

Psychosocial and behavioral aspects of populations affected by humanitarian emergencies: Recent developments

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Abstract

Purpose of the Review: Understand recent developments psychosocial and behavioral aspects of populations affected by humanitarian emergencies. The review covers the prevalence, longitudinal course, risk factors, post-traumatic growth, biological basis and interventions to address the needs. **Recent Findings:** Populations living in humanitarian emergencies, over 50 million worldwide, have higher risk of developing a range of mental disorders. There is evidence of persistence of these disturbances over long periods of time. There is growing body of knowledge to indicate the biological pathways to the occurrence of mental disorders. A proportion of population, report post-traumatic growth. There is new focus on identifying the characteristics of risk factors, resilience at the individual, family, community and societal levels. Range of interventions to address the mental health needs are in use from strengthening the coping of individuals, parenting, school based interventions and use of cognitive behavior therapy. Biological basis is becoming clear. **Summary:** The most important message of the review is the high mental health needs of individuals living in emergency situations and the urgent need to work towards adequate preparedness for natural disasters, integrate psychosocial interventions as part of relief, rehabilitation and reconstruction and work towards preventing situations of conflict, war, migration and refugee situations.

(Words 200)

Key words: Emergencies; Refugees; Post-traumatic growth; risk factors; resilience.

KEY POINTS

1. Populations living in humanitarian emergency situations have higher rates of mental disorders and mental health needs.
2. The effects of humanitarian emergencies are both psychosocial and biological.
3. There is scope for addressing the psychosocial needs at the level of individuals, families, schools and communities.
4. There is need for greater understanding of the factors leading to emotional problems(risks) and factors that promote growth.
5. There is need for greater efforts to prevent humanitarian emergencies at the national and international levels.

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Introduction

The period under review is very special in the area of psychosocial and behavioral aspects of populations affected by humanitarian emergencies. World in general and Europe in particular is gripped by the biggest humanitarian emergency, since the second World war, in the form of millions of people seeking refugee status, from Africa and Middle East. As the world came to terms with the ravages of Ebola virus, there is looming danger of the Zika virus and its impact on the world population. Conflicts continue in different parts of the world. Climate change is the emerging issue with multiple humanitarian issues. The period is also significant as it represents a century since world war ended, 30 years of Chernobyl disaster, more than three decades of Bhopal disaster, 10 years after the tsunami, and 5 years of the Japan tsunami and the nuclear disaster in Japan, besides the most recent earthquake in Nepal during the last year. From the studies of populations at high risk for mental health problems, there is better understanding of the risk factors linking emergencies and enhanced mental health needs. On the positive side, there have been better understanding of the biological basis of emergencies on human beings and development of innovative approaches to provide mental health care.

A number of investigators have provided an overview of the mental health needs of populations in humanitarian emergencies. Ventevogel et al (1**) present the higher rates of 15-20% with depression and posttraumatic stress disorder (PTSD). Long term mental health of refugees in 29 studies with 16010 people, for depression and unspecified anxiety disorder was in the range of 20% and above (2**). There have been advances in the understanding of PTSD (3*, 4**). Another review presents the socio-interpersonal view of PTSD (5). A new tool for understanding resilience was developed and normative data as a framework for the interpretation and comparisons of resilience in other population (6*).

Epidemiology

General population surveys in 24 countries with a combined sample of 68,894 adult respondents across six continents assessed exposure to 29 traumatic event types (7**). Over 70% of respondents reported a traumatic event; 30.5% were exposed to four or more. Five types – witnessing death or serious injury, the unexpected death of a loved one, being mugged, being in a life-threatening automobile accident, and experiencing a life-threatening illness or injury – accounted for over half of all exposures. Exposure varied by country, sociodemographics and history of prior traumatic events. Being married was the most consistent protective factor.

There is an urgent need to address the poor psychosocial wellbeing of the Ebola Virus Disease (EVD) survivors (8,9). Among the EVD survivors, most frequently occurring psychological distress were inability to concentrate (37.6 %) and loss of sleep over worry (33.3 %). Losing a

relation to EVD outbreak was significantly associated with feeling unhappy or depressed while being a health worker was protective. Adjusted Odds Ratio (AOR) showed losing a relation was a predictor of “feeling unhappy or depressed”, loss of a relation was a predictor of inability to concentrate(9).

Conflict situations have the greatest potential for mental health issues in the population. In South Sudan, a community survey report the most frequently expressed needs were related to availability of drinking water, alcohol and drug use in the community and access to sanitation facilities. Higher level of perceived needs significantly predicted psychological distress and lower level of functioning even when numbers of experienced trauma events were taken into account (10*).

Earthquakes not only disrupt the environments but communities and individuals. The most recent major earthquake is the Nepal earthquake on April 25, 2015, (11,12) brought to focus among the multiple needs, the psychological trauma and the limited resources available to provide the needed care. One and half year after the Great East Japan Earthquake of 11, March 2011, among the elderly living in temporary accommodation, 62.0 % residents had chronic pain. 29.6 % of these residents had relatively severe pain. Quality of life (QOL) was significantly lower for the subscales of “physical functioning,” “role physical”, “general health”, “social functioning”, “role emotional” and “mental health”, when compared with the national standard values(13*). After Lushan earthquake, among children and adolescents, with probable PTSD, there was frequent somatic symptoms, namely, trouble sleeping (83.2%), feeling tired or having low energy (74.4%), stomach pain (63.2%), dizziness (58.1%), and headache (57.7%) in the probable PTSD group. Older age, having lost family members, having witnessed someone get seriously injured, and having witnessed someone get buried were predictors for somatic symptoms (14). Depressive symptoms and associated psychosocial factors among adolescent survivors 30 Months after 2008 Wenchuan Earthquake, the prevalence rates of probable depression, was 27.5% at 6 months and 27.2% at 30 months. Female gender was related with higher risk of depressive symptoms at both time points. Negative life events and social support at 6 months as well as earthquake exposure, were concurrently associated with increased risk of depressive symptoms. Dispositional resilience was evidenced as a relatively stable negative predictor for depressive symptoms(15). Social cohesion was found to be protective factor following an earthquake(16*).

In a study of 62 adult Norwegian tsunami survivors, the impact of psychiatric disorders on QOL cross-sectionally and longitudinally, (majority (81 %) reported direct exposure to the waves, and 14 participants (23 %) lost a close family member in the tsunami) psychiatric disorders, especially depression, but also PTSD and other anxiety disorders, were associated with reduced QOL. Psychiatric disorders were more strongly related to QOL at 6 years after the tsunami than at 2 years (17**). Following the 2011 Joplin, Missouri Tornado, after 6 months and 2.5 years, probable PTSD prevalence was 12.63% at Survey 1 and 26.74% at Survey 2, while current depression prevalence was 20.82% at Survey 1 and 13.33% at Survey 2. Less education and more tornado experience was generally related to greater likelihood of experiencing probable PTSD and current depression in both surveys. Men and younger participants were more likely to report current depression at Survey 1. Low levels of social support were related to more probable PTSD and current depression. There was low rates of mental health service utilization.

Parents reporting probable PTSD reported a greater frequency of children with borderline or abnormal difficulties (18).

The mental health needs of refugees have been studied and reported by a number of investigators.(19-22). Among the Iraqi Yezdis displaced into Turkey, 42.9% met the criteria for PTSD, 39.5% for major depression, and 26.4% for both disorders. More women suffered from PTSD and depression (21). In Australia and Austria, among resettled refugees, acculturative stress associated with post-migratory experiences predicted severity of PTSD and anxiety symptoms, while depressive symptoms were only predicted by exposure to traumatic events.(22*). In Japan, immigrants were found to need greater psychosomatic care (23). Among the refugees rescued from distress at sea predominant medical diagnoses have been dermatological diseases (55.4%), followed by internal diseases (27.7) and trauma (12.1%)(24).

Populations living amidst bombings and shootings represent another emergency situation. Following the Utoya shootings in Norway, students' grades were lower the year after the event than they had been the year before, and they were also lower than the national grade point average . Absence from school increased after the event, compared to the previous year (27). The most impressive finding of the long term impact of bombings come from the 11-13 years follow-up study after World Trade Centre terrorist attack.(25**). Among the 3231 responders , 9.7% had current, 7.9% remitted, and 5.9% partial WTC-PTSD. Among those with active PTSD, avoidance and hyperarousal symptoms were most commonly, and flashbacks least commonly, reported. Trajectories of symptom severity across monitoring visits showed a modestly increasing slope for active and decelerating slope for remitted PTSD. WTC exposures, especially death and human remains, were strongly associated with PTSD. After adjusting for exposure and critical risk factors, including hazardous drinking and co-morbid depression, PTSD was strongly associated with health and well-being, especially dissatisfaction with life. In Iraq, due to continuing conflict, medical schools are facing challenges in staff recruitment and adequate resource provision; the majority believe quality of training has suffered as a result. Medical students are experiencing added psychological stress and lower quality of teaching; the majority intend to leave Iraq after graduation (26**).

Climate change as a potential humanitarian emergency is getting attention from researchers and administrators (27,28*,29,30*).Issues addressed are environmental pollution (29), and drought(30).

Risk Factors

One of the enduring questions relating to the mental health impact of emergencies is the differential way it affects individuals (31). Victims who had experienced Dongting Lake flood in 1998 and had been diagnosed as having PTSD in 2000 were followed up after 13-14 years. Out of 321 subjects with prior PTSD, 51 (15.89 %) were diagnosed as still having PTSD. Recovery from prior PTSD was significantly associated with social support, subjective support and support utilization (32). Survey of non-bereaved survivors and bereaved survivors, 2 weeks after Wenchuan earthquake found bereaved survivors had lower scores for gregariousness, trust, and optimism, but higher scores for depressed mood, loneliness, becoming easily fearful, irritation,

and anxiety than non-bereaved survivors. Bereaved participants scored higher for avoiding problems, self-blame, and fantasy coping styles than non-bereaved ones. Personality and coping styles significantly correlated with psychosomatic status in bereaved and non-bereaved survivors. Optimism and openness to feelings personality characteristics, and self-blame, avoiding problems, and rationalization coping styles significantly predicted psychosomatic status of bereaved survivors, whereas openness to fantasy, optimism, order, and trust personality characteristics, and self-blame and avoiding problems coping styles significantly predicted psychosomatic status of non-bereaved survivors (33). Risk perception is reported to partially mediating role in the relationship between earthquake exposure and psychological health (34). Among elderly, 65 years and older in a health survey of Great East Japan Earthquake survivors, participants who had been displaced from their homes were more likely to have low physical activity, non-working status was significantly associated with low physical activity, and social network was significantly associated with low physical activity(35*). An extensive review of this area,(31) covering 111 papers, found the psychological impact of disasters on responders appeared associated with pre-disaster factors (occupational factors; specialised training and preparedness; life events and health), during-disaster factors (exposure; duration on site and arrival time; emotional involvement; peri-traumatic distress/dissociation; role-related stressors; perceptions of safety, threat and risk; harm to self or close others; social support; professional support) and post-disaster factors (professional support; impact on life; life events; media; coping strategies). Following hurricane Sandy, adjusting for lifetime history of depressive disorders, higher levels of stress predicted elevated levels of depressive symptoms, but only in participants with high levels of negative emotionality or low levels of positive emotionality (36)..In SriLanka, among schoolchildren aged 7 to 11 exposed to traumatic events, exposure to mass trauma and family violence was significant risk factors of child mental health whereas parental care emerged as a significant factor associated with fewer behavior problems. Parental care significantly moderated the relationship between mass trauma and internalizing behavior problems (37**). In Indonesia, in a post-earthquake population, parents' post-traumatic symptoms (PTS) were associated with children's general distress but children's PTS symptoms were not associated with parents' general distress(38).

Post-traumatic Growth (PTG)

In the recent years, there is growing focus on the positive aspects of exposure to humanitarian emergencies on individuals (39*). In a study of 111 refugees, aged 12–17, in Netherlands, participants reported mean PTG scores (20.2) indicating an average response of some perceived change, while reporting high levels of PTSD symptoms (30.6). PTG and PTSD symptoms were not related with each other. PTG was positively associated with dispositional optimism and social support. PTG was also positively related with satisfaction with life(40). Social support plays an important role in PTG (40).

Biological aspects

The focus on better understanding of the brain using innovative technology is shifting the focus in understanding mental disorders. With regard to PTSD, association have been found with

cortisol levels (41), white matter abnormalities (42), adrenal steroid hormones(43), heart rate variability(44) and peripheral biomarkers(45).

Interventions

A wide range of psychosocial interventions to meet the mental health needs of the traumatised populations have been reported. These include mindfulness(46*), cognitive behavioural therapy (47), eye movement desensitization and reprocessing (EMDR), (48), interventions by school teachers (49**). Review covering twenty four studies in children living in armed conflict situations, recognizes the need for increased diversification in research focus, with more attention to interventions that focus at strengthening community and family support, and to young children, and improvements in targeting and conceptualizing of interventions (50). Other review covers refugee children (51*).

Conclusions

Current review reiterates the high levels of mental health needs of populations in humanitarian emergencies. It also presents the new developments in understanding risk factors and the biological basis of PTSD. Wars and conflict situations have played an important role in the development of mental health care in the world. It was the psychological impact of the two world wars of the last century, described variously as, "shell shock", "not yet diagnosed, nervous", "battle fatigue" that brought to focus the effects of war on mental health of individuals and supported the effectiveness of psychological interventions. Working with populations affected by humanitarian emergencies, the predominant finding is one of disintegration of individuals, families and communities with limited scope for interventions. The interventions are most often inadequate and the populations continue to suffer in silence for decades at many levels. These feelings are expressed by Gall (52**), a reporter who has worked in Afghanistan, 'Over twelve years, I lost friends and acquaintances in suicide bombings and shootings, and saw other close to me savagely maimed. I do not pretend to be objective in this war. I am on the side of the victims. **The human suffering has been far too great, and we have a duty to ponder for the reasons for such a calamity'**(emphasis added). Another important thought is for greater activism of mental health professionals to address prevention of emergencies, as there is growing recognition of the pointlessness of the measuring of morbidity, intervening to address the devastations of conflict situations, without addressing the causes of humanitarian emergencies.(53*,54**). These are challenges for the future work.

(2338 words)

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