Mental health in complex emergencies

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Mental health is becoming a central issue for public health complex emergencies. In this review we present a culturally valid mental health action plan based on scientific evidence that is capable of addressing the mental health effects of complex emergencies. A mental health system of primary care providers, traditional healers, and relief workers, if properly trained and supported, can provide cost-effective, good mental health care. This plan emphasises the need for standardised approaches to the assessment, monitoring, and outcome of all related activities. Crucial to the improvement of outcomes during crises and the availability to future emergencies of lessons learned from earlier crises is the regular dissemination of the results achieved with the action plan. A research agenda is included that should, in time, fill knowledge gaps and reduce the negative mental health effects of complex emergencies.

Mental health is becoming a core public health area in complex emergencies.[1] Many historic milestones have contributed to this situation,[2] for example, studies in war veterans have revealed the serious mental health effects of conflict.[3] Psychological casualties exceeded physical casualties by two to one in World War I and in World War II 33% of all medical casualties were attributable to psychiatric causes. 10 years after the Vietnam war, 15% of US veterans were still affected by post-traumatic stress disorder.[4] These findings were eventually applied to war-affected civilian populations.

In the late 1980s, the humanitarian relief community acknowledged the mental health crisis in their efforts to help more than 300 000 Cambodian displaced people who had been living on the Thai-Cambodian border for over a decade after the Khmer Rouge genocide of 1975–79. Deteriorating social conditions in the camps led to a landmark meeting in July, 1988, of UN, Thai, and voluntary relief organisations to discuss the deteriorating mental health conditions in the camps.[5] The first on-site refugee mental health survey was undertaken in the largest Thai border camp, Site 2, in 1988,[6] followed by the UN's acceptance of a plan to relieve the mental health crisis.[7] The next milestone was the implementation by humanitarian relief workers of hundreds of psychosocial programmes during the Balkan conflict.[8] Mental health practices that are evidence-based and culturally competent are needed for complex emergencies, and in this review we offer a mental health action plan and an agenda for future research.

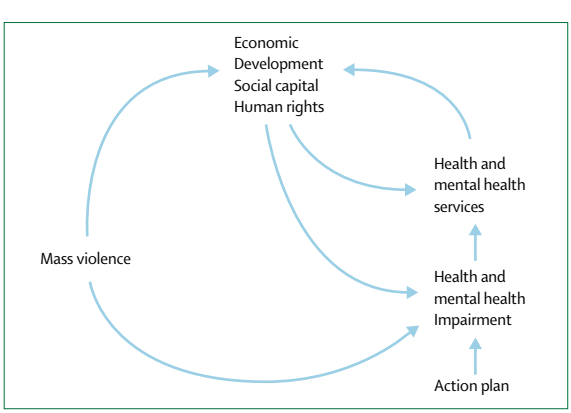

Figure: **Macrolevel interactions and mental health during complex emergencies**

Conceptual framework

A complex emergency is a social catastrophe marked by the destruction of the affected population's political, economic, sociocultural, and health care infrastructures.[9] The figure illustrates the links between mass violence, mental health impairment and services, and the existing damage to economic development, social capital, and human rights. Although these macrolevel forces create health and mental health impairments and barriers to mental health service delivery, they can also be used to foster resiliency and mental health recovery.

The economic collapse that characterises complex emergencies may be associated with the destruction of businesses and hospitals, and the displacement of populations to camps where work opportunities are few. The inability of the affected populations to be

Search strategy and selection criteria

We identified relevant studies for possible inclusion by searching standard computer databases including the US National Library of Medicine, Ecommons (Harvard Medical School), PubMed, and OVID. For psychosocial-related research, a review of grey literature (work that is not widely published; for example, theses, government reports, and dissertations) was compiled through bibliographic and documentation development associated with the Psychosocial Working Group (www.forcedmigration.org/psychosocial). Each author drew on his or her substantial expertise to contribute to this review. Keywords used were mental health, prevalence, trauma, traumatic event, refugee, war, mass violence, public health, complex emergency, complex humanitarian emergency, psychosocial, children, adolescents, Afghanistan, Bosnia, Kosovo, Rwanda, and Cambodia.

	Post-traumatic stress disorder	Depression	Screening method
Complex emergency population			
Cambodian refugees in Thailand[31]	37·2%	67·9%	HTQ HSCL-25
Bosnian refugees in Croatia[27]	26%	39%	HTQ HSCL-25
Kosovar Albanians in Kosovo[32]	17·1%	NA	HTQ GHQ-28
Karenni (Burmese) refugees in Thailand[33]	4·6%	41·8%	GHQ-28 HSCL-25 HTQ SF-36
Cambodia[34]	28·4%	NA	CIDI
Baseline population			
US population[35,36]	1%	6·4 %	DIS
US population[37,38]	7·8%	16·2%	CIDI (modified)

Point prevalences in first four rows, lifetime prevalences thereafter. Different screening methods were used in these studies (see references for details). HTQ=Harvard trauma questionnaire. HSCL-25=Hopkins Symptom Checklist-25. GHQ-28=general health questionnaire-28. SF-36=short form-36. CIDI=composite international diagnostic interview. DIS=diagnostic interview schedule. NA=not measured.

Table 1: **Prevalence of mental health disorders in adult populations affected by complex emergencies**

economically self-sufficient has a major effect on psychological wellbeing.[10] Social capital refers to the "features of social organization, such as trust . . . and networks (of civil engagement), that can improve the efficiency of society by facilitating coordinated actions."[11,12]

Restoring social capital, and reducing hatred and revenge, is central to post-conflict reconciliation.[13] A World Bank report[14] states: "The easy part of any Bank operation is reconstructing the bricks and mortar; the hard—but more essential—part is restoring the institutional societal bases of post conflict society." Evidence is emerging that links the mental health sequelae of mass violence to the destruction of social capital.[2] Colletta and Cullen[15] have reported case studies illustrating how the rebuilding of social capital can provide a framework for recovery and economic development. Complex emergencies are accompanied by serious violations of rights.[16] Sex-based violence is common and has serious mental health effects.[16] There seems to be a dose-effect relation between cumulative trauma and psychiatric morbidity.[17]

The primary objective of a mental health action plan, therefore, is to address the human suffering associated with mental ill-health from the perspective of patient, community, and service provider.[18,19] Mental health symptoms, which are signs of emotional distress, should be distinguished from psychiatric illnesses and disabilities.[20–23] In resource-poor environments characterised by high levels of emotional distress, thresholds should be set for identifying those individuals in need of mental health services. Emotional distress combined with impairment in social and physical functioning creates a reasonable clinical standard for eligibility, but input from the local community is necessary for determining the cultural norms needed for establishing the standard.

Magnitude of the problem

The Global Burden of Disease Study[24] established for the first time the substantial burden of mortality and disability associated with mental illnesses. Depression, the fourth leading disease burden in 1990, is predicted to move to second place in 2020. Of the ten leading causes of disability worldwide, five were psychiatric conditions. The Global Burden of Disease Study did not focus on traumatised populations, and the mental health effects of psychiatric disorders might be much greater in complex emergencies. Despite the challenges of determining the prevalence of mental illness across cultures and in insecure environments, progress has been made in assessing the psychological and social effects of complex emergencies. The absence of accurate population estimates and culturally validated screening instruments needs to be overcome before culturally valid mental health assessments can be made.[25,26] However, validated measures of economic and social productivity and social capital in emergencies are still not available. Studies showing the prevalence of the mental health consequences of mass violence, depression, and post-traumatic stress disorder in adults are summarised in table 1. Some studies recorded non-specific psychiatric morbidity.

A longitudinal study of Bosnian refugees revealed, for the first time, the serious disability associated with the mental health effects of mass violence. 45% of the refugees studied met DSM-IV criteria for depression or post-traumatic stress disorder or both, and when both were diagnosed there was a high rate of physical disability (45·5%).[27] In 1999, psychiatric disability was unremitting and premature death was identified in elderly people in this population.[28] Other studies support these results, suggesting that suffering continues long after the crisis has ended.[29,30]

Scientists have recently focused on elaborating the mental health problems of children exposed to extreme violence.[39–52] Table 2 emphasises the high prevalence of post-traumatic stress disorder and depression in children and adolescents[53–64] affected by complex emergencies. Two studies revealed high rates of emotional distress in Cambodian refugee adolescents and Palestinian children, respectively.[65,66] In contrast to the studies in adults (table 1), the generalisability of these results is limited because few of the studies sampled a general population of children involved in a complex emergency,[49] or compared the findings with those in comparable, non-traumatised controls.[50]

	Post-traumatic stress disorder	Depression	Screening method
Complex emergency populations			
6-year follow-up of 30 young Khmer refugees[53]	50% in 1984 38% in 1990	41% in 1987 6% in 1990	
170 Cambodian adolescent refugees[54]	26·5% 12·9%		
480 Croatian refugee children[55]	NA	11·28%	CDI
59 young Cambodian-Americans[56]	Point: 24% Lifetime: 59%	19%	SCID-NP
209 Khmer adolescents[57]	12·9–41·2%	NA	SSADS SCID
99 Cambodian refugees[58]	Point: 31·3% Lifetime: 37·3%	Point: 68·4% Lifetime: 86%	SSADS Interview
12 Bosnian adolescents in US[59]	25%	17%	CTEI
147 Bosnian children refugees[60]	NA	25·90%	Self-report
492 Israeli children during Scud missile attacks[61]	24·9%	NA	SRQ
234 children in the Gaza Strip[62]	Point: 40·6% 1-Year: 10%	NA	CPTS-RI
Cambodian refugees in US[62]	Point: 28·6% Lifetime: 37·1%	Point: 17·1% Lifetime: 37·1%	SSADS Interview
Baseline populations			
Children (US)[63]	NA	Point: 2%	DSM-III-R Interview
9–17 year-olds (US)[64]	6-month: 2%	6-month: 6%	DISC-2·3

CIDI=composite international diagnostic interview. SCID-NP=structured clinical interview for diagnosis of mental illness, non-patients version. SSADS=school children version schedule for affective disorders and schizophrenia. CTEI=communal traumatic experiences inventory. SRQ=stress reaction questionnaire. CPTS-RI=child post-traumatic stress reaction index. DSM-III-R=diagnostic and statistical manual of mental disorders, third edition, revised. DISC-2·3=diagnostic interview schedule for children version 2.3. NA=not measured.

***Table 2*: Prevalence of mental health disorders in children and adolescents affected by complex emergencies**

Mental health action plan

A mental health action plan for a complex emergency (panel) should be grounded in recommendations from landmark reports from the World Health Organisation[67,68] and the US Surgeon General.[69]

Coordination of mental health care

Early intervention should focus on immediately establishing centralised coordination of mental health activities.[70,71] There is no evidence that this coordination has ever been undertaken; in most emergencies hundreds of organisations have implemented varying programmes (eg, in Bosnia and Kosovo[8]) and little information has been provided on monitoring and effectiveness. The experiences of relief and assistance organisations, including the US Federal Management Agency, offer insight into the role of coordination in responding to the mental health needs of disaster-affected populations.[72,73] Although the agency's model is not readily transferable to resource-poor environments, it does emphasise the value of coordinated services that are provided by trained mental health practitioners and community participation. Coordination can guarantee that steps in the action plan have their outcomes assessed and that they are integrated into and built on pre-existing mental health services, and also ensures that those most in need receive appropriate and effective intervention.

Sufficient evidence exists of the role of mental health in complex emergencies to argue that the planning of a mental health response should be routinely incorporated into the activities of UN agencies, non-governmental organisations, and donors before these organisations become involved in complex emergencies.

Assessment and monitoring

As soon as possible, a population-based assessment should be undertaken in complex emergencies to estimate the prevalence of mental health disorders, to identify vulnerable groups, and to find out what mental health support and clinical care is available. A major barrier to the implementation of action plans has been the absence of guidelines linked to a formal system of assessment and monitoring.[1] Indeed the absence of criteria for evidence-based best practice has led some public health authorities to doubt the contribution that mental health assistance can make in complex emergencies.[74] WHO recommendations[68] and the Sphere project[75] might fill this gap. Until culturally validated and standardised mental health needs assessments become available for use in complex emergencies, simple ethnographically informed quantitative measures will have to be generated for each emergency to provide the information needed for planning, monitoring, and assessment, and these measures should cover macro-level factors (economic opportunities, social capital, and human rights violations), mental health outcomes (symptoms and disability), and available mental health resources.

Early intervention phase

Early mental health interventions should focus on supporting public health activities aimed at reducing mortality and morbidity; offering psychological first aid, identifying and triaging seriously ill patients who need specialised psychiatric care,[68,71,76] and mobilising community-based resiliency and adaptation to the new circumstances affecting people during the emergency.

Early interventions have usually been based on the premise that 90% of the affected population will not develop mental illness despite high rates of emotional distress related to the crisis.[70,71] This premise might be incorrect. Table 1 shows the prevalence of chronic psychiatric disorders and a study in Bosnian refugees shows that a higher percentage of individuals might be seriously affected by chronic mental illness than previously thought.[28] High-risk individuals will eventually be identified through early screening, and will be treated. For the general population, the action plan should support the normalisation of everyday life, through the reduction of physical diseases, re-establishment of normal sociocultural and economic activities, family reunification, and protection from violence. The most intensive intervention in this phase is psychological first aid, which consists of listening (not forcing talk), conveying compassion, ensuring basic

Panel: **Mental health action plan for complex emergencies**

Coordination of mental health care
Strong, centralised coordination established at beginning of complex emergency to organise, monitor, supervise, and assess all mental health activities

Assessment and monitoring
Early rapid baseline assessment of the population's resiliency and risk factors, and vulnerable group's mental health disorders and available mental health resources
Monitoring system established able to review changes in baseline status over time

Early intervention phase
Early interventions should support reduction in mortality and morbidity, offer population-wide psychological first aid, identify and triage seriously mentally ill to psychiatric treatment, and mobilise community-based resiliency and adaptation by facilitating restoration of normal community life.

De-facto mental health system
Build up and finance the de-facto mental health system of local primary health care practitioners, traditional healers, and local and international relief workers
Use culturally validated and scientifically established mental health interventions throughout the system

Training and education
Train all front-line responders in basic mental health principles such as psychological first aid
Build mental health capacity in the de-facto mental health care system through effective training that emphasises teaching of culturally effective evidence-based interventions

Implement, manage, and monitor a culturally competent system of care
All policies, practitioners, and organisational structures should actively use the cultural medical worldview of the population(s) served, and engage the local communities' participation in the action plan

Ethics and community participation
Informed consent should be followed. Patients and communities should participate in shared decision-making processes
Public awareness campaigns will improve community support of plan and improve outcomes

Prevention of negative mental health consequences in mental health providers
All mental health providers should be provided with a self-care programme that includes identification of risk factors and opportunities for resiliency to prevent negative mental health outcomes
Mental health treatment should be readily available to affected relief workers in a safe, non-punitive, and confidential setting

Outcome assessment and research
All mental health interventions should be assessed as to their overall benefit to individuals and community and to their cost-effectiveness
All mental health trainings should be assessed to identify at least an increase in skills and knowledge of evidence-based practices that are culturally valid
Scientific investigations including population studies and randomised controlled trials are not a luxury and should be incorporated into all mental health action plans

needs, mobilising support from family members or significant others, and protecting the survivor from further harm.[73]

Existing mental health care system

Local primary care practitioners, traditional healers, and relief workers can be organised into a culturally competent, effective mental health system during a complex emergency. The role of primary health care in the mental health care of resettled traumatised refugees has been well documented.[77,78] The integration of mental health services into primary care has been widely promoted, especially in developing countries.[79,80] Primary care practitioners are able to help traumatised patients by identifying and treating medical and psychiatric disorders during complex emergencies.[81] Local doctors, nurses, social workers, and occasionally psychiatrists (eg, in Bosnia[82,83]) can be mobilised to deal with their community's mental health needs. Primary care is able to treat the mental health disorders of traumatised patients in a non-stigmatising environment since in most societies emotionally distressed individuals avoid psychiatric treatment. With little training, practitioners can obtain the patient's trauma history and identify

related physical and mental health sequelae and so provide culturally sensitive assistance.[84] They can also identify illnesses and disabilities resulting from human rights violations.

Randomised trials in non-traumatised populations point to an important potential role for mental health services in primary care during complex emergencies. The efficacy of primary care has been shown for the treatment of depression,[85,86] and effective interventions include psychotropic drugs and interpersonal and cognitive behavioural therapy. The most effective primary care treatment for post-traumatic stress disorder has yet to be established. Psychological treatments and psychotropic drugs might be effective.[87] Supportive counselling helps patients cope with the adversities of a complex emergency but there is no evidence that it prevents or ameliorates post-traumatic stress disorder; nor is there evidence that such counselling is harmful. Cognitive behavioural therapy can be helpful when a patient with post-traumatic stress disorder has not responded to counselling.[88,89]

Raphael and Wilson[90] conclude that stress debriefing, a structured interview that elicits traumatic experience and reactions, is not recommended for disaster-affected populations as it might be both ineffective and potentially harmful. A role for eye movement desensitisation and reprocessing, a treatment that relies on the desensitisation of traumatic thoughts through repetitive eye movements, has yet to be substantiated.[91–93] Art therapy, in which children relive their experience of violence, might have no harmful effects but this type of therapy has not been proved to be beneficial.[94]

Traditional medicine covers diverse health practices, approaches, knowledge, and beliefs incorporating plant-based, animal-based, or mineral-based medicines, spiritual therapies, massage techniques and exercises applied singularly or in combination to maintain the wellbeing of the patient, and to treat, diagnose, or prevent illness. Traditional medicine is widely accepted and practised as a valid form of treatment worldwide.[95] A traditional healer is often a religious healer, or family, or community, elder. Traditional medicine generally uses a local classification system for emotional distress consisting of folk diagnoses accepted by the community. The accessibility of these practitioners and confidence in their abilities to manage mental health disorders, combined with the reduced stigma and potential cost-effectiveness, mean that traditional healers should be supported in complex emergencies. Experience with traditional healing and mental health has been extensively described for the Cambodian refugee crisis of the 1990s.[96–98] The evidence base for such interventions is growing, and randomised trials in settings other than complex emergencies show the clinical effectiveness of herbal medicines, acupuncture, and non-medication therapies in reducing some forms of depression, anxiety, insomnia, and pain.

Mental health services provided by relief organisations are psychosocial interventions based on a primary concern for the psychological and social wellbeing of the individual, but extending to the repair of collective social structures.[99,100] The term psychosocial[101] emphasises the dynamic relations between psychological effects (eg, emotions, behaviours, and memory) and social effects (eg, altered relations as a result of death, separation, and family and community breakdown). Psychosocial interventions try to help survivors of mass violence to cope with the demands of a social world shattered by violence. The effect of a complex emergency on a population's ability to care for itself is not described by accepted psychopathological diseases.[102] The psychosocial approach suggests that although people are affected in many ways, three areas in particular are affected: human capacity (ie, skills, knowledge, and capabilities), social ecology (social connectedness and networks), and culture and values. People need support to enhance both their own and the community's psychosocial wellbeing by strengthening each of these areas.[103] Psychosocial approaches usually focus on vulnerable groups or those with "special needs".[104] These are individuals with specific characteristics that place them at risk of psychological distress and social disability and who might be neglected, abused, and stigmatised by their society, limiting their ability to access humanitarian relief. This emphasis on vulnerable groups should not preclude an appreciation of the effect of mass violence on the mental health of all members of an affected population.

The evidence base for specific psychosocial interventions is small. A study by Mollica and colleagues[105] of Cambodian refugees on the Thai-Cambodian border showed environmental conditions (eg, opportunity for economically productive activities) that could have been fostered by camp authorities, to reduce psychiatric morbidity in camp residents. In a study in Bosnia-Herzegovina and Croatia, Agger and Mimica[8] recorded positive appraisals of services received, with higher rankings for group meetings and shared activities than for individual therapeutic provision. Assessment that uses feedback from those receiving psychosocial interventions has methodological limitations,[106] but a case-control study by Dybdahl[107] revealed a reduction of intrusive memories and higher self-rating of wellbeing in traumatised mothers in Bosnia who participated in weekly group meetings compared with those who received a basic package of medical care. The initial results of the UN experience with emergency and peace education with the objective of improving social capital is promising, but needs further assessment.[108,109]

Psychiatric practitioners trained in developed countries can participate in training, provide consultation and on-site supervision within the system, and do assessment and evidence-based investigations.[76] These practitioners have an important role in providing specialised care to the seriously mentally ill. Many conflict-affected

countries have little experience with western psychiatry (eg, Rwanda has one psychiatrist) so psychiatrists should amplify their effect through a culturally sensitive partnership with local indigenous healers.

Training and education

Early in a complex emergency, individuals in the frontlines of health care and humanitarian assistance should be trained in basic mental health practices as psychological "first aid".[68,70] Mental health practitioners should acquire the skills and knowledge that would enable them to deliver culturally effective evidence-based interventions. Few of these practitioners will have previous experience of large numbers of people who are emotionally affected by violence.[110] A new trend is the provision by relief organisations of brief mental health training to policy-makers, doctors, teachers, and relief workers. However, the professional expertise and mental health knowledge of those being trained frequently exceeds that of the trainers. Despite the popularity of this approach, scientific evidence of benefit is needed;[111] by contrast, assessments of mental health training given to local primary care practitioners in Bosnia and Cambodia have revealed sustainable results.[112] Although mental health training materials are plentiful few curricula are available or have been assessed for their scientific quality and cultural content. All such training projects should be made publicly available along with the lessons that have been learned so that duplication of effort and repetition of failed approaches can be avoided.

Cultural competence

Complex emergencies have affected societies that are very different from developed countries in their view of medicine, but we could not find one scientific study on the provision of culturally sensitive mental health services in such an emergency. This omission is surprising because ethnicity and culture have a major effect on mental health-seeking behaviour and treatment outcomes;[113–117] and these effects will probably be intensified during a complex emergency. Furthermore, attitudes to mental health care may need to be overcome, such as fear of the mental health care system attributable to its previous use for torture, punishment, and incarceration, stigma and community rejection of vulnerable groups.[118] Avoidance of the health care system may also occur if health facilities have been targeted for destruction during the conflict.[119]

Much debate has surrounded the cultural validity of the diagnosis of post-traumatic stress disorder in developing societies.[120] However, the ethnographic study of traumatised populations has identified the common symptoms of emotional distress and related folk diagnoses that can be used by mental health providers in caring for these populations.[78] Psychiatric diagnoses can be combined with folk diagnoses to provide benefit to the patient.[96]

Cultural competence should characterise the mental health action plan's goals and procedures. It is not enough for individual providers to practise cultural competence in a complex emergency. The California Pan-Ethnic Network and the California Healthcare Foundation have listed 12 characteristics of a culturally competent organisation that can be directly applied to the setting of a complex emergency. These characteristics include knowledge of the population served; diversity in organisation, governance and decision-making; mandatory cultural competence training; promoting delivery of culturally competent health care; and measurement of outcomes.[121]

Ethics and community participation

Mental health practices should follow the principle of do no harm and ensure respect for patients' freedom and autonomy.[122] Without informed consent no mental health intervention is morally justified and such consent needs to be sought in a culturally appropriate manner.[123] Mental health care providers should make a special effort to guarantee consent because normal standards, even if they were present before the emergency, may have been disrupted by the destruction of the health care system. Although difficult to achieve in a complex emergency, the patient and the community should be equal partners in a shared decision-making process. Community input and participation are also needed for psychosocial interventions that operate at the collective level. The Humanitarian Accountability Project[124] is a step towards ensuring this participation. Public awareness campaigns that include the community in all aspects of the action plan are not only ethically responsible but might also be therapeutic. Yet it is naive to think that mental health care is uniformly benign in complex emergencies and is associated with few risks.[125] Some interventions, especially those applied to individuals experiencing highly traumatic life events such as sexual violence or the murder of a child, can be very intrusive and psychologically disturbing and lead to serious negative mental health outcomes. Although eliciting trauma stories from survivors cannot be avoided,[126–128] mental health practitioners should not strip away a survivor's psychological defences (eg, denial of recent traumas) to uncover the experience thought to be behind his or her mental health and physical disorders. Talking cures are not always benign or welcomed, especially in developing cultures, and investigations are still needed to determine the type of personal sharing of traumatic life experiences that is most helpful in the healing process.[129]

Self-care and risk of burn-out in mental health care providers

Relief workers are not immune to the negative mental health effect of complex emergencies[130] and there seems to be a dose-response relation between the experience of trauma events and anxiety symptoms of clinical significance. Vulnerability is greatest in those workers on

Future investigations	Rationale
Adapt and develop culturally valid and reliable instruments with known psychometric properties for measuring risk and resiliency factors and mental health outcomes	Instruments such as the HTQ, HSCL-25, and GHQ can be expanded for use in complex emergencies by establishing their psychometric properties through a simple standardised approach. Simple measures that include risk and resiliency factors such as economic status and social capital do not exist for baseline mental health needs assessments. Culturally validated measurements of physical functioning and socioeconomic disability are necessary for identifying those in need of mental health care without sole reliance on psychiatric symptomatology
Undertake longitudinal studies that assess the effects of complex emergencies on the health and mental health status of conflict-affected populations over time	The natural course of mental health outcomes in conflict-affected populations is unknown; cause and effect relations are poorly described by available cross-sectional research. Studies are necessary for planning, preventing and for the timing and implementation of interventions
Do evidence-based studies of the effectiveness of interventions Undertake evidence-based studies of the effectiveness of mental health trainings	Although scientific studies from other settings support the benefits of some mental health interventions, few evidence-based intervention studies such as randomized controlled trials have been done during a complex emergency. Despite the heightened frequency of mental health trainings in complex emergencies, few studies have assessed the effectiveness of trainings. Studies should focus on relative effectiveness of mental health trainings in producing sustainable results including increase in the knowledge and skills of scientific practices, and the proper use of these practices, resulting in improved mental health outcomes
Investigate the ability of public awareness campaigns to protect affected populations against the negative mental health consequences of complex emergencies	Do public health awareness campaigns help prevent psychiatric illness and increase the use of services by those most in need? Do they improve shared decision-making and community participation? Are they the most culturally acceptable approach to guaranteeing community involvement? If the answers to any of these questions is no, what are more effective alternatives?
Determine the unit cost of providing culturally competent, evidence-based mental health care during complex emergencies	This information is essential for donors and policy-makers to make informed decisions on their financial support of a mental health action plan

Research agenda applies to adults, children and adolescents. HTQ=Harvard trauma questionnaire. HSCL-25=Hopkins symptom checklist-25. GHQ=general health questionnaire.

Table 3: **Research agenda for mental health and complex emergencies**

their first assignment or those with a long history of serial deployments. Local staff are especially vulnerable[131] and strategies to provide effective mental health protection, and treatment if necessary, for front-line personnel in complex emergencies need to be identified.[132]

Outcome assessment and research

Public health experts have called for all health interventions in complex emergencies to be evidence-based[133–135] (see table 3). Many mental health interventions are not based on sound scientific evidence,[70] and best practices for culturally effective mental health services in complex emergencies remain to be determined. A moral obligation to find such evidence for complex emergencies was emphasised at a meeting of mental health scientists after the Sept 11, 2001, terrorist attacks in the USA. Extrapolating from evidence derived from studies of natural disasters and individual traumatic events such as car accidents needs care. A review of 76 studies of early clinical interventions targeted at survivors of mass violence did not contain any studies done in a complex emergency.[70] The greatest barrier to the recognition of mental health as an essential public health activity is the absence of systematic work assessing response to clinical treatments and psychosocial interventions during complex emergencies.[136,137]

Development of a culturally valid, evidence-based action plan should begin with the assessment of mental health activities. These assessments should use standardised measures that can be simply applied by relief organisations.[25,26,138–141] Public discussion of the results is essential so that lessons can be learned for the benefit of mental health activities in future complex emergencies. For example, the results of UNICEF's national training programme in Rwanda and UNHCR's counselling programmes in the Balkans could benefit future efforts.[142]

Donors and relief organisations should press for research and assessment in mental health to be a funding priority during complex emergencies. Some workers have argued that research wastes limited resources and increases the likelihood that the scientific community will exploit vulnerable populations. However, the opposite is true. Careful research provides effective interventions that will help achieve more equitable resource allocation. International covenants[143] offer specific proscriptions against the coercion of individuals into medical and scientific experiments. Guidelines to ensure that research done during complex emergencies is ethical should be established.[144–146]

Conflict of interest statement

We declare that we have no conflict of interest.

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