



in the Eastern Mediterranean Region

There is an information gap on gender differences in vulnerability to, and the impact of disasters. The limited information available from small-scale studies suggests that there is a pattern of gender differentiation at all levels of the disaster process: exposure to risk, risk perception, preparedness, response, physical impact, psychological impact, recovery and reconstruction. Since the mid 1990s there has been an increase in the recorded number of all types of disasters and in the number of recorded fatalities resulting from disasters, especially in developing areas. People in low-income countries are four times more likely to die from extreme natural events than those in high-income countries.

What we know

There is some evidence which shows that women and men may suffer different negative health consequences following a disaster. It is not clear whether this is because of biological differences between the sexes, because of socially determined differences in women's and men's roles and status, or as a result of the interaction of social and biological factors.

The timing of disasters and the different activities and roles of men and women are important factors in explaining differences in death and injury rates between women and men. For instance, it is estimated that four times more women than men may have died in the tsunami in December 2004 because they were in their homes and on the coast, while many men were inland [1].

Gender roles

Differences in socially determined roles and responsibilities of women and men and access to resources and decisionmaking power can influence the impact of disasters for males and females. Women may face challenges in accessing relief supplies if, for example, they cannot arrange childcare and/or care of injured family members. In addition, in settings where women are discouraged from interacting with non-family male members of the community, they may have difficulties in accessing relief services delivered by male relief workers. Women who become the head of their household as a result of the death of their husband or male relatives may have little experience in negotiating for their relief supply needs and may therefore be at a disadvantage in providing for their families.

Men play the primary role as combatants in conflict situations and suffer the consequential injuries and negative health outcomes, or become the fatalities. Men's roles as protectors may place a greater responsibility on them for risk-taking during and after a disaster, both within their households and as volunteers and rescue workers. For example, men are more likely to be engaged in clearing landmines. A study of male patients with injuries sustained while clearing mines found that three quarters of these men became functionally blind. None of the victims were wearing protective eye gear or clothing during the mine clearing [2,3]. In the Region, 18 countries have a problem with landmines, including Afghanistan, Egypt, Islamic Republic of Iran, Jordan, Kuwait, Lebanon and Sudan. In addition, it has been found that in post-conflict areas, particularly in Lebanon, male children incorporate violence in their everyday perceptions and are less likely to incorporate positive perspectives than girls [4].

Men may also suffer greater disadvantages due to their expected social roles in refugee camps. As all services and food are provided by the camp hosts, refugees are not



employed, and males and females are deprived of their productive function in society. This especially affects males who are the primary providers for their families. Men struggle to maintain their self-esteem under such circumstances, where their societal role has been removed and they are left idle with no productive function. Females remain occupied with their reproductive roles and are, therefore, not as adversely affected [5].

Impact of disasters

The impact of disasters is felt differentially within societies, and those most socially excluded and economically insecure bear a disproportionate burden.

Social and economic consequences

The loss of ability to take care of the family may cause adjustment difficulties for men, especially those with more traditional gender role norms. Others may view the receipt of financial aid as a stigma and feel challenged in their role as providers. In Palestine, more than two thirds of the population is living at or below the poverty line [6].

Reproductive health

Studies have repeatedly reported adverse reproductive outcomes following disasters, including miscarriage, premature delivery, stillbirths, delivery-related complications and reduced fertility. This is attributed to a variety of factors including lack of access to food, clean water and appropriate sanitation, social instability, powerlessness and poverty, disruption and/or inaccessibility of essential services and necessary supplies and equipment.

Women are also vulnerable to vitamin and iron deficiencies, which may result in anaemia. Anaemia can be fatal for pregnant women and their babies. Women face additional vulnerabilities to violence and both men and women are vulnerable to increased ill-health due to the lack of health care services. In Palestine, over one third of women of childbearing age are anaemic and over a 12-month period from 2000 to 2003, 103 women delivered at checkpoints [6]. Infant mortality figures have increased by 15% in comparison with the pre-intifada levels [6].

Impact assessments of the Iraqi conflict have estimated that if 10 000 people were deprived of access to a health care centre for one month this would result in at least 150 pregnant women not receiving antenatal care, 20 deliveries without trained assistance, 28 women unable to receive emergency obstetric care, and 9 women unable to undergo caesarian sections [7]. Afghanistan, which has experienced a multitude of disasters, including drought and long periods of conflict, has the second highest maternal mortality rate in the world and less than 15% of deliveries are attended by trained birth attendants.

Gender-based violence

The stress and disruption of war can lead to a rise in genderbased and sexual violence. In Darfur, Sudan, 14% of 132 victims of violence examined in health clinics were found to be victims of gender-based violence [8]. In a series of focus group discussions carried out by UNICEF and UNFPA with both men and women in Darfur, sexual violence and abuse were found to be a serious problem, especially for girls and women. Most cases of sexual violence were reported as taking place outside the camps when girls and women were collecting firewood or grass [9].

HIV/AIDS

Victims of conflict and refugees have been found to be at greater risk of contracting HIV/AIDS due to increased sexual violence and disruption of health services [10]. Female victims of sexual violence will be especially vulnerable to becoming infected due to tearing of their vaginal mucous membranes during intercourse. Conflicts and emergencies can increase injecting drug use-related transmission of HIV/AIDS because of shortages of sterile injecting equipment. Transmission of HIV/AIDS is increasing through injecting drug use as drug users are finding injecting methods more cost-effective than inhalation [11]. Military control on the Afghanistan-Pakistan border, combined with increased police pressure, has resulted in a switch by heroin users from inhaling heroin fumes to injecting drug use [11]. Injecting drug use is largely confined to male populations in the Region. Wives of drug users face vulnerability to acquiring HIV/AIDS from their husbands, especially in emergency situations during which time sterile injecting equipment becomes scarcer.

Mental health

Victims of complex emergencies are at special risk of being affected by mental health problems, although males and females may respond in different ways. Women, for example, have been found to experience severe mental health problems in conflict situations. Recent studies in post-conflict Afghanistan found that women had significantly poorer mental health than men and higher levels of post-traumatic stress disorder (PTSD), depression and anxiety [12]. In a population-based study of survivors of the Bam earthquake, those suffering from the most severe psychological distress were found to be the elderly, the less educated, the divorced or widowed, the unemployed and women [13]. Women's particular vulnerability to depression after emergencies may be due to their responsibilities for caring for children, the sick, the elderly, and injured family members, with severe shortages of resources and support. Their vulnerability increases with the loss of male family support due to death, disruption of the social structure and other conflict factors. Integrated communities are essential in protecting the mental well-being of their citizens and in facilitating social support. Iraqi asylum seekers were found to be more likely to be suffering from depression from a lack of social support than from having been subject to torture [14].

"Perhaps the primary impact of war on victims is through their witnessing the destruction of a social world embodying their history, identity, and living values [14]."

What research is needed?

- Sex-disaggregated data on disaster-related mortality, morbidity and long-term health consequences is necessary to shape future emergency responses and prevention.
- At the local level, there needs to be better documentation of: whether perceptions, preparedness and warning responses in disaster relief and vulnerability are influenced by gender-based differences, and how; how gender relations operate in households and communities in a disaster situation and during the relief and recovery phase; how gender roles and gender relations influence coping methods.
- Research is needed both at the local and at national and regional levels on structural processes and factors that increase women's and men's vulnerability in disasters across different social groups.
- More data must be gathered and analysed in relation to gender-based violence in the aftermath of a disaster.
- The role of males as combatants in conflict areas and their subsequent health outcomes needs investigation.
- Evaluation studies of recovery and mitigation programmes are needed to assess the effectiveness of different strategies which incorporate gender equity and social justice into disaster mitigation and reconstruction.

Factors that can positively influence disaster relief programmes and policies

Pre-disaster activities, such as hazard mapping and vulnerability analysis, should integrate gender considerations, including differences in vulnerability to, and the impact of, disasters on women and men, and how their roles and status affect disaster relief and recovery. Community-based disaster preparedness projects and disaster training and educational programmes should include men and women, and address their respective needs and concerns. Information collected through rapid assessments of health status and health needs in disaster situations should be sex disaggregated and include a gender analysis. There should be gender-sensitive evidencebased guidelines, including best practices in response, in addition to gender-sensitive relief tools which both link to and inform future preparedness activities. More information is needed on the specific reproductive and mental health needs of males and females in emergencies, in addition to more information on communicable diseases and malnutrition for men and women.

Basic health-care services provided as part of emergency relief should cater to women's and men's different needs. The Minimum Initial Services Package (MISP) for reproductive health should be implemented and coordinated within disaster relief. Disadvantaged groups, such as men and women with disabilities, should be identified as special-risk populations for disaster relief and recovery services. A gender-sensitive response to the mental health needs of males and females must also form an integral component of relief efforts. Training of emergency managers and health service providers in the specific needs of men and women should be implemented in all organizations and agencies involved in disaster relief. Finally, a gender balance of relief personnel would further ensure that both male and female needs and sensitivities were being appropriately attended to.

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