# Chapter 12 Reproductive and Mental Health during Natural Disaster: Implications and Issues for Women in Developing Nations – A Case Example

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## ABSTRACT

With the ever-increasing number of natural disasters, it is important to understand the impact on the health and wellbeing of survivors, especially women. The reproductive and mental health of women contributes significantly to their overall wellbeing. The Chapter gives an overview of natural disasters with an emphasis on consequences of earthquakes of health and wellbeing of the survivors. It includes a critical review of published studies on psychological trauma and reproductive health following earthquake disasters. Among the psychological consequences of earthquakes, this chapter describes post-traumatic stress disorder, depression and anxiety. The last section of this chapter reviewed reproductive health in relation to the mental health consequences following natural disasters.

#### INTRODUCTION

This chapter covers three main areas. First, it discusses natural disasters and earthquakes in the context of health outcomes. Secondly, it elaborates on the mental health consequences of earthquakes including post-traumatic stress disorder (PTSD), depression and anxiety. Finally, it discusses various aspects of reproductive health, including the relationship between mental health and reproductive health.

# **1.1 Natural Disasters**

Natural disasters such as earthquakes, tsunamis, volcanic eruptions, landslides, hurricanes, floods, wildfires, heat waves and droughts, kill more than 90,000 people and affect around 160 million people worldwide every year (Wisner & Adams, 2002). In the context of public health, disaster definition is DOI: 10.4018/978-1-4666-8702-8.ch012

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based upon its consequences related to health and human services. Noji defines 'disaster' as "the result of a vast ecological breakdown in the relation between humans and their environment, a serious or sudden event (or slow, as in drought) on such a scale that the stricken community needs extraordinary efforts to cope with it, often with outside help or international aid" p. 290 (Noji, 1996). The effects of the natural disasters are not limited only to individuals; rather they affect whole communities and their economic, social, medical and psychological well-being (Erdur, 2004).

Natural disasters can cause massive widespread damage and destruction, fatalities and injuries and severe disruption to families. One aspect of a natural disaster is the physical force that causes damage to buildings, destruction of houses and death of people. Other serious consequences of natural disasters include the negative health outcomes to individuals affected by these disasters. Adverse health outcomes include psychological consequences in the form of mental disorders and negative reproductive health events including abortions, stillbirths and premature deliveries. In other words, extreme disruption and isolation experienced by displaced people can have serious consequences on their mental and reproductive health (Otsea, 1999). For example poor access to safe reproductive health services, lack of contraceptive methods and exposure to sexual violence, may cause physical and psychological trauma, sexually transmitted diseases (STDs) and unwanted pregnancy (Otsea, 1999).

Asia is the most disaster-prone area of the world. During the past 100 years nine of the ten worst disasters occurred in Asia (Udomratn, 2008). Earthquakes are particularly common in the Asian region because East and South-east Asia is situated on the 'Circum-Pacific Seismic Belt' (Kokai, Fujii, Shin-fuku, & Edwards, 2004); Pakistan lies within this belt.

#### 1.2 Earthquakes

Earthquakes are one of the most frequently occurring natural disasters. Throughout the world they affect large numbers of people practically every year. They often strike unexpectedly, threaten lives and cause large scale destruction (Priebe et al., 2010a). Earthquakes have been responsible for 25% of natural disaster related deaths in the last thirty years and 58% of fatalities in the last decade. Fifty-six percent of all earthquakes have occurred in Asia, causing 90% of global earthquake fatalities. Single major earthquake disasters can have a tremendous impact. The ten earthquakes with the largest number killed account for 82% of all earthquake related deaths from 1980 to 2009 (CRED, 2010). In the nine years from 2000-2009, almost half a million people were killed due to earthquakes alone and they affected 82.6 million people in 73 countries (CRED, 2010). Earthquakes of large magnitude pose great risk to those who survive by damaging or destroying the public health infrastructure such as public and private hospitals and clinics in the affected areas (Briggs, 2006).

Based on the number of earthquakes in the last decade, Pakistan is one of the most affected countries. Between the years 2000 and 2009, twenty earthquakes of different magnitudes struck Pakistan. Moreover, in the last nine years, it was one of the three countries with the highest number of people killed due to earthquakes. Overall, in the last eight years, more than 6.2 million people were affected by the devastating effects of earthquakes in Pakistan (CRED, 2010). Most earthquake victims experience psychological trauma in addition to physical deprivation.

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