

The Role of Nurses in Disaster Management in Asia Pacific

Sheila Bonito
Hiroko Minami
Editors



Springer

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Foreword

The Asia-Pacific region, the most disaster-prone region in the world, has at the core of its health workforce nurses and midwives performing essential, foundational and pivotal roles in disaster prevention, mitigation and management. *The Role of Nurses in Disaster Management in Asia Pacific* highlights the contributions of nurses in disaster preparedness and response, through ten illustrative disaster nursing case studies of floods, cyclones or typhoons, earthquakes and tsunamis, as well as infectious disease outbreak preparedness and response. The disasters depicted take place in countries ranging from small Pacific islands, with populations of 105,000 to China, with a population of over 1.3 billion.

Working in a rapidly changing, disaster-prone world, nurses, other health practitioners, volunteers and others may ask: *How can I better prepare for potential disasters? What skills do I need? Who could I work with in the event of a disaster? Who could help to enhance our efforts to help communities respond to disasters?* Readers of the case studies will find answers to these questions and be inspired to take disaster preparedness actions focused on the most vulnerable populations at risk for or impacted by disasters.

This publication is a welcome companion piece to *Nurses and Midwives in Action During Emergencies and Disasters: Case Studies from the Western Pacific Region* (WHO, 2013), contributing to the growing knowledge base of nursing and disaster management. Disaster management concepts, competencies and frameworks presented by the book's editors, Dr. Sheila Bonito and Dr. Hiroko Minami, serve as the unifying context for the case studies. The conceptual framework (APEDNN, 2011) of the Asia Pacific Emergency and Disaster Nursing Network (APEDNN) is represented in the case studies by contextual assessments of disaster events; interventions, including provision of essential public health services; policy changes; and collaboration, all aimed at building the resilience of affected families and communities.

The case studies describe situations in which nurses respond to disasters affecting remote outer island, rural and urban residents in temporary housing, as well as other populations in disaster-prone areas. The competencies applied cross all phases of the disaster management continuum—from mitigation and preparedness to response and recovery. Multiple essential public health disaster competencies are illustrated, from Ebola response infection control preparedness training to family and field community assessments targeting water, sanitation and hygiene, as well as

counselling and health education focused on enhanced self-management of chronic conditions. Family and community engagement serve as cornerstones of response efforts described.

Collaboration, partnerships, teamwork, policy change, inclusiveness as well as shared expertise are some of the many leadership principles exemplified by the case studies. Cross-border collaborative research between the Nursing Association of Nepal (NAN) and the Philippines and Japan enabled the adoption and use of an electronic health information system to support communication, data collection and research following the 2015 Nepal earthquake. The benefits of university partnerships within and across borders are clearly shown in the case studies of Japan and China. The essential roles played by national nursing associations are illustrated in the Nepal and Philippines case studies. Policies underpinning the integration of national nursing associations and Ministry of Health nursing leaders in national disaster response committees or clusters are evident in the Solomon Islands and Philippines case studies. The China and South Korea case studies highlight the vital roles played by military nurses and military nursing academies in disaster preparedness and response.

The Role of Nurses in Disaster Management in Asia Pacific, an important publication, expands, enhances and disseminates knowledge in the field of disaster nursing. Future publications which could further expand the evidence base for disaster management decision- and policy-making might include outcomes of nursing interventions, preventive community vulnerability and risk assessments as well as mechanisms and outcomes of interdisciplinary and cross-sector partnerships.

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1.1 The Asia Pacific Region and Natural Disasters

The Asia Pacific region (see Fig. 1.1) is the world's most disaster-prone region in terms of natural disasters (UN-ESCAP 2015). Countries in Southeast Asia are located in the “Pacific Ring of Fire” that causes devastating earthquakes and volcanic eruptions and/or lies in the path of strong tropical cyclones or super typhoons. East Asia has the greatest concentration of exposed economic assets to tropical storms, floods, earthquakes, and threats of emerging infections. There are high seismic and flood risks in South and Southwest Asia. Small islands in the Pacific are vulnerable to typhoons, floods, earthquakes, and tsunamis.

In the last decade (2005–2015), Asia Pacific has experienced 1731 natural disasters, 39% of natural disasters that occurred globally. These resulted in 444,761 deaths, representing more than half (53%) of the total global deaths related to natural disasters. These also affected 1.5 billion people in the Asia Pacific, roughly 82% of people affected by natural disasters globally. More than half (52%) of total damage due to natural disasters also occurred in the Asia Pacific region. These statistics show why Asia Pacific has been called the epicenter of disaster (see Fig. 1.2).

Out of these natural disasters, 42% was due to floods, 29% tropical storms, and 10% earthquakes (see Fig. 1.3). The highest number of people killed was due to earthquakes and tsunamis (208,195 deaths) and tropical storms (168,526 deaths). The largest number of people affected was in floods (796M) and tropical storms (333M). The costliest were earthquakes (USD 371B), floods (USD 220B), and tropical storms (USD127B) (EM-DAT 2016).

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Fig. 1.1 Map of the Asia Pacific region

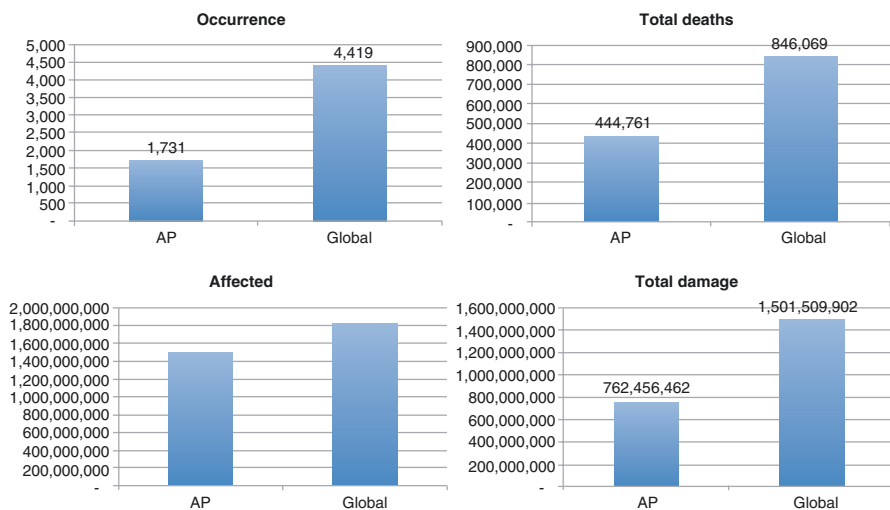


Fig. 1.2 Occurrence and impacts of natural disasters in Asia Pacific and the world (2005–2015)
(Data source: EM-DAT: The OFDA/CRED International Disaster Database [2016](#))

Within this period, the region has experienced overwhelming natural disasters that challenged the health systems of upper-middle and high-income countries like Australia, China, Japan, and South Korea and slowed down the development of low- and lower-middle-income countries like Cambodia, Indonesia, Nepal, Philippines,

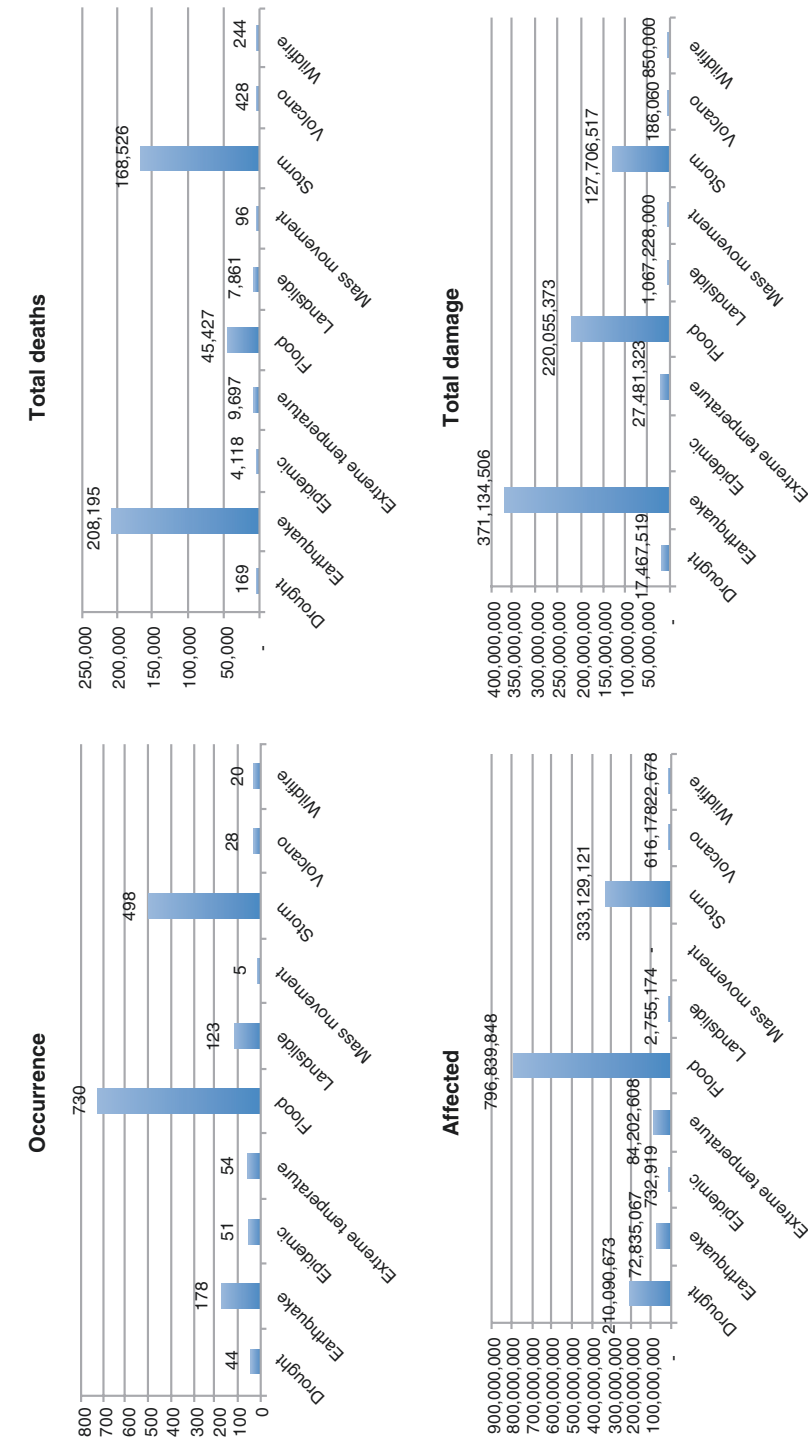


Fig. 1.3 Distribution of natural disasters in Asia Pacific (2005–2015)