

## Physiotherapy in Disaster Management: Physiotherapist View

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**Abstracts:** Background: A disaster is a sudden, calamitous event that disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources. Disasters result immediate, significant loss of life and long-term physical impairments such as spinal cord injuries (SCI), traumatic brain injuries (TBI), amputations, fractures, and peripheral nerve injuries; related mental health conditions including situational anxiety and post-traumatic stress disorder occur concomitantly. The principal non-governmental organizations (NGOs) providing disaster relief do not include physiotherapists as part of their healthcare teams. Also after literature review it was found that there are limited studies which shows role of physiotherapy in disaster management. Objective: To find role of physiotherapy in Disaster management. Methods: Descriptive study, included physiotherapists involved in disaster. Semi structured Questionnaire was used. Results: 10 participants were involved and the results suggest there is role of physiotherapists in different phase of disaster management. Interpretations: There is role of physiotherapist in disaster management but Physiotherapists are also not involved in disaster management by govt. organizations. Conclusion: There is significant role of physiotherapists in different phase of disaster management. [Navjyot T NJIRM 2017; 8(4):32-34]

**Key Words:** Disaster, Physiotherapists, Phase of disaster, Rehabilitation

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**Introduction:** A disaster is a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources. Though often caused by nature, disasters can have **human origins**. A disaster occurs when a hazard impacts on vulnerable people. There are mainly two types of disaster, natural and manmade disaster.<sup>1</sup>

Large-scale natural disasters result in significant numbers of disabling impairments, including spinal cord injuries (SCI), traumatic brain injuries (TBI), limb amputations, long bone fractures and peripheral nerve injuries. Moreover, disasters generally occur in low-resourced regions where disaster response plans do not include strategies for physical rehabilitation or specifically account for persons with new or pre-existing disabilities. The limited pre-disaster health and rehabilitation service infrastructure is quickly overwhelmed, necessitating a multidisciplinary, international humanitarian response. Notwithstanding the lack of host rehabilitation resources, international rehabilitation disaster relief efforts are extremely challenging. As an expert in disability and functioning, and with training in the diagnosis and treatment of general health conditions, the physical and rehabilitation medicine (PRM) physician can perform a critical role in integrating the field medical team's rehabilitation efforts following a disaster.<sup>2</sup>

After a brief investigation, it was discovered that many of the principal non-governmental organizations (NGOs) providing disaster relief do not include physiotherapists as part of their healthcare teams. The question "is there a role for physiotherapists in emergency disaster responses, and if so, what is this role?" arose.<sup>3</sup> Waldrop reported on interviews with physiotherapists who had been involved in the response following several disasters in the United States. Although participants provided a variety of physiotherapy treatments, the lack of a clearly defined role for physiotherapists meant that disaster response organizers and therapists did not know how to use their skills to provide maximum effect.<sup>4</sup> A 2004 guide, produced by the US Public Health Service's Office of Emergency Readiness, provides what may be the most comprehensive description of the role of physiotherapists in disaster response. Physiotherapists employed by the armed forces in the UK and US are trained and prepared to support the military during disasters. In this context, they may play a primary role in triage, treating acute orthopaedic trauma, and wound care, as well as respiratory care in critical and ward settings. Grissom and Farmer noted the inclusion of are respiratory therapist in the US Army's mobile critical care unit, and state that critical care in disasters should be provided by the same personnel using the same protocols routinely used in non-disaster situations. The same principle could be used to justify the involvement of physiotherapists in the treatment of many types of casualties commonly seen

in disaster, including respiratory complaints, burns and critical cases, and orthopaedic and musculoskeletal injuries.<sup>5</sup>

In summary, more of a potential role than an actual one for physiotherapists in disaster response is described in the literature. At a time when new roles are developing in disaster response,<sup>6</sup> action and further research are required if physiotherapists are to become involved. The majority of reviewed literature related to the provision of disaster care by the governments of relatively wealthy, developed countries. Therefore, it is not necessarily possible to relate their findings to disaster response by NGOs or in developing countries. Literature on disaster suggested finding actual role of the Physiotherapy in Management. The research question is what was and what is present role of physiotherapists in Disaster management?

**Methods:** The study was done as a part of PhD thesis. The study has ethical approval from Hospital ethical committee 'Shree Giriraj Hospital Research Ethical Committee'.

This study was Descriptive study. CTRI number CTRI/2016/03/006748

The population was physiotherapists who have participated in Disaster management. The inclusion criteria were Physiotherapists, some participations in disaster management, undergone a training of disaster management, voluntary participation. Exclusion criteria were those physiotherapists not participated in any phase of disaster management and not willing to participate.

Semi structure questionnaire obtain from previous studies<sup>1</sup> and was modified to suit the objectives of the study. The validation of modified questionnaire was carried out by pilot study and reviews from experienced therapists. The questionnaire included closed ended questions. The questionnaire was mailed to participants and also method like the personal interview and telephonic interview was done to fill the questionnaire.

**Result:** Researchers could get 10 participants for the study. 6 participants have filled semi structure questionnaire and 4 participants did telephonic interview for the study.

All participants have participated in Natural disaster. They participated as volunteer in Tsunami in south India in 2004 and Earthquake in Western India in 2001. 7 participants had done post-graduation in physiotherapy and rest 3 had done graduation.

The results were found from the studies were divided in following groups.

Generally the Physiotherapists who were participant were from different places in India.

Most of them had worked in Disaster management on some special assignment but were not employed by government or NGO.

**Role in Preparation Phase:** None of physiotherapist who worked in Disaster had been a part of preparation phase of disaster management.

**Role in Response Stage:** Their work was helping the Doctors and Nurses. They were cleaning wound, Dressing and first aid to the victims. Physiotherapists also helped them in assessment of injury and doing first referral to Orthopaedic surgeons. Two of them gave breathing exercises to reduce work of breathing. Teaching the patient ambulation and walking aids. Taking care of the patients with Spinal cord injury, Amputation other injuries. Preparing the assessment and planning physiotherapy treatment. Taking care of already disable persons before Disaster.

**Role in Recovery:** Two of Physiotherapists are still working in Recovery stage. They are treating and rehabilitating patients with SCI, Amputation and other multiple injuries. Preparing patient for their occupation. Have helping them to regain independent mobility.

**Other role:** One of them said "I was finance coordinator and my job was to distribute finances as per need of NGOs" Whereas other said "I was sending and doing food and accommodation arrangement for PG students and Doctors"

**Discussion:** During disasters, healthcare providers often are compromised, and all of the participants found themselves involved in different ways in the organizational effort required to provide health

services. The participants' use of their managerial skills shows their ability to be an effective part of the large amount of logistical and organizational work required in any disaster response. Participants also found creative ways to deal with the emotionally traumatized, an inevitable consequence of disasters and something worth considering in future planning. Although not acting within a clearly defined role, the participants' experiences showed that physiotherapist's skills can be utilized in a variety of roles within disaster response. Physiotherapists should be involved in all their normal areas of work before and after a disaster, a view shared by Grissom and Farmer. From the results of this investigation, it seems that there would be multiple roles for physiotherapists in disaster relief. Physiotherapists have unique skills to contribute to the area of disaster response, as noted by the participants. The main strengths of physiotherapy were believed to be the functional focus of the profession and the ability to carry out thorough, musculoskeletal examinations, often with limited resources. Waldrop cites a physiotherapist who believed that there is no consideration of physiotherapists' role during disasters. There are new roles opening up in disaster response, but it seems to be up to physiotherapy as a profession to be its own advocate, starting with individual awareness. The implication for the profession as a whole is that the need for further training, as identified here and in the literature, must be recognized and addressed, and experience must be shared. Also the result from the participant says that physiotherapist now should work for global health and disaster management should be important part of their course. Some views from participant also make physiotherapist as team leader was not supported by any published review.

**Conclusion:** The results of this study indicate that although it may not be accepted widely, there has been and is a potential role for physiotherapists in disaster management. Physiotherapists have participated in disaster response with some success, but in ill-defined roles, possibly limiting their effectiveness in the field. Several unique areas of skill were found to be offered by physiotherapists, including those of assessing and treating casualties with acute injuries, preventing injury among rescue workers, and possibly preventing or lessening the burden of chronic dysfunction amongst patients after the emergency phase, finance coordinator, team

leader etc. In addition, it has been noted that the focus of disaster response programs primarily is medical, and that physiotherapists potentially could relieve some of the workload of the medics by attending to selected patients, as well as possibly adding a more functional and holistic balance. These findings have implications for responsible organizations in terms of employing skilled physiotherapists with the necessary experience to improve disaster response. Equally, however, responsibility must lie with physiotherapists themselves in raising awareness within the profession of disaster response and considering new ways of working which must be flexible and incorporate multiple areas of skill.

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