

Disaster Relief Workers: Health Issues

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Abstract

Introduction: Disaster is defined as any occurrence that causes damage, ecological disruption, loss of human life or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area. Internationally, major disasters occur frequently, but for one country, they are unusual events. It causes severe health damage to that country. In this scenario, our rescue teams/ relief workers risk their own lives to save the life of others.

Methods: The concerned topic was searched on internet in different databases with abstract or full free text available in English in previous five years.

Results: This group is more vulnerable than general population to various accidents even death in relief process and also health problems such as post traumatic stress disorder, mental health risks, heat disorder, radiation exposure, respiratory problems, skin and mucous membrane problems, digestive problems, eye irritation and fatigue etc. In developed countries, their problems are dealt with great zeal, but unfortunately, in our country, we fail to address the health issue of these workers in spite of having the most important role in disaster management by providing physical and rehabilitative services to survivors. It has been proven that work output of these workers is enhanced if their health issues are taken care of properly.

Discussion: We want to acknowledge the health concerns of rescue teams with possible solutions.

Keywords: Disaster, rescue/ relief workers, post traumatic disorder, rehabilitation.

Introduction

India is vulnerable in varying degrees to a larger number of disasters. More than 58.6% of landmass is prone to earthquakes of moderate to very high intensity, over 40 million hectares (12%) of its land is prone to floods and river erosion, close to 5700 kms out of the 7516 kms long coastline is prone to cyclones and tsunamis, 68% of its cultivable area is vulnerable to droughts, and its hilly areas are at risk from landslides and avalanches. Moreover, India is also vulnerable to chemical, biological, radiological and nuclear (CBRN) emergencies, and other manmade disasters.¹

Disaster is defined as “any occurrence that causes

damage, ecological disruption, loss of human life or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area”.² As we can see from the definition, that response from outside is required, so here comes the role of disaster relief/ rescue workers who work day and night neglecting their own health to provide rescue services to the disaster affected population. They include National and State disaster response forces (NDRF, SDRF), Military forces, Paramilitary forces, Disaster medical assistance teams, Red Cross volunteers, and Nurses or local volunteers. Internationally, major disasters occur frequently but for one country they

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are unusual events. All residents of that country in their own capabilities try to help the victims. Government of that country also utilizes its whole manpower to deal with the disastrous situation so as to save the life of its citizens, but in the midst of all these, we all miss one vulnerable group which also requires attention and that is disaster relief/rescue workers. We in this article want to address the reasons for their vulnerability, their health issues, importance of addressing them and ways to tackle them.

Pub Med and Google scholar were consulted. The search only included articles published in English in previous 5 years. Key words involved were disaster, rescue/ relief workers, post traumatic disorder, rehabilitation etc. Articles were selected by reading titles and abstracts.

Why Vulnerable?

Disaster relief workers are vulnerable to different health problems because of many reasons. They deal with the disastrous situations very often where their occupational routine includes the provision of emergency medical assistance to severely injured people, searching for and recovering victims from life threatening situations which expose them to dust, chemicals, toxic fumes, radiations etc. They suffer greatest exposure to the injured, the dying and the dead, human remains (many from their own colleagues) and potential life threatening situations.³ They work day and night for long hours without any rest.⁴ Their job requires intense emotional demands because they have to deal with the bereaved and angry family members. Another reason of their vulnerability is the lack of training and medical care. An Australian study reported that only 27% of rescue workers felt that existing training programs had adequately prepared them for deployment, only 42% and 15% received medical checkup and psychological assessment prior to deployment respectively.^{5,6} Along with these, extreme weather conditions, hunger, sleep deprivation, and fatigue not only reduce their functional capacity but also make them susceptible to various health problems.

Health Problems among Disaster Relief Workers

a) During disaster: They suffer from skin and mucous membrane problems (50%), respiratory symptoms (38%), digestive (29%) and nervous symptoms (22%).⁷ On 11th March, 2011, the Great East Japan earthquake and Tsunami that followed caused severe damage along the coastline and

damage to the Fukushima Daiichi nuclear power plant, which resulted in radiation exposure to the relief workers⁸ and heat disorders which usually occur in 45-60 years of age occurred at the age of 30-40 years in them⁹. Three studies quoted that workers involved in rescue, recovery and cleanup operations during World Trade Centre collapse were exposed to large fumes of dust, pulverized materials, and products of combustion resulting in various respiratory symptoms like asthma (27.6%), sinusitis (42.3%) and decline in lung functions.^{10,11,12} The Carmel cohort study reported 77% eye irritation, 71% fatigue, 60% cough, 53% headache, 47% runny nose, 27% shortness of breath, 22% wheezing and 19% chest pain.⁴ Along with these health issues, their occupation endangers their lives. 44 rescue workers lost their lives in the Carmel forest fire in Israel.⁴

b) After coming back: Most important health issue post deployment is the mental health, out of which post traumatic stress disorder (up to 40%) is the commonest, followed by depression, anxiety and panic disorder.^{3,7,12-21} One study pooled the worldwide current prevalence of post traumatic stress disorder among all types of disaster rescue workers which is much higher than the general population and it is reported to be 10%.¹³ Rescue, recovery, rehabilitative and restorative work makes them stressful and that leads to mental health issues in them. Fatigue is also very common post deployment.

Situation of Rescue Workers in India

Nature causes havoc frequently in India resulting in a long list of large scale disasters like J & K floods 2014, Uttarakhand floods 2013, Kosi floods 2008, Gujarat earthquake 2001 etc. Our rescue workers are always in front to save people as reported in Times of India on 25th October 2014- "Between life and death they extend a helping hand". There are various studies on victims of disasters in India and they are completely taken care of, but rescue workers who are our life saviors are not given any importance, as we are not able to find any study on disaster relief workers. In developed countries, their problems are dealt with great zeal, but unfortunately, in our country, we fail to address the health issues of these workers in spite of having the most important role in disaster management by providing physical and rehabilitative services to the survivors. Guidelines are formed by NDMA¹ for both natural and manmade disasters as well as for training of workers, but no study exists in India to tell about the implementation status of these guidelines and to what level workers are satisfied

with their training. NDRF consists of 10 battalions of Central Armed Police Force. Each battalion provides 18 self contained specialist search and rescue teams of 45 personnel each, including engineers, technicians, electricians, dog squads, medics and paramedics accounting for a total of 8100. But as per NDMA, only 6021 workers have received training for natural disasters, 3456 workers have acquired CBRN training, 4200 are heli-borne trained, 5720 are trained for water rescue and 61 are foreign trained.¹ There is no provision of post deployment health camps for rescue workers, unlike United States, where their health issues are dealt with there and then only. NDMA has guidelines and indicators of psychosocial support and mental health services (PSSMHS) for disasters but only with the objective of improved psychosocial well being of affected population, and not for disaster relief workers.¹

Ways to Tackle their Health Issues^{3,5,6,14,22-26}

As first responders, relief personnel even without prior disaster education, proceed to the area of disaster and may get injured. So networking, education and disaster awareness should be advocated among these workers. Attention should be given to their basic needs like food, shelter, hygiene etc. There should be medical and psychological support for team members. Another issue to handle is communication with their family members because they also suffer from work-family conflict which leads to stress. Training should include the practical aspects of deployment. Organizational support, pre & post deployment medical checkup, psychological counseling after coming back, good team functioning are recognized to be important factors for health of these workers as they give them strength to cope up with the situations and they can resume their work early with good functional output.

Conclusion

Health support for disaster victims is of highest priority, however, the health of relief personnel who act as frontline workers has often been neglected. Now it's high time to attract attention towards the health issues of rescue workers as they are our life saviors.

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