

RESEARCH

Stress among community level workers working in disasters

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Abstract

Background: After any disaster, thousands of community level workers (CLWs) from Government organisations and non-government organisations (NGOs) are involved in the rescue, relief, rehabilitation and rebuilding of the disaster affected population. However, the exposure to traumatic stimuli and the demands of work can cause workers to show signs of emotional and psychological strain. So there is a need to understand the CLWs' stress at various dimensions.

Materials and methods: The main objectives of the study are to describe the job stress and time spent on social life of the CLWs who are working in the disaster affected areas. The study was conducted among 68 health workers who were working in all the 33 tsunami affected villages of Kanniyakumari District of Tamil Nadu during the period of January-March 2006. The instruments used were family schedule, burnout inventory to describe the job stress of the health workers, and time analysis chart developed based on one's routine work in a usual week.

Results: Majority of the CLWs (57%) were in 41–50 years age group. The most reported items in the questionnaire were headaches at work, feel moody, restless or depressed at work, feel discouraged, work harder and enjoy it less, get irritated with the demands of the people. The time spent at work was comparatively more than other spheres of life.

Conclusion: Stress among CLWs working with the survivors of disaster is one of the important factors to be addressed that has a direct implication on the effective implementation of the disaster relief and rehabilitation services in the community.

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Background

After any disaster, thousands of community level workers (CLWs) from Government organisations and non-government organisations (NGOs) are involved in the rescue, relief, rehabilitation and rebuilding of the disaster affected population. The CLWs include health workers, anganwadi workers, school teachers, NGO volunteers, panchayat leaders, village leaders, whoever is directly in touch with the affected community. In the process of providing support to the disaster affected population, the CLWs who are the primary caregivers are in to severe stress due to various demands from personal, professional as well as familial commitments.

CLWs in disaster work are normal persons who generally function quite well under the responsibility and stresses of their jobs. However, the exposure to traumatic stimuli and the demands of work can cause workers to show signs of emotional and psychological strain.[1,2] The type of work, heavy workloads, long working hours, pressure to accomplish the difficult task quickly in an unfriendly

environment, make them vulnerable to stress. Involvement of CLWs in providing rehabilitation helps to give a long term support for the survivors of disaster. Also, it helps to identify the psychosocial issues as early as possible and provide interventions effectively. But workers' prolonged contact with the victims, who have been severely traumatised by disaster, may lead to the trauma vicariously. It should also be noted that not all will react in a same way.[3]

Tsunami was a catastrophe that resulted in wide loss to life and property.[4] It is not often that 'disaster planning and training' deals with workers' difficulties. Thus, there is a need to address the stress of the CLWs working with the survivors of tsunami. This study is an effort to identify the job stress, and the social life of the Village Health Nurses (VHNs) working in the tsunami affected areas. The findings would give a scope to address the difficulties of the CLWs through various interventions.

Review of literature

The frequent occurrences of disasters, both human made and natural, have accelerated the need to provide care to the workers, who deal with the disaster situation. Few people like disaster workers, emergency workers etc., beside the family members of the victims, have experienced the events of the disaster.

The range of symptoms of stress, both in quality and quantity is very impressive. Byl and Sykes[5] reported fatigue, dizziness and anxiety in stressed workers. Sedgwick[6] found withdrawal, somatic complaints, decreased ability to think, increased distractibility. Rigidity and inflexibility were reported by Lazarus.[7] Lippert and Ferrara[8] reported similar symptoms in emergency personnel and police. The repeated exposures to the disaster events also make the workers dysfunctional, decreased activity level, aimless wandering and apathy.[9] The suppression of emotional symptoms during the emergency may be later transformed in to nightmares, flash backs, and other maladaptive techniques such as outbursts.[10-12] Freeman[13] stated that these symptoms can occur long after the disaster.

There are organisational stressors that can occur due to the nature of emergency organisation or the agency. Among these are stress due to professional vs. volunteer organisations, day to day vs. disaster responsibility,[14] role clarity and role conflict,[15] the size of the organisation,[16,17] chain of command, organisational conflict and rewards.

In India, the National Institute of Mental Health and Neurosciences (NIMHANS) has been at the forefront studying the psychological consequences of disasters and interventions systematically.[1,18] Workers in all phases of disaster work expose themselves to unprecedented demands in their desire to meet the needs of the affected, at least in the immediate post-impact period. The psychological distress is mostly found in anecdotal reports,[19] and portrays the job-related stress, partially because of resistance from the disaster workers. Efforts to predict and control disaster-induced trauma are severely hampered by lack of a construct for analysing and assessing events that may adversely affect the ability to perform their occupational roles.

Despite the considerable body of knowledge regarding stress, there has been no reliable and valid method for directly measuring stress in CLWs deployed during specific disasters. As Murthy[20] puts it, "India is a repository of disasters, both past and future," which warrants a systematic study to see the needs and level of stress faced by disaster workers and develop a package that deals with their stress at their personal, family and work front. The integration of

these results would help in developing a more comprehensive and improved programme of stress recognition and management for disaster workers.

Methodology

The main objectives of the study are to describe the job stress, time spent on social life of the CLWs who are working in the disaster affected areas. Kanniyakumari district is one among the tsunami affected districts in Tamil Nadu. In the 33 villages affected by tsunami, there are 70 VHNs working in nine Primary Health Centres (PHCs) that cover the 33 affected villages. Out of 70 VHNs, 68 were available during the study period from January to March 2006. The tools used were:

Family schedule[21] to profile details of health workers

Family schedule was developed by Indian Council for Medical Research (ICMR), Centre for Advanced Research in Community Mental Health (CAR-CMH), NIMHANS to study the demographic details of the persons in a PHC geographical area. Family schedule includes both personal details and household details. Individual variables consist of age, sex, marital status, education and occupation. The household variables are name of the settlement, religion, family type, family size and total family income. This family schedule was used by ICMR-CAR-CMH in various studies related to the community mental health to study the demographic details of the subjects.

Burnout inventory[22] to describe the job stress of health workers

The inventory consists of 25 items on a five point scale. It is a self-administered inventory. It talks about the physical, psychological and behavioural consequences of job stress. Higher the score, higher is the burnout. This inventory also helps to identify the type of specific reactions due to burnout and the higher frequency of the reactions among the respondents. The reliability and validity of the inventory is well established. The reliability coefficients were: Cronbach's alpha = .86, split-half = .57 and odd-even = .92.

Time analysis chart[23] developed based on one's routine work in a usual week

The chart consists of boxes for seven days and 24 hours a day, a total of 168 boxes. The respondents have to fill the boxes based on the time they spend on four areas that include personal, family, work and social activities. This chart was widely used during the training programmes for the caregivers of tsunami survivors to understand the amount of time spent on each dimension, so as to compare the results of the other stress related scales in relation to more or less number of hours spent in each dimension.

Results

Table 1 describes the personal profile of the respondents which shows all the health workers are females and the majority (57.1%) is Christian. The educational qualification of 83.9% of the respondents is SSLC and the majority of the respondents' (64.3%) individual income is below Rs. 5000 per month.

Table 1. Personal profile of the respondents			
Sl. No.	Demographic details	Category	Percentage
1	Sex	Female	100
2	Age	30-40 years	25
		41-50 years	57.1
		Above 50 years	17.9
3	Religion	Christian	57.1
		Hindu	42.9
4	Education	SSLC	83.9
		PUC	3.6
		Degree	3.6
		Post graduation	8.9
5	Family Income	< Rs. 5000	39.3
		Rs. 5001 - 10000	39.3
		Rs. 10001 - 15000	17.9
		Rs. 15001 - 20000	3.6
6	Individual Income	< Rs. 5000	64.3
		Rs. 5001 - 10000	35.7

Figure 1 shows that the work experience of the majority of the health workers is above 15 years. Very few respondents (7.1%) are having less than five years of experience.

Figure 2 describes the severity of the job stress experienced by the respondents. Every one of the respondents reported that they experience stress at different levels of severity. Forty per cent of them were having moderate level of job stress due to multiple tasks they had to undertake.

Table 2 describes the stress reactions reported by most of the respondents using the burnout inventory. Though there are 25 such items in the scale, the table describes the items reported positively (merging different levels of severity of stress against no stress) by most (minimum of 50%) of the respondents. Reactions like headache (77.8%),

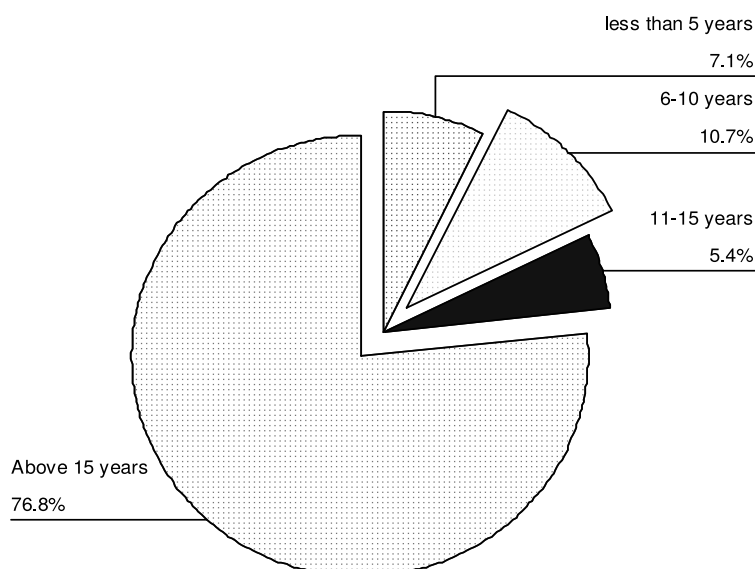


Figure 1 Work experience of the respondents.

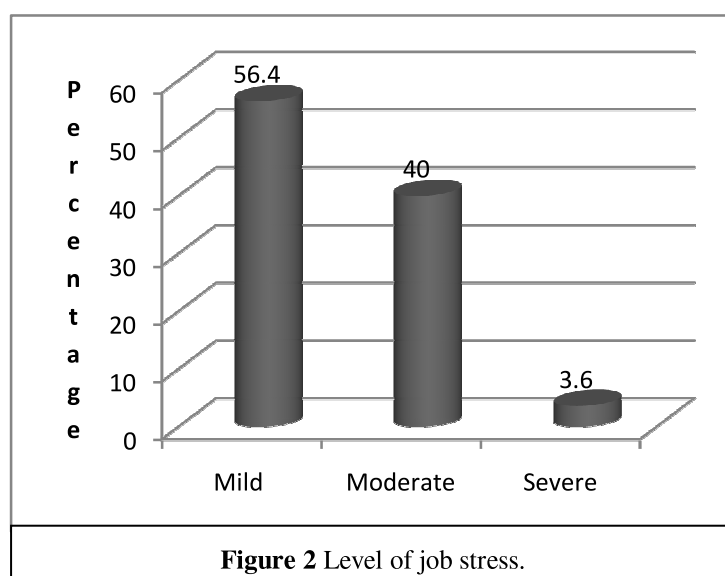


Figure 2 Level of job stress.

feeling discouraged (70.4%), getting irritated with the demands of the people (68.6%), getting upset about the way things are going at work (94.4%), and getting tired and drowsy at work (76%) were predominantly seen among the respondents, out of twenty five reactions given in the burnout inventory. The frequency of the reactions present for the respondents differed from sometimes to always.

Figure 3 describes the amount of time the respondents spend in a week for different responsibilities. It shows that on an average they spend 60 hours for work life, 49 hours for family life, 52 hours for personal life and only 7 hours for social life. It explains that the respondents spend very little time for social activities.

Table 3 shows the correlation between the number of hours spent in each sphere of life (work, family, social and personal) and the level of job stress. There is a significant negative correlation ($r = -0.338$, $p < 0.05$) between time spent on work and personal life, significant negative correlation (r

= -0.279, $p < 0.01$) between time spent on family life and job stress, which also shows that the lesser time spent in family would lead to increased job stress and vice versa.

Discussion

The findings of the study describe the stress level at workplace and the amount of time spent for the social life by the health workers working in the disaster affected areas. The demographic detail shows that the health workers, being women, face lots of stress as they are vulnerable to any type of disaster. This also shows that not only the survivors but also the caregivers face stress at different dimensions. This supports the fact that

Table 2. Reactions due to job stress among workers			
Sl. No.	Stress Reactions	Present	Absent
1	Headaches at work	77.8%	22.2%
2	Feel moody, restless or depressed at work	68.5%	31.5%
3	Feel discouraged, work harder and enjoy it less	70.4%	29.6%
4	I get irritated with the demands of the people	68.6%	31.4%
5	I am making more mistakes or I am forgettable	70.4%	29.6%
6	Gets upset about the way things are going at work	94.4%	5.6%
7	Gets tired and drowsy at work	76.0%	24.0%
8	I miss work due to illness, cold and flu	72.3%	27.7%
9	I am having trouble sleeping	50.0%	50.0%

Table 3. Correlation among outcome variables					
	Work	Family	Social	Personal	Job stress
Work	1				
Family	-.118	1			
Social	-.037	-.195	1		
Personal	-.338*	-.841**	-.039	1	
Job stress	.027	-.279*	.247	.187	1

*Correlation is significant at the 0.05 level (2-tailed),

**Correlation is significant at the 0.01 level (2-tailed)

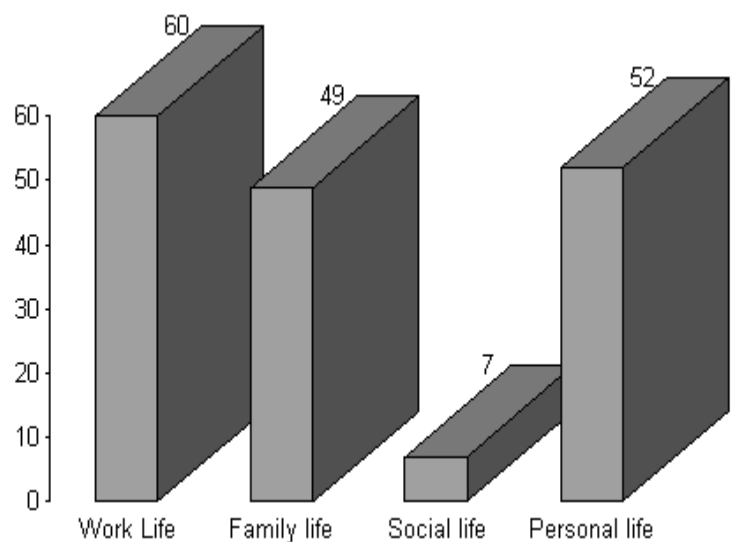


Figure 2 Time analysis.

the exposure to traumatic stimuli and the demands of work can cause workers to show signs of emotional and psychological strain.[1,2]

Stress has both mental and physiological components.[24] Stress can cause disorders in both mind and body.[24] The stress reactions like headaches, irritation, getting upset easily, not enjoying the work etc. is being reported in other disaster situations like symptoms including nightmares, insomnia, depression, marital discord, job dissatisfaction, irritability, unusual fatigue, anxiety, gastrointestinal upset, migraine and amnesia long after the event has passed.[13,25-30]

Change in working procedure, working in new culture, language, climate, unfamiliarity with new roles, inadequate community support, long working hours, acceptance of the community, magnitude of the disaster and the local political pressure can create additional stress for the worker,[31] which is again shown in this study that long working hours lead to inadequate care for the family members. Though the number of stressful life events is not very high, the stressful life events like loans, illness of the family members that are present, would again increase the stress level because of not spending adequate time for the family.

After any disaster, the relief and rehabilitation workers would be in full swing in helping the affected people. Many times workers reported to be caught between the dilemma of whether to help the very needy or to do the routine duty.[32] This would make the caregivers to spend very little quality time for their personal and social life. Though the study shows that they spend an average of 52 hours per week for their personal needs, most of the time, it would be for sleep and food, and not for recreational and relaxation activities. Also the number of hours they spend for social activities like attending functions, marriages, visiting friends or relatives etc. is as low as seven hours per week. This again blocks their way to relieve their stress.

It is well understood that the stress at work life due to various reasons like not understanding the roles and responsibilities, heavy workload etc., and the lack of social activities and proper time management are interlinked, and the stress at one level causes stress at the other level, and this would be more during disaster situations. People usually use two kinds of coping strategies - positive or negative.[24] The lack of positive coping strategies would lead to the increase in the distress level and decrease in the functionality of the workers. Coping with the stress is an art.[24]

The distress and disability of the workers not only affect their work performance in long run which would drastically affect the health services for the affected people, but also their family and personal well-being. The instruments used to understand the level of stress had even helped the respondents to introspect in to their own stressful situations.

Implications of the study

The study implies that there are many stressful situations at workplace, family and personal life for those who are involved in the disaster relief work, and it also implies that all the concerns should be addressed simultaneously. The care for the caregivers is an essential part of the disaster management programme to provide long term care for the survivors of disaster. Most of the difficulties of the intervention workers are not addressed. So interventions for the intervention workers are very essential, and it has to be essential part of any disaster management programmes.

Regular debriefing meetings should be arranged along with the usual review meetings to address the personal and professional difficulties of the workers. Staff, thus found with more difficulties, should be paid more attention in terms of providing psychological support by the organisation. Continuous and heavy workload should be avoided, and rather a work with a proper plan and periodic rest would improve the output of the workers which would also help in maintaining their physical and psychological well-being.

The mental health professionals' role and scope in the area of providing care for caregivers is enormous in terms of providing stress management programmes, understanding the various psychosocial issues of the workers which would pave way for the sustainable development of the organisations working in disaster management.

Conclusion

Stress among community level workers working with the survivors of disaster is one of the important factors to be addressed that has a direct implication on the effective implementation of the disaster relief and rehabilitation

services in the community. Thus, equal importance needs to be given to the care for caregivers during the rebuilding of the disaster affected community. Also, at the policy level, mental health professionals should lobby for the inclusion of disaster management and stress management in the curriculum which would help the students to have a better understanding in the area of disaster and their role in providing care for the caregivers.

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