



EFFECTIVENESS OF COMMUNITY CHANGE AGENTS ON SKILL REGARDING DISASTER PREPAREDNESS AMONG WOMEN RESIDING AT SELECTED COASTAL AREAS OF THIRUKAZHUKUNDRAM, KANCHEEPURAM DISTRICT

Nursing

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ABSTRACT

Aim & Objective: To assess the effectiveness of community change agents on skill regarding disaster preparedness among women. **Methodology:** Researcher adopted a quasi experimental research design for the study. 414 women (experimental-206 & control-208) who fulfilled inclusion criteria were selected by using non probability convenient sampling technique. Researcher obtained written Informed consent from the community change agents and women. Researcher chosen the community change agents and gave training regarding CPR skills. Similar training was given to the women regarding home disaster preparedness through the community change agents. Data was collected using an observational checklist. **Results:** The study findings showed that the post test mean skill score of experimental and control group women was 15.35 with SD of 1.70 and 5.34 with SD of 6.27 respectively. Women in experimental group had gained 90.3% of skill score, whereas control group had gained 31.4% of skill score. **Conclusion:** The study concluded that active participation of community change agents and reinforcement of disaster related education and training is extremely essential for the women living in coastal villages, at regular intervals in order to maintain the sustainability of disaster preparedness measures.

KEYWORDS

Community change agents, CPR skill, disaster preparedness.

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 it can even have human origins. (Federal Emergency Management Agency, 2013)

Due to many reasons, women are subjected to number of secondary disasters, which arise from the indirect impact from events like violence, trauma, pressure to marry early, loss or reduction in educational opportunities and an increased work load. These events make the women to end up in 'double disasters' and also in more intangible impacts, which may arise from the "Real Disasters" for "Girls and Women". (Marren Fordham, Sarah Broadshaw, 2013)

Natural Disaster emergencies cannot be prevented but can be controlled. Disaster preparedness is one of the most important elements, that has all the measures, that ensures that resources necessary to carry out an effective response, available before any disaster. In any natural disaster, women and children are the most vulnerable population. They are the first responders, in any kind of natural disasters, which necessitates the need for the importance of equipping the women with disaster preparedness.

The human and economic loss resulting from disasters have made the community and nation to think of strategies, for mitigating risk and the related vulnerability associated with it. The survival techniques after a disaster should be thought of and planned well in advance to minimize losses, both human and material. It is imperative for the citizens, to be prepared at various levels, including families, health-care employees and community organizations, to come up with a successful response during disastrous events.

In the local context, women being the first responders in any natural disasters. This study attempts to demonstrate the importance of equipping the women with disaster related education and move forward in bringing the positive attitude and in empowering them with the required skills to form a societal readiness. In other words, to form disaster resilience, is a core output of disaster preparedness.

This study aimed to empower the women with disaster-related CPR skills, which could help in improving their risk management skills. It also focused on expanding their potential, which would enable them to change from "hapless and helpless victims" to useful resources to their community and the country.

METHODS & MATERIALS

The research design adopted for the study was quasi experimental design. Researcher had obtained permission from the Directorate of Public Health, Head of the Institution, Medical officer main Primary Health Centre, Sadras. The investigator collected the name list of coastal villages, which comes under the main Primary Health Centre, Sadras. Researcher had chosen 4 villages (experimental - 2 village, Control - 2 village) with extreme geographical proximity in order to avoid contamination.

The study was conducted in two phases. In the first phase, researcher identified 10-12 women volunteer after obtaining their willingness to be the community change agents (CCA) from each village with the help of village leader and village health nurse. CCA from the experimental group were instructed to come to the health centre for the training programme. The training programme was scheduled for 3 days. On the first day CCA's were made to sit comfortably. Researcher had given complete explanation about the study and informed consent was obtained and confidentiality was maintained. The background data was collected from the women volunteers, which lasted for 10 to 15 minutes.

On the second day researcher had given training to the community change agents in the experimental group with Coastal Disaster Readiness Package (CDRP) which consisted of disaster related education, mapping exercises by using charts, knowledge on flood safety measures, communicable diseases spread in natural disasters, women health care and preparation of Family Disaster kit with "10 invisible secrets for visible events" which lasts for 20-30 minutes.

Researcher identified 414 women (Experimental-206 and control - 208) with the help of community change agents and obtained informed consent from them. Community change agents administered CPR skills and assessed the post test skill on 1st month, 3rd month and 6th month to the experimental group and post test without intervention for control group women. After post test wait list intervention was given to women in the control group.

Ethical Consideration

Ethical permission was obtained from The Institutional Ethics Review Board from Omayal Achi College of Nursing. Permission was obtained from the Directorate of Medical Education and Directorate of Public Health to conduct the study in the selected areas. Informed consent was obtained and detailed explanation about the study was given to community change agents and women.

Statistical Analysis

Statistical analysis was performed using the Statistical package for

Social Sciences Programme (SPSS) version 17.0. Descriptive statistics was used to describe the demographic variables. Student Independent "t" test was used to compare the post test level of CPR skill among women. One way ANOVA and 'F' test was used to find the association between the level of CPR skill and demographic variables.

RESULTS & DISCUSSION

The study findings showed that the post test mean skill score of experimental and control group women was 15.35 with SD of 1.70 and 5.34 with SD of 6.27 respectively. Women in experimental group had gained 90.3% of skill score, whereas control group had gained 31.4% of skill score. The analysis revealed that there had been continuous improvement in the level of skills in post test 1, 2 and 3 in experimental group and the control group skill score remains the same.

Table 1: Comparison of post test level of skill in experimental and control group N=414

Assessment	Level of Skill	Group				Chi-square test
		Experiment (n=206)		Control (n=208)		
		n	%	n	%	
1st month	Poor	18	8.7	146	70.2	2=141.55 p=0.001 *** (S)
	Moderate	84	40.8	45	21.6	
	Good	104	50.5	17	8.2	
3rd month	Poor	0	0.0	145	69.7	2=245.34 p=0.001 ***(S)
	Moderate	80	38.8	44	21.2	
	Good	126	61.2	19	9.1	
6th month	Poor	0	0.0	144	69.2	2=329.05 p=0.001 ***(S)
	Moderate	36	17.5	44	21.2	
	Good	170	82.5	20	9.6	

Table 2: Comparison of 1st month, 3rd month and 6th month post test mean skill score between experimental and control group N=414

S.No	CPR Skill	Experiment Mean	Experiment SD	Control Mean	Control SD	Mean difference	Student independent t-test
1	1st month	13.44	2.81	5.07	6.38	8.37	t=17.24P=0.001** * S
2	3rd month	14.37	1.84	5.18	6.28	9.19	t=20.16P=0.001** * S
3	6th month	15.35	1.70	5.34	6.27	10.01	t=22.14P=0.001** * S

In experimental group, repeated measures ANOVA test showed that the mean skill score difference was statistically significant between 1st month and 6th month (F=45.95, p<0.001). Considering control group, repeated measures ANOVA test shows that mean skill score difference was not statistically significant between 1st month and 6th month (F=0.18, p<0.05). Chi square test findings revealed that there was statistically significant association was found for the demographic variables age (2=6.81, p=0.03), educational status (2=12.57, p=0.05), occupation (2=13.04, p=0.01), family monthly income (2=7.92, p=0.04), and total number of family members (2=6.16, p=0.04) with the post test skill of women.

The present study findings were consistent with the following studies Sultan Alshaqsi, Khadeeja Alwahaibi and Ahmed Alrisi (2015) on knowledge and awareness of people in the Sultanate of Oman about CPR skills. Results found that 54.8% of participants indicated that they do not know how to perform CPR.

Another study conducted by Meng Chen, Yue Wang, Xuan Li (2017) regarding the current status of layperson CPR training to analyze the willingness of bystanders to perform CPR. The majority (98.6%) of laypersons would perform CPR on their family members, but fewer laypersons (76.3%) were willing to perform CPR on strangers. Most respondents (53.2%) were worried about legal issues.

Another randomized trial conducted by Rachel Godfred, Ella Huszti et al (2013) on effectiveness of a compression-only CPR video self-instruction (VSI) with a personal mannequin in the lay public. Results analyzed the data were available for the untrained group (n=135), compressions-only group (n=185) and the compressions and ventilation group (n=119). Four (3%) achieved competency in the untrained group (p-value=0.57 versus compressions-only), nine (4.9%) in the compressions-only group, and 12(10.1%) in the compressions and ventilations group (p-value 0.13 vs. compressions-only).

Another study conducted by Wanner GK, Arayel Osborne and Charlotte H Greene (2016) on effectiveness of teaching compression-only CPR to previously untrained individuals using 6-min online CPR training video and skills practice on a homemade mannequin. Results revealed that comparing pre and post training, the never-trained group had improvements in average compression rate per minute (64.3 to 103.9, p=0.006), compressions with correct hand position in 1 min (8.3 to 54.3, p=0.002), and correct compression release in 1 min (21.2 to 76.3, p<0.001).

CONCLUSION

The study found that the women living in coastal areas had poor CPR skills. The study also proved that the intervention given to the women was much effective in changing the CPR skill through the Community Change Agents. Furthermore the study concluded that active participation of community change agents and reinforcement of disaster related education and training is extremely essential for the women living in coastal villages, at regular intervals in order to maintain the sustainability of disaster preparedness measures.

Conflict of Interest: None declared

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