

Enhancing of Female Rural Leaders' Awareness about First Aid Activities Using Capacity Development Approach

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Abstract: Capacity development is about strengthening the abilities needed for successfully performing tasks, achieving results, identifying problems, finding solutions and taking sound decisions in the respective professional and living environments. Every citizen shares a responsibility of having basic first aid knowledge in case of emergency as we have to undergo such situations in our day today life. **Aim:** This study aims to enhance awareness of female rural leaders about first aid activities using capacity development approach. A Quasi experimental design was utilized. **Setting:** This study was conducted at Care of Menoufia Students' Association hall, which used for teaching. This association follows the Ministry of Social Affairs Shebin El kom, Menoufia governorate. **Sample:** A convenience sample of 200 female rural leaders who chosen by the Ministry of Social Affairs Shebin El kom, Menoufia governorate. They participated in the training at their request. **Tools:** 1. Self-administered structured questionnaire which involved socio-demographic data and knowledge of female rural leaders about first aid. 2. Observational checklist of subjects about first aid activities. The main result of this study showed that there was significant improvement in the knowledge and practice of female rural leaders' about first aid throughout the stages of capacity development. Additionally, there was statistically significant relation between knowledge of studied samples and their level of education. **Conclusion:** capacity development approach was effective in improving knowledge and practice of female rural leaders about first aid activities. **Recommendation:** Use capacity development approach in teaching and learning the entire first aid skills to all individuals, aggregate and the entire population.

Keywords: Capacity development, First aid and female rural leaders.

1. INTRODUCTION

Capacity development is the process through which individuals, groups and organizations, and societies deploy, adapt, strengthen, and maintain the capabilities to define, plan and achieve their own development objectives on an inclusive, participatory, and sustainable basis^[1]. Capacity development has become one of the leading issues in the development of any profession. Many countries declare that they need more knowledge and skills on this subject. The increased interest in capacity development in recent years is a response to widely acknowledged short comings in development assistance over the past fifty years, e.g. inadequate attention to long-term 'capacity' issues. A consequence of these short comings has been limited sustainable impact in priority areas^[2].

Capacity development is important for many reasons; it leads to improved performance and enhances chances of success for individuals as well as organizations. Enhanced capacity also contributes to reaching national and global development goals including improved health outcomes^[3]. The goal of capacity development is to facilitate individual and organizational learning which builds social capital and trust also develops knowledge, skills and attitudes and when

successful creates an organizational culture and a set of capabilities which enables organizations to set objectives, achieve results, solve problems. This leads to create adaptive procedures which enable them to survive in the long run ^[4].

There are four capacity development stages, from highly dependent on advisers (Dependent) through to full capability (Independent). Dependent: the researcher controls the particular work function and may do most of the work, takes the decisions or is highly influential in the decision making process. Guided: the researcher still has a high level of control, but counterparts can undertake the straightforward elements of the function under supervision or guidance. Assisted: nurses are now taking prime responsibility for the function, can handle most of the complex aspects and know when they need to ask for assistance. Independent: nurses are now fully competent to do the whole function ^[5]

The philosophy for developing research capacity in health is that it should generate research that is useful for practice. The North American Primary Care Group defined the 'ultimate goal' of research capacity development as the generation and application of new knowledge to improve the health of individuals and families ^[6].

First aid training for lay people is recognized as an important capacity development component of pre-hospital care in communities. First aid is the 'immediate help provided to a sick or injured person until professional help arrives. First aid is applied to injured or ill persons in any health threatening settings in order to save life, prevent degradation of the situation or contribute to a treatment process before professional medical care is available. This refers to assessments and interventions that can be performed by a bystander (or by the victim) with minimal or no medical equipment ^[7, 8].

A first aider needs to be able to assess and take control of the situation, keep calm and organized and does not replace the role of paramedic nurse or physician ^[7]. Training courses of first aid must develop individuals to provide relevant and efficacious management for a wide range of conditions ^[9]. Training courses of first aid must develop individuals to provide relevant and efficacious management for a wide range of conditions ^[10].

First aid in the community aims to build the resilience of communities by working with them in an inclusive and flexible approach in first aid, identifying local capacity and vulnerability to common injuries, community health priorities (such as prevention, health promotion and control of common diseases) and disaster preparedness a response capacity ^[11].

1.1. Aim of the study:

This study aims to enhance awareness of female rural leaders about first aid activities using capacity development approach. ***This aim achieved through:***

- Assessing the female rural leaders' knowledge and practice regarding first aid activities.
- Designing, implementing and evaluating the effect capacity development approach on first aid activities among female rural leaders.

1.2. Hypotheses:

- a. Female rural leaders, who attend the capacity development educational program, will have higher knowledge scores throughout the second, third and fourth capacity development stages than in first stage.
- b. Female rural leaders, who attend the capacity development educational program, will have higher practice scores throughout the second, third and fourth capacity development stages than in first stage.

2. SUBJECTS AND METHODS

2.1. Research design: Quasi experimental design with pre and post-test was utilized to accomplish the aim of this study.

2.2. Research setting: Care of Menoufia Students' Association hall, which used for teaching. This association follows the Ministry of Social Affairs Shebin El kom, Menoufia governorate.

2.3. Sample: A convenience sample of 200 female rural leaders who chosen by the Ministry of Social Affairs Shebin El kom, Menoufia governorate. They participated in the training at their request.

2.4. Tools of the study:

Tool I: Self-administered structured questionnaire: it was developed by the researchers after reviewing the related literature and included the following:

- a. **Socio-demographic data:** It was included participants' age, marital status and education level.

b. Knowledge of female rural leaders about first aid activities: It was included 9 main topics in first aid such as bases of first aid activities, cardiopulmonary resuscitation (CPR), burn, fracture, poisoning, bleeding, choking, shock and animal bites. Each topic had ten questions.

Scoring system: Each correct answer was given one score based on predetermined answer key according to the literature, while incorrect and don't know answer was given zero. Then the knowledge scores were summed to obtain a total knowledge score (10 scores) for each topic and 90 scores for total knowledge score to all the topics. This was measured in the four stages of capacity development. Knowledge of female rural leaders about first aid activities was categorized as follow:

- Poor knowledge (< 50%).
- Fair knowledge (50 - 75%).
- Good knowledge (>75%).

Tool II: Observational checklist: It designed by the researchers to assess the practice of female rural leaders, it was used when the female rural leaders were re-demonstrated how to manage the first aid topics. Every topic had ten steps.

Scoring system: Each step was correctly done was given two scores based on predetermined answer key according to the literature, while incomplete step was given one score and not done was given zero. Then the practice scores were summed to obtain a total practice score (10 scores) for each topic and 90 scores for total practice score to all the topics. This was measured in the four stages of capacity development. Practice of female rural leaders about first aid activities was categorized as follow:

- Poor practice (< 50%).
- Fair practice (50 - 75%).
- Good practice (>75%).

2.5. Validity and reliability of tools:

Tools were developed by the researchers after reviewing the related literature and tested for its content validity. Validity was determined by a panel of experts in medical surgical nursing and community health nursing to determine its content validity, relevance and completeness and modifications were done.

The reliability was measured by Cronbach's Alpha coefficient test. The value of Cronbach's alpha for knowledge about first aid was 0.85 and practice of first aid was 0.80. The value of Cronbach's alpha for each topic of first aid such as bases of first aid activities was 0.78 burn management 0.87 fracture was 0.83. This indicating that instrument was consistent and reliable in achieving the study aim.

2.6. Pilot study:

A pilot study was conducted prior to data collection on 20 female rural leaders (10%) to test all tools for clarity, objectivity, relevance, feasibility and the applicability of the tools. Also it was conducted to identify any problem associated with administering the tools and measure the time needed for data collection then the necessary modifications were carried out accordingly. Data included in pilot study was excluded from the current study.

2.7. Ethical considerations:

Informed consent was obtained from the participants who were willing to participate in the study after explaining the aim of the study. The participants were informed that participation in this study is voluntary; they can withdraw at any time during the study without giving reasons. They reassured that any obtained information would be strictly confidential.

2.8. Data collection procedure:

- The study was conducted during the period from June 2016 to the end of August 2016.
- Official approval was obtained from the authorized personnel at Ministry of Social Affairs Shebin El kom, Menoufia governorate after explaining the aim of the study.
- The researchers divided the studied subjects into ten groups each group consists of 20 participants.
- The study was conducted in five consecutive days every week (two sessions /day) for each studied group, the first session took about 60-90 minutes while second session took about 90-120 minutes.

- **First day (Pre-test):** The researchers were initiated data collection through using self-administered structured questionnaire (**tool I**). Before distributing the questionnaire, the researchers introduced themselves and a brief explanation about the purpose of the study was given to the studied sample. The researchers were present during data collection for any clarifications to the subjects about questionnaires.
- The researchers asked the participant to demonstrate how they manage the nine first aid activities using each other (role play) and the researchers assess their performances using observational checklist (**tool II**). The obtained data used as the baseline assessment (pre-test).
- The researchers were developed and distributed guide materials including videos, power point presentations, pictures and posters aimed to improve the studied sample's knowledge and practice regarding first aid activities.
- **Second day (Dependent Phase):** The entire studied groups were given teaching about first aid in lecture room in the first session using the guide materials including videos, power point presentations, pictures and posters. Another session the researchers demonstrate the all the first aid topics management and the participant re-demonstrates the first aid practice.
- **Third day (Guided Phase):** in this phase the researchers act as a guide. The participants worked under guidance of the researchers. The researchers carried out this phase by the following steps:
 - ✓ First session the researcher gave the participants the knowledge about the content again.
 - ✓ Second session: Researchers asked the participant to handle first aid case. They use each other making role play. Under the researcher guide then the researchers asked the participant to fill another self-administered questions sheet.
- **Fourth day (assisted Phase):** in this phase the participants have the first responsibility to work with little help from the researchers then the researchers asked the participant to fill another self-administered questions sheet.
- **Fifth day (Independent Phase):** in this phase the researchers assess the knowledge of participant about first aid activities in the first session while second session, the participants were re- demonstrated the steps of the nine first aid activities.
- The researchers collect data through using self-administered structured questionnaire (**tool I**). The researchers asked the participant to re-demonstrate how they manage the nine first aid activities using each other and the researchers assess their performances using observational checklist (**tool II**). (Post-test).

2.9. Statistical Analysis:

The collected data were organized, tabulated and statistically analyzed using SPSS software (Statistical Package for the Social Sciences, version 16, SPSS Inc. Chicago, IL, USA). For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, comparison between two groups and more was done using Chi-square test (χ^2). For comparison between means of two groups of parametric data of independent samples, student t-test was used. For comparison between more than two means of parametric data, F value of ANOVA test was calculated for parametric data. For comparison between more than two means of non-parametric data of related samples, Friedman test (χ^2 values) was calculated. Significance was adopted at $p < 0.05$ for interpretation of results of tests of significance.

3. RESULTS

Table (1): Socio demographic characteristics of the studied female rural leaders (n=200)

Variables	Studied female rural leaders (n=200).	
	n	%
Age (years):		
17-<20	28	14.0
20-<30	53	26.5
30-<40	33	16.5
40-<50	73	36.5
50-60	13	6.5
Range	17- 60	
Mean \pm SD	34.55 \pm 10.58	
Marital status:		

Single	20	10.0
Married	120	60.0
Divorced	20	10.0
Widow	40	20.0
Education level:		
Basic education	86	43.0
Secondary education	86	43.0
High education	28	14.0

Table (1) showed that, the female rural leaders mean age were 34.55 years. Most of them were married (60%), near half of the studied subject had basic education.

Table (2): Mean scores of knowledge of the studied female rural leaders about first aid activities during the capacity development phases (n = 200)

Total Knowledge scores about fist aid items	studied female rural leaders (n = 200)				χ^2 value	P
	Pre educational intervention	During guided intervention	During assisted intervention	Post educational intervention		
	Range Mean \pm SD	Range Mean \pm SD	Range Mean \pm SD	Range Mean \pm SD		
Bases of first aid activities	1.51 \pm 0.81	1.52 \pm 0.82	1.97 \pm 0.24	1.99 \pm 0.14	40.339	0.0001*
CPR	1.19 \pm 0.80	1.86 \pm 0.49	2.00 \pm 0.00	2.00 \pm 0.00	136.781	0.0001*
Burn	1.71 \pm 0.70	1.62 \pm 0.75	1.95 \pm 0.31	2.00 \pm 0.00	42.784	0.0001*
Fracture	1.50 \pm 0.60	1.43 \pm 0.81	1.91 \pm 0.36	1.96 \pm 0.18	49.975	0.0001*
Poisoning	1.35 \pm 0.87	1.77 \pm 0.62	1.99 \pm 0.14	1.99 \pm 0.14	60.158	0.0001*
Bleeding	1.26 \pm 0.85	1.74 \pm 0.65	1.98 \pm 0.20	2.00 \pm 0.00	78.552	0.0001*
Choking	1.50 \pm 0.60	1.44 \pm 0.81	1.91 \pm 0.36	1.96 \pm 0.18	49.975	0.0001*
Shock	1.43 \pm 0.81	1.50 \pm 0.60	1.88 \pm 0.36	1.96 \pm 0.18	47.967	0.0001*
Animal bites	1.54 \pm 0.60	1.43 \pm 0.81	1.96 \pm 0.18	1.97 \pm 0.36	52.975	0.0001*

* Significant (P<0.05)

χ^2 value of Friedman test

Table (2) illustrated that there was a statistical significant improvement in all mean scores of knowledge of the studied subjects about first aid activities post-intervention and independent phase compared to pre-intervention dependent phase (P value= 0.0001).

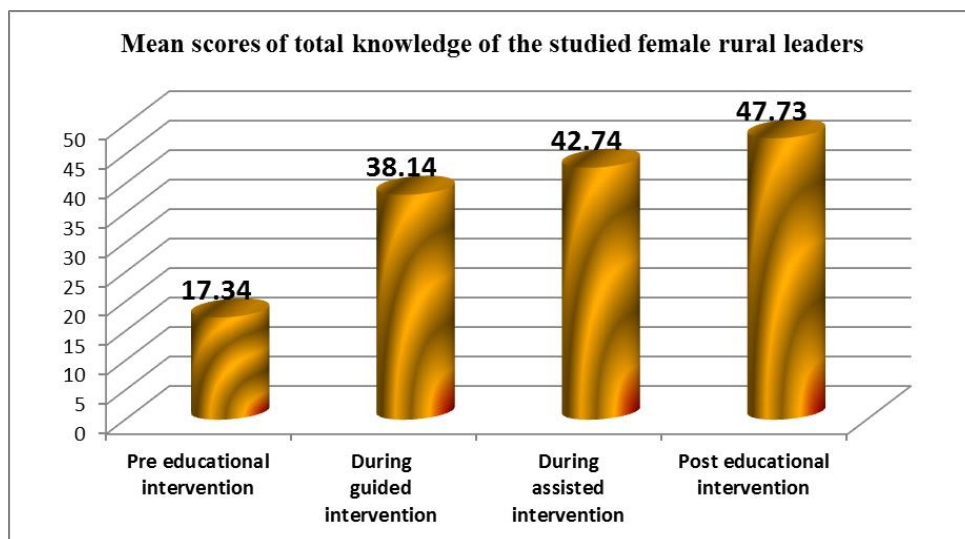


Figure (1): Mean scores of total knowledge of the studied female rural leaders about first aid activities during the capacity development phases (n = 200).

Figure (1): showed that there was a significant improvement in all mean scores of total knowledge of the studied subjects about first aid activities during the capacity development phases.

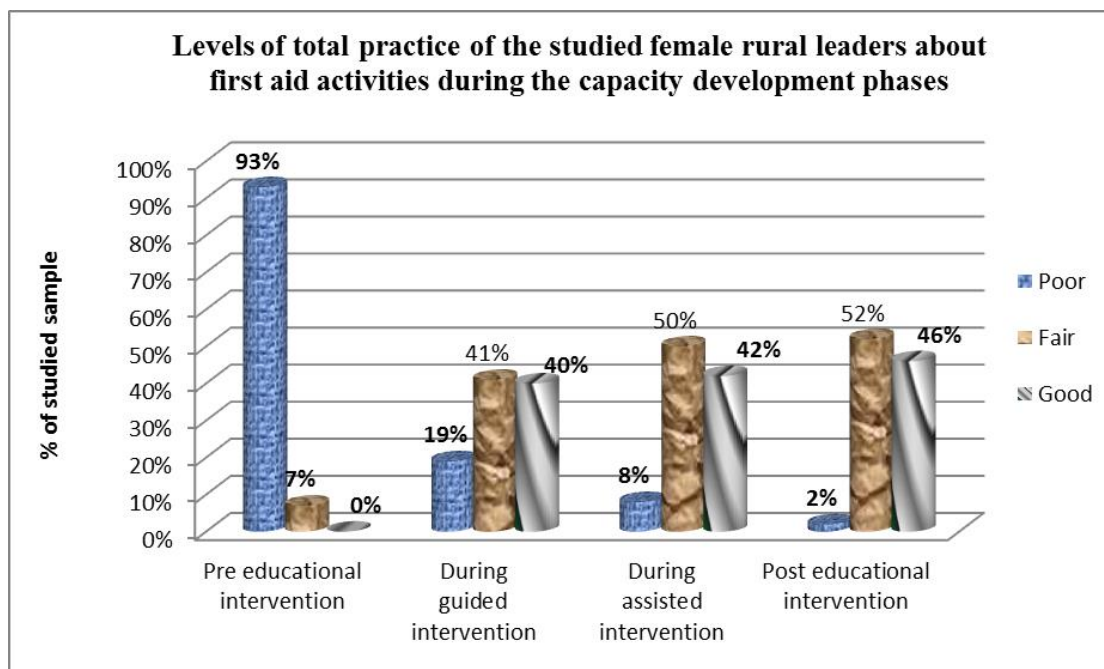


Figure (2): Levels of total practice of the studied female rural leaders about first aid activities during the capacity development phases (n = 200).

Figure (2): demonstrated that there was a statistical significant improvement in all levels of total knowledge of the studied subjects about first aid activities during the capacity development phases.

Table(3): Mean scores of total Knowledge of the studied female rural leaders about first aid during the capacity development phases in relation to their socio-demographic data (n=200).

socio-demographic data	Mean scores of knowledge about first aid activities of the studied female rural leaders (n=200)				
	Pre-educational intervention	During guided intervention	During assisted intervention	Post-educational intervention	
	Mean ±SD	Mean ±SD	Mean ±SD	Mean ±SD	
Age (years):					
17-<20	7.38±2.60	26.92±3.09	29.00±2.16		33.77±0.44
20-<30	7.60±3.11	26.53±3.28	28.70±2.40		33.87±0.39
30-<40	7.23±3.60	26.30±3.60	29.31±2.46		33.77±0.54
40-<50	7.33±2.71	26.12±2.71	28.76±2.08		33.67±0.64
50-60	7.53±2.71	26.07±2.99	28.64±2.42		33.82±0.39
F-value	0.116	0.236	0.761		0.888
P	0.977	0.918	0.552		0.472
Education level:					
Basic education	7.19±3.04	26.26±3.16	28.85±2.38		33.77±0.52
Secondary education	8.50±2.28	27.17±4.26	29.58±2.50		33.83±0.39
High education	9.42±5.37	26.67±3.34	29.67±1.61		33.92±0.29
F-value	3.526	0.503	1.142		0.523
P	0.031*	0.605	0.321		0.594

*Significant (P<0.05)

Table (3) showed that there was a statistical significant relation between studied subjects qualifications and total knowledge of first aid during the capacity development phases.

4. DISCUSSION

Capacity development is about strengthening the abilities needed for successfully performing tasks, achieving results, identifying problems, finding solutions and taking sound decisions in the respective professional and living environments^[12]. Every citizen shares a responsibility of having basic first aid knowledge in case of emergency as we have to undergo such situations in our day today life^[13].

The results of the present study illustrated that the mean age of the subjects were 34.55 years and near half of the studied subject had basic education. This result was in agreement with Kamel, Emam and Mohammed.(2014)^[14] they studied " Knowledge, Attitude and Practice among Rural Mothers about Home-Related Injuries in a Rural Area in El-Minia Governorate, Egypt " they reported that mean age of mothers was 33.9 years. Only 23.3% of mothers were highly educated.

The present study showed improvement in all mean scores of knowledge of the studied subjects about the nine topics of first aid activities post-intervention and independent phase compared to pre-intervention dependent phase This result is in agreement with Davies and Danahern, (2014)^[15], who studied "Capacity Development for Western Expatriate Nurses and Australian Early Career Researchers", and revealed that capacity development, emerges for integrating learning in professional work places, thereby rendering such learning more effective and sustainable knowledge and practice. That is, an explicit focus on creating and disseminating widespread opportunities for capacity development should be included in any professional development program.

In addition, this result is in the same line with Kleine, (2010)^[16], who studied" Capacity building for the future primary health care of mothers and children in Iraq", and reported that the Iraqi trainers who disseminate knowledge to the medical workers needed capacity building. Training of the trainer program could be best developed in collaboration with a center of excellence or the program could be a part of an existing training program.

The present study showed significant improvement in all mean scores of total knowledge of the studied subjects about first aid activities during the capacity development phases, this result in the same line with Sunil Kumar et.al. (2013) who studied perception and practices regarding first-aid among school teachers in Mysore they revealed that, it is very important to have training on first aid activities^[17].

Concerning practice level of the studied sample was poor pre intervention this result was in agreement with Sonavane, Kasturi, Kiran, Chikkaraju and Kumari, (2014)^[18], they studied Knowledge and assessed practice regarding first aid among mothers of under 15 years children. A community based study in a rural area of south India. They founded the practice regarding first aid among women with children <15 years in the study area was poor. In the same line ware Abd El-Aty, Mofteh, Ibrahim and Hassanen, (2005)^[19], they studied Assessment of Knowledge and Practice of Mothers toward Home Accidents among Children Under Six Years in Rural Areas in Assiut Governorate. They reported about three-quarters (74.5%) of mothers had poor practice regarding home accidents among their children.

Regarding total knowledge of the studied female rural leaders about first aid during the capacity development phases in relation to their socio-demographic data, there was statistical significant relation between studied subjects qualifications and total knowledge of first aid during the capacity development phases. This result was in agreement with Abd El-Aty, Mofteh, Ibrahim and Hassanen, (2005)^[19], they stated that there was relation between mother's education and her practice related first aid.

5. CONCLUSION

5.1. There was significant improvement in the knowledge of female rural leaders about first aid throughout the stages of capacity development.

5.2. There was significant improvement in the practice of female rural leaders about first aid throughout the stages of capacity development.

6. RECOMMENDATIONS

Use capacity development approach in teaching and learning the entire first aid skills to all individuals, aggregate and the entire population.

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