International Journal of Advance Research in Community Health Nursing

E-ISSN: 2664-1666
P-ISSN: 2664-1658
www.communitynursing.net
IJARCHN 2021; 3(1): 33-38
Received: 19-12-2020
Accepted: 21-01-2021

Darshana Hazarika
Faculty, School and College of Nursing, NEMCARE Foundation, Mirza, Assam, India

Ranjita Devi
Professor, Sikkim Manipal College of Nursing, Gangtok, Sikkim, India

M Thoibi Devi
Associate Professor Sikkim, Manipal College of Nursing, Gangtok, Sikkim, India

Corresponding Author:
Ranjita Devi
Professor, Sikkim Manipal College of Nursing, Gangtok, Sikkim, India

Effectiveness of self-instructional module on knowledge regarding first aid management among Anganwadi workers in selected district of Sikkim

Darshana Hazarika, Ranjita Devi and M Thoibi Devi

Abstract
Introduction: First aid is an emergency care or treatment given to an ill or injured person before regular medical aid is obtained. In India most of the under six children go to Anganwadi centers every day and accident rate such as burns, fall injury, drowning, poisoning are common among under six children. The aim of the present study was to examine the knowledge of the Anganwadi Workers on First aid management and to examine the effectiveness of a Self-Instructional Module on First aid management among Anganwadi Workers in selected District of Sikkim.
Methods: A quasi experimental design was adopted in this study. Total 60 Anganwadi Workers (30 experimental groups and 30 control group) of East district, Sikkim were selected through purposive sampling technique. Structured knowledge questionnaire was used to assess the knowledge regarding First aid management among Anganwadi Workers. Data were analysed by using both descriptive and inferential statistical method.
Results: Findings of the study showed that in pre-test among experimental group 5 (17%) had poor knowledge, 22 (73.3%) had average knowledge and 3 (10%) had good knowledge on First aid management whereas, in post-test 30 (100%) had good knowledge. In pre-test among control group 5 (17%) had poor knowledge, 23 (77%) had average knowledge and 2 (7%) had good knowledge whereas, in post-test 5 (17%) had poor knowledge, 22 (73.3%) had average and 3 (10%) had good knowledge. The pretest knowledge was significantly associated with work experience of the Anganwadi Workers in experimental group ($p<0.05$).
Conclusion: The study showed that after introduction of Self-Instructional Module on First aid management the knowledge level of the Anganwadi Workers were improved. Therefore Self Instructional Module was effective in improving the knowledge of Anganwadi Workers on First aid management.

Keywords: knowledge**,** Anganwadi workers, first aid management, self-instructional module, under six children

Introduction

India is the second most populated country in the World. According to census 2011 the current population of India is 1.3 billion and out of these almost 13.1percent of the population belongs to the age group of 0-6 years (census 2011) [1]. Child injury is a global public health issues. In 2011, WHO (World Health Organization) estimated that over 630000 children died due to injury. Injuries are the leading causes of death in many countries for children after their first birthday [2].

According to World Health Organization's Global report, in the South–East Asia Region, road traffic injuries, drowning, burns and injuries are the leading causes of death among children. Mortality rates of major causes of child injury are Road traffic injury7.4%, Drowning 6%, Burn 6.1% and fall 2.7% [2].

According to Centers for Disease Control and Prevention (CDC), drowning, fall injury, poisoning and road traffic accidents are the leading causes of morbidity and mortality among children in the United States. Each year between the age group of 0-19, more than 12,000 people die from unintentional injuries and more than 9.2 million are treated in emergency departments [3].

Government of India which is implementing by the Ministry of Women and Child Development. ICDS represents one of the world's largest and unique programes for early childhood care and development. Initially the scheme was prepared by the Department of Social Welfare in 1975.

Integrated Child Development Services (ICDS) scheme is the most important scheme of the In India there are total 13,46,186 operational Anganwadi centers and 365.44 lakh 3-6 year preschool children are serving are taking care of AWC (2015-2016).In Sikkim there are total 1308 ICDS centers (East=470,West=316'North=190,South=332) [4].

Anganwadi worker is a trained person allotted to a population of 1000, to construct a bridge in between the people and healthcare institution, and to focus on the health and educational needs of children aged 0-6 years. The Anganwadi Workers and helpers are the basic functionaries of the ICDS who run to Anganwadi centers and implement the ICDS scheme in coordination with the functionaries of the health education, rural development and other departments.[4]

First aid is an emergency care or treatment given to an ill or injured person before regular medical aid is obtained. It is the assistance given to any person suffering a sudden illness or injury with care provided to preserve life, prevent the condition from worsening, or to promote recovery [5]

A study conducted by P.M Arulmozhi Baskaran [6], Narayana Hridayalaya College of nursing Bangalore. The findings of the study revealed that 88.9% of ICDS staffs were not having adequate knowledge on First aid management.

In India most of the under six children go to Anganwadi centers every day and accident rate are more in under six children such as burns, drowning, road traffic accident, poisoning. Therefore it is necessary to have knowledge on First aid management among Anganwadi worker to provide First aid to the children at the initial stage and then shift them to hospitals. In order to do so Anganwadi Workers should have adequate knowledge regarding First aid management. Since most of the studies revealed that Anganwadi Workers had inadequate knowledge regarding First aid and knowledge had improved after providing educational intervention so, the researcher is interested to make the Anganwadi Workers aware on First aid management for the under six children with the help of Self Instructional Module.

Review of literature

Literature related to incidence and prevalence of injury among children

A study conducted by Addor Veronique *et al*. [7] to assess the incidence of injuries among preschoolers of Switzerland and their risk factors. Total 5827 children were selected for the study. The study findings revealed that, the overall incidence was 224 injuries per 1000 children and out of these falls represented (66%) of all injuries, followed by burns (8%) and poisoning (5%).

Literature related to knowledge regarding first aid management

A cross-sectional study conducted by Ganfure Gemechu *et al*. [8] regarding First aid knowledge, attitude, and practice and associated factor among kindergarten teachers of Lideta sub-city Addis Ababa, Ethiopia. Total194 teachers were selected through random sampling technique. Data was collected using pretested, structured and self-administered questionnaire. Result showed that only 40% of the teachers were knowledgeable.

A descriptive study conducted by Kaur, Navjot *et al*. [9] to assess the level of knowledge Regarding the First aid management among School Teachers in selected schools of Mohali District, Punjab. 40 school teachers were selected through non probability purposive sampling technique. The results of the study showed that most of the teachers (77.5%) were having average knowledge, 12.5% were having good knowledge and 10% were having poor knowledge regarding First aid management**.**

Effectiveness of educational intervention on first aid measurement

A quasi Experimental study conducted by Thomas M Linto *et al*. [10] to assess the Effectiveness of Self Instructional Module on Knowledge regarding selected First aid Measures among primary School teachers in Ernakulam District. 60 primary school teachers were selected through non-probability convenient sampling technique. The result revealed that the overall score was 19.00 in pre-test and 26.03 in posttest, 100% of primary school teachers had inadequate knowledge in the pre-test, after distribution of Self-instructional module Primary school teachers. 21.67% had moderately good knowledge and 78.33% had excellent knowledge regarding selected condition of First aid.

Objectives of the study

The objectives of the study are to

1. Prepare and validate Self Instructional Module on First aid management
2. Assess the knowledge regarding First aid management among Anganwadi Workers in experimental and control group
3. Provide Self Instructional Module on knowledge regarding First aid management among Anganwadi Workers in experimental group
4. Compare pre-test and post –test knowledge regarding First aid management among Anganwadi Workers in experimental group
5. Compare the post-test knowledge regarding First aid management among Anganwadi Workers in both experimental and control group
6. Determine association between experimental and control group on pre –test knowledge regarding First aid management and also with their selected demographic variable.

Research methodology

The research design adopted for the study was the Quasi-experimental research design. A total of 60(30 experimental and 30control) nursing students were selected through a purposive sampling technique. Ethical permission was taken from the institutional ethics committee.Data were collected from12/11/18 to 8/12/18.Tool used for data collection was divided into Section A and Section B, Section A (Demograficproforma) was used to measure age, marital status, religion, educational qualification, work experience of Anganwadi Workers., attended workshop on First aid management, Most common injury at centre and First Aid box at Centre. Section B deals with Multiple Choice Question on fall injury, fracture, hemorrhage, drowning, burns, bites, foreign bodies. The data were analyzed by using both descriptive and inferential statistics using SPSS (Statistical Package of Social Science) version 16 software. The demographic variables were analyzed by frequency and percentage distribution and the knowledge questionnaire was analyzed by using mean, median and standard

deviation. Paired "t" test was used to compare pre-test and post –test score of experimental group and unpaired "t" test was used to compare posttest knowledge score of experimental and control group. Fisher's exact test was used for association between the pre-test knowledge with the demographic variable in experimental and control group.

Results

Among the Anganwadi workers in the experimental group most 9(30%) workers were in the age group of 20-30 years. Majority 24(80%) workers were married. Majority 21(70%) workers were Hindu. Most 8(27) % workers had completed secondary education, Majority 18(60%) workers had 6-10 years' experience, 30 (100%) workers had negative response on attendant any workshop on First aid management. Majority 21(70%)of workers had not given any response, Most 2(7%) workers had incidence of fall injury, 6(20%) workers had incidence of fracture and 1(3%) workers had incidence of burn at centre. Majority 26(87%) workers had not First aid box at their centre.

In control group majority18 (60%) workers were in the age group of 31-40 years. Majority 24(80%) workers Majority 20(67%) workers were Hindu. Most 4(13%) had completed primary education Most that is 1(3%) workers had less than 1 years of experience. 30(100%) workers had negative response on attendant any workshop on First aid management. Majority that is 18(60%) workers had not given any response, most that is 11(37%) workers had incidence of fall injury and 1(3%) had incidence of burn at centre. Most15 (50%) workers had not Fist Aid box at their centre.

Table 1: Frequency and percentage distribution of demographic characteristics

N=60, n=30

Demographic characteristics	Experimental group		Control group	
	(f)	%	(f)	%
1) Age				
a) 20-30	9	30	6	20
b) 31-40	15	50	18	60
c) 41-50	6	20	4	13
d) 51 and above	0	0	2	7
2) Marital status				
a) Single	3	10	3	10
b) Married	24	80	24	80
c) Widowed	3	30	0	0
d) Divorced	0	0	3	10
3) Religion				
a) Hinduism	21	70	20	67
b) Christianity	3	10	8	26
c) Buddhism	6	20	2	7
d) Others	0	0	0	0
4) Educational qualification				
a) Primary	0	0	4	13
b)Secondary	8	26	6	20
c) Higher secondary	12	40	6	20
d) Graduation and above	10	33	14	47
5) Work experience				
a) <1 year	0	0	1	3
b) 1-5 years	3	10	3	10
c) 6-10 years	18	60	13	43
d) > 11 years	9	30	13	43
6) Attended any workshop on First Aid Management Yes				
No a) 6 month before	30	100	30	100
b)1 year before				
7) What are the most common injury among children at your centre?				
a) Nil	21	70		
b) Fall injury	2	7	18	60
c) Fracture	6	20	11	37
d) Burn	1	3	1	3
8) Do you have First Aid box at your centre?				
a) Yes	4	13	15	50
b) No	26	86	15	50

N=60. n=30

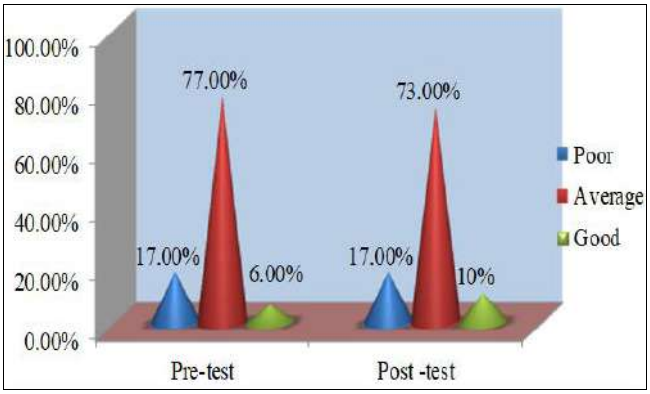

Fig 1: Frequency and percentage distribution of pre-test and post-test knowledge regarding First aid management among control group

The data presented in Fig 1 shows that, in the control group in pre-test 5(17%)had poor knowledge, 23(77) had average knowledge and 2(6%) had good knowledge whereas, in post-test 5(17%) had poor knowledge, 22(73.%) had average and 3(10%) had good knowledge regarding First aid management.

N=60. n=30

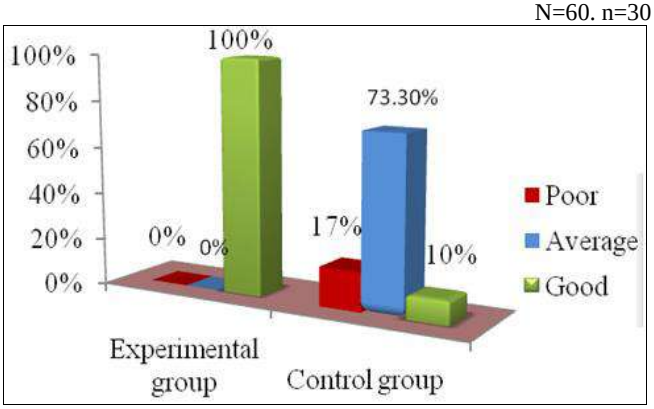

Fig 2: Frequency and percentage distribution of comparison of post-test knowledge among Anganwadi Workers in both experimental and control group

Data presented in Fig 2 reveals that, in post-test in experimental group, 30(100%) had good knowledge regarding First aid management where as in control group 5(17%) had poor knowledge, 22(73.%) had average and 3(10%) had good knowledge regarding First aid management.

Table 2: Paired' test for effectiveness of Self Instructional Module among experimental group

N=60, n=30

Pre-test		Post –test		't' value (29) 'p' value	
Mean	SD	Mean	SD		
14.23	4.09	27.60	2.43	-16.29	<0.01

Significant at p(<0.05); Significant at p(<0.01): Not significant at p(>0.05) Data presented in Table 2 reveals that in experimental group pre-test mean score was 14.23,SD 4.09 and post-test mean score was 27.60,SD 2.43.The calculated "t" value -16.29,which shows significance at p<0.05 level. Therefore research hypothesis is accepted

Table 3: Unpaired' test for effectiveness of Self Instructional Module among Anganwadi Workers in both experimental and control group

N=60, n=30

Pre-test		Post –test		't' value (29) 'p' value	
Mean	SD	Mean	SD		
27.60	2.43	14.8	4.45	-13.82	<0.01

Significant at p(<0.05) ;Significant at p(<0.01) :Not significant at p(>0.05)

Data presented in Table3 shows that pre-test mean score in experimental group was 27.60,SD 2.43 and post-test mean score in control group was 14.8,SD 4.45.The calculated "t" value is -13.82, which shows significance at p<0.05 level.

Table 4: Association of pretest level of knowledge on First aid management in experimental group with their selected demographic variables

N=60,n=30

Sl. No	Exp group	Poor	Average	Good	p value
1. Age	20-30yrs	3	7	0	0.148
	31-40yrs	1	12	1	
	41-50	1	3	2	
	≥51	1	3	0	
2. Marital Status	Single	1	3	0	1.000
	Married	4	16	3	
	Widowed	0	3	0	
3. Religion	Hindu	4	15	3	.772
	Christian	1	2	0	
	Buddhist	0	5	0	
4. Educational Qualification	Primary	0	1	0	.6000
	Secondary	3	5	0	
	Higher Secondary	1	9	1	
	Graduation & above	1	7	2	
5. Work experience	1-5yrs	2	1	0	.010
	6-10yrs	0	15	3	
	>11yrs	3	6	0	
6. Workshop attended	No	5	22	3	NA
7. Most common Injury at centre	Nil	3	16	2	.717
	Burn	0	1	0	
	Fracture	2	3	1	
	Fall injury	0	2	0	
8. First aid box at centre	Yes	0	4	0	.719
	No	5	18	3	

Significant at $p<0.05$
+NA (Not applicable)

Data presented in Table 4. reveals that the pre test knowledge score of experimental group was significantly associated with work experience (p=.010), while it was insignificantly associated with age(p=.148), marital status (p=1.000), religion (p=.772), educational qualification (p=.600), most common injury at centre (p=.717) and First aid box at centre(p=.719).The calculated statistical value of work experience was more than p value and calculated statistical value ofage, marital status, religion, educational qualification, most common injury and First aid box at centre was lesser than p value. Hence, the formulated H_2 is accepted for work experience at 0.05 level of significant.

Table 5: Association of pre-test level of knowledge on First aid management in control group with their selected demographic variables.

N=60, n=30

Sl. No	Cont group	Poor	Average	Good	p value
1. Age	20-30yrs	0	5	1	.441
	31-40yrs	4	13	1	
	41-50	0	4	0	
	≥51	1	1	0	
2. Marital status	Single	1	2	0	0.99
	Married	2	20	2	
	Widowed	2	1	0	
3. Religion	Hindu	4	15	1	.891
	Christian	1	6	1	
	Buddhist	0	2	0	
4. Educational Qualification	Primary	2	2	0	.319
	Secondary	0	6	0	
	Higher Secondary	0	0	1	
5. Work experience	<1yr	0	1	0	.455
	1-5yrs	0	3	0	
	6-10yrs	1	10	2	
	>11yrs	4	9	0	
6. Workshop attended	No	5	23	2	NA
7. Most common Injury at centre	Nil	4	14	0	.382
	Burn	0	1	0	
	Fall injury	1	8	2	
8. First aid box at centre	Yes	4	10	1	.477
	No	1	13	1	

Significant at $p<0.05$

[+]NA (Not applicable)

Data presented in Table 5 reveals that the pre-test knowledge score of control group was insignificantly associated with age (p=.441), marital status (p=.099), religion (p=.891), educational qualification (p=.319), work experience (p=.455), most common injury at centre (p=.382) and First aid box at centre (p=.477). The calculated statistical values of age, marital status, religion, educational qualification, work experience, most common injury at centre and First aid box at centre was lesser than p value Hence, the formulated H_2 is rejected at 0.05 level of significant.

Discussion

Discussion based on demographic characteristics

Findings of the present study showed that most of the workers 24(80%) were married. This finding is similar to the findings reported by Magrabi. El. Mohamd. Neama (2017) [11] in which most of the preparatory schools teachers 132 (88.0%) were married. Findings of the present study showed that most of the workers 18(60%) had work experience between 6-10 years. This finding was similar to the findings reported by Baskarn. Arulmozhi. P(2016) [8] findings revealed that most of the workers i.e., 57(63.3%) had experience above 7 years.

Knowledge regarding First aid management

The findings of the present study showed that 16.6% of workers had poor, 73.3% had average and 10% had good knowledge regarding First aid management. These findings were similar with the findings reported by Baskaran Arulmozhi P[6] which showed that 16.6% of Anganwadi teachers had poor knowledge and 83.3% had average knowledge regarding First aid measures.These findings were also consistent with findings reported by Kaur Navjot [9] which revealed that 77.6% school teachers were having average knowledge, 12.5% were having good knowledge and 10% were poor knowledge regarding First aid management.

Effectiveness of educational intervention on First aid management

The findings of the present study showed that there was a significant improvement in the knowledge of Anganwadi Workers (t=-16.16,p=.001) those who were given Self Instructional Module regarding First aid management. These findings are consistent with the findings reported by Thomas M. Linto [10] which showed that Self Instructional Module helped in improving the knowledge regarding First aid measures among School teachers. (t=7.47,p=0.000). These findings were also similar with the findings reported by Magrabi. El. Mohamd. Neama (2017) [11] which showed that there was a significant difference between the First aid performance level among preparatory schools teachers in pre and post –test (p-=.000)

Association between knowledge on First aid management and selected demographic variable

The findings of the present study shows that there is no significant association between the levels of knowledge regarding First aid management among Anganwadi Workers with selected demographic characteristics like age, religion, educational qualification. These findings were similar with the findings reported by Krishna AnanthaRadhika[12]which revealed that there is no significant association between the level of knowledge regarding First aid management with selected demographic characteristics such as age, educational qualification, religion, work experience ($p>0.05$). Finding was contradictory with present study that there was a significant association between level of knowledge and work experience of the workers ($p<0.05$).

Limitation

- The researcher limited the study to First aid management for only 7 minor injuries: fall injury, fracture, haemorrhage, bites, foreign bodies, burn and drowning.
- Due to the geographical distribution of the Anganwadi centres the researchers found difficulty in collecting the data.

Conclusion

The present study assesses the effectiveness of Self Instructional Module on knowledge regarding First aid management among Anganwadi Workers and the Anganwadi Workers had inadequate knowledge regarding First aid management. Analysis of the data showed that there was significant difference between pre-test and post knowledge among experimental and control group.

Therefore, educating them through Self Instructional Module significantly bring out their improvement in the knowledge regarding First aid management. Which will eventually decline the under six morbidity related to injuries.

Recommendation

On the basis of the study findings, the following recommendations are given:

1. A descriptive study can be carried out among large samples to assess the knowledge regarding First aid management among Anganwadi Workers.
2. A similar study can be conducted among other group of samples like school teachers, School students, and ASHA workers.
3. A longitudinal study can also be carried out.
4. As there are very few research conducted among Anganwadi Workers on First aid management in India, so there is a need to conduct more studies on these aspects in India and in North East settings.

Conflict of Interest

The authors declare no conflict of interest

References

1. Usmani G, Ahmad N. Health status of Children in India current reviews 2016. ISSSN:2375-4273
2. www.who.int>injury>world report on child injury prevention.
3. Centers for Disease Control and Prevention https://www.cdc.gov in
4. Ministry of Women and Child Development. https://india.gov.in
5. St Andrew. First aid manual 2016.
6. Baskaran Arulmozhi PM. Knowledge and Attitude Regarding Selected First aid management among Anganwadi Teachers in Selected Rural Community of Bangalore. Int JSRST 2016;2(3):176-180.
7. Addor V, Eggimann B. Incidence of injuries among preschoolers of Switzerland and their risk factors. European Journal of Pediatries 1996;155(2):130-135.
8. Gamachu G, Gemechu A, Ababr T, Bikila L, Dereje B. First aid knowledge, attitude, practice and associated factor among kindergarten teachers of Lideta sub-city Addis Ababa, Ethiopia, plosone 2018. https:doi.org/10.1371/jounal.pone.0194263
9. Kaur N, Kaur M. Knowledge Regarding the First aid management among School Teachers in selected schools of Mohall District, Punjab. Journal of Health and Medical Informatics 2017;8(4).
10. Thomas ML, Therese M. Effectiveness of Self Instructional Module on Knowledge regarding selected First aid Measures among primary School teachers in Ernakulam District. International Journal of Medicine and Health Professional Research 2015;2(1):14-31.
11. Mohamed N, Elwardany S. Impact of training programme regarding First aid knowledge and practice among preparatory schools teachers at Assiut City. Journal of Nursing Education and Practice 2017;7(12).
12. Krishna RA. Knowledge on First aid management among play school teachers at selected playschools at Nellore District. Narayana Nursing Journal 2013;2(2):12-14.