



Effectiveness of Health Education Programme on Knowledge and Selected Practices Regarding Diarrhoea among the Mothers of Under Five Children

Mamta Chauhan¹, Isha Thakur Dharni²

¹Student, Akal College of Nursing, Eternal University, Baru Sahib, H.P

²Nursing Tutor, Akal College of Nursing Eternal University, Baru Sahib, H.P

ABSTRACT

Diarrhoea is a symptom of a variety of conditions and it constitutes one of the main causes of morbidity and mortality among infants and children throughout the world. Diarrhoea is a problem not only of the developing countries but also of the Western countries. Globally, there are nearly 1.7 billion cases of diarrhoeal disease every year. Globally four billion episodes of diarrhea were estimated to occur each year with > 90% occurring in developing countries.

The study adopted pre-experimental one group pretest-post-test research design and was conducted in selected rural areas of Sirmour District, H.P (Jan-2016 to July-2017). A total of 30 mothers was selected by convenience sampling technique. Inclusion criteria: - Mothers who were having at least one child of under five years and mothers of under-five children who were willing to participate. Exclusion criteria:-Mothers of under-five children who were having any mental illness. A structured knowledge questionnaire was used to assess knowledge and structured observation practices check list was used to assess the selected practices regarding diarrhea among the mothers of under-five children.

Data analysis was done by descriptive and inferential statistics. The study results showed that the knowledge pre-test mean \pm SD (7.97 \pm 2.710) and post-test mean \pm SD score (14.10 \pm 2.090) showed there was increased in level of knowledge. The selected practices pre-test mean \pm SD (8.30 \pm 2.409) and post-test mean \pm SD score (18.13 \pm 2.300) showed there was increased in adequate level of practice. The study showed the effectiveness of health education programme.

Conclusion: The results of the study suggest that there was an adequate level of knowledge and adequate practices regarding diarrhea among the mothers of under-five children.

Keywords: Knowledge, Selected Practices, Mothers of under Five Children, Diarrhoea.

1. INTRODUCTION

Diarrhoeal disease is the second leading cause of death in under-five children. It is both preventable and treatable. Globally, there are nearly 1.7 billion cases of diarrhoeal disease every year. Globally four billion episodes of diarrhea were estimated to occur each year with > 90% occurring in developing countries. Diarrhoeal disease is an important public health problem among under-five children in developing countries. Total diarrhoeal deaths in India among children aged 0-6 years were estimated to be 158,209 and proportionate mortality due to diarrhea in this age-group was 9.1%. The average estimated incidence of diarrhoea in children aged 0-6 years was 1.71 and 1.09 episodes/person/year in rural and urban areas. According to National Family Health Survey-3 (NFHS-3) report (2015), 9% of all under-five children were reported to be suffering from diarrhoea. Studies have shown that the incidence of acute diarrhoeal diseases was as low as 1 episode/child/year in some urban areas.¹

According to CDC, report (2012) diarrhea kills 2,195 children every day more than AIDS, malaria, and measles combined. Diarrheal diseases account for 1 in 9 child deaths worldwide, making diarrhea the second leading cause of death among children under the age of 5. For children with HIV, diarrhea is even more deadly; the death rate for these children is 11 times higher than the rate for children without HIV.²

Health Ministry has launched nationwide 'intensified diarrhea control fortnight' (2016), that report showed 13 children die every hour in India, 328 every day and 1.2 lakh every year under-five children die in India.³

2. METHODS

The study adopted pre-experimental one group pretest-post-test research design and was conducted in selected rural areas of Sirmour District, H.P. (Jan-2016 to July-2017). A total of 30 mothers was selected by convenience sampling technique.

Inclusion Criteria: Mothers who were having at least one child of under five years and mothers of under-five children who were willing to participate.

Exclusion Criteria: Mothers of under-five children who were having any mental illness. A structured knowledge questionnaire was used to assess knowledge and structured observation practices check list was used to assess the selected practices regarding diarrhea among the mothers of under-five children.

Reliability was established by test-retest and split-half method to assess the structured knowledge questionnaire and inter-rater method to assess the practice checklist. Karl Pearson's correlation coefficient formula was used. The reliability for the tool was found to be 0.93 for knowledge and 0.99 for practice respectively, which showed that the tool was reliable. The data were analyzed by using both the descriptive and inferential statistics.

3. RESULTS

Data analysis was done by descriptive and inferential statistics. The study results showed that the knowledge pre-test mean \pm SD (7.97 ± 2.710) and post-test mean \pm SD score (14.10 ± 2.090) showed there was increased in level of knowledge. The selected practices pre-test mean \pm SD (8.30 ± 2.409) and post-test mean \pm SD score (18.13 ± 2.300) showed there was increased in adequate level of practice. The study showed the effectiveness of health education programme.

4. DISCUSSION

The findings of the study have been discussed in accordance with the objectives of the study and previously reviewed literature.

i. To assess the pre-test knowledge and practice regarding diarrhea among the mothers of under-five children.

In the present study, it was revealed that 16(53%) of subjects had average knowledge whereas 14(47%) had good knowledge and none of the subjects had poor and excellent knowledge before the health education programme regarding diarrhea. The mean score knowledge regarding diarrhea was 7.97 with standard deviation 2.710. Practice results showed that 16(53%) of subjects had an inadequate level of practice, 14(47%) had moderate level of practice and none of the subjects had adequate practice before the health education programme regarding diarrhea. The mean score practice regarding diarrhea was 8.30 with standard deviation 2.409.

A similar study was conducted to assess the effectiveness of health education on knowledge with reference to prevention and home management of diarrhea among mothers of under-five children in the selected rural area at Karad talukas. A study conducted on 100 mothers of under-five children. Result reveals that in pre-test majority 62(62%) mothers had average knowledge, 23(23%) had poor knowledge and 15(15%) had good knowledge regarding diarrhoea.⁴

A similar study was conducted to assess mother's knowledge and practice among mothers who have under-five children, in Fenote Selam Town, West Gojjam zone, Amhara Regional State, Northwest Ethiopia. The study was done from April- May 2014. Study results showed that a total of 846 participants were included in the study. 63.6% of mothers had good knowledge towards Diarrhoea management while 54.1% of mothers had poor practice on Diarrhoea management.⁵

ii. To assess the post-test knowledge and selected practices regarding diarrhea among mothers of under-five children.

In the present study, it was revealed that majority of subjects 19(64%) had good knowledge, 10(33%) had excellent knowledge, whereas 1(3%) had the average knowledge and none of the subjects had poor knowledge after the health education programme regarding diarrhea. The mean score knowledge regarding diarrhea was 14.10 with standard deviation 2.090. Practice result showed that majority of subjects 23(77%) had a moderately adequate level of practice, 7(23%) had an adequate level of practice and none of the subjects had an inadequate level of practice after the health education programme regarding diarrhea. The mean score knowledge regarding febrile seizure was 18.13 with standard deviation 2.300.

A similar study was conducted to assess the effectiveness of health education on knowledge with reference to prevention and home management of diarrhea among mothers of under-five children in the selected rural area at Karad talukas. A study conducted on 100 mothers of under five children. Result reveals that in post test 63(63%) had average knowledge, 22(22%) had good knowledge and 15(15%) had poor knowledge in total knowledge score of the study.⁴

A similar study result showed regarding practices in post- test 58 (96.7%) mothers had scored excellent and improved practices regarding prevention and management of diarrhea and no mothers reported poor practice.⁶

iii. To evaluate the effectiveness of health education programme on knowledge and selected practice regarding diarrhea among the mothers of under-five children.

In the present study, it was revealed that the mean knowledge of the pre-test and post-test regarding diarrhea among the mothers of under-five children. The knowledge pre-test mean \pm SD (7.97 ± 2.710) and post-test mean \pm SD score (14.10 ± 2.090) showed there

was increased in level of knowledge. The statistical paired 'test indicated that the knowledge means score found to increase at the level of $p < 0.001$ revealing the effectiveness of health education programme. Hence, H_{01} was rejected.

Practice result showed that the mean practice of the pre-test and post-test regarding diarrhea among the mothers of under-five children. The practice pre-test mean \pm SD (**8.30 \pm 2.409**) and post-test mean \pm SD score (**18.13 \pm 2.300**) showed there was increased in adequate level of practice. The statistical paired 'test indicated that the practice means score found to increase at the level of $p < 0.001$ revealing the effectiveness of health education programme. Hence, H_{02} was rejected.

A similar study was conducted to assess the effectiveness of planned teaching programme on home management of diarrhea and preparation of ORS on the knowledge and practice of mothers having under-five children in the selected rural area of Dehradun, Uttarakhand. The mother's knowledge showed that Mean \pm SD of pre-test was 8.14 ± 2.33 and Mean \pm SD of post-test was 13.8 ± 3.43 . The mean difference between pretest and post-test was 5.66, the finding of the study revealed that post test knowledge score was significantly higher than post test knowledge score. The difference between pre-test and post-test shows difference at the level of $p < 0.005$.⁷

A similar study was conducted to assess the effectiveness of planned health teaching on knowledge and practices of mothers of under-five age children regarding prevention from diarrhea residing in slums of Indore city. Total 60 subjects were selected with convenient sampling technique. In the study the effectiveness of planned health teaching was assessed by find out the mean difference in their score. Data found that mean post-test score (23.2) of knowledge of mothers were higher than mean pre-test knowledge (9.5) score. The mean post-test score (25.3) of practices were also higher than pre-test of practices score (15.4) This difference was statistically significant as per t-test ($P < 0.01$) This indicated that planned health teaching was effective in increasing the knowledge and improving the practices of mother's regarding prevention and management of diarrhoea.⁵

5. ACKNOWLEDGEMENTS

It is always difficult to acknowledge such precious debt as that of learning and it is the only debt that is difficult to repay, except through gratitude. First of all, I am thankful to Almighty God for providing me wisdom to accomplish this task.

6. DECLARATIONS

Funding: Self

Conflict of Interest: None

Ethical Approval: Research Degree Committee (RDC) of Eternal University

7. REFERENCES

- [1] Lakshminarayanan S, Jayalakshmy R, Diarrheal diseases among children in India: Current scenario and future perspectives. J Nat Sci Bio [Internet] Med. 2015 Jan-Jun [Cited 2016 Aug 29];6(1):24-28. Available from: <http://www.ncbi.nlm.nih.gov/Article/PMC4367049>
- [2] CDC. Diarrhea Common Illness, Global Killer. Available from: <http://www.cdc.gov/healthywater/global/diarrhea-burden.html>
- [3] Health Ministry has launched nationwide. Intensified diarrhea control fortnight. (2016): <http://www.m.timesofindia.com>
- [4] Ansari M, Ibrahim MI, Shankar PR. Mothers' Knowledge, Attitude and Practice Regarding Diarrhea and its Management in Morang Nepal: An Interventional Study. Tropical Journal of Pharmaceutical Research. 2012;11(5):847-54. <https://www.ajol.info/index.php/tjpr/article/view/85715>
- [5] Sethi L. Effectiveness of planned health teaching on knowledge and practices regarding prevention and management of diarrhea among the mothers of under-five age group children in a selected slum of Indore city. Nursing and Midwifery Research. 2016 Jan; 12(1):25. <http://medind.nic.in/nad/t16/i1/nadt16i1p25.pdf>
- [6] A ,Talebian A, Alavi N, Mousavi G. Knowledge of Mothers in Management of Diarrhea in Under-Five Children. N Mid. J St. 2013 March; 1(3): 158-62. Available from: http://nmsjournal.com/?page=article&article_id=10393
- [7] Joseph T, Narega P. A study to assess the effectiveness of health education on knowledge with reference to prevention and home management of diarrhea among mothers of under-five children in the selected rural area at Karad taluka. I J S R. July 2014 Volume 3 Issue 7. Available from: www.ijsr.net.

Table No. 1: Frequency and Percentage of Socio-Demographic Variables of the Subjects N=30

Sr. No.	Variables	F	%
1.	Age of mother (in year)		
	≤20	4	13
	21-30	19	64
	31-40	6	20
	>40	1	3
2.	Education status		
	No formal education	4	13
	Primary	5	17
	Secondary	12	40
	High secondary	4	13
	Graduation	3	10
	Post-Graduation	2	7
3.	Education of spouse		
	No formal education	4	13
	Primary	4	13
	Secondary	8	27
	High secondary	8	27
	Graduation	3	10
	Post-Graduation	3	10
4.	Occupation		
	Home maker	26	86
	Employed	2	7
	Self employed	2	7
	Unemployed	0	0
5.	Occupation of spouse		
	farmer	16	53
	Employed	3	10
	Self employee	11	37
	Unemployed	0	0
6.	Religion		
	Hindu	30	100
	Sikh	0	
	Christian	0	
	Others	0	
7.	Family type		
	Nuclear family	12	40
	joint family	18	60
	Extended family	0	0
8.	Monthly family income (in rupees)		
	≤4000	12	40
	4001 to 6000	8	27
	6001 to 8000	1	3
	8001 & above	9	30
9.	No. of children		
	1	14	47
	2	10	33
	3	4	13
	More than 3	2	7
10.	Age of the child		
	<1 year	11	37
	2-3 year	17	56
	4-5 year	2	7
11.	Gender of the child		
	Male	14	47
	Female	16	53

12.	Dietary habits		
	Vegetarian	10	33
	Non Vegetarian	20	67
	Ovo-vegetarian	0	0

Table No. 2: Distribution of Health-Related Data Subject.

Sr. No.	Variables	f	%
1	Any episode of diarrhea was in your child		
	Yes	23	77
	No	7	23
2	Previous history of hospitalization of the child due to diarrhea		
	Yes	11	37
	No	19	63

Table no.2.This table showed that 76.7% of children were having diarrhea history and 36.7% were having the previous history of hospitalization of the child due to diarrhoea.63.3% not having any previous history of hospitalization of the child due to diarrhea.

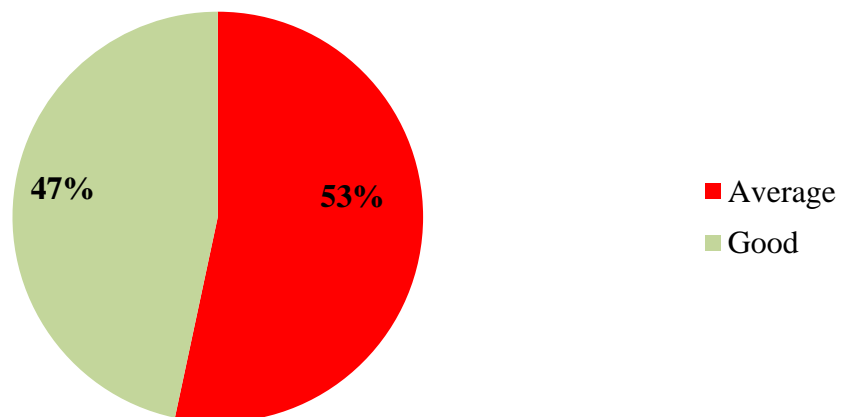


Figure 1: Percentage Distribution According to Pre-test Knowledge Score

Figure 1: Depicts that 16(53%) of subjects had the average knowledge, 14(47%) had good and none of the subjects had poor and excellent knowledge regarding diarrhea. The mean score knowledge regarding diarrhea was 7.97 with standard deviation 2.710

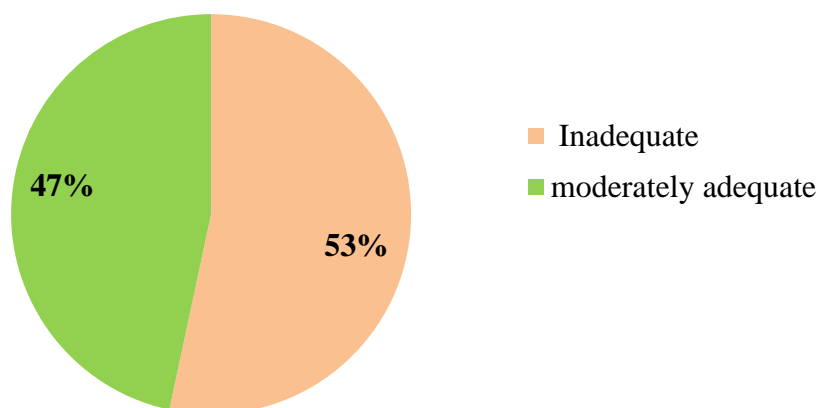


Figure 2: Percentage Distribution According to Pretest Selected Practices Scores

Figure 2: Depicts that 16(53%) of subjects had an inadequate level of practices, 14(47%) had a moderately adequate level of practices and none of the subjects had adequate practices regarding diarrhea. The mean score practice regarding diarrhea was 7.97 with standard deviation 2.710.

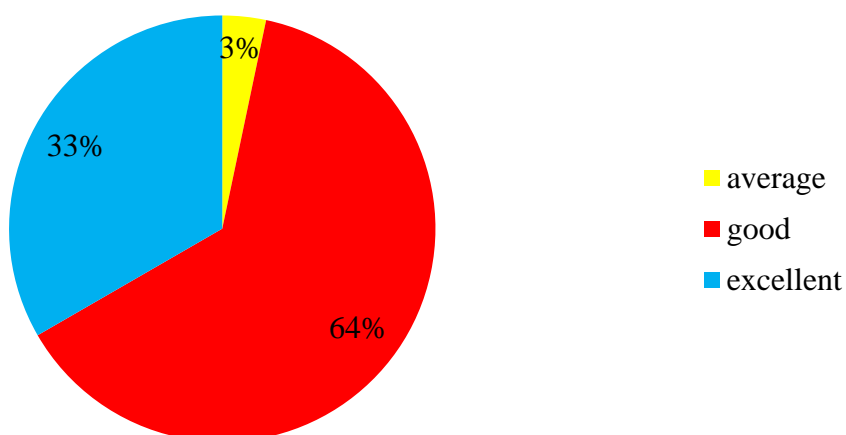


Figure 3: Percentage Distribution According to Post-test Knowledge Scores

Figure 3: Depicts that majority of subjects 19(64%) had good knowledge, 10(33%) had good, 1(3%) had average and none of the subjects had poor knowledge regarding diarrhea. The mean score knowledge regarding diarrhea was 14.10 with standard deviation 2.090

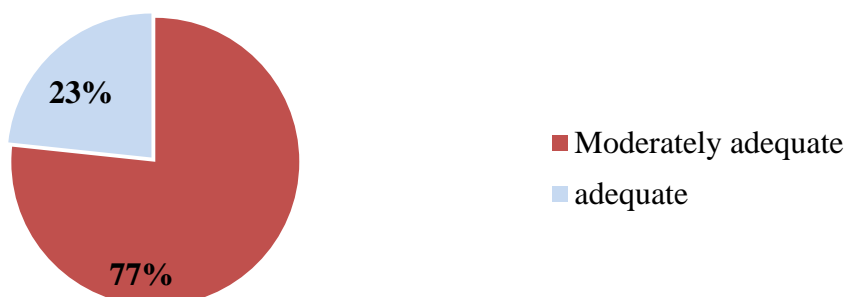


Figure 4: Percentage Distribution According to Post-test Selected Practice Scores

Figure 4: Depicts that majority of subjects 23(77%) had a moderately adequate level of practice, 7(23%) had adequate and none of the subjects had inadequate practice regarding diarrhea. The mean score knowledge regarding febrile seizure was 18.13 with standard deviation 2.300.

Table 3: Comparison of Pretest and Posttest Knowledge Regarding Diarrhoea Among the Mothers of Under Five Children. N=30

Variable		Mean± SD	Mean Difference	't' value	df	P value
Knowledge	Pretest	7.97±2.710	6.13	-14.999	29	.0001**
	Posttest	14.10±2.090				

Table No. 3: Depicts the mean knowledge post-test mean ± SD score (**14.10±2.090**) which was higher than the knowledge pre-test mean± SD (**7.97±2.710**). Thus, the improvements mean score is 6.13. There was a significant difference between pre-test and post-test knowledge score with the 't' value. 14.99 found to be significant at the level of $p < 0.001$. Hence, H_1 was accepted.

Table 4: Comparison of Pre-test and Post-test Selected Practices Regarding Diarrhoea among the Mothers of under Five Children N=30

Variable		Mean± SD	Mean Difference	t	df	P value
Practice	Pretest	8.30±2.409	9.83	-14.609	29	.0001**
	Posttest	18.13±2.300				

Table No. 4: Depicts the selected practices post-test mean ± SD (**18.13±2.300**) which was higher than the selected practices pre-test mean± SD (**8.30±2.409**). Thus, the improvements mean score is 9.83. There was a significant difference between pre-test and post-test selected practices score with the 't' value. 14.609 were found to be significant at the level of $p < 0.001$. Hence, H_2 was accepted.