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A quasi-experimental study to assess the effectiveness of planned teaching regarding BRAT diet on knowledge among the mothers from selected hospitals of Pune city.

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ABSTRACT

Introduction: Diarrhea which is one of the major common diseases among children under 1-6 years of age. The child with diarrhea mainly requires BRAT diet for the treatment as an alternative method or home remedy. **Aim of the study:** To assess the effectiveness of planned teaching regarding BRAT diet on knowledge among the mothers from selected hospitals of Pune city. **Material and method**: The research approach adopted for the study was quantitative research approach and research design was quasi-experimental research design with pre-test post-test control group design. 70 mothers were selected by method of Non-probability - Purposive sampling technique, 35 mothers were kept in experimental group and 35 mothers were in control group. Experimental group received planned teaching regarding BRAT diet. **Results:** The finding of the study found that effectiveness on level of knowledge regarding BRAT diet among mothers in experimental and control group was analyzed by paired and unpaired t-test. The value of t-test is 10.0214 and the p-value is 0.0001. So, the result is significant at 0.05 level. Hence, planned teaching regarding BRAT diet is effective increasing the knowledge level. There were no association found in between pre intervention with selected demographic variables in experimental group. In control group there were no association between pre-test except in occupation. **Conclusion**: From the findings of the study, the researcher concludes that the planned teaching regarding BRAT diet was effective among the mothers as mothers practiced the diet as a home remedies rather than using pharmaceutical medication which is easily available.

Keywords: Assess, Effectiveness, BRAT diet, diarrhea, planned teaching,

INTRODUCTION

Diarrhea is a condition which identified by increase in frequency, fluidity and volume of stools which unusual as compared to normal routine. Bacteria such as *Salmonella, Streptococcus* and *Escherichia coli* are main cause of acute and chronic diarrhea. Diarrhea is often sets off by bacterial infections, chemical toxins, psychogenic factors, drugs and even dietary sensitivities.[1]

As per the reports of World Health Organization due to diarrhea death is nearly 8% in children under six years of age and indicates as a global crisis overall. Due to malnourished (45%), pneumonia (15%), diarrhea (8%), malaria (5%) and other (9%) factors are primary cause of death among under six-year-old by reports of United Nations International Children's Emergency Fund. Diarrhea disease got adapt in to poor diet, malnutrition and children who are under age of six. Globally diarrhea disease hits back and affects 1.7 billion children with over half dying annually. In the year 2008, the rate of collectively diarrhea death among children is 4.249 million into countries like Nigeria, Congo, Pakistan and China.[2]

In developing countries especially like India, highly public health responsibility due to major threat to infants and young children by diarrhea.[1]

BRAT diet was invented by Fe Del Mundo as a home remedy treatment of diarrhea children And It's was first started in the country of Philippines and firstintroduced in 1926. It was believed that the one who are suffering from gastroenteritis, which include nausea, vomiting and diarrhea need bland food option. But it is recommended for children to get strengthen their body by comprising bland foods.[3]

B-R-A-T stands for Banana, Rice, Applesauce and Toast which is often recommended for child who had experiencing diarrhea which helps in firm and gentle stool since it content low fiber. In addition to that this diet recommended to use all people regardless of age.[4]

NEED OF THE STUDY

Children who are under below six years old is a valuable period for child's physical and socio-psychological development. Children need to take special care, attention and concerns health services since in this period they are unsafe to infections, malnutrition and accidents. By "World Health Organization Diarrhea" claims that second prime cause of death in children under six would be treatable and preventable even though diarrhea effects approximately 525,000 under six annually.[1]

In the year 2001 and 2012, total death decreasing from 2.5 to 1.5 million, under six years in India. It has made contributed to universal programs like expended immunization programs for diarrhea diseases and acute respiratory infections. Comprehensive strategy focusing on diarrhea diseases, preventive and control strategies are valuable to make better community organization.[2]

Diarrhea caused by poor sanitation, unhygienic, poor water transportation, lack of hand-washing before feeding and unfitting feces disposal. It has more prevalent under six years old. It keeps remain significant burden in India inspite of taking efforts to control mortality.[1]

It is mandatory to take up a comprehensive strategy focusing on diarrhea disease for saving many children from diarrhea. Government and relevant organization should take awareness program addressing on social health determinants like sanitation, fit feces disposal, proper management of water and household handling.

The study evaluated the nutritional management of children with diarrhea. It involved 110 individuals and applied Google Forms for analysis of data. Study revealed general population has good understanding of nutritional management for acute diarrheal disease in children and infants. Foods such as rice, toast, applesauce, teas, vegetables soup and banana preferred by people as appropriate. 83 avoid antimicrobial drugs which indicate no misuse, 67.90 believed diet significantly improved their child symptoms with 19.09% experiencing complete diarrhea recovery. Nevertheless, 3 out of 110 claimed that it did not help at all.[5]

AIM OF THE STUDY

To assess the effectiveness of planned teaching regarding BRAT diet on knowledge among the mothers from selected hospitals of Pune city.

METHODOLOGY

The objectives of the study are: to assess the knowledge regarding BRAT diet among mothers before and after planned teaching in experimental group and control group, to determine the effectiveness of planned teaching on knowledge regarding

BRAT diet and to find the association between pre intervention with selected demographic variables. The research approach adopted for the study was quantitative research approach and research design was quasi-experimental research design with pre-test post-test control group design. Research carried out on 70 mothers which were selected by using a method of Non-probability - Purposive sampling technique, 35 mothers were kept in experimental group and 35 mothers were kept in control group. Demographic variables and Self-Structured Questionnaire were used for data collection. Research tool validity was done from different experts and from different specialties. Reliability of the study was done by selected 10 samples with method of test-retest method by using Karl's Pearson's Formula and obtained value is r = 0.82. Pilot study was done with 10 samples, 5 in experimental group and 5 in control group. Paired t-test as well as unpaired t-test were utilized to analyzed the data. Hence the t-value is statistically significant at 0.05 level.

RESULTS

The finding of the study found that effectiveness on level of knowledge regarding BRAT diet among mothers in experimental and control group was analyzed by paired and unpaired t-test. The value of t-test is 10.0214 and the p-value is 0.0001. So, the result is significant at 0.05 level. Hence, planned teaching regarding BRAT diet is effective increasing the knowledge level. There were no association found in between pre intervention with selected demographic variables in experimental group. In control group there were no association between pre-test except in occupation.

Section-I: Analysis of data related to demographic variables of the experimental and control group.

The data divulge the major findings regarding the demographic variables of 70 samples, 35 from experimental and 35 from control group.

In experimental group most of the mothers, (37.14%) were from age group 21 years – 25 years among all the age group. Mothers (45.71%) were from the high school of education background. Mothers (31.43%) had an occupation from the private employee and home maker. Majority of mothers (62.86%) were having a family income ₹10,000-₹30,000 per month. Maximum mothers (85.71%) were from joint family. Among all (31.43%) of mothers did have three kids.

In control group most of the mothers, (37.14%) were from age group 21 years – 25 years among all the age group. Mothers (31.43%) were from the primary school of education background. Mothers (60.00%) had an occupation of private employee. Majority of mothers (42.86%) were having a family income ₹10,000-₹30,000 per month. Maximum mothers (54.29%) were from joint family. Among all (45.71%) of mothers did have two kids.

Section-II: Findings related to level of knowledge regarding BRAT diet among mothers before and after planned teaching in experimental and control group. n=35

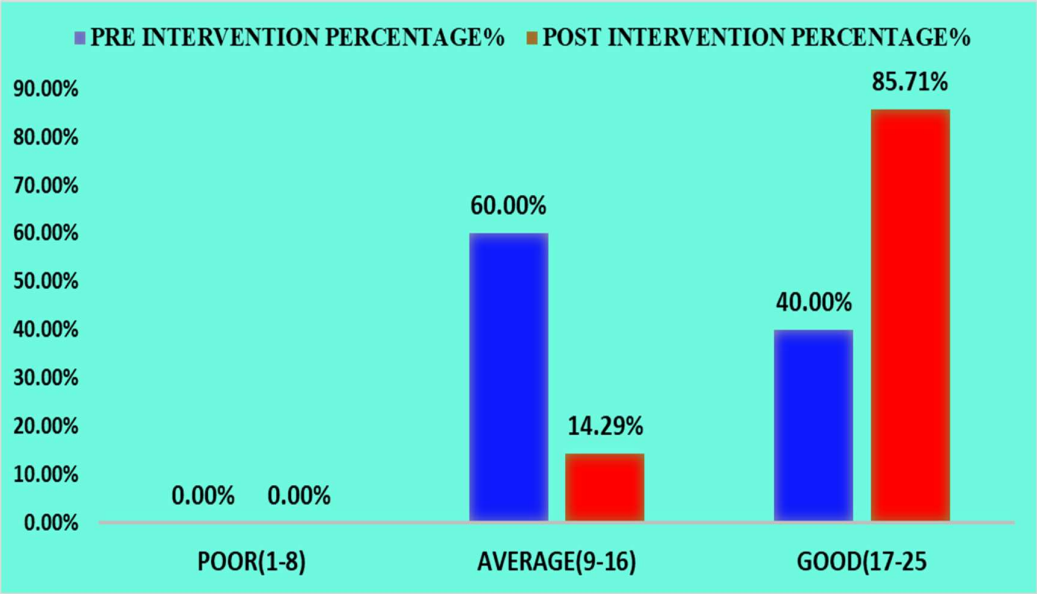

Figure No. 01

Pre and post intervention level of knowledge regarding BRAT diet among mothers in experimental group

In the above figure indicate that mothers did have an average knowledge of 21(60.00%) in pre intervention and mothers having good knowledge 30(85.71%) in post intervention**.**

Table No. 01: Pre and post - test level of knowledge regarding BRAT diet among mothers in control group n=35

	Control Group				
		Pre-Test		**Post-Test**	
		Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Level of knowledge	**Poor (1-8)**	0	0.00%	0	0.00%
	Average (9-16)	31	88.57%	28	80.00%
	Good (17-25)	4	11.43%	7	20.00%

Table No. 01 indicates that mothers did have an average knowledge maximum of 31(88.57%) in pre-test and 28 (80.00%) in post-test**.**

Section-III: Findings related to the effectiveness of planned teaching on level of knowledge regarding BRAT diet among mothers. n=35

Table No. 02: Effectiveness on level of knowledge regarding BRAT diet among mothers in experimental and control group

		N	**Mean**	**SD**	**t-value**	**p-value**	**Remarks**
Experimental and control group	**Post intervention (Experimental)**	35	20.03	2.33			
	Post test (Control)	35	15.06	1.78	10.0214	0.0001	Significant

Table No. 02 represents the effectiveness on level of knowledge regarding BRAT diet among mothers in experimental and control group which was analyzed by unpaired t-test. The mean and standard deviation of pre intervention score is 20.03 and 2.33, respectively. The mean and standard deviation of post-test score is 15.06 and 1.78, respectively. The value of t is 10.0214. The p-value is less than 0.0001. So, the result shows that significant at which p-value is less than 0.05 level.

Section-IV: Findings related to the association between pre intervention on level of knowledge with selected demographic variables in both experimental and control group.

The association between pre intervention on level of knowledge with selected demographic variables in experimental group which was calculated by chi-square test. All the p-value are less than at 0.05 level of significant. So, there was no association between demographic variables in experimental group.

The association between pre-test on level of knowledge with selected demographic variables in control group which was calculated by chi square test. All the p-value are less than at 0.05 level of significant except occupation. So, there was no association between demographic variables in control group but there was association only in occupation.

DISCUSSION

The study finding is supported by a similar study. A pre-test post-test control group design were used in the study in order to collect the samples. 70 samples of mothers whose child was admitted in Pediatric Ward of children 1-6 years of age was taken, 35 mothers were allocated from interventional group and 35 mothers were allocated from control group.

In foregoing analysis, investigation showed that interventional group, average of knowledge 21(60.00%) and 30(85.71%) good knowledge in respectively. In control group, average knowledge 31(88.57%) and 28(80.00%) respectively. A cross sectional study was conducted among 106 paternal mothers which was practices on management of acute diarrhea on children under 5 years, which was interviewed by using pre designed and pre tested questionnaire. Results shows that 60.7% are provides less or not even at all fluids meanwhile 19.6% are as usually and 17.8% more than usually. During diarrhea mothers used 19.6% of rice and 15.9% of banana. Thus, it concludes that there is a need for immediate campaigns in order to change maternal practices on management of acute diarrhea.[6]

In the study, the diarrhea of mean score treatment was twenty one point six four +…./- seven point eight one for banana flake treatment group and twenty five point four one +.///- nine point seven six for medical treatment group. Statistically which is irrelevant but nutrient was also supported in both groups. Banana flake group had less diarrhea clinically yet, fifty-seven percentage subjects free from diarrhea as compare to 24% medical treatment. Thus, the banana flakes can also be used as treatment for diarrhea effectively in critically ill tube-fed patients.[7]

Research disclose, it is necessary to develop the insight of mothers regarding BRAT diet. Research indicates planned teaching a possible method for refined perception about birth mother in regard to BRAT diet.

CONCLUSION

On the basis of verdicts, the study can be deduced that in pre and post intervention level of knowledge regarding BRAT diet among mothers in experimental group, among mothers 21(60.00%) of them having an average knowledge and 30(85.71%) of them having good knowledge in post intervention. In the pre and post -test level of knowledge regarding BRAT diet among mothers in control group,

among mothers31(88.57%)of them having an average knowledge in pre-test and 28 (80.00%) of them having average knowledge in post-test.

So, mothers got knowledge regarding BRAT diet. Hence, planned teaching regarding BRAT diet among mothers was effective. The knowledge level of mothers regarding BRAT diet has increased by providing a planned teaching which shows significantly effect in knowledge level. Thus, the planned teaching is better for increasing the knowledge level for mothers. In the clinical setting mothers who are admitted their child in Pediatric Ward and Pediatric Intensive Care Unit and mothers who comes in Pediatric OPD can be benefited from such research, as it will provide more knowledge regarding the BRAT diet. Every now and then regarding BRAT diet most people had no knowledge, education can improve the knowledge regarding BRAT diet for the dietary management of diarrhea instead of medicine as a home remedy.

Conflict of Interest

The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

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