IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

A Study To Assess The Effectiveness Of The Sensitization Program On Knowledge, Attitude, And Practices Regarding Home-Based Diarrhoeal Management Amongmothers Of Under-Five Children In Selected

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Abstract

Background

Diarrhoea is a widespread and debilitating illness, particularly impacting infants and young children. Besides being a significant cause of both illness and death, it also hampers the growth and development of children. The negative effects on growth result from various factors, including reduced appetite, altered feeding practices, and impaired nutrient absorption. This detrimental relationship between diarrhoea and physical growth is evident, with each day of illness contributing to a weight deficit of approximately 20 g to 40 g. For infants experiencing prolonged diarrhoea, exceeding 20% of their time, the weight deficit can be as high as 370 g at one year of age. Such substantial weight loss during early development can have long-term consequences on a child's overall growth trajectory.

The impact of diarrhoea on growth is not limited to weight deficits alone; it also affects linear growth. Children who suffer from diarrhoea during the first 24 months of life tend to be approximately 1.5 cm shorter than those who never experienced the illness. This demonstrates the significant correlation between diarrhoea and stunted growth during critical developmental periods. The negative effects of diarrhoea on linear growth are particularly concerning, as stunted growth in early childhood can have lasting effects on physical and cognitive development, impacting overall well-being and future opportunities.

Effective home-based diarrhoea management is vital in the early stages of illness to prevent severe dehydration and complications. In India, mothers are the primary caregivers and play a central role in managing the health of their under-five children. As the first point of contact during a child's illness, their understanding of proper home-based management is crucial. Timely recognition of danger signs and initiation of appropriate management strategies can significantly reduce the risk of severe complications and mortality.

Methodology

An evaluate study was conducted to find out the effectiveness of the sensitization program on knowledge, attitude, and practices regarding home-based diarrhoeal management among mothers of under-five children in selected rural areas of Punjab. The research design wasquasi experimental non-equivalent control group pre-test and post test design. All the mothers under of five children who are residing in Sehra, Saidhkheri , Gopalpur and Abdulpur District , Patiala villages of Punjab and who fulfilled the inclusion criteria were considered as sample. The samples were selected using purposive sampling technique, a total of 75 samples for each experimental and control group had chosen. Data was collected using pretested, validated and reliable tool knowledge and attitude scale on home based diarrhoeal management and observational check list preparation of ORS solution. On Day 1 pre-test was conducted using structured knowledge questionnaire to assess knowledge on home based diarrhoeal management and attitude scale was used to assess the attitude on home based diarrhoeal management and observational check list was used to assess the practice on ORS preparation. The sensitization program on home based diarrhoeal management was administrated to experimental group and post test was conducted 21 days after pre-test using the same tool. Before conducting the post test motivational follow-up was given to the experimental on Day 10. Similarly, the pre-test and post-test were conducted to the control group by using same questionnaire without administration of sensitization program and motivational follow up on home based diarrhoeal management. At the end of the post-test sensitization program was administrated to the control group.

Results

In experimental group the paired ‘t’ test value for knowledge was 13.070 which was statistically significant at P <0.001 and in control group the paired ‘t’ test value for knowledge was 0.359 which was not statistically significant at P <0.05.

In experimental group, posttest knowledge mean, and S.D. was 28.54 ± 4.91 where as in control group posttest knowledge mean ± S.D. was 16.19 ± 3.84. The overall independent ‘t’ value for knowledge was 6.988 which was statistically significant at P<0.001.

In experimental group the paired ‘t’ test value for attitude was 13.722 which was statistically significant at P <0.001 and in control group the paired ‘t’ test value for attitude was 1.612 which was not statistically significant at P <0.05..

In experimental group, posttest attitude mean, and S.D. was 72.89 ± 16.66 where as in control group posttest attitude mean ± S.D. was 41.89 ± 12.67. The overall independent ‘t’ value for attitude was 12.826 which was statistically significant at P<0.001.

In experimental group the paired ‘t’ test value for practice was 19.178 which was statistically significant at P <0.001 and in control group the paired ‘t’ test value for practice was 0.712 which was not statistically significant at P <0.05.

In experimental group, posttest practice mean, and S.D. was 11.64 ± 0.67 where as in control group posttestpractice mean ± S.D. was 7.01 ± 1.40. The overall independent ‘t’ value for practice was 13.290 which was statistically significant at P<0.001.

In experimental group there was significant association between pre-test level of knowledge and demographic variables such as education ($\chi 2$ =6.7052, p=0.048), family type ($\chi 2$ = 5.831 p=0.015), number of children ($\chi 2$ =5.70, p=0.016), there was significant association between pre-test level of attitude and demographic variables such as education ($\chi 2$ =8.895, p=0.011), family type ($\chi 2$ = 5.795 p=0.016),there was significant association between pre-test level of practice and demographic variables such as Religion ($\chi 2$ =10.797, p=0.011), occupation ($\chi 2$ =15.07, p=0.004), Number of children ($\chi 2$ = 6.669 p=0.009).

In experimental group there was significant association between pre-test level of knowledge and demographic variables such as occupation ($\chi 2$ =17.03, p=0.001), Number of children ($\chi 2$ = 8.566 p=0.003), Source of information ($\chi 2$ =18.59, p=0.000), there was significant association between pre-test

level of attitude and demographic variables such as occupation ($\chi 2$ =12.91, p=0.004), Number of children ($\chi 2$ = 7.220, p=0.007), there was significant association between pre-test level of practice and demographic variables such as Religion ($\chi 2$ =27.62, p=0.000).

Conclusion

The findings of the study revealed that there was significant increase in the post test knowledge attitude and practice score among mothers in experimental group. Hence, it is concluded that Sensitization Programs highly effective in improving the knowledge attitude and practice on home based diarrhoeal management among mothers.

Key words: Effectiveness, Sensitization Program, Knowledge, Attitude, Practice, Mothers, Home based diarrhoeal management, under five children.

Introduction

Background of the study

Diarrhoea, as defined by the World Health Organization (WHO), is the passage of three or more loose or liquid stools per day, or more frequent stools than usual for an individual. This condition can lead to significant health complications, including the loss of essential fluids, electrolytes, and vital nutrients, which can potentially progress to dehydration and even death. Globally, diarrhoea is a major cause of mortality among young children, accounting for approximately 8% of all deaths in children under the age of five in 2016. Shockingly, this translates to over 1300 young children losing their lives each day, or approximately 480,000 children per year. Diarrhoea claims more lives among young children than combined deaths caused by malaria, HIV/AIDS, and measles, making it a grave public health concern.1-2

Diarrhoea is a widespread and debilitating illness, particularly impacting infants and young children. Besides being a significant cause of both illness and death, it also hampers the growth and development of children. The negative effects on growth result from various factors, including reduced appetite, altered feeding practices, and impaired nutrient absorption. This detrimental relationship between diarrhoea and physical growth is evident, with each day of illness contributing to a weight deficit of approximately 20 g to 40 g. For infants experiencing prolonged diarrhoea, exceeding 20% of their time, the weight deficit can be as high as 370 g at one year of age. Such substantial weight loss during early development can have long-term consequences on a child's overall growth trajectory.3-4

The impact of diarrhoea on growth is not limited to weight deficits alone; it also affects linear growth. Children who suffer from diarrhoea during the first 24 months of life tend to be approximately 1.5 cm shorter than those who never experienced the illness. This demonstrates the significant correlation between diarrhoea and stunted growth during critical developmental periods. The negative effects of diarrhoea on linear growth are particularly concerning, as stunted growth in early childhood can have lasting effects on physical and cognitive development, impacting overall well-being and future opportunities.5

Diarrhoea remains a significant global health concern, particularly affecting children under the age of 5, especially in underdeveloped regions with limited access to proper healthcare and knowledge about diarrhoeal disease management. Annually, approximately 1.7 billion cases of diarrhoea occur among young children worldwide, a staggering number that continues to be unacceptable. Tragically, diarrhoea is responsible for an estimated 800,000 deaths in children under the age of 5 globally, with more than 80% of these fatalities concentrated in South Asia and Africa, with Africa alone accounting for 46% of the deaths. In South Africa, diarrhoea ranks as the third leading cause of death in young children, and many of these deaths could have been prevented with the proper use of oral rehydration solution (ORS) at home. These children primarily succumb to dehydration, which can be effectively addressed with ORS.6 Proper home-based management is essential to reduce the morbidity and mortality associated with diarrhoea in children under the age of 5. Caregivers play a significant role in managing diarrhoea at home; however, studies indicate that their level of management practice is often inadequate. This lack of knowledge and skill in managing diarrhoea can lead to delayed or improper treatment, potentially exacerbating the child's condition and increasing the risk of severe complications. Moreover, the usage of universal popular oral

rehydration solution (ORS) to prevent dehydration, a critical aspect of diarrhoea management, is also reported to be very low among caregivers. Promoting better education and awareness among caregivers about home-based management practices and the importance of using ORS can significantly improve outcomes and reduce the burden of diarrhoea-related illnesses in young children.38-40

A study conducted on knowledge and practice regarding home care management of diarrhoea among mothers of under five reported that out of 204 mothers were covered. Nearly two thirds (62.74%) mothers were literate and majority of them were in the age group of 21-25 years. More than half of participants lacked adequate knowledge regarding danger signs, spread and prevention. Poor dietary practices were prevalent among 50.49% mothers. Only 50.49% mothers practiced exclusive breast feeding. Nearly one fifth of the mothers practiced bottle feeding, among them only 26.82% practiced hygienic measures. Majority of mothers (55.88%) dispose child's faeces in open air. Only 43.62% mothers demonstrated proper technique of hand washing. 86.27% participants knew about ORS, among them more than half had adequate knowledge regarding preparation and administration. Only 26.96% mothers dewormed their child regularly. The concluded that health education should be used as a tool to promote knowledge and good practice and reduce morbidity & mortality.41

Another study conducted among mothers of under five children reported that majority (86.2%) of the women knew that drinking dirty water can cause diarrhoea, 175 (47.3%) believed teething causes diarrhoea, 177 (47.8%) knew that human faeces could be a source of diarrhoea, while 332 (89.7%) knew that hand-washing prevents one from developing diarrhoea. Their level of knowledge of signs of dehydration was low with 45.7%, 62.4%, 27.8% and 42.2% identifying sunken eyes, thirst and dry mouth, tearless eyes and loss of stretchiness of the skin as signs of dehydration respectively. The study concluded that though mothers had good knowledge of causes, and home management of diarrhoea, there are still knowledge gaps. Efforts to bridge the gaps should be tackled through periodic and regular health education programs for the mothers. Existing evidence suggest that there is need for health education for mothers under five to prevent and management of diarrhoea among children.42

Efforts to enhance caregivers' capacity to manage diarrhoea at home should focus on providing clear and accessible information about proper care practices. Educating caregivers about early recognition of diarrhoea symptoms, appropriate fluid intake, and when to seek medical assistance can empower them to take prompt and effective action during diarrhoeal episodes. Furthermore, promoting the use of universal popular ORS and ensuring its availability can contribute to reducing dehydration-related complications and hospitalizations. By investing in caregiver education and promoting the use of essential tools like ORS, healthcare providers can empower families to better manage diarrhoea at home, leading to improved child health outcomes and reduced healthcare burden.

Need for the study

Diarrhoeal diseases are a significant public health challenge globally, affecting populations in both developed and developing countries. Among these, India, with its vast population and diverse socio-economic landscape, faces a considerable burden of diarrhoeal infections. Characterized by frequent loose and watery stools, diarrhoeais commonly caused by viral, bacterial, or parasitic infections, leading to dehydration and potentially fatal complications if left untreated. The World Health Organization (WHO) estimates that approximately 1.7 billion cases of childhood diarrhoea occur globally each year, causing around 525,000 deaths, with India accounting for a substantial portion of these cases.43

In India, diarrhoeal diseases are a significant public health concern, mirroring the global pattern where low and middle-income countries bear the greatest burden. The country's diverse context introduces regional variations and numerous risk factors, making the situation more complex. Factors such as inadequate access to clean water, poor sanitation facilities, and limited healthcare resources contribute to the higher incidence of diarrhoeal infections in India. Particularly in rural areas, where sanitation and hygiene practices may be lacking, the challenges of combating diarrhoeal diseases are more pronounced.44

The lack of clean water access remains a crucial issue in many parts of India, especially in rural and underserved communities. Contaminated water sources become breeding grounds for diarrhoeal pathogens, leading to outbreaks of the disease. Additionally, the improper disposal of wastewater and fecal

matter can further contaminate water sources, perpetuating the cycle of diarrhoeal infections. Access to safe drinking water is essential in preventing diarrhoeal illnesses and reducing the transmission of the disease.45-46

Poor sanitation facilities in India contribute to the spread of diarrhoeal diseases. Open defecation and inadequate sanitation systems create unhygienic conditions, facilitating the transmission of pathogens and increasing the risk of diarrhoeal infections. The construction of latrines and proper waste management systems is critical in maintaining hygienic environments and preventing the contamination of water sources and food, helping to break the chain of infection.47

In rural areas of India, where healthcare facilities may be limited, timely access to medical care during diarrhoeal episodes becomes a challenge. Early recognition and prompt treatment of diarrhoea are crucial in preventing severe dehydration and complications, but the lack of nearby healthcare centers may hinder caregivers from seeking medical help promptly.48

Furthermore, factors such as poor breastfeeding practices and low birth weight can also contribute to the prevalence of childhood diarrhoea in India. Optimal breastfeeding practices provide essential nutrients and antibodies that strengthen a child's immune system, reducing the risk of diarrhoeal infections. Addressing these factors requires a multi-faceted approach, including education and support for mothers to promote breastfeeding and proper nutrition for infants and young children.49

To effectively combat the burden of diarrhoeal diseases in India, comprehensive interventions are needed. Improving access to clean water and sanitation facilities, promoting proper hygiene practices, and educating communities about the importance of early recognition and appropriate management of diarrhoea are crucial steps. Additionally, enhancing healthcare infrastructure and resources in rural areas can help ensure timely medical intervention and improve child health outcomes. By addressing these challenges collectively, India can make significant progress in reducing the incidence and impact of diarrhoeal diseases, particularly among vulnerable populations like young children.50

The impact of diarrhoea on child health is a critical issue, particularly concerning under-five mortality rates. Childhood mortality is a vital indicator of overall population health, and diarrhoeal diseases significantly contribute to the mortality rates among young children. The World Health Organization (WHO) reports that in India, 9% of all deaths among children under the age of five are attributed to diarrhoea. Despite being preventable, diarrhoea remains a persistent public health concern in the country.51-52

Diarrhoea can lead to severe dehydration and nutrient loss, posing a significant threat to young children's well-being. The condition is often caused by contaminated water and inadequate sanitation facilities, particularly in rural and underserved areas. Improving access to clean water and proper sanitation, along with promoting good hygiene practices, can help reduce the incidence of diarrhoeal diseases and prevent associated deaths.53

Efforts to combat childhood diarrhoea should include targeted interventions to educate caregivers and healthcare providers on early recognition and appropriate management of the condition. Timely use of oral rehydration solution (ORS) and zinc supplementation are vital in treating diarrhoea and preventing severe dehydration. Additionally, promoting optimal breastfeeding practices and proper nutrition can enhance children's immune systems, reducing their susceptibility to diarrhoeal infections.54

By addressing the factors contributing to childhood diarrhoea and implementing effective preventive and management strategies, India can make significant progress in reducing under-five mortality rates associated with diarrhoeal diseases. A comprehensive approach involving government initiatives, community engagement, and healthcare system improvements is essential in achieving this goal and ensuring better health outcomes for young children across the country.55

Effective home-based diarrhoea management is vital in the early stages of illness to prevent severe dehydration and complications. In India, mothers are the primary caregivers and play a central role in managing the health of their under-five children. As the first point of contact during a child's illness, their understanding of proper home-based management is crucial. Timely recognition of danger signs and

initiation of appropriate management strategies can significantly reduce the risk of severe complications and mortality.56

However, several challenges hinder effective home-based diarrhoea management in India. There exist knowledge gaps and misconceptions, as some communities hold traditional beliefs that influence disease causation and treatment practices. Inadequate health literacy among caregivers, especially in rural and marginalized communities, can hinder the implementation of proper disease management and preventive practices. Socio-cultural barriers, including stigma associated with diarrhoeal diseases and gender norms within households, can further impact maternal decision-making and healthcare-seeking behavior.57

Access to healthcare services also plays a critical role in effective diarrhoea management. The availability and accessibility of healthcare facilities in remote and underserved areas can be limited, hindering timely access to medical treatment for diarrhoea. Healthcare-seeking behavior is influenced by various factors, including distance to healthcare facilities, perceived severity of the illness, and financial constraints, further complicating the situation.58-60

In response to the burden of diarrhoeal diseases, both the Indian government and non-governmental organizations have implemented various interventions and programs. Government initiatives include national health programs focused on child health, such as the Integrated Management of Neonatal and Childhood Illness (IMNCI) and the Rashtriya Bal SwasthyaKaryakram (RBSK). These programs aim to address child health issues, including diarrhoea management, through targeted interventions and community-level engagement.61

Non-governmental organizations have also played a crucial role in raising awareness and implementing community-based interventions to prevent and manage diarrhoeal diseases. These efforts often involve community health workers and volunteers to disseminate information and promote appropriate health-seeking behaviors.62

Despite the implementation of various programs, there remains a gap in the effectiveness of current interventions in home-based diarrhoea management. Many existing programs primarily focus on healthcare facilities, overlooking the critical role of mothers in home-based care and management. Additionally, some interventions may lack adequate behavior change communication strategies, which are essential for promoting lasting changes in maternal practices.63

Therefore, there is a pressing need for evidence-based interventions tailored to the local context that emphasize empowering mothers with accurate and practical knowledge and fostering positive attitudes towards diarrhoea management. Such interventions can effectively address the challenges faced in home-based diarrhoea management and contribute to reducing the burden of diarrhoeal diseases in India.64

A study conducted on managing childhood diarrhoea at homes in India reported thatthe results reveal that only 76.36% mothers have knowledge about diarrhoea management in India. Merely, 54.76% mothers give oral rehydration solution (ORS) to their children when they get diarrhoea. However, 43.43% mothers use salt and sugar solution for the treatment of childhood diarrhoea at their homes. Despite a great deal of efforts being expanded worldwide to promote breastfeeding, only 19.9% mothers continue breastfeeding when their child suffers from diarrhoea. This study concluded there is a significant gap in existing interventions to prevent and manage the diarrhoea. Hence there is comprehensive management of diarrhoea is required in order prevent, treat and reduce the mortality of diarrhoea.65

The sensitization program emerges as a promising solution to fill this gap in home-based diarrhoea management. It aims to empower mothers with knowledge and skills to manage diarrhoea effectively at home, thereby strengthening the capacity of households to handle diarrhoeal episodes promptly and appropriately.66

The key components of the sensitization program involve health education and communication strategies. These strategies can include group sessions, individual counseling, and the distribution of educational materials. Group sessions can provide a platform for mothers to interact, learn from one another, and build a sense of community support. Individual counseling can address specific concerns and challenges faced by mothers, tailoring interventions to their unique circumstances. Educational materials, such as

pamphlets and posters, can reinforce key messages and provide a tangible resource for mothers to refer to when needed.67

Community engagement and participation are integral to the success of the sensitization program. Involving community leaders, elders, and local influencers can enhance the program's reach and acceptance within the community. These influencers can serve as role models, demonstrating proper home-based diarrhoea management practices and encouraging others to follow suit. Moreover, community engagement can help contextualize the program, ensuring that it aligns with local beliefs, customs, and language, making it more relevant and relatable for mothers.68

Empowering mothers as primary caregivers is pivotal in the success of the sensitization program. When mothers possess the knowledge and skills to manage diarrhoea at home, they become key agents of change within their households. They can take prompt action in case of diarrhoea, initiate appropriate management strategies, and seek medical care when necessary. Empowered mothers can positively influence child health and well-being in communities across India.69

By addressing these challenges and empowering mothers, India can take significant strides towards reducing the burden of diarrhoeal diseases and improving child health and survival. The sensitization program holds immense potential to bridge the gap between knowledge and practices, ultimately contributing to improved health outcomes for children under five.

Thus,this research study aims to evaluate the effectiveness of the sensitization program on knowledge, attitudes, and practices regarding home-based diarrhoea management among mothers of under-five children in India. Ultimately, this research seeks to contribute to the efforts in reducing the burden of diarrhoeal diseases and improving child survival in India. By addressing the challenges faced in home-based diarrhoea management and promoting evidence-based interventions, India can move closer to achieving its goals in child health and well-being.

Problem statement

A study to assess the effectiveness of the sensitization program on knowledge,attitude, and practices regarding home-based diarrhoeal management amongmothers of under-five children in selected rural areas of Punjab.

Objectives

1. To assess the pre and post-test knowledge, attitude, and practices regardinghome-based diarrhoeal management among mothers of under-five children in experimental and control group.

2. To compare the post-test knowledge, attitude, and practices regarding home-based diarrhoeal management among mothers of under five children in experimental and control group.

3. To find the association of knowledge, attitude, and practices regarding home-based diarrhoeal management among mothers of under-five children with the selected demographic variables of mothers of under-five children in the experimental group.

4. To determine the relationship between knowledge, attitude and practice regarding home-based diarrhoeal management among mothers of under five children.

Operational definitions

Effectiveness: It refers to determining the extent to whichsensitization program has brought about the result, intended to measure significant gain in knowledge, attitude, practice on home-based diarrhoeal managementwhich was assessed by using structured knowledge questionnaire, attitude scale and practice check list.

Knowledge:It refers to the recall of memory regardinghome-based diarrhoeal management. It was assessed by using structured questionnaire onhome-based diarrhoeal management.

Attitude: It refers to belief or opinion or feeling regarding home-based diarrhoeal management. It was assessed by using attitude onhome-based diarrhoeal management.

Attitude: It refers to belief or opinion or feeling regarding home-based diarrhoeal management. It was assessed by using attitude on home-based diarrhoeal management.

Practice: It refers to ability of the mothers to perform home-based diarrhoeal management. It was assessed by practice checklist.

Sensitization Program:It refers to an educational intervention, systematically developed content regarding knowledge, attitude and practice on home-based diarrhoeal management for mothers of under five children.

Hypotheses

All hypotheses are tested at 0.05 level of significance

H1:The mean post-test knowledge score will be significantly higher than the mean pretest knowledge score amongmothers of under-five childrenregarding home-based management of diarrhoea.

H2:The mean post-test attitude score will be significantly higher than the mean pretest knowledge score amongmothers of under-five childrenregarding home-based management of diarrhoea.

H3:The mean post-test practice score will be significantly higher than the mean pretest knowledge score amongmothers of under-five childrenregarding home-based management of diarrhoea.

H4:The mean post-test knowledge score of mothers of under-five children regarding home-based management of diarrhoea in the experimental group will be significantly higher than that of the control group.

H5:The mean post-test attitude score of mothers of under-five children regarding home-based management of diarrhoea in the experimental group will be significantly higher than that of the control group.

H6: The mean post-test practice score of mothers of under-five children regarding home-based management of diarrhoea in the experimental group will be significantly higher than that of the control group.

H7: There will be a significant association between pre-test level of knowledge, attitude and practice among mothers of under-five children and selected demographic in experimental group.

H8 : There will be a significant association between pre-test level of knowledge, attitude and practice among mothers of under-five children and selected demographic in control group.

H9 :There will be significant relationship between Knowledge, attitude and practice in the pre and post-test scores among mothers of under-five children regarding home-based management of diarrhoea in the experimental group.

Research approach, a quantitative approach was used to accomplish the objectives of the study

Research design; A Quasi experimental design can be thought of to be appropriate in providing solid evidence of causality and effects.

Setting of the study Four village of Punjab was selected to collect the data among moter of under five year children

Sampling Technique, Purposive sampling technique was used to select the samples.

Sample size There was a sample of 150 subjects into two groups 75 in experiment and 75 in control group

Development and Description of the Tool

The tool for the present consists of 4 sections.

Section A: Demographic Performa

Section B: Structured knowledge questionnaire on home based diarrheal management.

Section C: Attitude scale on home based diarrheal management.

Section D: Observational check list on preparation ORS Solution

Ethical Considerations from Ethical committee, Desh Bhagat Univrsity and Sarpanch of villages was taken to conduct the study .

Analysis and Interpretation , Frequency, percentage distribution was used for describing socio demographic variables and level of knowledge .Mean percentage and standard deviation was used to describe the knowledge .Paired T test, Unpaired T-Test and Non-parameter chi-square test was used
Section A: Distribution of mothers based on demographic variables.

Section A

Table 4.1: Distribution of Demographic variables among mothers

n= (75+75) = 150

Demographic Variables		Experimental Group(n=75)		Control Group (n = 75)	
		f	%	f	%
Age in years	Below 20 years	3	4.0	8	10.7
	21-25	18	24.0	15	20.0
	26-30	21	28.0	24	32.0
	31-35	29	38.7	21	28.0
	Above 35	4	5.3	7	9.3
Age of the child	0-5 months	14	18.7	10	13.3
	6-11 months	17	22.7	18	24.0
	12-17 months	12	16.0	8	10.7
	18-23 months	19	25.3	23	30.7
	24-29 months	13	17.3	16	21.3
	30 months and above	0	0.0	0	0.0
Religion	Hindu	16	21.3	14	18.7
	Muslim	10	13.3	13	17.3
	Christian	12	16.0	9	12.0
	Sikhs	37	49.3	39	52.0
	Others (Specify)	0	0.0	0	0.0
Education	Illiterate	0	0.0	0	0.0

	Primary	0	0.0	0	0.0
	Secondary	22	29.3	24	32.0
	Graduate	39	52.0	35	46.7
	Post graduate	14	18.7	16	21.3
Occupation	Home maker	27	36.0	31	41.3
	Labour	8	10.7	11	14.7
	Private employee	23	30.7	14	18.7
	Govt. employee	7	9.3	6	8.0
	Business	10	13.3	13	17.3
Monthly Income	Less than Rs 10,000	8	10.7	12	16.0
	Rs 10,001- Rs 20,000	30	40.0	24	32.0
	Rs 20,001- Rs 30,000	14	18.7	18	24.0
	Above Rs 30,000	23	30.7	21	28.0
Family Type	Nuclear	63	84.0	61	81.3
	Joint	12	16.0	14	18.7
	Extended	0	0.0	0	0.0
	Separated	0	0.0	0	0.0
	Widow	0	0.0	0	0.0
Number of children	1	32	42.7	39	52.0
	2	43	57.3	36	48.0
	3	0	0.0	0	0.0
	4 and above	0	0.0	0	0.0
Source of information	Friends	11	14.7	7	9.3
	Relatives	5	6.7	12	16.0
	Mass Media	10	13.3	10	13.3
	Health care professionals	13	17.3	12	16.0
	Digital Media	36	48.0	34	45.3

Table 4.1 depicts that the highest percentageofmothers were belongs to age group between 31-35 years in experimental (38.7%) and in control group (32%) were belongs to 26-30 years.The majorityofthe childin experimental group (25.3 %) and control group (30.7 %) were belongs to the age group of 18-23 months. The majority of mothers were belongs to Sikhs religion in experimental group (49.3 %) and control group (52 %).The majority of mothers completed the graduation in experimental group (52 %) and control group (46.7%).The majority of mothers in experimental group (52%) and control group (46.7%) were home maker.The majority of mothers in experimental group (40%) and control group (32%) were had monthly income of Rs 10,000- Rs 20,000. The majority of mothers in experimental group (84%) and control group (81.3%) were belong to the nuclear family. The majority of mothers were had 2 children in experimental

(57.3%) and in control group (52%) were had one children. The majority of mothers in experimental group (48%) and control group (45.3%) were had source of information from digital media.

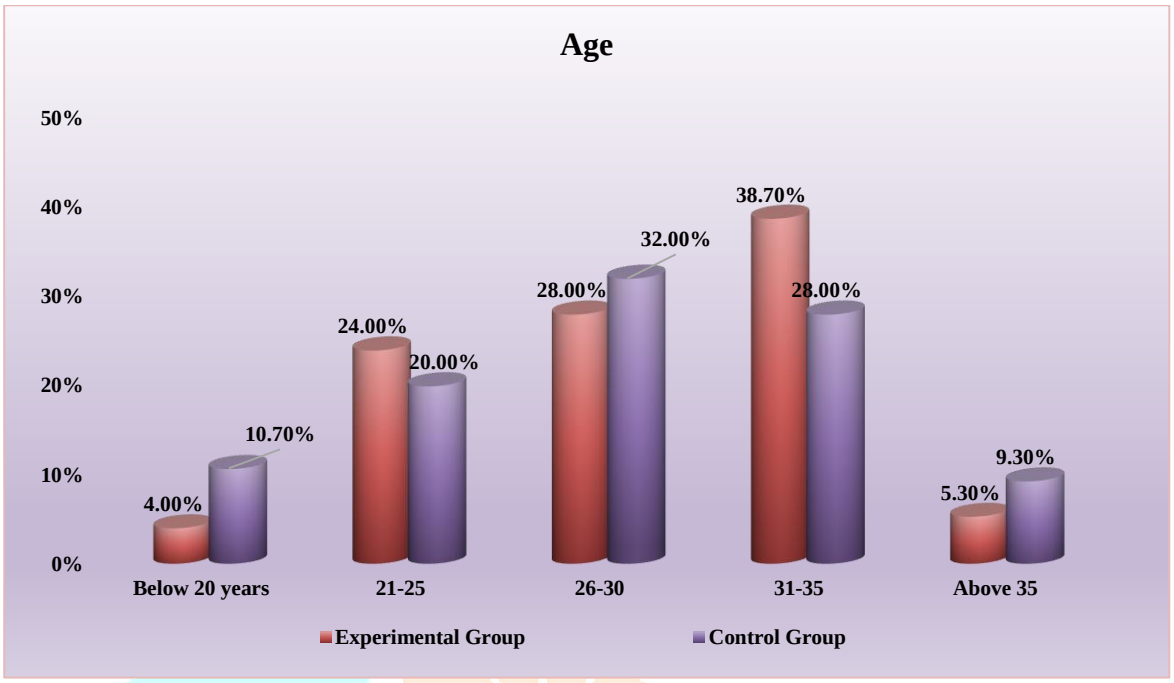

Fig no 4.1 double cylinder diagram showing percentage wise distribution of mothers according to their age.

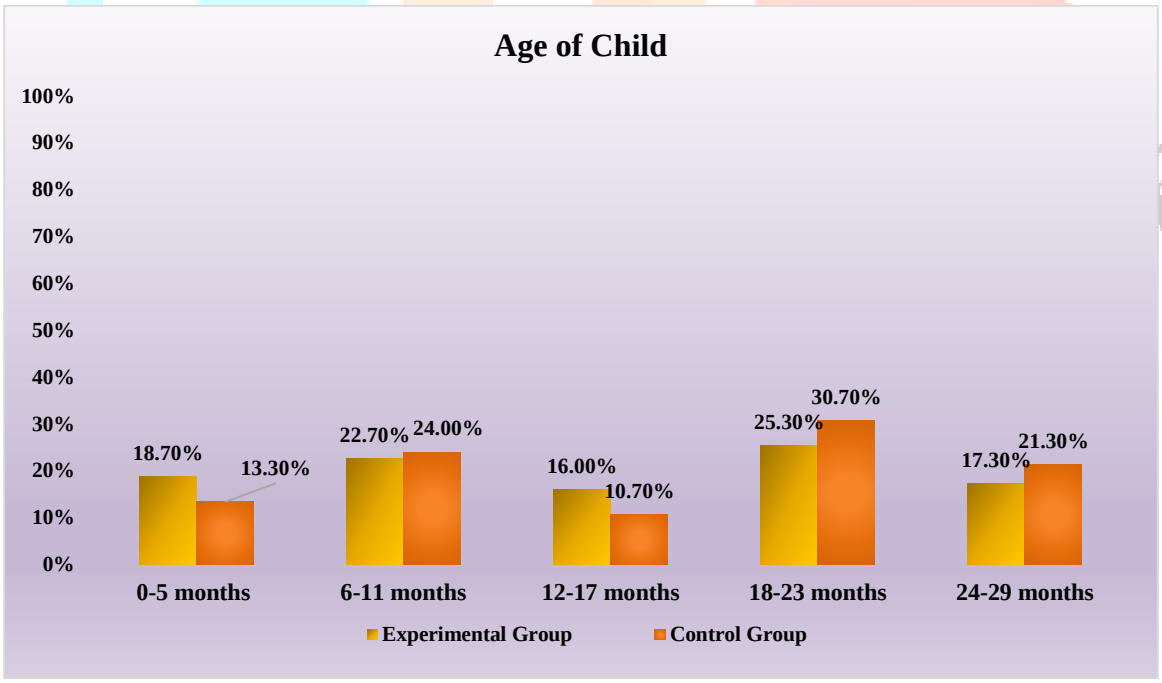

Fig No 4.2 Double bar diagram showing percentage wise distribution of according to age of child.

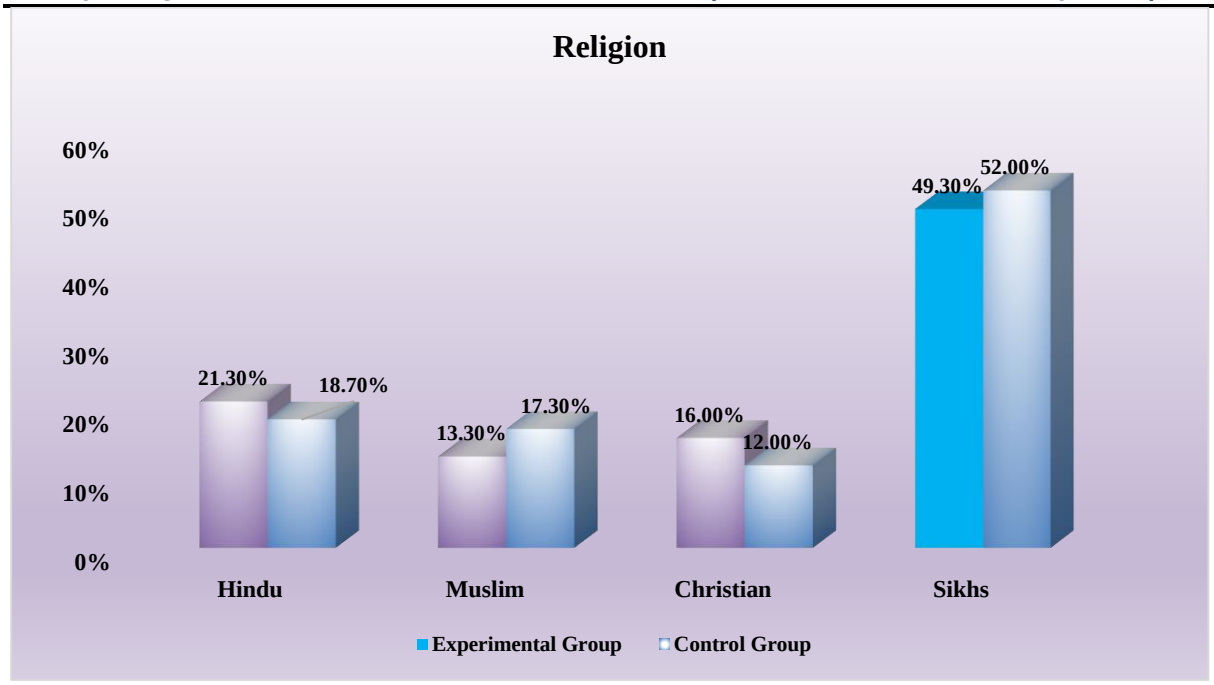

Fig No 4.3 Double column diagram showing percentage wise distribution of Mothers according to their religion.

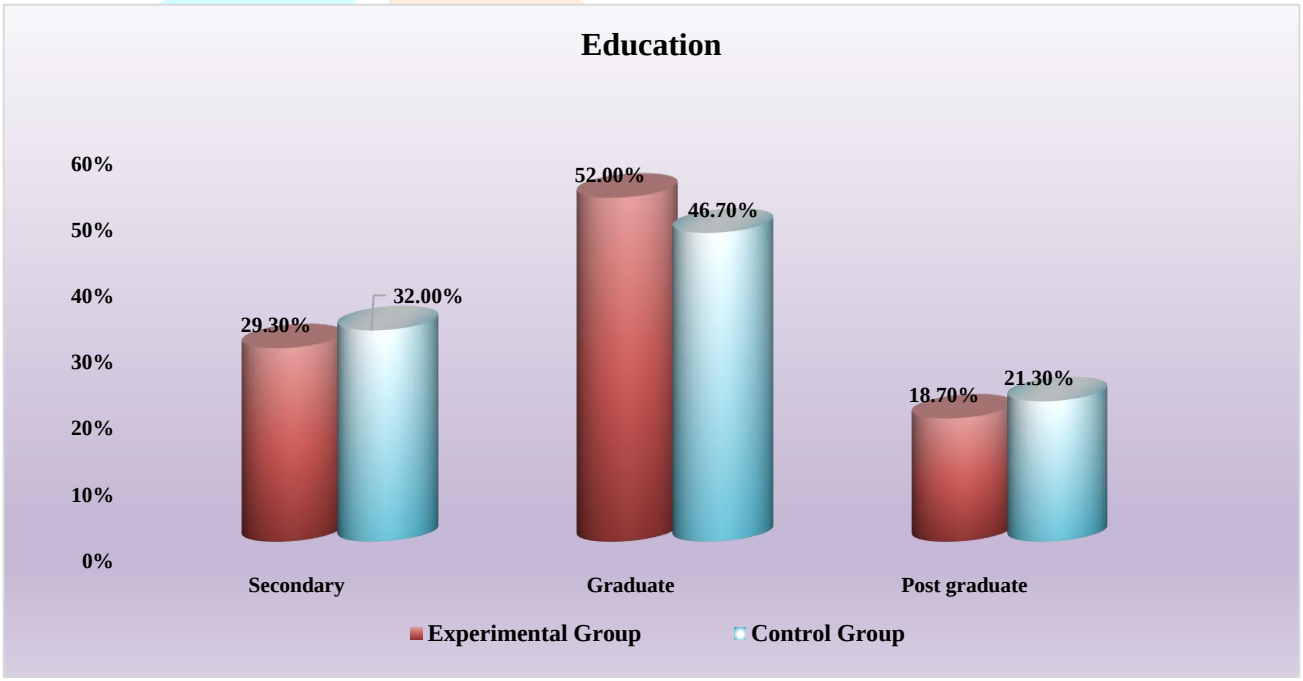

Fig No 4.4 Double cylinder diagram showing percentage wise distribution of Mothers according to their Education.

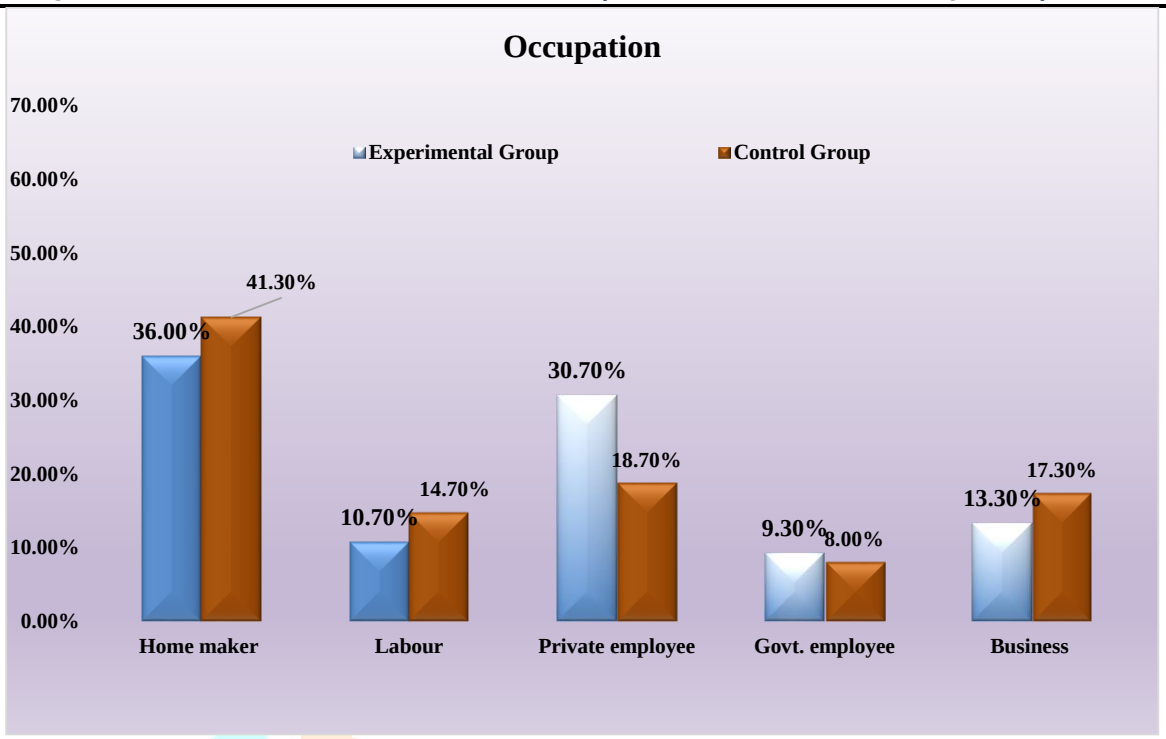

Fig No 4.5 Double bar diagram showing percentage wise distribution of Mothers according to their Occupation.

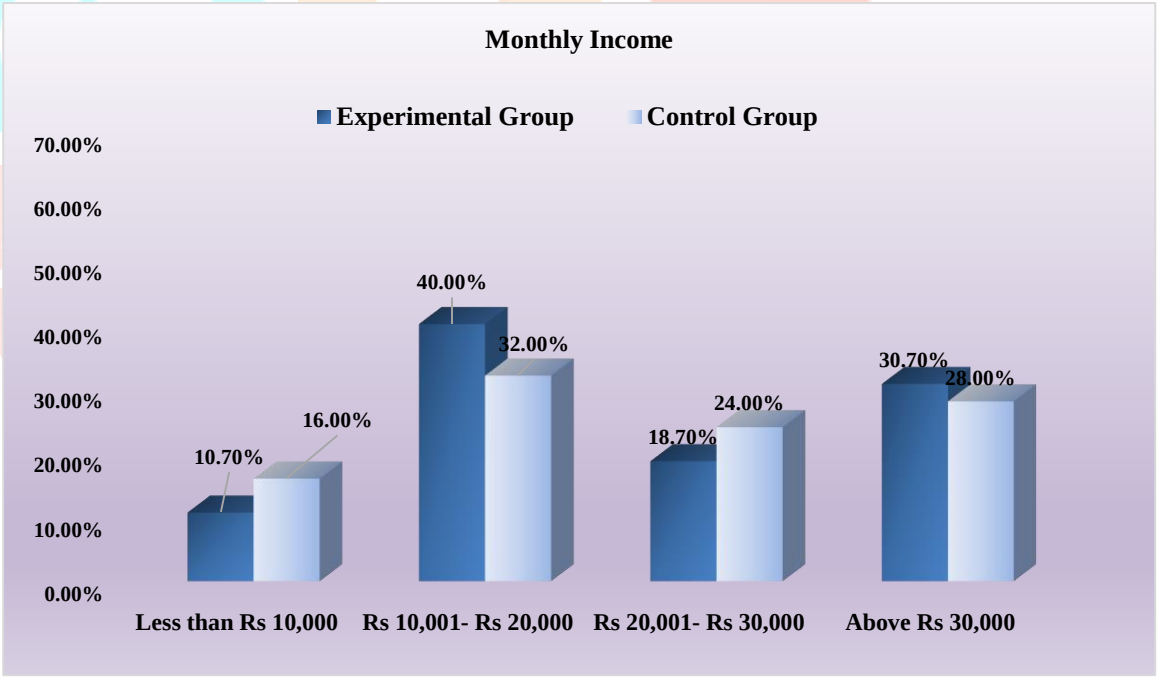

fig no 4.6 double cylinder diagram showing percentage wise distribution of mothers according to their monthly income.

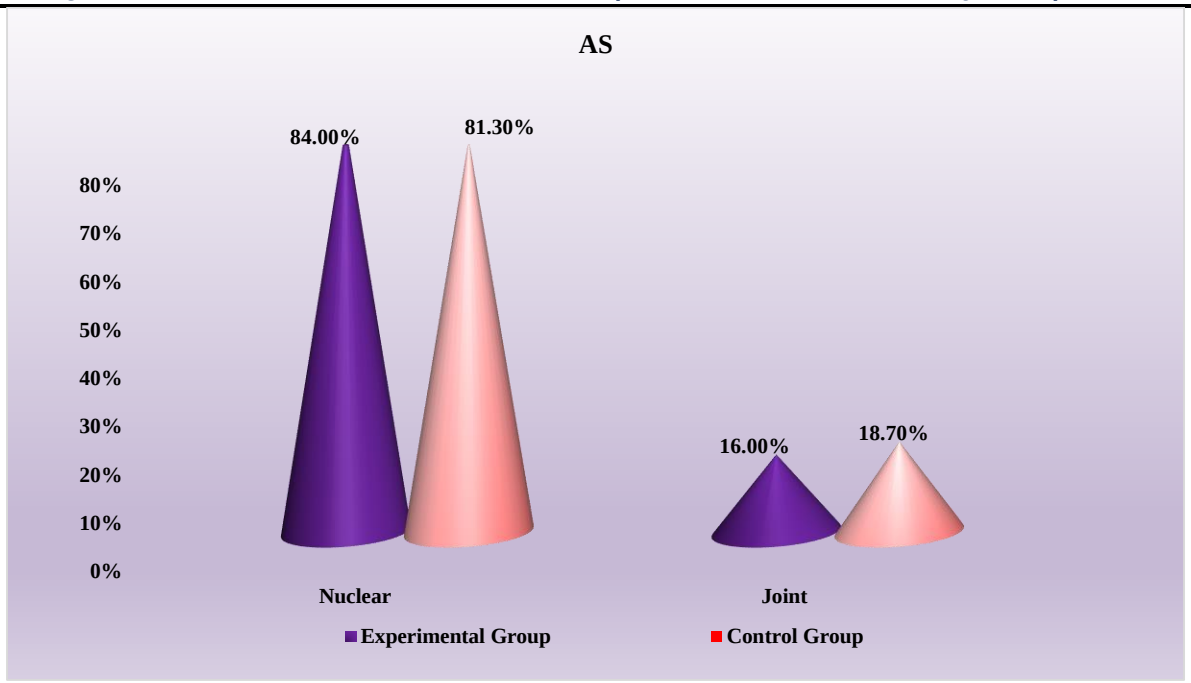

fig no 4.7 double conical diagram showing percentage wise distribution of mothers according to their family type.

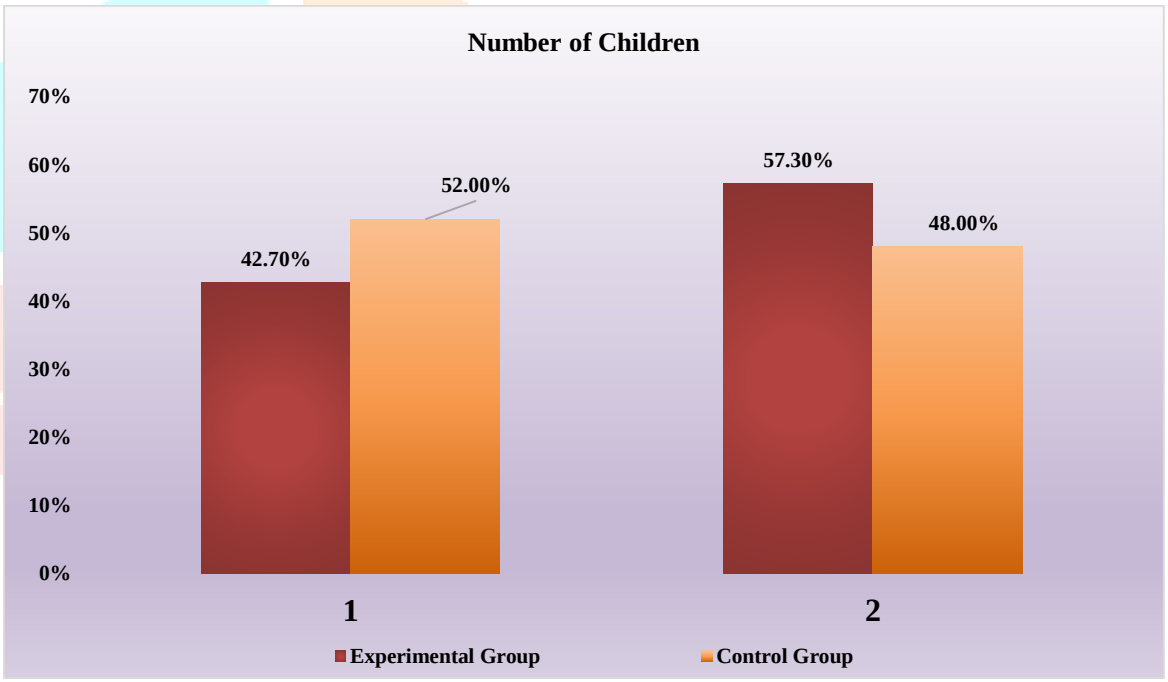

Fig No 4.8 Double bar diagram showing percentage wise distribution of Mothers according to the Number of children.

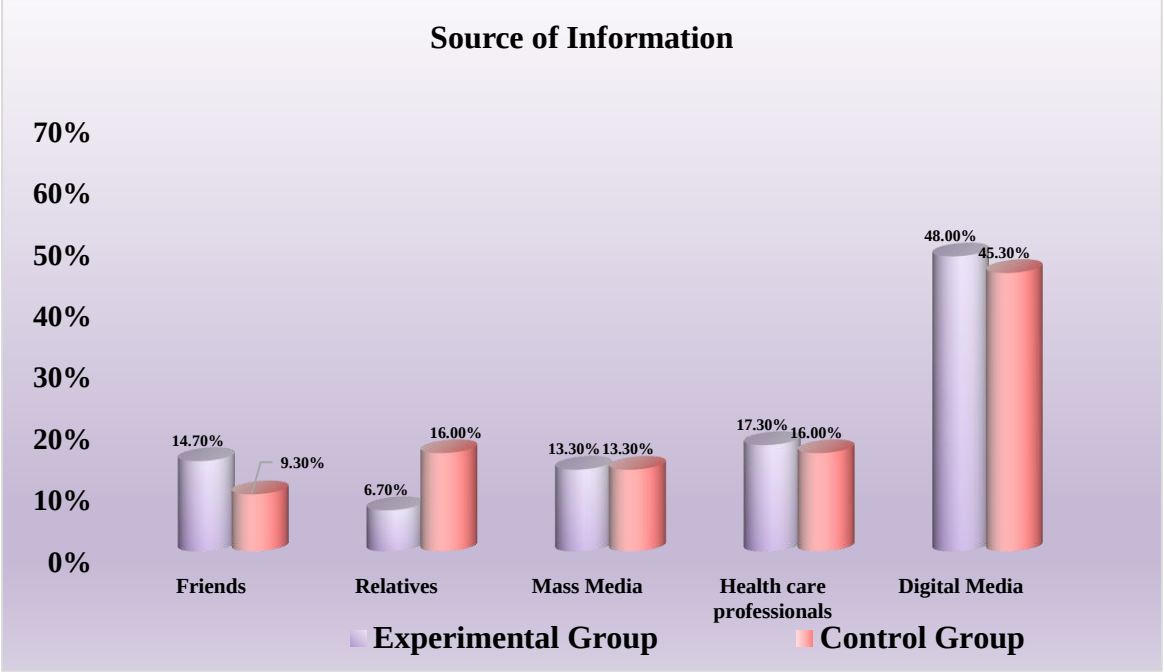

Fig No 4.9 Double cylinder diagram showing percentage wise distribution of Mothers according to their source of information.

Section B: Assessment of pre-test and post-test knowledge among mothers

Part I: Frequency description of pre-test and post-level of knowledge among mothers .

Table 4.2: Frequency and Percentage Distribution of Pretest Level of knowledge among mothers in both experimental group and control group.

n= (75+75) = 150

Level of Knowledge	Experimental Group		Control Group	
	Pre-test		Pre-test	
	f	%	f	%
Very Poor	36	48.00	41	54.67
Poor	17	22.67	12	16.00
Average	18	24.00	17	22.67
Good	4	5.33	5	6.67
Excellent	0	0.00	0	0.00

Table 4.2 shows pre-test level of knowledge among mothers between experimental and control group. The majority of mothers (58.3 %) in the experimental group and (66.7 %) in the control group had very poor knowledge. In the experimental group (22.67 %) and (16%) in the control group had poor knowledge. In the experimental group (24 %) and (22.67%) in the control group had average knowledge. Further, 5.33% and 6.67 % had good knowledge in experimental group and control group respectively.

Table 4.3 Frequency and Percentage Distribution of Post test Level of knowledge among mothers in both experimental group and control group.

n= (75+75) = 150

Level of Knowledge	Experimental Group		Control Group	
	Post test		Post test	
	f	%	f	%
Very Poor	7	9.33	35	46.67
Poor	9	12.00	21	28.00
Average	25	33.33	19	25.33
Good	22	29.33	5	6.67
Excellent	12	16.00	0	0.00

Table 4.3shows post test level of knowledge among mothers between experimental and control group. The majority of mothers (33.3 %) in the experimental group had average knowledge and (46.67%) in the control group had very poor knowledge. In the experimental group (29.33 %) and (6.67%) in the control group had good knowledge. Further, 16% and 0% had excellent knowledge in experimental group and control group respectively.

Part II: Description of pre- and post-test knowledge score among mothers .

Table 4.4: Description of overall Mean, SD and Mean percentage of pre-test knowledge Score among mothers in both experimental group and control group.

n= (75+75) = 150

Pre-test Knowledge	Experimental Group			Control Group			Difference in Mean %
	Mean	SD	Mean %	Mean	SD	Mean %	1.28
	15.47	3.61	38.67	15.98	3.30	39.95	

Table 4.4 shows that overall Mean, SD and Mean percentage of pre-test knowledge among mothers between experimental and control group. In experimental group overall mean ± S.D. was 15.47 ± 3.61 with mean percentage of 38.67 % and in control group overall mean ± S.D. was 15.98 ± 3.30 with mean percentage of 39.95 %. Further, the mean difference in percentage between experimental and control group was 1.28 %.

Table 4.5: Description of overall Mean, SD and Mean percentage of post-test knowledge Score among mothers in both experimental group and control group.

n= (75+75) = 150

Post-test Knowledge	Experimental Group			Control Group			Difference in Mean %
	Mean	SD	Mean %	Mean	SD	Mean %	30.88
	28.54	4.91	71.35	16.19	3.84	40.47	

Table 4.5 shows that overall Mean, SD and Mean percentage of post-test knowledge among mothers between experimental and control group. In experimental group overall mean ± S.D. was 28.54 ± 4.91 with mean percentage of 71.35% and in control group overall mean ± S.D. was 16.19 ± 3.84 with mean percentage of 40.47. Further, the mean difference in percentage between experimental and control group was 30.88%.

Part III: Effectiveness of sensitization program on regarding home-based diarrhoeal management on knowledge among mothers .

Table 4.6: Computed Paired test to compare the mean pretest and posttest knowledge Score among mothers in both Experimental and Control Group.

n= (75+75) = 150

Groups	Mean		S.D.		Paired t test and P value
	Pre- test	Post-test	Pre-test	Post-test	
Experimental Group	15.47	28.54	3.61	4.91	t=13.070 P= 0.0001***
Control Group	15.98	16.19	3.30	3.84	t= 0.359 P= 0.720 (NS)

Note: *** - P<0.001 Level of Significant.

Table 4.6 shows effectiveness of sensitization program on regarding home-based diarrhoeal management on knowledge among mothers . In experimental group the paired 't' test value was 13.070 which was statistically significant at P <0.001 and in control group the paired 't' test value was 0.359 which was not statistically significant at P <0.05. It indicates that sensitization program on regarding home-based diarrhoeal management was effective to improve practice among mothers in experimental group which was statistically at P <0.001. Hence, the investigator rejected the null hypothesis (H01) and accepted the research hypothesis (H1).

Table 4.7 Computed Independent T test to compare the mean post knowledge Score among mothers between Experimental and Control Group.

n= (75+75) = 150

Groups	Mean	S.D.	Independent t test and P value
Experimental Group	28.54	4.91	t=17.158 P= 0.0001***
Control Group	16.19	3.84	

Note: *** - P<0.001 Level of Significant.

Table 4.7 shows comparison of posttest level of knowledge in experimental group and control group. In experimental group, Posttest knowledge mean, and S.D. was 28.54 ±4.91 where as in control group Posttestknowledge mean ± S.D. was 16.19± 3.84. The overall independent 't' value for knowledge was 6.988which was statistically significant at P<0.001. This shows that there was a significant improvement inknowledge among mothers in experimental group than the control group due to implementation of

sensitization program on regarding home-based diarrhoeal management . Hence, the investigator rejected the null hypothesis (H04) and accepted the research hypothesis (H4).

Section C: Assessment of pre-test and post-test attitude among mothers

Part I: Frequency description of pre-test and post-level of attitude among mothers .

Table 4.8: Frequency and Percentage Distribution of Pretest Level of attitude among mothers in both experimental group and control group.

n= (75+75) = 150

Level of Attitude	Experimental Group		Control Group	
	Pre-test		Pre-test	
	f	%	f	%
Negative	38	50.67	34	45.33
Uncertain	20	26.67	23	30.67
Positive	17	22.67	18	24.00

Table 4.8 shows pre-test level of attitude among mothers between experimental and control group. The majority ofmothers (50.67%) in the experimental group and (45.33 %) in the control group had negative attitude. In experimental group (26.67%) and (30.67%) in the control group had uncertain attitude.Further, 22.67% and 18 % had positive attitudein experimental and control group respectively.

Table 4.9: Frequency and Percentage Distribution of Posttest Level of attitude among mothers in both experimental group and control group.

n= (75+75) = 150

Level of Attitude	Experimental Group		Control Group	
	Post test		Post test	
	f	%	f	%
Negative	0	0.00	28	37.33
Uncertain	22	29.33	27	36.00
Positive	53	70.67	20	26.67

Table 4.9 shows posttest level of practice among mothers between experimental and control group. The majority ofmothers (70.67%) in the experimental group had positive attitude and (37.33 %) in the control group had negativeattitude. The lowest percentage of the mothers (29.33%) in the experimental group had uncertain attitude and (26.67 %) in the control group had positiveattitude. Further in experimental group (0 %) had negative attitude and in the control group (36 %) had uncertain attitude .

Part II: Description of pre- and post-test attitude score among mothers .

Table 4.10: Description of overall Mean, SD and Mean percentage of pre-test attitude Score among mothers in both experimental group and control group.

n= (75+75) = 150

Pre-test Attitude	Experimental Group			Control Group			Difference in Mean %
	Mean	SD	Mean %	Mean	SD	Mean %	0.14
	40.04	12.34	32	39.83	11.96	31.86	

Table 4.10 shows that overall Mean, SD and Mean percentage of pre-test attitude among mothers between experimental and control group. In experimental group overall mean ± S.D. was 40.04± 12.34 with mean percentage of 32% and in control group overall mean ± S.D. was 39.83± 11.96 with mean percentage of 31.86 %. Further, the mean difference in percentage between experimental and control group was 0.14 %.

Table 4.11: Description of overall Mean, SD and Mean percentage of post-test attitude Score among mothers in both experimental group and control group.

n= (75+75) = 150

Post-test Attitude	Experimental Group			Control Group			Difference in Mean %
	Mean	SD	Mean %	Mean	SD	Mean %	24.8
	72.89	16.66	58.31	41.89	12.67	33.51	

Table 4.11 shows that overall Mean, SD and Mean percentage of post-test attitude among mothers between experimental and control group. In experimental group overall mean ± S.D. was 72.89± 16.66 with mean percentage of 58.31 % and in control group overall mean ± S.D. was 41.89 ± 12.67 with mean percentage of 33.51%. Further, the mean difference in percentage between experimental and control group was 24.8 %.

Part III: Effectiveness of sensitization program on regarding home-based diarrhoeal management on attitude among mothers .

Table 4.12: Computed Paired test to compare the mean pretest and posttest attitude Score among mothers in both Experimental and Control Group.

n= (75+75) = 150

Groups	Mean		S.D.		Paired t test and P value
	Pre- test	Post-test	Pre-test	Post-test	
Experimental Group	40.04	72.89	12.34	16.66	t= 13.722 P= 0.001**
Control Group	39.83	41.89	11.96	12.67	t=1.612 P= 0.307 (NS)

Note: ** - P<0.01 Level of Significant.

Table 4.12 shows effectiveness of sensitization program on regarding home-based diarrhoeal management on attitude among mothers . In experimental group the paired 't' test value was 13.722 which was statistically significant at P <0.001 and in control group the paired 't' test value was 1.612 which was not statistically significant at P <0.05. It indicates that sensitization program on regarding home-based diarrhoeal management was effective to in improving the attitude among mothers in experimental group which was statistically at P <0.001. Hence, the investigator rejected the null hypothesis (H02) and accepted the research hypothesis (H2).

Table 4.13: Computed Independent T test to compare the mean post-test attitude Score among mothers between Experimental and Control Group.

n= (75+75) = 150

Groups	Mean	S.D.	Independent t test and P value
Experimental Group	72.89	16.66	t=12.826 P= 0.0001***
Control Group	41.89	12.67	

Note: *** - P<0.001 Level of Significant.

Table 4.13 shows comparison of posttest level of attitude in experimental group and control group. In experimental group, Posttest attitude mean, and S.D. was 72.89± 16.66where as in control group Posttest attitude mean ± S.D. was 41.89± 12.67. The overall independent 't' value for attitude was 12.826which was statistically significant at P<0.001. This shows that there was a significant improvingtheattitude among mothers in experimental group than the control group due to implementation of sensitization program on regarding home-based diarrhoeal management. Hence, the investigator rejected the null hypothesis (H05) and accepted the research hypothesis (H5).

Section D: Assessment of pre-test and post-test practice among mothers

Part I: Frequency description of pre-test and post-level of practice among mothers .

Table 4.14: Frequency and Percentage Distribution of Pretest Level of practice among mothers in both experimental group and control group.

n= (75+75) = 150

Level of Practice	Experimental Group		Control Group	
	Pre-test		Pre-test	
	f	%	f	%
Very Poor	42	56.00	39	52.00
Poor	21	28.00	15	20.00
Average	12	16.00	21	28.00
Good	0	0.00	0	0.00
Excellent	0	0.00	0	0.00

Table 4.14 shows pre-test level of practiceamong mothers between experimental and control group. The majority of mothers (56%) in the experimental group and (52%) in the control group had very poor knowledge. The lowest percentage of the mothers (16%) in the experimental group had average practice and (20 %) in the control group had poor practice. Further in experimental group (28%) had poor practice and in the control group (28 %) had average practice.

Table 4.15 Frequency and Percentage Distribution of Posttest Level of practice among mothers in both experimental group and control group.

n= (75+75) = 150

Level of Practice	Experimental Group		Control Group	
	Post test		Post test	
	f	%	f	%
Very Poor	9	12.00	30	40.00
Poor	7	9.33	27	36.00
Average	20	26.67	18	24.00
Good	24	32.00	0	0.00
Excellent	15	20.00	0	0.00

Table 4.15 shows posttest level of practice among mothers between experimental and control group. The highest percentage of mothers (32%) in the experimental group had good practice and (40 %) in the control group had very poor practice. The lowest percentage of the mothers9.33 % in experimental group poor practice and 24 % had good practicein control group respectively. Further in experimental group (20%) had excellentpractice and in the control group (36 %) had poor practice.

Part II: Description of pre- and post-test practice score among mothers .

Table 4.16: Description of overall Mean, SD and Mean percentage of pre-test Practice Score among mothers in both experimental group and control group.

n= (75+75) = 150

Pre-test Practice	Experimental Group			Control Group			Difference in Mean %
	Mean	SD	Mean %	Mean	SD	Mean %	0.9
	6.98	1.21	46.5	6.85	1.35	45.6	

Table 4.16 shows that overall Mean, SD and Mean percentage of pre-test practiceamong mothers between experimental and control group. In experimental group overall mean ± S.D. was 6.98± 1.21 with mean percentage of 46.5 % and in control group overall mean ± S.D. was 6.85± 1.35 with mean percentage of 45.6 %. Further, the mean difference in percentage between experimental and control group was 0.9%.

Table 4.17: Description of overall Mean, SD and Mean percentage of post-test Practice Score among mothers in both experimental group and control group.

n= (75+75) = 150

Post-test Practice	Experimental Group			Control Group			Difference in Mean %
	Mean	SD	Mean %	Mean	SD	Mean %	30.9
	11.64	0.67	77.6	7.01	1.40	46.7	

Table 4.17 shows that overall Mean, SD and Mean percentage of post-test practice among mothers between experimental and control group. In experimental group overall mean ± S.D. was 11.64± 0.67 with mean percentage of 77.6 % and in control group overall mean ± S.D. was 7.01± 1.40 with mean percentage of 32.4. Further, the mean difference in percentage between experimental and control group was 30.9 %.

Part III: Effectiveness of sensitization program on regarding home-based diarrhoeal management on practice among mothers .

Table 4.18: Computed Paired test to compare the mean pretest and posttest practice Score among mothers in both Experimental and Control Group.

n= (75+75) = 150

Groups	Mean		S.D.		Paired t test and P value
	Pre- test	Post-test	Pre-test	Post-test	
Experimental Group	6.98	11.64	1.21	0.67	t=19.178 P= 0.0001***
Control Group	6.85	7.01	1.35	1.40	t=0.712 P= 0.477 (NS)

Note: *** - P<0.001 Level of Significant.

Table 4.18 shows effectiveness of sensitization program on regarding home-based diarrhoeal management on practice among mothers. In experimental group the paired 't' test value was 19.178 which was statistically significant at P <0.001 and in control group the paired 't' test value was 0.712 which was not statistically significant at P <0.05. It indicates that sensitization program on regarding home-based diarrhoeal management was effective to improve practiceamong mothers in experimental group which was statistically at P <0.001. Hence, the investigator rejected the null hypothesis (H03) and accepted the research hypothesis (H3)

Table 4.19 Computed Independent T test to compare the mean post practice Score among mothers between Experimental and Control Group.

n= (75+75) = 150

Groups	Mean	S.D.	Independent t test and P value
Experimental Group	11.64	0.67	t=13.290 P= 0.0001***
Control Group	7.01	1.40	

Note: *** - P<0.001 Level of Significant.

Table 4.19 shows comparison of posttest level of practicein experimental group and control group. In experimental group, Posttest practice mean, and S.D. was 11.64± 0.67 where as in control group Posttest practice mean ± S.D. was 7.01± 1.40. The overall independent 't' value for practice was 13.290which was statistically significant at P<0.001. This shows that there was a significant improvement in practiceamong mothers in experimental group than the control group due to implementation of sensitization program on regarding home-based diarrhoeal management. Hence, the investigator rejected the null hypothesis (H06) and accepted the research hypothesis (H6)

Section E: Association of pre-test level of knowledge, attitude and practiceamong mothers with selected demographic variables in the experimental and the control group.

Part I:Association of pre-test level of knowledge among mothers in the experimental group.

Table 4.20Association between pre-test level of knowledge among mothers in experimental group.

n= 75

Demographic Variables		Total	Below Mean (n=48)	Above Mean (n=27)	Chi square Test
Age in years	Below 20 years	3	2	1	$\chi 2$= 0.474
	21-25	18	12	6	P=0.975
	26-30	21	13	8	df= 4
	31-35	29	19	10	
	Above 35	4	2	2	
Age of the child	0-5 months	14	9	5	$\chi 2$= 3.258
	6-11 months	17	8	9	P=0.515
	12-17 months	12	8	4	df= 4
	18-23 months	19	13	6	
	24-29 months	13	10	3	
Religion	Hindu	16	9	7	$\chi 2$= 1.285
	Muslim	10	6	4	P=0.732
	Christian	12	7	5	df= 3
	Sikhs	37	26	11	
Education	Secondary	22	16	6	$\chi 2$= 6.052
	Graduate	39	27	12	P=0.048*
	Postgraduate	14	5	9	df= 2
Occupation	Home maker	27	22	5	$\chi 2$= 7.652
	Labour	8	5	3	P=0.105
	Private employee	23	12	11	df= 4
	Govt. employee	7	5	2	
	Business	10	4	6	
Monthly Income	Less than Rs 10,000	8	4	4	$\chi 2$= 2.466
	Rs 10,001- Rs 20,000	30	17	13	P=0.291
	Rs 20,001- Rs 30,000	14	11	3	1
	Above Rs 30,000	23	16	7	df= 3

Family Type	Nuclear	63	44	19	χ2= 5.831
	Joint	12	4	8	P=0.015*
					df= 1
Number of children	1	32	25	7	χ2= 5.70
	2	43	22	21	P=0.016*
					df= 1
Source of information	Friends	11	8	3	χ2= 6.506
	Relatives	5	3	2	P=0.164
	Mass Media	10	3	7	df= 4
	Health care professionals	13	8	5	
	Digital Media	36	26	10	

Note: * - P<0.05 Level of Significant.

The data presented in Table 4.20portrays that the association between pre-test level of knowledge and the demographic variables. Pearson Chi-square test was used to calculate the association. There was significant association between pre-test level of knowledge and demographic variables such as education($\chi 2$ =6.7052, p=0.048), family type ($\chi 2$ = 5.831 p=0.015), number of children ($\chi 2$ =5.70, p=0.016). Hence null hypothesis (H07) was rejected for education, family type, number of children and null hypothesis is accepted for other characteristics.

Part II: Association of pre-test level of attitude among mothers in the experimental group.

Table 4.21Association between pre-test level of attitude among mothers in experimental group.

n= 75

Demographic Variables		Total	Below Mean (n=52)	Above Mean (n=23)	Chi square Test
Age in years	Below 20 years	3	1	2	χ2= 3.840
	21-25	18	13	5	P=0.279
	26-30	21	13	8	df= 4
	31-35	29	23	6	
	Above 35	4	2	2	
Age of the child	0-5 months	14	9	5	χ2= 1.814
	6-11 months	17	11	6	P=0.769
	12-17 months	12	8	4	df= 4
	18-23 months	19	13	6	
	24-29 months	13	11	2	
Religion	Hindu	16	10	6	χ2= 2.867

	Muslim	10	6	4	P=0.412
	Christian	12	7	5	df= 3
	Sikhs	37	29	8	
Education	Secondary	22	10	12	$\chi 2$= 8.895
	Graduate	39	32	7	P=0.011*
	Post graduate	14	10	4	df= 2
Occupation	Home maker	27	20	7	$\chi 2$= 4.341
	Labour	8	3	5	P=0.361
	Private employee	23	17	6	df= 4
	Govt. employee	7	5	2	
	Business	10	7	3	
Monthly Income	Less than Rs 10,000	8	5	3	$\chi 2$= 0.211
	Rs 10,001- Rs 20,000	30	21	9	P=0.975
	Rs 20,001- Rs 30,000	14	10	4	df= 3
	Above Rs 30,000	23	16	7	
Family Type	Nuclear	63	48	15	$\chi 2$= 5.795
	Joint	12	5	7	P=0.016*
					df= 1
Number of children	1	32	24	8	$\chi 2$= 0.505
	2	43	29	14	P=0.477
					df= 3
Source of information	Friends	11	8	3	$\chi 2$= 0.737
	Relatives	5	4	1	P=0.946
	Mass Media	10	6	4	df= 4
	Health care professionals	13	9	4	
	Digital Media	36	25	11	

Note: * - P<0.05 Level of Significant.

The data presented in Table 4.21portrays that the association between pre-test level of attitude and the demographic variables. Pearson Chi-square test was used to calculate the association. There was significant association between pre-test level of attitude and demographic variables such as education ($\chi 2$ =8.895, p=0.011), family type ($\chi 2$ = 5.795 p=0.016). Hence null hypothesis (H07) was rejected for education, family type and null hypothesis is accepted for other characteristics.

Part III: Association of pre-test level of practice among mothers in the experimental group.

Table 4.22Association between pre-test level of practice among mothers in experimental group.

n= 75

Demographic Variables		Total	Below Mean (n=41)	Above Mean (n=34)	Chi square Test
Age in years	Below 20 years	3	2	1	$\chi 2$= 1.047
	21-25	18	9	9	P=0.902
	26-30	21	11	10	df= 4
	31-35	29	16	13	
	Above 35	4	3	1	
Age of the child	0-5 months	14	5	9	$\chi 2$= 3.891
	6-11 months	17	9	8	P=0.420
	12-17 months	12	8	4	df= 4
	18-23 months	19	10	9	
	24-29 months	13	9	4	
Religion	Hindu	16	6	10	$\chi 2$= 10.979
	Muslim	10	3	7	P=0.011*
	Christian	12	6	6	df= 3
	Sikhs	37	28	9	
Education	Secondary	22	10	12	$\chi 2$= 2.942
	Graduate	39	25	14	P=0.229
	Post graduate	14	6	8	df= 2
Occupation	Home maker	27	11	16	$\chi 2$= 15.07
	Labour	8	2	6	P=0.004**
	Private employee	23	19	4	df= 4
	Govt. employee	7	2	5	
	Business	10	7	3	
Monthly Income	Less than Rs 10,000	8	6	2	$\chi 2$= 7.455
	Rs 10,001- Rs 20,000	30	10	20	P=0.058
	Rs 20,001- Rs 30,000	14	9	5	df= 3
	Above Rs 30,000	23	14	9	
Family Type	Nuclear	63	35	28	$\chi 2$= 0.125
	Joint	12	6	6	P=0.723

					df= 1
Number of children	1	32	23	9	χ2= 6.669
	2	43	18	25	P=0.009**
					df= 3
Source of information	Friends	11	7	4	χ2= 6.388
	Relatives	5	3	2	P=0.171
	Mass Media	10	2	8	df= 4
	Health care professionals	13	9	4	
	Digital Media	36	20	16	

Note: * - P<0.05 Level of Significant, Note: ** - P<0.01 Level of Significant.

The data presented in Table 4.22portrays that the association between pre-test level of practice and the demographic variables. Pearson Chi-square test was used to calculate the association. There was significant association between pre-test level of practice and demographic variables such as Religion (χ2 =10.797, p=0.011), occupation (χ2 =15.07, p=0.004), Number of children (χ2 = 6.669 p=0.009). Hence null hypothesis (H07) was rejected for religion, occupation, number of children and null hypothesis is accepted for other characteristics.

Part IV :Association of pre-test level of knowledge among mothers in the control group.

Table 4.23Association between pre-test level of knowledge among mothers in control group.

n= 75

Demographic Variables		Total	Below Mean (n=55)	Above Mean (n=20)	Chi square Test
Age in years	Below 20 years	8	6	2	χ2= 8.863
	21-25	15	11	4	P=0.064
	26-30	24	18	6	df= 4
	31-35	21	18	3	
	Above 35	7	2	5	
Age of the child	0-5 months	10	6	4	χ2= 1.240
	6-11 months	18	13	5	P=0.871
	12-17 months	8	6	2	df= 4
	18-23 months	23	18	5	
	24-29 months	16	12	4	
Religion	Hindu	14	12	2	χ2= 3.733
	Muslim	13	11	2	P=0.291
	Christian	9	7	2	df= 3

	Sikhs	39	25	14	
Education	Secondary	24	19	5	$\chi 2$= 5.667
	Graduate	35	28	7	P=0.058
	Post graduate	16	8	8	df= 2
Occupation	Home maker	31	15	16	$\chi 2$= 17.03
	Labour	11	10	1	P=0.001**
	Private employee	14	13	1	df= 4
	Govt. employee	6	5	1	
	Business	13	12	1	
Monthly Income	Less than Rs 10,000	12	8	4	$\chi 2$= 0.405
	Rs 10,001- Rs 20,000	24	18	6	P=0.939
	Rs 20,001- Rs 30,000	18	13	5	df= 3
	Above Rs 30,000	21	16	5	
Family Type	Nuclear	61	46	15	$\chi 2$= 0.720
	Joint	14	9	5	P=0.395
					df= 1
Number of children	1	39	23	16	$\chi 2$= 8.566
	2	36	32	4	P=0.003**
					df= 3
Source of information	Friends	7	4	3	$\chi 2$= 18.59
	Relatives	12	8	4	P=0.000***
	Mass Media	10	3	7	df= 4
	Health care professionals	12	8	4	
	Digital Media	34	32	2	

Note: ** - P<0.01 Level of Significant.

The data presented in Table 4.23portrays that the association between pre-test level of knowledge and the demographic variables. Pearson Chi-square test was used to calculate the association. There was significant association between pre-test level of knowledge and demographic variables such as occupation ($\chi 2$ =17.03, p=0.001), Number of children ($\chi 2$ = 8.566 p=0.003), Source of information ($\chi 2$ =18.59, p=0.000). Hence null hypothesis (H08) was rejected for occupation, number of children, source of information and null hypothesis is accepted for other characteristics.

Part V:Association of pre-test level of attitude among mothers in the control group.

Table 4.24Association between pre-test level of attitude among mothers in control group.

n= 75

Demographic Variables		Total	Below Mean (n=40)	Above Mean (n=35)	Chi square Test
Age in years	Below 20 years	8	4	4	$\chi 2$= 1.238
	21-25	15	7	8	P=0.871
	26-30	24	13	11	df= 4
	31-35	21	13	8	
	Above 35	7	3	4	
Age of the child	0-5 months	10	4	6	$\chi 2$= 8.375
	6-11 months	18	6	12	P=0.781
	12-17 months	8	3	5	df= 4
	18-23 months	23	16	7	
	24-29 months	16	11	5	
Religion	Hindu	14	4	10	$\chi 2$= 4.591
	Muslim	13	8	5	P=0.204
	Christian	9	6	3	df= 3
	Sikhs	39	22	17	
Education	Secondary	24	12	12	$\chi 2$= 1.953
	Graduate	35	17	18	P=0.376
	Post graduate	16	11	5	df= 2
Occupation	Home maker	31	24	7	$\chi 2$= 12.91
	Labour	11	4	7	P=0.004**
	Private employee	14	4	10	df= 4
	Govt. employee	6	2	4	
	Business	13	6	7	
Monthly Income	Less than Rs 10,000	12	7	5	$\chi 2$= 3.874
	Rs 10,001- Rs 20,000	24	14	10	P=0.275
	Rs 20,001- Rs 30,000	18	6	12	df= 3
	Above Rs 30,000	21	13	8	
Family Type	Nuclear	61	31	30	$\chi 2$= 0.829
	Joint	14	9	5	P=0.362

					df= 1
Number of children	1	39	15	24	χ2= 7.220
	2	36	25	11	P=0.007**
					df= 3
Source of information	Friends	7	2	5	χ2= 7.281
	Relatives	12	4	8	P=0.121
	Mass Media	10	6	4	df= 4
	Health care professionals	12	4	8	
	Digital Media	34	22	12	

Note: ** - P<0.01 Level of Significant.

The data presented in Table 4.24portrays that the association between pre-test level of attitude and the demographic variables. Pearson Chi-square test was used to calculate the association. There was significant association between pre-test level of attitude and demographic variables such as occupation (χ2 =12.91, p=0.004), Number of children (χ2 = 7.220, p=0.007). Hence null hypothesis (H08) was rejected for occupation, number of children and null hypothesis is accepted for other characteristics

Part VI: Association of pre-test level of practice among mothers in the control group.

Table 4.25Association between pre-test level of practice among mothers in control group.

n= 75

Demographic Variables		Total	Below Mean (n=52)	Above Mean (n=23)	Chi square Test
Age in years	Below 20 years	8	3	5	χ2= 4.698
	21-25	15	12	3	P=0.319
	26-30	24	17	7	df= 4
	31-35	21	15	6	
	Above 35	7	5	2	
Age of the child	0-5 months	10	4	6	χ2= 5.830
	6-11 months	18	15	3	P=0.212
	12-17 months	8	6	2	df= 4
	18-23 months	23	16	7	
	24-29 months	16	11	5	
Religion	Hindu	14	2	12	χ2= 27.62
	Muslim	13	9	4	P=0.000***
	Christian	9	6	3	df= 3

	Sikhs	39	35	4	
Education	Secondary	24	13	11	$\chi 2$= 4.471
	Graduate	35	28	7	P=0.106
	Post graduate	16	11	5	df= 2
Occupation	Home maker	31	21	10	$\chi 2$= 0.145
	Labour	11	8	3	P=0.997
	Private employee	14	10	4	df= 4
	Govt. employee	6	4	2	
	Business	13	9	4	
Monthly Income	Less than Rs 10,000	12	8	4	$\chi 2$= 0.169
	Rs 10,001- Rs 20,000	24	17	7	P=0.982
	Rs 20,001- Rs 30,000	18	12	6	df= 3
	Above Rs 30,000	21	15	6	
Family Type	Nuclear	61	42	19	$\chi 2$= 0.035
	Joint	14	10	4	P=0.850
					df= 1
Number of children	1	39	19	20	$\chi 2$= 1.748
	2	36	23	13	P=0.186
					df= 3
Source of information	Friends	7	5	2	$\chi 2$= 0.121
	Relatives	12	8	4	P=0.998
	Mass Media	10	7	3	df= 4
	Health care professionals	12	8	4	
	Digital Media	34	24	10	

Note: *** - P<0.001 Level of Significant.

The data presented in Table 4.25portrays that the association between pre-test level of practice and the demographic variables. Pearson Chi-square test was used to calculate the association. There was significant association between pre-test level of practice and demographic variables such as Religion ($\chi 2$ =27.62, p=0.000). Hence null hypothesis (H08) was rejected for Religion and null hypothesis is accepted for other characteristics.

Section F: Relationship of knowledge with attitude and practice on home based diarrheal management among mothers in the experimental group.

Table 4.26: Relationship of knowledge with attitude and practiceamong mothers in experimental group.

n= 75

Variables	Experimental Group

	Observation	r Value	P value
Knowledge - Attitude	Pre-test	0.698	0.017*
	Post-test	0.789	0.028*
Knowledge - Practice	Pre-test	0.707	0.027*
	Post-test	0.726	0.004*
Attitude- Practice	Pre-test	0.712	0.023*
	Post-test	0.756	0.025*

Note: * - P<0.05 Level of Significant.

The data presented in table 4.26 shows the relationship between attitude and Practice. The computed findings of Pearson correlation coefficient value show there is positive correlation betweenknowledge and attitudein pre-test, post-test with r value of 0.698, 0.789 respectively which were significant at level of p= 0.017, 0.028 respectively. Hence, it was found that if knowledge increases attitude also increase in the same direction of knowledge. There is positive correlation between knowledge and practice in pre-test, post-test with r value of 0.707, 0.726 respectively which were significant at level of p= 0.027, 0.004 respectively. Hence, it was found that if knowledge increases,practice also increase in the same direction of knowledge. There is positive correlation between attitude and practice in pre-test, post-test with r value of 0.712, 0.756 respectively which were significant at level of p= 0.023, 0.025 respectively. Hence, it was found that if attitude increases,practice also increases in the same direction of attitude.Hence the researcher has rejected the null hypothesis (H09) and accepted the research hypothesis (H9).

The present study findings were parallel to the study conducted by (Emea et al., 2023)107who reported that significant difference between baseline and the post-immediate test mean knowledge score in the experimental group (from 19.03±5.91 to 22.20±3.67 at p< 0.05 after the implementation of educational intervention.

The similar, study findings were also demonstrated by (Da Penha et al.,2022)109who reported significant difference between pre test and the posttest mean knowledge score in the experimental group (from 15.03±4.91 to 21.20± 2,76 at p< 0.05 after implementation of educational intervention.

In experimental group the paired ‘t’ test value for attitude was 13.722 which was statistically significant at P <0.001 and in control group the paired ‘t’ test value for attitude was 1.612 which was not statistically significant at P <0.05.

In experimental group, posttest attitude mean, and S.D. was 72.89 ± 16.66 where as in control group posttest attitude mean ± S.D. was 41.89 ± 12.67. The overall independent ‘t’ value for attitude was 12.826 which was statistically significant at P<0.001.

The present study findings were parallel to the study conducted by (Tadesse et al., 2022)110who reported that significant difference between pretest and the post- test mean attitude score in the experimental group (from 34.03±6.49 to 75.20±8.45 at p< 0.05 after the implementation of educational intervention.

The similar, study findings were also demonstrated by (Wolfet al.,2022)108who reported significant difference between pre test and the posttest mean attitude score in the experimental group (from 45.56±4.91 to 81.67±12.13 at p< 0.05 after implementation of educational intervention.

In experimental group the paired ‘t’ test value for practice was 19.178 which was statistically significant at P <0.001 and in control group the paired ‘t’ test value for practice was 0.712 which was not statistically significant at P <0.05.

In experimental group, posttest practice mean, and S.D. was 11.64 ± 0.67 where as in control group posttest practice mean ± S.D. was 7.01 ± 1.40. The overall independent 't' value for practice was 13.290 which was statistically significant at P<0.001.

The present study findings were parallel to the study conducted by (Lenchi and Ngozi, 2021)116who reported that significant difference between pre test and the post test mean practice score in the experimental group (from 43.24±7.30 to 43.24±7.30 at p< 0.05 after the implementation of educational intervention.

The similar, study findings were also demonstrated by (Sunandaet al.,2017)121who reported significant difference between pre test and the posttest mean practice score in the experimental group (from 10.03±2.21 to 18.20±1.76 at p< 0.05 after implementation of educational intervention.

Section D: Association of pre-test level of knowledge, attitude and practice on home based diarrhoeal management with selected demographic variables.

In experimental group there was significant association between pre-test level of knowledge and demographic variables such as education ($\chi2$ =6.7052, p=0.048), family type ($\chi2$ = 5.831 p=0.015), number of children ($\chi2$ =5.70, p=0.016), there was significant association between pre-test level of attitude and demographic variables such as education ($\chi2$ =8.895, p=0.011), family type ($\chi2$ = 5.795 p=0.016),there was significant association between pre-test level of practice and demographic variables such as Religion ($\chi2$ =10.797, p=0.011), occupation ($\chi2$ =15.07, p=0.004), Number of children ($\chi2$ = 6.669 p=0.009).

In control group there was significant association between pre-test level of knowledge and demographic variables such as occupation ($\chi2$ =17.03, p=0.001), Number of children ($\chi2$ = 8.566 p=0.003), Source of information ($\chi2$ =18.59, p=0.000), there was significant association between pre-test level of attitude and demographic variables such as occupation ($\chi2$ =12.91, p=0.004), Number of children ($\chi2$ = 7.220, p=0.007), there was significant association between pre-test level of practice and demographic variables such as Religion ($\chi2$ =27.62, p=0.000).

The present study findings were consistent with the study conducted by (Shridevi et al, 2015)144who reported there was association between knowledge and number of children. The present study findings were also parallel to the study conducted by (Amare et al, 2014)145 who reported there was significant association between religion and attitude among mothers of under five children.The present study findings were consistent with the study conducted by (Ashrafet al, 2019)140who reported there was significant association level of practice and number of children.

Section E: Relationship between knowledge, attitude practice home based diarrhoeal management among mothers.

The computed findings of Pearson correlation coefficient value show there is positive correlation between knowledge and attitude in pre-test, post-test with r value of 0.698, 0.789 respectively which were significant at level of p= 0.017, 0.028 respectively. There is positive correlation between knowledge and practice in pre-test, post-test with r value of 0.707, 0.726 respectively which were significant at level of p= 0.027, 0.004 respectively. There is positive correlation between attitude and practice in pre-test, post-test with r value of 0.712, 0.756 respectively which were significant at level of p= 0.023, 0.025 respectively.

The present study findings were consistent with the study conducted by (Momohet al, 2022)139 who reported there was positive relationship between knowledge and attitude. Similar, Study findings were reported by (Ashraf et al., 2019)140 there was positive relationship between knowledge, attitude and practice

Conclusion: Based on the study findings, following conclusions are made:

From the findings improvement in knowledge was highly significant in experimental group than control group. Therefore, it is concluded that home based diarrhoeal management helps in increasing knowledge of mothers.

From the findings improvement in attitude was highly significant in experimental group than control group. Therefore, it is concluded that home based diarrhoeal management helps in increasing attitude of mothers.

From the findings improvement in practice was highly significant in experimental group than control group. Therefore, it is concluded that home based diarrhoeal management helps in increasing practice of mothers.

Based on the study findings, it is concluded that home based diarrhoeal management is an effective in improving knowledge attitude and practice on diarrhoea among mothers.

It also concluded that in experimental group there was positive correlation between knowledge attitude and practice on diarrhoea among mothers.

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