



# **A Study To Assess The use of ORS in the Management of Diarrhoea in Children among Mothers in selected villages of Lucknow, Uttar Pradesh.**

Mrs. Lubna, Research Scholar, JIT University, Rajasthan

Prof .Dr.Madhusoodhan, Research Supervisor, JIT University, Rajasthan

Diarrheal sickness has long been identified as the second-most common cause of juvenile death and illness. Nearly 1.7 billion diarrhea cases are reported each year, with the number of deaths increasing every year to be over 1.1 million. Children in many developing nations under the age of three suffer around three episodes of diarrhea a year. Each episode slows kid growth and nutrition. Diarrhea kills millions of children each year in India. Nearly 20% of all pediatric deaths are due to diarrhea. Diarrhea is a primary cause of malnutrition in young children, which is also a cause of the illness. People suffering from diarrhea, as well as other health problems, tend to have significant dehydration and fluid loss. Malnourished children are much more susceptible to deadly diseases, including diarrhea. A person is suffering from diarrhea if he/she experiences three or more diarrhea bowel movements a day, more often than the average of a person's usual bowel movements.

Various studies have indicated that diarrhea can be transmitted from one person to another and is typically due to a lack of access to clean water, poor personal hygiene, and intake of contaminated food. But, intervention programs are already in place to deal with youngsters suffering from diarrhea. A few examples include: The inclusion of the Oral Rehydration Solution (ORS), which consists of clean water, salt, and sugar. ORS is mainly used to replenish and restore water and electrolytes lost in feces. The disease and its cure has developed dramatically since 1975, when ORT was introduced in the United States. To control diarrhea, this method is cost-effective, accepted, easy to access, safe, and may be used in any setting [4]. Studies on diarrhea therapy found that while nursing moms know about diarrhea and its causes, symptoms, and treatments, their use of oral rehydration solution (ORS) is low. Conversely, even as research into the biological basis of ORT has continued to produce a new body of information (e.g., clarification of the

biochemical pathway of malabsorption), practically oriented health care professionals working with children have independently discovered that treating diarrhea with ORS significantly reduces children's rates of morbidity and mortality. Researchers in Nigeria found that 65.7% of mothers used ORS in the treatment of childhood diarrhea, while 34.6% of nursing moms used it at home. A study performed in Mexico found that 66% of moms were found to have utilized rice-based gruel, and only 16% used ORS. A study done in Gambia found that over 90% of mothers were aware of Oral Rehydration Solution and that most were able to use it in their care of diarrheal disease in infants. Research in Guinea-Bissau found that mothers were educated on ORS, however only 58% of diarrhea episodes were treated with ORS. At home in Ibadan, Nigeria, nearly all responders utilized ORT to cure diarrhea, which was made up of SSS. According to a cross-sectional study done in Edo state, only 39.2% of mothers had awareness of ORS, and much less (14.3%) used UNICEF-approved ORS in the management of diarrheal disease in children. Studies demonstrate that parents face multiple challenges, such as a lack of understanding regarding ORS's financial and medical implications, that prevent them from using ORS to cure their children's diarrhea.

With this study in mind, it was essential to gauge the understanding and implementation of ORS among nursing moms in order to further the fight against diarrhea.

## Methodology

A descriptive cross-sectional research was used for the study design. A comprehensive analysis was performed on the women in the study population of moms with under five children in certain areas in Luknow. Two hundred mothers with a kid age five or younger took part in the study. Wards, neighborhoods, families, and respondents were selected through the application of the multi-stage sampling technique. The researcher created a questionnaire that would get responses from the respondents and hence yield data. The respondents willingly took part in the study by completing the questionnaire, which was given to them by the interviewer. There were 20 pieces total, which were divided into four groups. Section A and B included information about socio-demographic factors, causes, signs, and symptoms, and prevention of diarrhea, while Section C and D had information about ORS preparation and composition, as well as how to utilize ORS. The pre-testing of the questionnaire took performed among 20 nursing women in several parts of Lucknow. Analysis was done in IBM SPSS 20.0 and findings were Variables were analyzed using Chi-square, which was employed at a 0.05 significance level.

## Results

95.5% of the respondents had heard of diarrhea, whereas only 4.5% had not. 46% of respondents used a health worker for information about diarrhea, but almost as many (42%) looked to TV, radio, and magazines (4.3 percent ). Of the individuals surveyed, the majority (35.5%) understood that contaminated food and drink might give children diarrhea, while 25% said that drinking contaminated water was to blame, 22% attributed the diarrhea to micro-organisms, and 7% identified poor air quality as a reason.

About 21% (or 10.5%) of the population knew nothing about children's diarrhea. This study found that signs and symptoms of dehydration (defined as eyes sunken, dry tongue, dry lips/tongue, body weakness, and irritability) were common (7.6 percent ). A full one-quarter (26.8%) of participants didn't know how to recognize dehydration and its symptoms. Almost two-thirds of those interviewed, 34.5 percent of the total, knew that adopting frequent hand washing both before and after meals was important.

Nearly two-thirds of respondents claimed to know about ORT/ORS/SSS, but only around a third said they had never heard of the concept. Using information gathered from 71% of the participants' hospital/clinics, 26% of their local chemists, 22% of the local TV/radio channels, and 13% of their friends, it was discovered that ORT/ORS/SSS are available to almost all residents of Dushakali (6.3 percent ). Regarding knowledge of the ingredients of ORS/SSS, 40 (20 percent) said that ORS/SSS is composed of salt + water, 31 (15.5 percent) stated that it was made of salt + sugar + water, 27 (13.5 percent) mentioned coconut water, 18 (9 percent) pointed to water + sugar, and 8 (4 percent) claimed that it is composed of sugar + salt. 76 percent of respondents were ignorant about SSS and ORS formulation. About two-thirds of the participants were unable to adequately describe how to prepare ORS/SSS, whereas 35 percent gave a detailed description. Only 69 (34.5 percent) of 200 survey participants said their child had diarrhea in the last two years. Nearly half of the responders who had experienced diarrhea in their children exclusively treated their children with ORS/SSS. Among users of ORS/SSS, about 20.3% (14 out of 65) said they started administration of ORS/SSS when their children began showing signs of weakness. The other two major reasons for using ORS/SSS included administering it the day after diarrhea began (15.9%) and giving it immediately after the child passed watery stool (5.5%). Nearly one-third of respondents reported using ORS/SSS infrequently, whereas one-tenth use it routinely in response to frequent need. Over a fifth of respondents admitted to discarding oral rehydration solution and sterilized saline solution after 24 hours. One in ten disposed of the medicine after 12 hours, and 5% did so after 36 hours. A paltry 5% of respondents used the medicines for 6 hours. Everyone who had previously used ORS/SSS said they would advise other mothers in child rearing about how it can be used to fight diarrhea. Respondents mentioned that barriers to ORT/ORS use included things like not knowing about ORS/SSS. More than 76% (52.4%) of the primary and middle school students reported that they were not informed of the ingredients or preparation of oral rehydration solutions or sodium-rich fluids, while 24% (16.6%) of them did not use oral rehydration solutions or sodium-rich fluids due to a lack of information on the ingredient or preparation of oral rehydration solutions or sodium-rich fluids. Additionally, 10% (6.9%) cited that oral rehydration solutions or sodium-rich fluids were not available, while 5% (3.4%) mentioned cultural beliefs that led them to not use these solutions.

Over two-thirds of the participants claimed they never utilized traditional medicines/herbs to help children deal with diarrhea, whereas one-fifth stated they did. Data indicated that less than half of the respondents knew about ORS/SSS (43.5 percent ), what ORS/SSS were made of (44.9 percent ), and how to use them (46.4 percent ), while



nearly half of them were unaware of ORS/SSS (56.5 percent ), didn't know what ORS/SSS were made of (55.1 percent ), and hadn't prepared for them (0 percent ). (53.6 percent ).

Thus, the results confirmed that a lack of awareness of ORS/SSS, as well as a lack of understanding of these substances.

## Discussion

Among responders, what people know about diarrhea and how to avoid it.

Most participants (95.5 percent) reported they had heard of diarrhea prior to participating in the study, whereas 4.5 percent had not. This data is in agreement with another report on diarrhea awareness; 93 percent of people knew about diarrhea, although there was less awareness than what was discovered in this study. This can be contributed to an improvement in information on childhood diarrhea as well as government dedication to bettering the lives of children and reducing deaths from treatable illnesses. Nearly half of the participants said they were aware of diarrhea because of hearing about it from a medical professional. Friends and family make up little over 40% of information on diarrhea. Other media, including radio and television, handbills, and pamphlets, make up around 20% of knowledge on the disease (4.3 percent ). A cross-sectional study done in Kwara State, Nigeria shows that a third of the people were receiving information about diarrhea through their local hospitals or health centers, while around a third were learning about it from the media. Studies have concluded that health workers are one of the most effective, accurate, and dependable means of communicating health information to the public. Results of this study suggest that health personnel have a crucial role in conveying knowledge about diarrhea features to people, and this is especially important in times of need. Messages on diarrhea management can be efficiently spread via the media, which can be a supplementary method of distribution to the many women who, because of their reluctance to attend hospitals frequently, are less likely to see education on management measures. When queried about childhood diarrhea causes, a significant majority indicated that children develop the disease through eating or drinking unclean foods or water. It was discovered that about 10.5% of children had no idea why they were having diarrhea. This data is contrary to the Pakistan study, which concluded that increased food intake was the leading cause of diarrhea. The report aligns with [18], in which 55.6 percent of respondents pointed to contaminated water and 54.9 percent said it was contaminated food. In this research, sixty-five percent of participants could name at least one source of children's diarrhea. An increase in the understanding of childhood diarrhea causes may have come from dealing with diarrhea cases in a clinical setting, visiting a health facility for regular post-natal visits, and providing healthcare information to patients.

Mothers with a lesser education are less likely to be able to determine what is causing diarrhea in their children. Approximately 35 percent of the responders named sunken eyes as the primary sign of dehydration. Respondents in addition reported: a dry tongue (21.8%), dry lips/tango (15.2%), body weakness (10.4%), and irritation (7.6 percent ).

9.9% of respondents could not recognize any symptoms of dehydration, even though they described symptoms of hydration. A result like this one has been found before by [15], when people were reporting feeling dehydrated after drinking excessively, describing a possible consequence as increased thirst and sunken eyes. Dehydration knowledge, such as the symptoms of dehydration, is prevalent since many people know to educate their children on things such as diarrhea. Mothers who had to deal with diarrhea in their child had a better understanding of dehydration than those who did not experience this. In this study, most respondents were aware that the best approaches to avoid diarrhea in children were to wash their hands before and after meals (34.5 percent), after using the bathroom (33.5 percent), and in food preparation and storage (21.8 percent). This discovery was also noted by [16], who described ways mothers may help their children avoid diarrhea, including promoting good hygiene, ensuring easy access to medical facilities, and treating infections promptly.

It is possible to reduce childhood mortality by making Education on handwashing and other personal hygiene techniques should be a major priority in any type of facility that provides ANC or postnatal care.

knowing the correct procedures for ORT/ORS preparation and administration among those who took the survey

Almost two-thirds of the participants (62%) had heard of ORT/ORS/SSS, whereas nearly four in ten participants (38%) said they were unfamiliar with it.

Nursing mothers knew of ORS according to reports that said 85% of them were aware of it. Advocacy and understanding of ORS/SSS have obviously been quite beneficial in the research area. A number of respondents received knowledge on ORS/SSS from sources such as their hospitals and medical clinics (34.1 percent ), chemists (12.5 percent ), and the media (10.6 percent ). This paper proposes that post-natal nursing women might easily learn about SSS and ORS while being cared for at health care facilities. A meager 15.5% of respondents knew what was in ORS/SSS, whilst the majority of the respondents did not. A study in Bihar concluded that the composition of SSS/ORS was common knowledge among respondents. However, a contrary outcome has emerged from research done here in Bihar. They discovered that 83.3% of respondents knew the proper proportion of ORS/SSS. A failure to use ORS/SSS may impact how people are raised, as they won't have any practical knowledge of the formula's core components. People who rarely visit the doctor and have never heard of ORS or SSS were less likely to know about ORS/SSS composition. The majority of respondents (82.5 percent) couldn't describe the right way to prepare ORS/SSS, while just 17.5 percent had a solid understanding of how it was made. This paper argues against the findings in [12] that stated 86.6% of people knew how to make ORS/SSS. [19] in their study , it was discovered that less than a third of nursing women knew how to prepare ORS/SSS correctly. As such, more programs in maternal education must include information about how to make

in managing diarrhea, ORT/ORS Of the 200 respondents, nearly 35% (69 out of 200) indicated their child suffered from diarrhea in the past two years, and 43.5% (143 out of 350) said they had utilized ORS/SSS for diarrhea management. The discrepancy in the use of ORS/SSS can be the result of various factors like the level of education the mothers have on the benefits of ORS/SSS, socio-economic status, and understanding of proper preparation of ORS/SSS in management of infantile diarrhea. Mothers who had information about using ORS/SSS for diarrhea were more likely to use it themselves when they got home.

In the survey of parents who administer ORS/SSS, many said they wait to administer ORS/SSS until they detect their child showing indications of weakness, while others administer it a day after diarrhea starts. Delays in treating diarrhea have caused high rates of childhood morbidity and mortality. In order to provide women with the knowledge of how to diagnose and treat diarrhea as early as possible, healthcare workers should educate them.

From 34.5 percent of the people who used ORS/SSS, only 15.9 percent of them constantly used it to manage diarrhea, whereas 27.5 percent of them used it occasionally. This finding indicated subpar adherence to ORS use, perhaps affected by the use of herbal medicine as an alternate treatment for diarrhea. Better education and knowledge of ORS/SSS benefits influences the frequency of using this intervention among nursing mothers. More ORS/SSS users said that they would throw out their preparation after only a day (20.3%) than would do so after a day and a half (11.6%). It appears that ORS/SSS had a problem following the WHO standard of discarding prepared solutions 12 hours after preparation. It is clear that mothers who are financially secure and educated know when to abandon ORS/SSS.

responders don't use ORE or SSS to control diarrhea because of barriers.

There are several roadblocks to the use of ORS/SSS, including 52.4% lack of awareness, 40.5% access issues, and 38.8% misconceptions about the usage of these products. 24, which accounts for 16.6 percent

& cultural belief 5 (3.4 percent ).

This information disagrees with [12] which reported that both out-of-pocket ORS/SSS expenses and traditional/alternative treatments use were a deterrent to ORS/SSS use among nursing mothers. However, it matches a study conducted in West Java, Indonesia, where nursing mothers lacked information about the connection between diarrhea, dehydration, and the rehydrating function of ORS [13].

These studies have proven that making rural women aware of the advantages of using ORS would lead to them using it more frequently. Healthcare providers and the media are necessary in this area. Only 22.5% of those surveyed said they relied on traditional/herbal medication to treat diarrhea in their children. Traditional/herbal

medicine use has also documented in prior investigations. Low income, a lack of education, a cultural belief system, a lack of confidence in traditional approaches to management, a lack of awareness of ORS/SSS, a lack of information on ORS/SSS preparation and where to get them, and a lack of information on ORS/SSS composition all could strongly influence the use of alternative/traditional medicine to treat diarrhea in children. Mothers will be motivated to treat diarrhea with ORS when they realize the advantages of doing so. Mothers who were more senior in age and who did not receive any formal education were more inclined to utilize traditional herbs to cure diarrhea at home.

## Conclusion

Diarrhea is a big factor in deaths of children in India. The World Health Organization and UNICEF recommend the use of ORS for the treatment of diarrhea in children, where it may be administered successfully at home. Most studies, however, found that moms who were controlling their children's diarrhea with ORS were not using and accepting it as much as they should. Respondents exhibited strong awareness of diarrheal illness, were aware of ORS but were not well-versed in ORS composition and The study also failed to report inadequate use of ORS among nursing mothers. So to make the use of ORS in the treatment of children's diarrhea more widespread, mothers must be educated on the benefits of it.

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