KNOWLEDGE ABOUT CHILDHOOD DIARRHEA AMONG MOTHERS: A SYSTEMATIC REVIEW OF 2020 ONWARDS

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ABSTRACT

Background: Childhood diarrhea is still a challenge in healthcare, and mother's knowledge about it can play a vital role in its management. Recent reviews to assess mother's knowledge may help in future strategies. **Objective:** To review the mother's knowledge about the management of diarrhea. **Materials and Methods:** The study was conducted using studies available free and in full on the internet and reported using Preferred Reporting Items for Systematic Review and Meta-Analysis Statement (PRISMA) guidelines. All original studies that were freely available were included. Google Scholar was used for searching for relevant articles. BOOLEAN search criteria were tried using the AND and OR operations for specific terms. The data was entered in a Microsoft Excel document with the same heading as in the table. **Results:** A total of 15 studies were shortlisted and published from 2020 onwards. The Knowledge was very varying, ranging from 5.6% to 82.2% with statistical significance. **Conclusion:** The knowledge of mothers is quite varied about childhood diarrhea, even in recent literature. More studies should be done to find risk factors for such variation, and awareness campaigns should be given to increase knowledge among mothers, as they are the primary caregivers for their children.

NTRODUCTION

Diarrhea is defined as increase of frequency of stool twice from usual number of stool in one day in infants or also defined as more than three watery or loose stools in one day in children of older age.[1] Diarrhea causes 525,000 deaths in those children that are under-five years of age and approximately world wide it affects 1.7 billion cases alongwith being second largest cause of mortality in children that are under-five year of age every year.[2] The 2017 to 2018 Pakistan Demographic & Health Survey (PDHS) reports that in Pakistan diarrhoea prevalence in children that are less than 5 year age as 19%. Globally Pakistan is known to have third-highest rate of mortality caused by diarrhea, along with 39 500 mortalities in children that are less than 5 year of age because of diarrhea each year.[3] In past, researchers have reported that inadequate water, hygiene and sanitation (WASH) practices, low maternal education, not breastfeeding, and age < 24 months as risk factors related to childhood diarrhoea. [3] If caregiver has Lack of awareness about importance of the practices associated to sanitation and hygiene for prevention of diarrhea then this is significant risk factors causing diarrheal disease.[4] Child age, latrine availability rural residence, and hand washing facility, improper disposal of waste and source of drinking water were notably related to

diarrheal disease in childhood[5]. In most cases, diarrhea can be treated at home by oral rehydration therapy (ORT) that has significantly decreased the mortality related to diarrhea disease.[6] ORT is the treatment preferred for electrolyte and fluid loss because of diarrhea which is related to gastroenteritis in children having mild or moderate dehydration. ORT is utilized in hypovolemia caused by gastroenteritis unrelated to age, initial sodium content and causative agent. ORT is often used at home or used under supervised conditions[7] Although ORS method of treatment is cheap, adequate, reasonable, and safe, few mothers listed that the aim of using (ORS) during diarrhea is to treat dehydration of diarrhea[6] ORS having osmolarity as 250 mOsm/L or less, as approved by WHO a, decreases need for (intravenous) IV rehydration therapy, diarrhea and vomiting.[8] Researchers report that ORS alongwith less osmolality is effective for treating patients having acute diarrhea.[9] Diarrhea is a disease that is not related to mortality itself, mother's lack of knowledge and mother's improper approach or management during diarrhea leads to mismanagement and hence severe dehydration. Researchers report mothers have lack in knowledge related to diarrhea, its causes and also prevention. Mothers showed inability to recognize specific signs related to dehydration. Most mothers had chosen soft food & adequate fluids. Mothers also knew how instant ORS is prepared but many were unaware of measures related to prevention of diarrhea at home. Mothers should be counselled properly about diarrhea, prevention, its causes and proper treatment.[10] Providing mothers with adequate health education alongwith demonstrating proper practice can prevent or stop the diarrhea. Harmful practices of mothers, for example nourishment limitation, using conventional therapy that is inappropriate or avoiding breastfeeding, plus wrong prescription, are related to diarrhea. [11]Researchers also report knowledge of mothers regarding signs in dehydration caused by diarrhea is poor and measures should be taken to provide proper health education to mothers regarding diarrhea.[12] Rationale of this study is to evaluate home care and management of diarrheal in this community by assessing knowledge, practice and attitude of mothers regarding diarrheal children, and its essential management. Therefore, we want to evaluate attitudes and knowledge of mothers to diarrheal children and also its management by mothers at home.

MATERIALS AND METHODS

Reporting of Data: The study was conducted using studies available free and full on internet and were reported using Preferred Reporting Items for Systematic Review and Meta-Analysis statement (PRISMA) guidelines.[13]

Inclusion & Exclusion Criteria: All original studies were included that were freely available and all reviews, editors notes, case reports or series and the ones in which only abstract was free available were excluded. Studies conducted in 2020 onward were included. Older studies were excluded.

Search Source and Extraction of Data: Google scholar was used for searching relevant articles. BOOLEAN search criteria was tried using the AND and OR operations for specific terms including "knowledge", "diarrhea", "mother's knowledge", "prevalence" among other terms. Studies were initially selected, thoroughly studied, and screened for most relevant and appropriate studies. Irrelevant studies were excluded after discussion among authors. The data was taken on a questionnaire that included information like author name, year, objective and main findings. The data was then entered in Microsoft Excel document with same heading as in table.

RESULTS

Total 15 studies were finalized, out of which 3 were of 2020, 3 from 2021 and rest of them (9 studies) were from 2022. Majority of studies were

descriptive cross sectional, and only three were analytical. The knowledge of mother regarding childhood diarrhea is given below in table-1. The Knowledge was very varying, ranging from 5.6% to 82.2%. All three analytical studies showed a significant knowledge of mothers regarding childhood diarrhea. **(Table-1)**

Table-1: Knowledge of mother's about childhood diarrhea

Studies	No. of subjects	Good Knowledge of mothers in %	Ref
(Alghadeer et al., 2021)	1140	40.3%	14
(Momoh et al., 2022)	360	59.2%	15
(Ndayisaba et al., 2022)	160	45%	16
(Khaliq et al., 2022)	40	72.06%	17
(Gaikwad and Biradar)	30	76.66%	18
(Pasi and Ravi, 2020)	60	16.66%	19
(Kumar et al., 2020)	240	40%	20
(Haris et al., 2021)	150	64.66%	21
(Wahab and Faris, 2022)	250	5.6%	22
(Mohmed and Abdalla, 2021)	50	60%	23
(Manzoor et al., 2022)	158	12%	24
(Terefe et al., 2022)	326	59%	25
(Ranjan and Ranjan, 2020)	30	23.3%	26
(Okafor et al., 2022)	371	82.2%	27
(Upashe and Shil, 2022)	75	6.7%	28

DISCUSSION

A research study that was done in Ethiopia shows 39.5% of mothers elaborated the start of severe diarrhea as three or more than three loose stools along with blood in the day time.[29] Another study carried out in the rural areas in Kenya show that 76.4% of mothers could not clearly find out the critical symptoms of diarrhea in childhood.[30] One study that was carried out in Nepal shows 20.8% mothers consider diarrhea that is red-colored as the most severe diarrhea.[6] Bloody diarrhea carries with itself the important sign of dehydration which the most mothers were not able to identify. Thirst or dry mouth, losing strictness in skin, tearless eyes were identified by 32.1%,24.3% and 11.6%, respectively, as signs in dehydration caused by diarrhea. Worldwide researchers have shown that mothers are unable to recognize signs of dehydration. [6, 31-33] Proper knowledge related to signs critical in childhood diarrhea is necessary for proper treatment of diarrhea. [29] Poorly sanitized water and food are precursors to diarrhea, as reported by researchers 3000 deaths approximately and almost 135,000 hospitalizations per year as a result of food caused diarrhea transmission in United States of America.[34] In relation to transmission and causes of diarrhea, approximately 50% of mothers that participated showed concern that polluted food causes childhood diarrhea most commonly, also 31% of total mothers that participated identified unclean water drinking to be a cause of childhood diarrhea. Many other studies also reported mothers on large scale were unaware of causes as well as transmission of diarrhea.[6,29,35] One other study conducted in Nigeria reported contaminated food and unclean water to be most common causes of diarrhea as 24.1% and 11.3% respectively .[36] One study conducted in Iran report only 24.66% of total participating mothers had knowledge of unclean water to be one of causes of diarrhea.[37]Researchers in Malawi reported that 55% of total participating mothers identified unhealthy water as main cause leading to diarrhea. The variance of knowledge about childhood diarrhea is also due to various education levels of mothers.[38] There is a huge misconception about diarrhea and teething worldwide. One study states 66% of total participating mothers reported to believe teething as cause of child's diarrhea. Similar results were reported in many other researches from other countries.[36, 37] One other fact that is noted is this that mothers take diarrhea as a result of teething dealing with it non seriously even if child is starting to show dehydration.[39]

Management of childhood diarrhea at home

requires some key factors like sufficient knowledge of mothers on reasons, management and prevention of diarrhea.[40, 41] According to IMCI (Integrated Management of Childhood Illness) guidelines, ORS can be used in therapy of diarrhea.[42] Although the mothers are not encouraged enough to utilize ORS as therapy in diarrhea. In one study 62% of participating mothers had knowledge of ORS, but only 23.5% utilized it in treatment of children. Another study conducted in Nigeria shows that 63% mothers had knowledge of ORS, and out of those 27% used it as treatment in their children. Researchers in Pakistan reported that 58% mothers utilized ORS for treatment of diarrhea in their children [12]. Regarding the resources of ORS usage by mothers for treating their children included medical prescriptions to be 50.3%, family and friends to be 15.7%, and pharmacists to be 15.1%. In another study the information about ORS was found by families and friends as 76% and pediatricians as 58%.[43] One study was done online to find out geographical dependence, as well as high literacy rate and usage of social media among Saudis[44, 45] also it aims to find out knowledge, practice and attitude of mothers when dealing with childhood diarrhea as in community perspective. The study had perspective of mothers behavior towards dealing with diarrhea could reduce clinic visits although many participating mothers, 68.9% to be precise visit doctor for treating diarrhea. [29] Researchers in a study report 70.9% of mothers believe handwashing as essential measure for reducing diarrhea prevalence.[46]

CONCLUSION

The knowledge of mothers is quite varying about childhood diarrhea even in recent most literature. More studies should be done to find risk factors for such variation and awareness campaigns should be given to increase knowledge among mothers as they are primary care-givers to their children.

AUTHORS CONTRIBUTION

AIH: Idea conception and write up,
SY: Literature search and article writing

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