

A survey on exploring socioeconomic factors and their impact on diarrhea management among children under 5 years at Mohammadpur maternity hospital and Suhrawardy medical college and hospital, Dhaka, Bangladesh



A dissertation presented to the Department of Pharmacy, Daffodil International University, in partial fulfillment of the requirements for the degree of Master of Pharmacy.

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Declaration

I affirm that I have independently undertaken the compilation of this thesis to fulfill the requirements for the Master of Pharmacy (M.Pharm) degree. This work was carried out under the guidance of Dr. Md. Sarowar Hossain, Associate Professor in the Department of Pharmacy within the Faculty of Allied Health Sciences at Daffodil International University. Through my signature, I confirm that I am the sole author of this thesis paper and declare under oath that neither the entire thesis nor any of its constituent parts have been previously submitted to any other educational institution for the purpose of obtaining a Master's degree or any other academic qualification.

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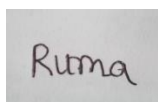
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DEDICATION

I dedicate this work primarily to my faith, followed by my parents, teacher, and family.

Abstract

Background: Childhood diarrhea remains a significant public health concern in Bangladesh, necessitating a nuanced understanding of its management within the context of socioeconomic factors. This survey study, conducted at Mohammadpur Maternity Hospital and Suhrawardy Medical College and Hospital in Dhaka, Bangladesh, aims to explore the impact of socioeconomic variables on the prevalence, healthcare-seeking behavior, and overall consequences of diarrhea among children under 5 years.

Methods: From October 5, 2023, to December 2023, a cross-sectional survey was conducted, involving face-to-face viva interviews with 280 guardians of children seeking healthcare services. A structured questionnaire, prepared in Google Form, covered demographic details, socioeconomic factors, diarrhea prevalence, healthcare-seeking behavior, and the impact of diarrhea on various aspects of participants' lives.

Results: Demographic analysis revealed a diverse participant pool, with parents comprising 75%, grandparents 18%, and other relatives 7%. The majority fell within the age group of 26-35 years (46%), and educational backgrounds varied, with 48% holding a university degree. Diarrhea prevalence in the past 6 months indicated occasional occurrences in 32%, frequent in 18%, and persistent in 7% of cases. Socioeconomic factors, including household income and sanitation facilities, exhibited wide variations among participants. Employment impact was reported by 43%, with missed workdays (21%) and loss of income (15%) being prominent. Financial burden was perceived as somewhat burdensome by 36%, while 11% had to borrow money for healthcare expenses. Education impact was noted in 21%, primarily through missed school days (11%). Social challenges were reported by 14%, with 29% acknowledging limited community discussions on diarrhea management. Overall, 43% perceived a decline in the quality of life due to diarrhea.

Conclusion: This study underscores the intricate interplay between socioeconomic factors and childhood diarrhea management. The diverse impacts on employment, finances, education, and social dynamics emphasize the need for targeted interventions and community-based programs. These findings contribute valuable insights for public health practitioners and policymakers working towards improving child health outcomes in resource-limited settings like Bangladesh.

Index

Sl. No.	List of the Content	Page No.
	Chapter One	1
1.0	Introduction	2-3
1.1	Causes and Risk Factors of Diarrhea	3-4
1.2	Impact of Diarrhea on Child Health	4-6
1.3	Diarrhea in the Global Context	6-7
1.4	Management Strategies for Diarrhea	7-9
1.5	Prevention and Hygiene Practices	9-10
	Chapter Two	11
2.0	Literature Review	12-15
	Chapter Three	16
3.0	Purpose of the Study	17
	Chapter Four	18
4.0	Methods and Materials	19-23
	Chapter Five	24
5.0	Results & Discussion	25
5.1	Results	25
5.1.1	Demographic information	25-27
5.1.2	Socioeconomic Factors & Impact	27-29
5.1.3	Diarrhea Management	29-34
5.1.4	Healthcare Infrastructure and Services	34-36
5.1.5	Diarrhea Impact Assessment	36-40
5.2	Discussion	40-41
	Chapter Six	42
6.0	Conclusion	43
	Chapter Seven	44
7.0	Reference	45-49

List of the Table

Sl. No.	List of the Table	Page No.
	Chanter Five	24
5.1	Demographic information of the participants.	25
5.2	Child's information.	26

List of the Figure

Sl. No.	List of the Figure	Page No.
	Chapter Five	24
5.1	Number of Children in the Household.	27
5.2	Monthly Household Income of Participants.	27
5.3	Educational Background of the Participants.	28
5.4	Access to Clean and Safe Water of Participants.	29
5.5	Sanitation Facilities of Participants Household.	29
5.6	Prevalence of diarrhea in last 6 months.	30
5.7	Healthcare Seeking Behavior.	31
5.8	Factors influencing choice of healthcare provider.	31
5.9	Affordability of Healthcare.	32
5.10	Knowledge about Preventing Diarrheal Diseases.	33
5.11	Preventive measures that take to reduce the risk of diarrhea.	34
5.12	Accessibility of Healthcare Services.	34
5.13	Satisfied with the quality of healthcare services participants receive.	35
5.14	Community Programs and Education.	36
5.15	Initial Steps in Managing Child's Diarrhea.	36
5.16	Factors Associated with Child Developing Diarrhea.	37
5.17	Assessment of Diarrhea Severity.	38
5.18	Employment impact of participants.	39
5.19	Financial burden of managing diarrhea of household.	39
5.20	Impact on Quality of Life.	40

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Diarrhea, a common gastrointestinal ailment characterized by frequent and loose bowel movements, poses a significant global health concern, particularly among children under the age of 5. Its prevalence in developing countries, including Bangladesh, necessitates a comprehensive understanding of the various dimensions surrounding this health challenge [1]. Diarrheal diseases are a leading cause of morbidity and mortality worldwide, contributing to the burden of infectious diseases and impacting the well-being of affected populations [2].

Diarrhea is often caused by infectious agents, such as bacteria, viruses, and parasites, leading to gastrointestinal inflammation and disruption of normal bowel function. Contaminated food and water, poor sanitation, and inadequate hygiene practices contribute to the spread of diarrheal pathogens [3]. In children, who are particularly vulnerable due to developing immune systems, diarrhea can result in dehydration, malnutrition, and even death if not promptly and adequately managed. Understanding the multifaceted aspects of diarrhea management goes beyond the immediate health implications [4]. Socioeconomic factors play a crucial role in shaping the outcomes of diarrhea episodes, influencing everything from access to healthcare services to the economic stability of affected families. Recognizing these broader impacts is essential for designing targeted interventions and public health strategies that address not only the medical aspects of diarrhea but also its ripple effects on communities [5].

Socioeconomic factors encompass a range of elements, including household income, education levels, living conditions, and employment opportunities, among others. The intricate interplay between these factors and diarrhea management becomes evident when considering the financial burden of healthcare expenses, the influence of education on preventive practices, and the impact on employment due to caregiving responsibilities [6]. A nuanced comprehension of these socioeconomic dynamics is instrumental in tailoring interventions that go beyond medical treatment. It allows for the identification of vulnerable populations, the development of targeted educational programs, and the creation of support structures that mitigate the broader consequences of diarrhea, particularly in resource-limited settings [7].

Bangladesh, like many other developing nations, grapples with a high prevalence of diarrhea among children under the age of 5. Factors such as inadequate sanitation facilities, limited access to clean water, and suboptimal healthcare infrastructure contribute to the persistence of diarrheal diseases [8]. The burden is not only a public health concern but also a socioeconomic challenge, impacting the lives of families and hindering the overall development of communities. This survey, delves into the specific socioeconomic factors influencing the management of childhood diarrhea. The insights gained from this exploration are essential for informing targeted interventions, public health policies, and community-based initiatives aimed at reducing the prevalence and mitigating the broader impacts of diarrhea in this vulnerable population [9].

1.1 Causes and Risk Factors of Diarrhea

Infectious Causes:

Bacterial Infections: Bacterial pathogens are significant contributors to childhood diarrhea. Enterotoxigenic *Escherichia coli* (ETEC), *Shigella*, *Salmonella*, and *Campylobacter* are common culprits. Contaminated food, water, and inadequate food handling practices contribute to bacterial infections in young children [10].

Viral Infections: Viral agents, including Rotavirus, Norovirus, and Adenovirus, are primary causes of acute gastroenteritis. Rotavirus, in particular, is a leading cause of severe diarrhea in children under five, with transmission occurring through fecal-oral routes and contaminated surfaces.

Parasitic Infections: Protozoa such as *Giardia lamblia* and *Cryptosporidium parvum* pose a risk, especially in areas with poor sanitation. Waterborne transmission and fecal contamination of food contribute to parasitic infections, leading to prolonged episodes of diarrhea [11].

Non-Infectious Causes:

Poor Sanitation: Inadequate sanitation facilities expose young children to fecal contamination. Open defecation, lack of proper sewage systems, and contaminated water sources contribute to the spread of enteric pathogens, increasing the risk of diarrhea [12].

Inadequate Hygiene Practices: Insufficient handwashing, especially after using the toilet or before meals, is a significant risk factor. Poor hygiene in food preparation, coupled with the lack of access to soap and clean water, amplifies the likelihood of ingesting infectious agents [13].

Malnutrition: Malnourished children are more susceptible to diarrheal illnesses due to weakened immune systems. Undernutrition compromises the integrity of the gastrointestinal tract, making it more susceptible to infections. Additionally, malnutrition can exacerbate the severity and duration of diarrhea episodes [14].

Contaminated Food and Water: Consumption of contaminated food and water is a direct route of exposure to diarrheal pathogens. Pathogens such as *E. coli* and *Salmonella* can contaminate food during production, processing, and storage, leading to foodborne infections in young children.

Environmental Factors: Environmental pollutants, including chemical contaminants and toxins, can contribute to non-infectious diarrhea. Exposure to pollutants in air, water, or soil may trigger gastrointestinal reactions, especially in children living in industrial or polluted urban areas [15].

Sociodemographic and Economic Factors:

Low Socioeconomic Status: Children from economically disadvantaged families often face challenges such as limited access to clean water, sanitation facilities, and healthcare resources. The lack of financial means may hinder timely access to medical care, exacerbating the impact of diarrhea [16].

Overcrowded Living Conditions: Overcrowded living spaces, common in urban slums and impoverished communities, facilitate the rapid spread of diarrheal infections. Limited personal space and shared facilities increase the risk of person-to-person transmission.

Lack of Education: In communities with low levels of education, awareness about proper hygiene practices and disease prevention may be insufficient. Educational interventions are essential to empower caregivers with knowledge on sanitation and preventive measures [17].

Understanding this multifaceted etiology is vital for designing comprehensive interventions aimed at reducing the burden of diarrhea in children under five. Effective management strategies must address both infectious and non-infectious risk factors, considering the socio-economic context in which vulnerable populations reside [18].

1.2 Impact of Diarrhea on Child Health

Recurrent episodes of diarrhea in early childhood exact a profound toll on the holistic health of a child, with repercussions extending far beyond immediate discomfort. Malnutrition and stunting emerge as insidious consequences, as diarrhea leads to the relentless loss of vital nutrients,

depriving the growing body of essential vitamins and minerals crucial for optimal development [19]. Persistent malnutrition and stunting, in turn, cast a long shadow over a child's physical stature and cognitive progression, resulting in shorter stature and delayed intellectual development. Weight loss and wasting, consequences of severe and prolonged diarrhea, further compromise the child's resilience, weakening their ability to fend off additional infections and impeding normal growth patterns [20].

The impact of diarrhea extends beyond the physical realm, permeating cognitive development with lasting effects. Nutrient deficiencies and dehydration, consequences of diarrheal illnesses, impair brain function, introducing cognitive delays that manifest as challenges in learning, memory, and overall intellectual development. The educational journey of children is disrupted, with frequent hospitalizations and cognitive deficits contributing to a cycle of educational disadvantage [21].

The general well-being of a child faces jeopardy, particularly when diarrhea is severe. Dehydration and electrolyte imbalances, common outcomes, induce lethargy, weakness, and irritability, further compromising the child's overall quality of life. The intricate interplay between diarrheal diseases and weakened immunity establishes a cycle of recurring illnesses, as malnutrition resulting from diarrhea compromises the immune system, rendering the child more susceptible to additional infections [22].

The interconnectedness of diarrhea and malnutrition creates a vicious cycle, perpetuating a negative impact on a child's health. Diarrhea contributes to malnutrition by inducing nutrient loss, while malnutrition, in turn, weakens the immune system, heightening the child's susceptibility to further diarrheal infections. This cyclic interaction fosters long-term health consequences, including heightened vulnerability to infections, compromised organ development, and an elevated risk of non-communicable diseases in later life [23].

Recognizing the profound implications of diarrhea on a child's growth, cognitive development, and overall well-being underscores the urgent need for preventive measures and timely interventions. Efforts to break the cycle of malnutrition and diarrhea demand a holistic approach, addressing both immediate symptoms and the enduring health outcomes for vulnerable populations. By prioritizing comprehensive strategies that encompass prevention, early detection,

and effective management, it is possible to mitigate the far-reaching impact of diarrheal diseases on the health and future prospects of children under the age of five [24].

1.3 Diarrhea in the Global Context

Diarrhea, a persistent global health challenge, manifests with a disproportionate impact on low- and middle-income countries (LMICs), where the prevalence rates of diarrheal episodes are alarmingly high. Children in these regions face a significantly elevated risk due to multifaceted challenges, including poor sanitation, limited access to clean water, and inadequate healthcare infrastructure [25]. Tragically, the consequences of diarrhea are more severe in LMICs, culminating in heightened mortality rates among children under five. The scarcity of healthcare facilities and delayed medical interventions exacerbate the gravity of the situation, underscoring the urgent need for a comprehensive global response [26].

Prevailing challenges in LMICs contribute significantly to the persistence of diarrheal diseases. Limited access to clean water emerges as a primary hurdle, as contaminated water sources become breeding grounds for waterborne pathogens, fostering recurrent infections. Inadequate sanitation infrastructure, marked by a lack of proper toilet facilities and sewage systems, amplifies the spread of diarrheal diseases, particularly through open defecation practices. The scarcity of healthcare resources, including a shortage of trained professionals and essential medications, further impedes timely diagnosis and management [27].

The socio-economic implications of diarrhea in LMICs reverberate across families and communities, perpetuating a cycle of poverty. Families bear a substantial economic burden, grappling with the direct and indirect costs associated with medical care, medications, and transportation to healthcare facilities. The impact extends to the workforce, with childhood morbidity and mortality diminishing the number of healthy, educated individuals entering the workforce, thereby hindering overall economic development. This cycle of poverty, shaped by poor health outcomes and limited educational opportunities, persists across generations, deepening the socio-economic divide [28].

The urgency for targeted interventions is paramount. Global health initiatives, driven by collaboration between international organizations, governments, and non-governmental entities,

are essential for addressing the disparities in disease burden. These initiatives must focus on improving water and sanitation infrastructure, promoting hygiene practices, and enhancing healthcare accessibility in LMICs. Community empowerment through education on hygiene practices, sanitation, and the importance of clean water is fundamental for sustainable change [29]. Moreover, investment in research and innovation is crucial for developing cost-effective interventions, vaccines, and technologies tailored to the unique challenges faced by LMICs. Through concerted efforts and collaboration, it is possible to break the cycle of diarrheal diseases, alleviating the burden on vulnerable populations and fostering improved health outcomes worldwide [30].

1.4 Management Strategies for Diarrhea

Oral Rehydration Therapy (ORT):

Principle of ORT: Oral Rehydration Therapy (ORT) is a cornerstone in the management of diarrhea, particularly in resource-limited settings. The fundamental principle involves the administration of a solution containing glucose and electrolytes orally to replace fluid and electrolyte losses during diarrheal episodes [31].

Composition of ORT Solution: ORT solutions typically contain a precise balance of glucose and electrolytes, including sodium, potassium, and bicarbonate. This formulation aids in the restoration of electrolyte balance, prevents dehydration, and supports the body's ability to absorb fluids.

5.1.3 Home-Based ORT: ORT is suitable for home-based management, empowering caregivers to administer the solution to children with diarrhea. It is a cost-effective and easily accessible intervention, especially in regions with limited healthcare resources [32].

Zinc Supplementation:

Role of Zinc: Zinc supplementation is recommended as an adjunct therapy for children with acute diarrhea. Zinc plays a crucial role in immune function, and its supplementation has been shown to reduce the duration and severity of diarrhea, as well as decrease the likelihood of future episodes.

Mechanism of Action: Zinc facilitates the repair of damaged intestinal mucosa, enhances immune response, and reduces inflammation. The supplementation of zinc is particularly important in areas where zinc deficiency is prevalent, as it addresses underlying nutritional deficiencies that may exacerbate diarrhea [33].

Integration with ORT: Combining zinc supplementation with ORT is a common practice. This integrated approach not only addresses fluid and electrolyte imbalances but also targets the underlying factors contributing to the severity and duration of diarrhea [34].

Antimicrobial Agents:

Indications for Antimicrobial Use: In cases of bacterial or parasitic etiology, antimicrobial agents may be warranted. Identification of the causative pathogen through diagnostic testing is crucial for targeted treatment. Common antibiotics for bacterial infections and specific anti-parasitic medications may be prescribed based on the pathogen involved [35].

Caution and Proper Prescribing: Antimicrobial use requires caution to prevent the development of antibiotic resistance. Prescribing should be based on accurate diagnosis, and healthcare providers must adhere to appropriate dosage and duration guidelines. Inappropriate use of antibiotics can have long-term consequences for both individual and public health [36].

Importance of Early Detection and Prompt Treatment:

Timely Intervention to Prevent Dehydration: Early detection of diarrhea and prompt initiation of treatment, including ORT and other interventions, are crucial to prevent dehydration. Dehydration can escalate quickly in young children, leading to severe complications and, in extreme cases, mortality [37].

Monitoring and Follow-up: Caregivers should be educated on recognizing the signs of dehydration, such as sunken eyes, reduced urine output, and lethargy. Regular monitoring and follow-up with healthcare providers ensure that the child's condition is adequately managed, and appropriate adjustments to treatment can be made if necessary [38].

Integrative and Holistic Approach:

Nutritional Support: In addition to ORT and zinc supplementation, nutritional support is essential for children with diarrhea. Encouraging continued breastfeeding and providing nutrient-dense foods aid in the recovery process and support overall child health [39].

Hygiene Education: Integrating hygiene education into management strategies is paramount. Educating caregivers on proper handwashing, safe food handling, and sanitation practices helps prevent future episodes of diarrhea, contributing to long-term disease prevention [40].

Effective management of diarrhea in children under 5 requires a holistic and integrated approach. By combining oral rehydration therapy, zinc supplementation, judicious use of antimicrobial agents when indicated, and emphasizing the importance of early detection and prompt treatment, healthcare providers can significantly reduce the morbidity and mortality associated with diarrheal diseases in this vulnerable population [41].

1.5 Prevention and Hygiene Practices

Preventive measures stand as crucial components in the battle against diarrheal diseases, particularly in the vulnerable population of children under the age of five. Vaccination represents a cornerstone in preventing certain types of diarrheal infections. Vaccines targeting pathogens such as Rotavirus and enterotoxigenic *Escherichia coli* (ETEC) have demonstrated efficacy in reducing the severity and incidence of diarrhea in children, providing a valuable line of defense against specific pathogens [42].

Exclusive breastfeeding emerges as a powerful protective factor against diarrheal illnesses in infants. Breast milk not only serves as a nutritionally rich source but also contains essential antibodies and immune factors that bolster the child's immune system, conferring a degree of protection against various pathogens. Promotion and support of exclusive breastfeeding during the first six months of life contribute significantly to reducing the risk of diarrheal diseases [43].

Hygiene practices play a pivotal role in preventing the transmission of diarrheal pathogens. Rigorous handwashing, particularly after using the toilet and before meals, is an effective barrier against fecal-oral transmission. Access to clean water and proper sanitation facilities is equally critical. Communities lacking adequate sanitation infrastructure are at increased risk, emphasizing the importance of investments in improved sanitation to break the transmission cycle [44].

Community-based interventions that engage local populations are instrumental in creating sustainable change. These initiatives may include the establishment of clean water sources, the implementation of proper waste disposal systems, and the promotion of hygiene education within communities. Empowering individuals with the knowledge and resources to maintain clean and sanitary living conditions fosters a proactive approach to preventing diarrheal diseases at the community level [45].

Health education initiatives contribute significantly to raising awareness about preventive measures. Educational campaigns can target caregivers, emphasizing the importance of vaccination schedules, exclusive breastfeeding practices, and the adoption of proper hygiene habits. These initiatives are vital in dispelling misconceptions, promoting behavior change, and fostering a collective responsibility towards disease prevention within communities [46].

A comprehensive approach to preventing diarrheal diseases among children under five involves vaccination, exclusive breastfeeding, and hygiene practices. The integration of community-based interventions and health education initiatives amplifies the impact of preventive measures, fostering a holistic strategy that addresses both individual and community-wide risk factors. By combining these efforts, there exists a tangible opportunity to reduce the incidence of diarrheal diseases and improve the overall health and well-being of young children worldwide [47].

CHAPTER TWO

LITERATURE REVIEW

2.0 Literature Review

1. Ahmed F, Farheen A, Ali I, Thakur M, Muzaffar A, Samina M. Management of diarrhea in under-fives at home and health facilities in Kashmir. International journal of health sciences. 2009 Jul;3(2):171.

Children aged 0–5 years form a vital group in the community, constituting approximately 13% of the population. Due to the still developing immunological system and poor sense of hygiene among parents, these children are prone to many infections, the commonest among them being Diarrhoea and ARI. Diarrhoeal diseases in children under five years age are perhaps the most common human ailment that is the source of discomfort, misery, and loss of time to their parents and burden to the health system as compared to their older siblings in which the course of disease is mild. The importance of the first five years of life of a child for its growth and development is well known. Any adverse influences operating on children during this period e.g., malnutrition and infection may result in severe limitations in their growth and development, some of which may be irreversible. According to the UNICEF study, each child, on average, in the developing world suffers from diarrheal diseases for more than three times a year. This study also supports the fact that diarrheal disease is the foremost leading cause of under five deaths among the major childhood diseases in the developing world contributing to 35% of mortality in children under five. In the developing countries of the world, an estimated 13,000 million episodes of Diarrhea with 3.2 million deaths occur among children annually (WHO, Geneva). 80% of these deaths occur in children under two years of age, 9.5% of all deaths (200,000) in infants, and 23–30 percent in under five age group children are due to Diarrhea with a heavy economic burden and account for 15% of all Pediatric beds.

2. Manetu WM, M'masi S, Recha CW. Diarrhea disease among children under 5 years of age: a global systematic review. Open Journal of Epidemiology. 2021 Jun 28;11(03):207-21.

Diarrheal diseases persist as the second leading cause of mortality among children under the age of five worldwide. Approximately one in five child deaths, totaling about 1.6 million annually, can be attributed to diarrhea. Notably, diarrhea claims more young lives than the combined toll of malaria, measles, and Acquired Immunodeficiency Syndrome (AIDS). Consequently, gaining a deeper understanding of the occurrence of childhood diarrhea holds the potential to mitigate associated morbidity and mortality rates. To address this, our study conducted a comprehensive

global systematic review on the prevalence of childhood diarrhea, with a primary focus on children under 5 years of age. The overarching objective was to assess existing and past research on childhood diarrhea, emphasizing the burden, causative factors, and potential solutions to the disease. Employing a systematic literature review, we explored databases such as PubMed, CINAHL, Web of Science, and Google Scholar. Key search terms included childhood diarrhea, risk factors, and intervention practices, with a focus on journal articles and related reports published between 2005 and 2020. Sixty-one reports and articles meeting the inclusion criteria were incorporated into this review.

3. Lamberti LM, Fischer Walker CL, Black RE. Systematic review of diarrhea duration and severity in children and adults in low-and middle-income countries. BMC public health. 2012 Dec;12(1):1-1.

Diarrhea stands out as a significant contributor to morbidity and mortality across diverse age groups and geographical regions worldwide. Particularly impactful among children aged 0-59 months, diarrhea claims the lives of 1.236 million individuals annually, emerging as the second leading cause of death in this age cohort. While mortality rates are comparatively lower among older children, adolescents, and adults, diarrhea remains a substantial public health concern, causing an estimated 2.8 billion episodes within these populations. Recognizing diarrhea's critical role as a leading global health challenge, it becomes imperative to precisely assess factors such as duration and severity to comprehensively gauge the overall disease burden attributable to diarrhea. Accurate estimations of the duration and severity of diarrheal episodes facilitate the precise calculation of disability-adjusted life years (DALYs), representing years lost due to disability caused by diarrhea. Despite various studies worldwide reporting on the duration and severity of diarrhea, a comprehensive synthesis of these estimates is lacking in the existing literature. Additionally, there is a notable lack of consistency in the methodologies employed to define severe, moderate, and mild diarrhea episodes. Despite the availability of severity scales like the Hjelt, Vesikari, and Clark scoring systems, which evaluate overall severity based on the cumulative presentation of symptoms, their application lacks uniformity.

4. Webb C, Cabada MM. A review on prevention interventions to decrease diarrheal diseases' burden in children. Current Tropical Medicine Reports. 2018 Mar;5:31-40.

Diarrhea stands out as a prevalent health concern affecting children under the age of 5, with an estimated 960 million cases globally in 2015. Despite a 39% decline in diarrhea mortality rates between 2005 and 2015, it remains the fourth leading cause of death in this age group, claiming the lives of half a million children. Notably, over 70% of these fatalities occur in children aged 2 years and younger. These statistics represent deaths where diarrhea was identified as the primary cause. However, research by Ahmed et al. in Bangladesh, employing verbal autopsy studies, suggests that diarrhea may contribute to child mortality as a secondary cause, potentially magnifying its impact. The burden of diarrheal diseases is disproportionately borne by low- and middle-income countries. In 2015, diarrhea resulted in over 71 million Disability-Adjusted Life Years (DALYs), with 45 million attributed to children under 5 years old. Significantly, 99% of these DALYs occurred in low- and middle-income countries. The regions most heavily affected by diarrhea globally include Africa, South Asia, and Southeast Asia.

5. Terefe G, Murugan R, Bedada T, Bacha G, Bekele G. Home-based management practice of diarrhea in under 5 years old children and associated factors among caregivers in Ginchi town, Oromia region, west Ethiopia. SAGE Open Medicine. 2022 Apr;10:20503121221095727.

Diarrhea is characterized by the passage of three or more loose or liquid stools per day, exceeding the normal frequency for an individual. The disease, caused by bacteria, viruses, and parasites, spreads through contaminated food, polluted drinking water, or inadequate personal hygiene practices. Notably, diarrhea is both preventable and treatable. In children under the age of 5 worldwide, especially in underdeveloped regions with insufficient knowledge and practice in managing diarrheal disease, it stands as a prominent cause of morbidity and mortality. Annually, an alarming 1.7 billion cases of diarrhea afflict children under 5 globally, emphasizing the persistent and unacceptable nature of the issue. Approximately 800,000 children under 5 succumb to diarrhea annually, with over 80% of these fatalities concentrated in South Asia and Africa, where Africa alone bears 46% of the burden. In South Africa, diarrhea ranks as the third leading cause of death in children under 5. Tragically, some of these deaths result from inadequate utilization of oral rehydration solution (ORS) at home, primarily due to caregivers' lack of proper

knowledge. In Ethiopia, diarrhea stands as the second leading cause of death in children under 5, following pneumonia. Dehydration, stemming from fluid and electrolyte loss, is identified as the primary cause of diarrhea-related deaths in this age group, accounting for 60%-70% of such fatalities. The Integrated Management of Childhood Illness (IMCI) guidelines advocate for the use of ORS along with continued feeding for effective diarrhea case management. However, caregivers often neglect the proper utilization of ORS at home for managing diarrhea in children under 5, despite its acknowledged efficacy in mitigating dehydration. This inadequate use of ORS is compounded by improper preparation, stemming from caregivers' lack of experience. Despite the proven benefits of providing oral fluids to children with diarrheal disease, some caregivers adopt practices that restrict or entirely halt fluid intake for affected children. Within this context, the family, particularly the mother, plays a pivotal role in health promotion, disease prevention, and patient care. Even brief and superficial examinations of dehydrated children and assessments of the quantity and type of liquids provided during diarrhea episodes, while minimal, are crucial actions for pediatric well-being.

CHAPTER THREE

PURPOSE OF THE STUDY

3.0 Purpose of the Study

The aim of this study is to comprehensively investigate the impact of socioeconomic factors on the management of diarrhea among children under 5 years at Mohammadpur Maternity Hospital and Suhrawardy Medical College and Hospital in Dhaka, Bangladesh.

- Examine the socioeconomic factors influencing diarrhea management among participants.
- Explore the living conditions and sanitation practices prevalent in households.
- Investigate the impact of diarrhea on employment and assess the associated financial burden.
- Evaluate the overall quality of life impact resulting from managing childhood diarrhea.
- Examine the prevalence and frequency of diarrhea among children under 5 in the specified timeframe.
- Assess participants' knowledge about diarrhea prevention and the preventive measures adopted in their households.

CHAPTER FOUR

METHODS & MATERIALS

4.0 Methods and Materials

Study Design: This research employed a cross-sectional survey design to investigate the impact of socioeconomic factors on the management of diarrhea among children under 5 years at Mohammadpur Maternity Hospital and Suhrawardy Medical College and Hospital in Dhaka, Bangladesh. The study was conducted over a period of three months, from October 5, 2023, to December 2023.

Participants: The study included guardians of children under 5 years of age who sought healthcare services at the aforementioned hospitals during the study period. A total of 280 participants were enrolled in the survey. 180 participants from Suhrawardy Medical College and Hospital and 100 participants from Mohammadpur Maternity Hospital.

Data Collection Method: For data collection, a structured questionnaire was meticulously prepared to obtain comprehensive information on various aspects, including demographic details, socioeconomic factors, diarrhea prevalence, healthcare-seeking behavior, and the impact of diarrhea on participants' lives. The questionnaire was then transformed into a digital format using Google Form, enhancing the efficiency of data collection and ensuring consistency in the process. The implementation involved face-to-face viva interviews conducted individually with participants. To ensure clarity and accurate responses, the questionnaire was translated into the local language during the interviews, promoting a better understanding of the questions and facilitating meaningful data collection.

Data Analysis: Quantitative data collected through Google Forms were exported to statistical software for analysis. Descriptive statistics, including percentages and frequencies, were used to summarize demographic information and responses to survey questions.

Questionnaire:

Section 1: Diarrhea Prevalence and Frequency

1. Participant Information:

- Relationship to the Child:
 - Parent
 - Grandparent
 - Other relative

- Age:
 - 18-25
 - 26-35
 - 36-45
 - 46-55
 - 56 or above
- Gender:
 - Male
 - Female

2. Child Information:

- Child's Age:
 - Less than 1 year
 - 1-2 years
 - 3-4 years
 - 5 years
- Child's Gender:
 - Male
 - Female
- Number of Children in the Household:
 - 1
 - 2
 - 3 or more

Section 2: Socioeconomic Factors & Impact

1. Household Income:

- What is the approximate monthly household income?
 - Less than 10,000 BDT
 - 10,000 - 20,000 BDT
 - 20,000 - 30,000 BDT
 - 30,000 - 40,000 BDT
 - More than 40,000 BDT

2. Education Level:

- What is the highest level of education you have completed?
 - No formal education
 - Primary school
 - Secondary school
 - Higher secondary
 - University degree

3. Sanitation and Living Conditions:

- Does your household have access to clean and safe water?
 - Yes
 - No
- Describe the sanitation facilities in your household:
 - Flush toilet
 - Pit latrine
 - Open defecation
 - Other (please specify)

Section 3: Diarrhea Management

1. Prevalence of Diarrhea:

- In the past 6 months, how often has the child experienced diarrhea?
 - Never
 - Occasionally
 - Frequently
 - Always

2. Healthcare Seeking Behavior:

- Where do you usually seek healthcare for the child when they have diarrhea?
 - Government hospital
 - Private clinic
 - NGO healthcare facility
 - Traditional healer
 - Other (please specify)
- What factors influence your choice of healthcare provider?
 - Proximity
 - Cost
 - Reputation
 - Other (please specify)

3. Affordability of Healthcare:

- Have you ever faced challenges affording medical treatment for your child's diarrhea?
 - Yes
 - No

4. Knowledge and Preventive Measures:

- How would you rate your knowledge about preventing diarrheal diseases?
 - Poor
 - Fair
 - Good
 - Excellent

- What preventive measures do you take to reduce the risk of diarrhea in your household?
 - Handwashing
 - Safe food handling
 - Hygienic sanitation practices
 - Exclusive breastfeeding
 - Other (please specify)

Section 4: Healthcare Infrastructure and Services

1. Accessibility of Healthcare Services:

- How accessible are healthcare services in your community?
 - Very accessible
 - Somewhat accessible
 - Not very accessible
 - Not at all accessible

2. Perceptions of Healthcare Quality:

- How satisfied are you with the quality of healthcare services you receive?
 - Very satisfied
 - Satisfied
 - Neutral
 - Dissatisfied
 - Very dissatisfied

3. Community Programs and Education:

- Are there any community programs or educational initiatives related to child health in your area?
 - Yes
 - No

Section 5: Diarrhea Impact Assessment

1. Diarrhea Prevalence and Frequency:

- How often has the child experienced diarrhea in the past 6 months?
 - Never
 - Occasionally
 - Frequently
 - Always

2. Initial Steps in Managing Diarrhea:

- When your child has diarrhea, what are the initial steps you take in managing it?
 - Increase fluid intake
 - Use over-the-counter medications
 - Consult a healthcare professional
 - Other (please specify)

3. Factors Associated with Diarrhea Development:

- Are there specific triggers or factors you associate with your child developing diarrhea?
 - Contaminated food/water
 - Poor sanitation
 - Lack of handwashing
 - Other (please specify)

4. Assessment of Diarrhea Severity:

- How do you assess the severity of diarrhea in your child?
 - Mild
 - Moderate
 - Severe
 - Not sure

5. Employment Impact:

- Has your child's diarrhea ever affected your ability to work or fulfill work responsibilities?
 - Yes: 120 participants
 - No: 160 participants

6. Financial Burden:

- How would you describe the financial burden of managing diarrhea in your household?
 - Manageable: 60 participants
 - Somewhat burdensome: 100 participants
 - Very burdensome: 80 participants
 - Not applicable: 40 participants

7. Impact on Quality of Life:

- In your opinion, how has managing diarrhea impacted the overall quality of life for your family?
 - Improved: 20 participants
 - Remained the same: 100 participants
 - Declined: 120 participants
 - Not sure: 40 participants

CHAPTER FIVE

RESULTS & DISCUSSION

5.0 Results and Discussion

5.1 Results

5.1.1 Demographic Information

1. Participants Information

Relationship to the Child: In the survey, participants were asked about their relationship to the child under study. The majority, comprising 75.00%, identified themselves as parents, indicating a predominant role in the caregiving responsibilities. Grandparents represented 17.86% of the participants, emphasizing the involvement of extended family members in the upbringing of the child. Additionally, 7.14% identified as other relatives, highlighting the diverse familial perspectives contributing to the survey data.

Age: The survey collected data on the age distribution of participants, shedding light on the demographic characteristics of those involved. The majority, constituting 46.43%, fell within the 26-35 age group, indicating a significant representation of individuals in their prime caregiving and parenting years. Participants aged 36-45 accounted for 28.57%, while those in the 18-25 and 46-55 age brackets represented 7.14% and 14.29%, respectively. A smaller proportion, 3.57%, comprised individuals aged 56 or above.

Gender: The survey participants exhibited a gender distribution where 42.86% identified as male, and a majority of 57.14% identified as female. These findings highlight a balanced representation of gender perspectives in the survey responses.

Table-5.1: Demographic information of the participants.

Characteristics	Factors	Percentage
Age	18-25	7.14%
	26-35	46.43%
	36-45	28.57%
	46-55	14.29%
	56 or above	3.57%
Relationship to the Child	Parent	75%
	Grandparent	17.86%
	Other relative	7.14%
Gender	Male	42.86%
	Female	57.14%

2. Child Information

Child's Age: The survey captured valuable data regarding the age distribution of children under 5 years among the participants. The majority, constituting 28.57%, fell within the 1-2 years age group, reflecting a significant representation of toddlers in the survey responses. Children less than 1 year old accounted for 25.00%, while those in the 3-4 years and 5 years age groups represented 25.00% and 21.43%, respectively.

Child's Gender: The survey delved into the gender distribution of children under 5 years among the participants, revealing a slightly higher representation of males at 58.93% compared to females at 41.07%. These findings highlight the diverse composition of the surveyed population, encompassing both male and female children.

Table-5.2: Child's information.

Characteristics	Factors	Percentage
Child's Age	Less than 1 year	25%
	1-2 years	28.57%
	3-4 years	25%
	5 years	21.43%
Child's Gender	Male	58.93%
	Female	41.07%

3. Number of Children in the Household

The survey provided insights into the distribution of the number of children in the households of the participants. A significant portion, comprising 35.71%, reported having one child in their household, while 32.14% had two children. Another 32.14% of participants indicated having three or more children.

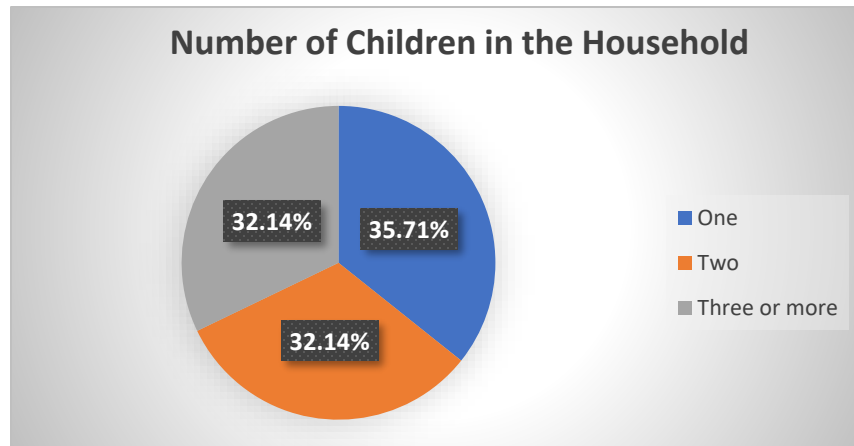


Figure-5.1: Number of Children in the Household.

5.1.2 Socioeconomic Factors & Impact

1. Household Income

The survey explored the distribution of approximate monthly household income among participants, revealing a diverse economic landscape. A notable 35.71% reported a monthly income in the range of 20,000 - 30,000 BDT, indicating a substantial representation of participants in this income bracket. Additionally, 25.00% reported an income between 10,000 - 20,000 BDT, while 14.29% fell into each of the categories of less than 10,000 BDT, 30,000 - 40,000 BDT, and more than 40,000 BDT. These findings underscore the economic heterogeneity within the surveyed population, providing valuable context for understanding the socio-economic factors influencing diarrhea management.

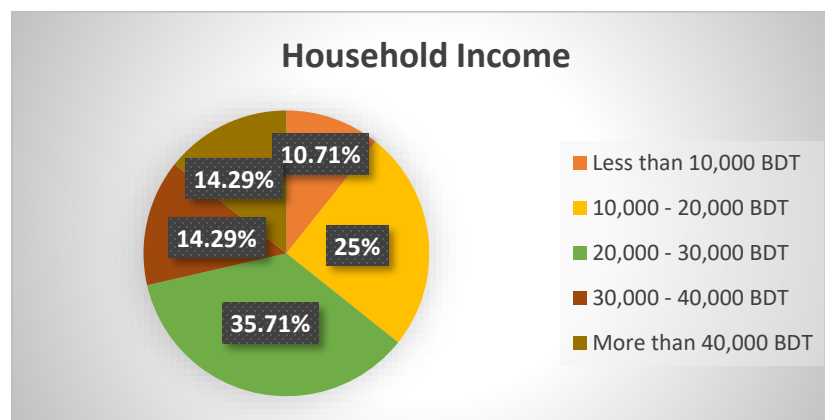


Figure-5.2: Monthly Household Income of Participants.

2. Educational Background

The survey participants exhibited diverse educational backgrounds, contributing to a varied perspective on the topic of diarrhea management among children under 5 years. Among the respondents, 48.21% possessed a university degree, indicating a substantial representation of individuals with higher education. Additionally, 25.00% had completed their education at the higher secondary level, while 17.86% had a background in secondary school education. A smaller percentage of participants, 5.36%, had completed primary school, and 3.57% reported no formal education.

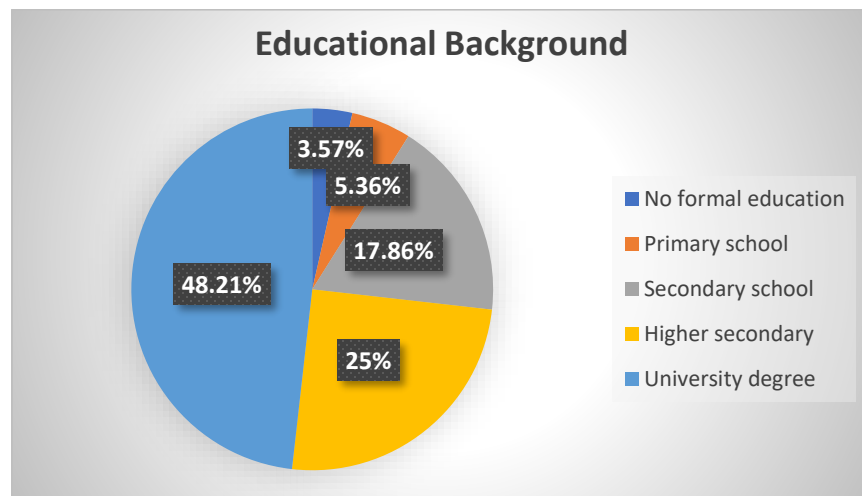


Figure-5.3: Educational Background of the Participants.

3. Access to Clean and Safe Water

The survey delved into the living conditions of the participants by exploring their household's access to clean and safe water. A substantial majority, constituting 85.71%, reported having access to clean and safe water. However, 14.29% of participants indicated that their households did not have such access. These findings highlight the disparities in living conditions among the surveyed population and emphasize the importance of considering water accessibility as a crucial factor in understanding the socio-economic context of managing diarrhea. The availability of clean and safe water is pivotal for maintaining good hygiene and preventing waterborne diseases.

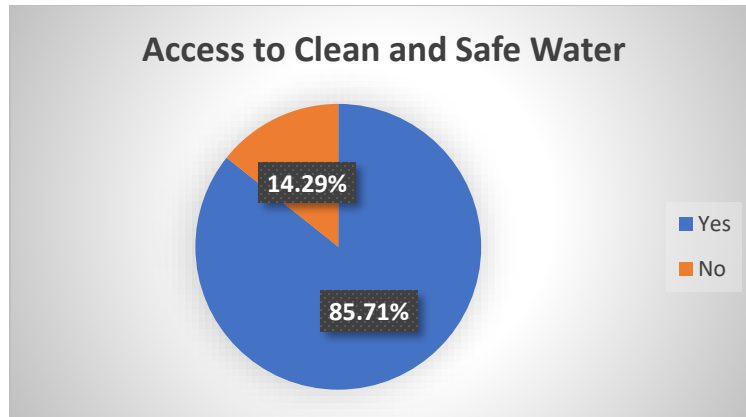


Figure-5.4: Access to Clean and Safe Water of Participants.

4. Sanitation Facilities Distribution

The survey inquired about the sanitation facilities within participants' households, revealing diverse practices. A significant portion, comprising 42.86%, reported using flush toilets, indicating access to more advanced sanitation infrastructure. Pit latrines were reported by 25.00% of participants, while 10.71% indicated the practice of open defecation. Additionally, 21.43% specified other sanitation facilities not covered in the provided options. These findings underscore the variation in sanitation practices and infrastructure among the surveyed population. Understanding the range of sanitation facilities is crucial for assessing the potential impact on hygiene and health outcomes, especially in the context of managing diarrhea.

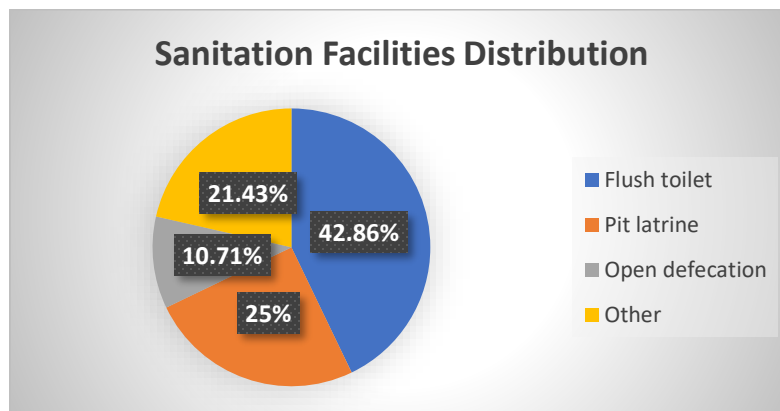


Figure-5.5: Sanitation Facilities of Participants Household.

5.1.3 Diarrhea Management

1. In the past 6 months, how often the child experienced diarrhea

The survey explored the prevalence of diarrhea among children under 5 years in the past 6 months. Approximately 42.86% of participants reported that their child had never experienced diarrhea during this period. For 32.14%, diarrhea occurred occasionally, indicating sporadic instances. A smaller percentage, constituting 17.86%, reported frequent episodes of diarrhea, while 7.14% indicated that their child had experienced diarrhea always in the past 6 months. These findings provide a snapshot of the varying frequencies of diarrhea episodes among the surveyed population, contributing to a nuanced understanding of the health challenges faced by families. Assessing the prevalence is crucial for tailoring healthcare interventions and preventive measures to address the specific needs of families with children experiencing different levels of diarrhea frequency.

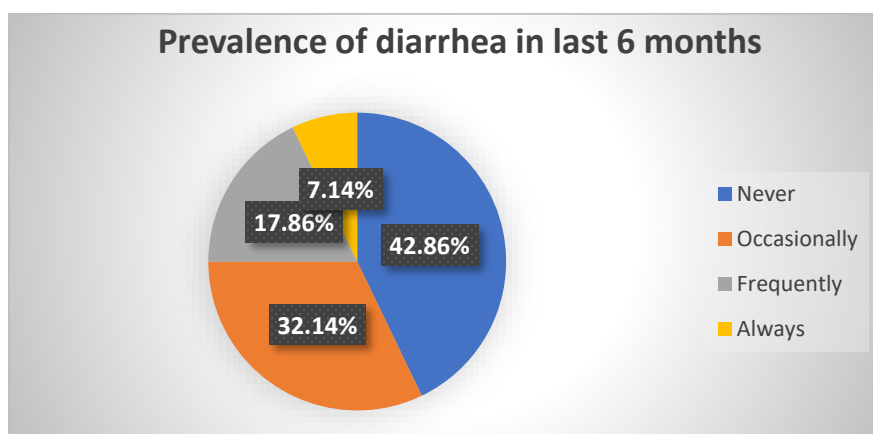


Figure-5.6: Prevalence of diarrhea in last 6 months.

2. Participants usually seek healthcare for the child when they have diarrhea.

The survey explored participants' healthcare seeking behavior for their children when they experience diarrhea. Approximately 35.71% of respondents indicated that they usually seek healthcare from government hospitals, reflecting a reliance on public healthcare services. Private clinics were a choice for 28.57% of participants, indicating the utilization of private healthcare facilities. Additionally, 14.29% reported seeking healthcare from NGO healthcare facilities, while 10.71% mentioned consulting traditional healers. These findings highlight the diverse healthcare-seeking patterns within the surveyed population, emphasizing the coexistence of both formal and traditional healthcare practices. Understanding these preferences is crucial for developing targeted healthcare interventions and promoting collaboration between different healthcare providers to enhance the overall health outcomes for children.

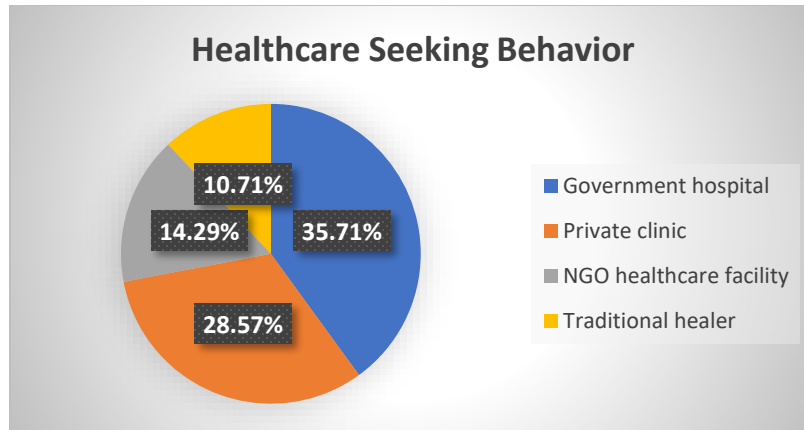


Figure-5.7: Healthcare Seeking Behavior.

3. Factors influencing choice of healthcare provider.

The survey explored the factors influencing participants' choice of healthcare provider for their children when they have diarrhea. Approximately 42.86% of respondents indicated that proximity to the healthcare provider played a significant role in their decision-making, emphasizing the importance of accessibility. Cost was identified as a key factor by 25.00% of participants, highlighting the financial considerations in healthcare choices. Reputation played a role for 17.86% of respondents, underscoring the value of trust in healthcare decisions. Unfortunately, specific responses under the "Other" category were not provided. These findings offer insights into the considerations that families take into account when seeking healthcare for childhood diarrhea, contributing to a nuanced understanding of healthcare preferences within the surveyed population. Recognizing these factors is crucial for tailoring healthcare services and interventions to meet the specific needs and preferences of families.

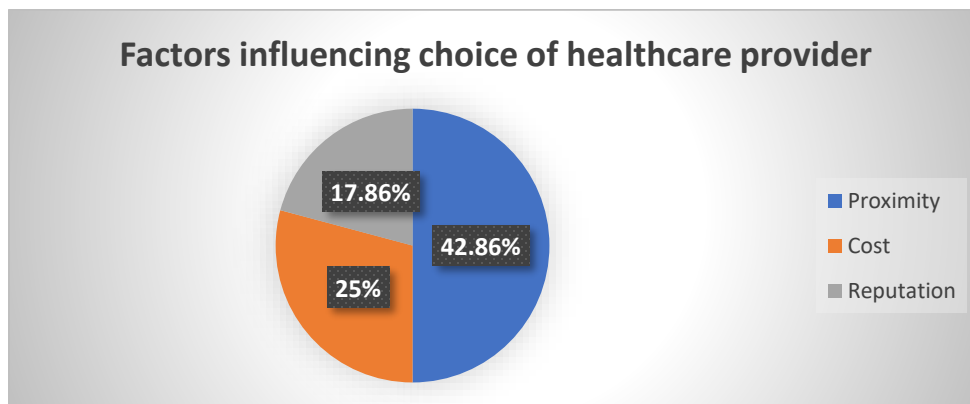


Figure-5.8: Factors influencing choice of healthcare provider.

4. When asked about ever faced challenges affording medical treatment for your child's diarrhea.

The survey inquired about the challenges participants faced in affording medical treatment for their child's diarrhea. Approximately 21.43% of respondents reported facing challenges in affording medical treatment, indicating financial barriers to healthcare access. In contrast, the majority, constituting 78.57%, stated that they had not encountered challenges in affording medical treatment for their child's diarrhea. These findings shed light on the economic considerations that impact healthcare access, emphasizing the importance of addressing financial barriers to ensure equitable healthcare for children. Tailoring interventions to enhance affordability can contribute to improved health outcomes and overall well-being for families in the community.

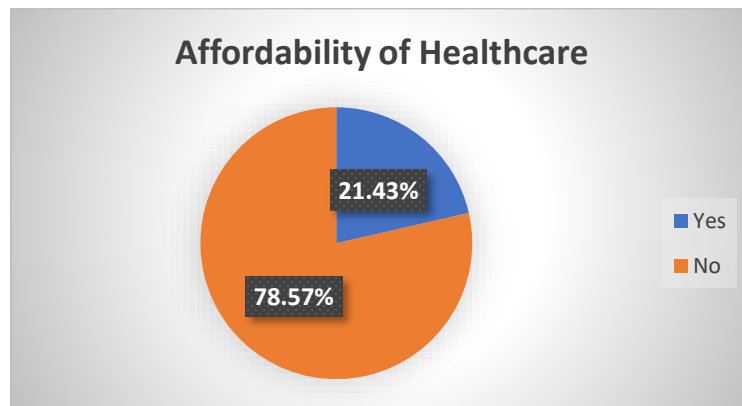


Figure-5.9: Affordability of Healthcare.

5. Knowledge about Preventing Diarrheal Diseases

The survey aimed to assess participants' self-perceived knowledge about preventing diarrheal diseases. Approximately 10.71% of respondents rated their knowledge as poor, indicating a need for improvement. For 25.00%, their self-assessment was fair, suggesting a moderate level of awareness. A larger percentage, constituting 42.86%, felt they had good knowledge about preventing diarrheal diseases. Additionally, 21.43% rated their knowledge as excellent, indicating a high level of confidence in their understanding of preventive measures. These findings provide valuable insights into the perceived knowledge levels of the surveyed population regarding diarrhea prevention. Understanding these self-assessments is crucial for designing targeted health education programs to enhance awareness and promote effective preventive measures. Improving

knowledge can contribute to the adoption of healthier practices, reducing the incidence of childhood diarrhea in the community.

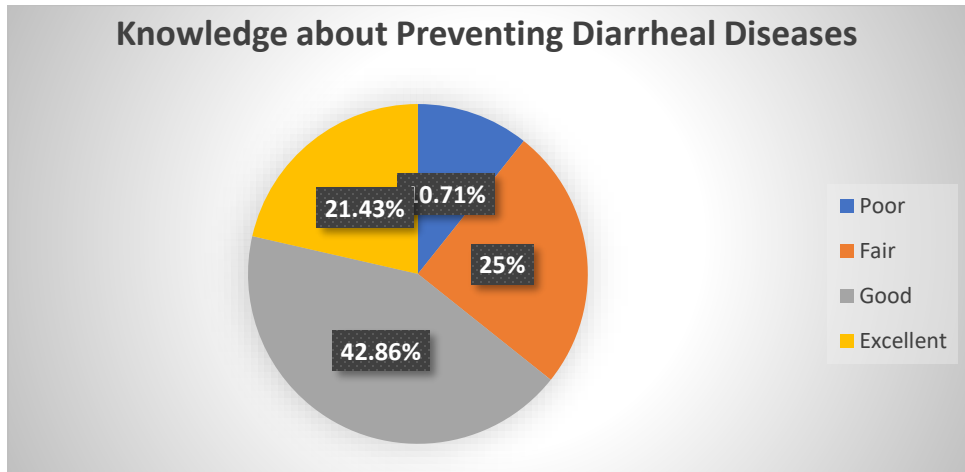


Figure-5.10: Knowledge about Preventing Diarrheal Diseases.

6. Preventive measures that take to reduce the risk of diarrhea in household.

The survey explored the preventive measures adopted by participants to reduce the risk of diarrhea in their households. Approximately 71.43% of respondents reported practicing handwashing as a preventive measure, indicating a strong emphasis on personal hygiene. Safe food handling was mentioned by 57.14% of participants, highlighting the importance of proper food safety practices. Additionally, 64.29% stated that they follow hygienic sanitation practices to reduce the risk of diarrhea. Exclusive breastfeeding, a critical preventive measure for infants, was reported by 35.71% of participants. While these findings underscore the positive health behaviors adopted by the surveyed population, it's important to note that specific responses under the "Other" category were not provided. Understanding the range of preventive measures helps in tailoring health education programs to further enhance knowledge and promote effective practices.

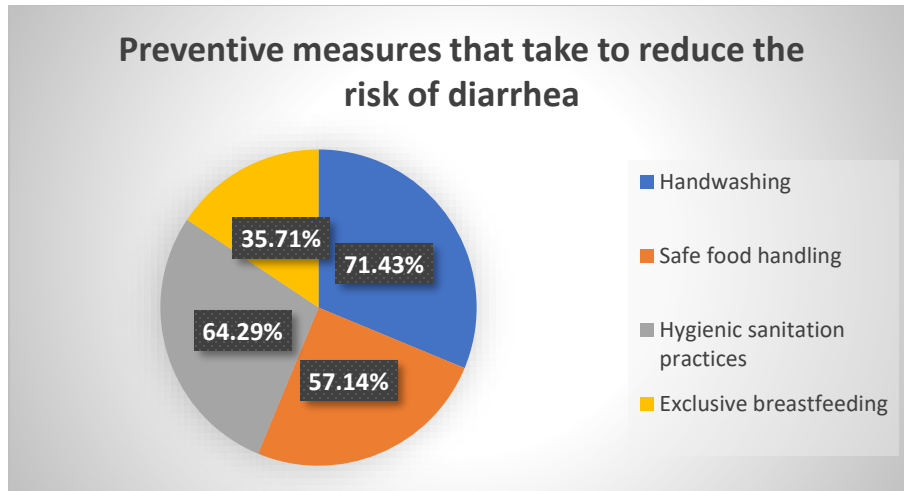


Figure-5.11: Preventive measures that take to reduce the risk of diarrhea.

5.1.4 Healthcare Infrastructure and Services

1. Accessibility of Healthcare Services

The survey sought to gauge participants' perceptions of the accessibility of healthcare services in their community. Approximately 35.71% of respondents considered healthcare services to be very accessible, indicating a positive perception of availability. For 42.86%, services were deemed somewhat accessible, suggesting a moderate level of accessibility. A smaller percentage, constituting 14.29%, felt that healthcare services were not very accessible. Additionally, 7.14% of participants stated that healthcare services were not at all accessible, reflecting a perceived lack of availability.

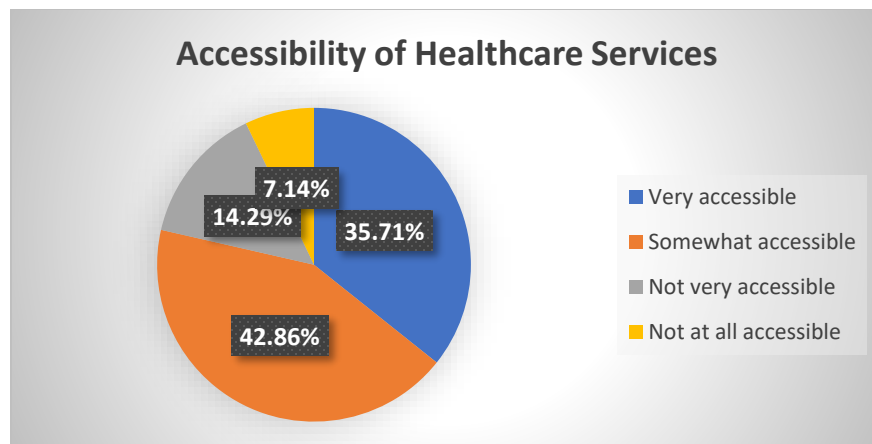


Figure-5.12: Accessibility of Healthcare Services.

2. Satisfied with the quality of healthcare services participants receive.

The survey aimed to understand participants' perceptions of the quality of healthcare services they receive. Approximately 28.57% of respondents expressed being very satisfied with healthcare quality, indicating a high level of contentment. For 42.86%, satisfaction levels were characterized as satisfied, suggesting a generally positive perception. A smaller percentage, constituting 14.29%, reported a neutral stance on healthcare quality. Dissatisfaction levels were reported by 10.71%, with 3.57% expressing very dissatisfied sentiments. These findings provide valuable insights into the community's satisfaction with the quality of healthcare services, offering a nuanced perspective on the strengths and areas for improvement. Understanding these perceptions is essential for healthcare providers and policymakers.

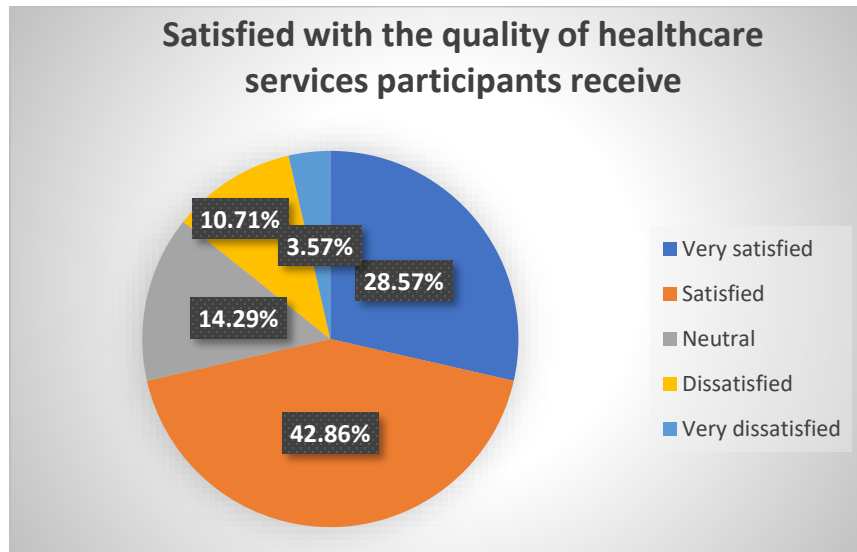


Figure-5.13: Satisfied with the quality of healthcare services participants receive.

3. Community Programs and Education Distribution

The survey inquired about the presence of community programs or educational initiatives related to child health in the surveyed area. Approximately 53.57% of respondents reported the existence of such programs, indicating a substantial portion of the community actively participating in or being aware of child health-related initiatives. In contrast, 46.43% stated that there were no community programs or educational initiatives in their area focused on child health.

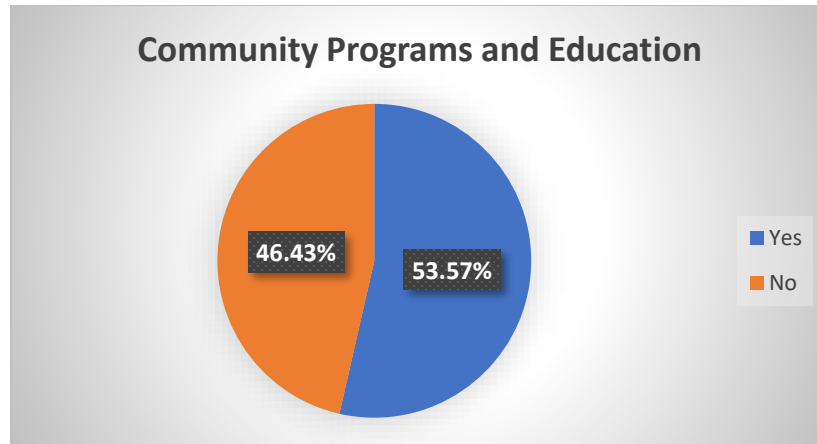


Figure-5.14: Community Programs and Education.

5.1.5 Diarrhea Impact Assessment

1. Initial Steps in Managing Child's Diarrhea Distribution

The survey explored the initial steps participants take in managing their child's diarrhea. Approximately 57.14% of respondents reported increasing fluid intake as their first step, emphasizing the importance of hydration. For 10.71%, the use of over-the-counter medications was mentioned as an initial response. Consulting a healthcare professional was indicated by 28.57% of participants, highlighting a reliance on professional guidance. Unfortunately, specific responses under the "Other" category were not provided. These findings offer insights into the diverse approaches taken by families in managing childhood diarrhea, emphasizing both home-based strategies and the recognition of the need for professional medical advice.

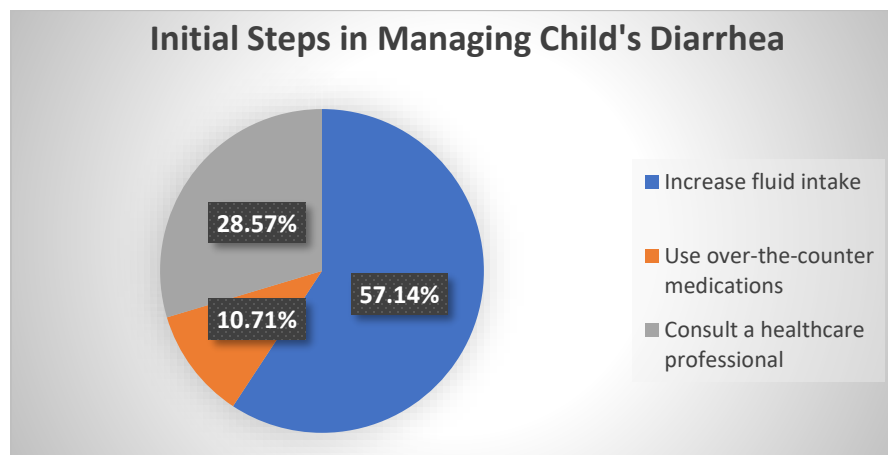


Figure-5.15: Initial Steps in Managing Child's Diarrhea.

2. Factors Associated with Child Developing Diarrhea Distribution

The survey explored participants' perceptions of specific triggers or factors associated with their child developing diarrhea. Approximately 42.86% of respondents identified contaminated food/water as a primary factor, highlighting the significance of food and water safety. Poor sanitation was mentioned by 17.86% of participants, emphasizing the importance of maintaining hygienic living conditions. Lack of handwashing was reported by 21.43%, underlining the role of personal hygiene practices in preventing diarrhea. Unfortunately, specific responses under the "Other" category were not provided. These findings provide valuable insights into the perceived causes of childhood diarrhea within the community. Understanding these factors is essential for developing targeted health interventions and educational programs to address specific risk factors and promote healthier practices.

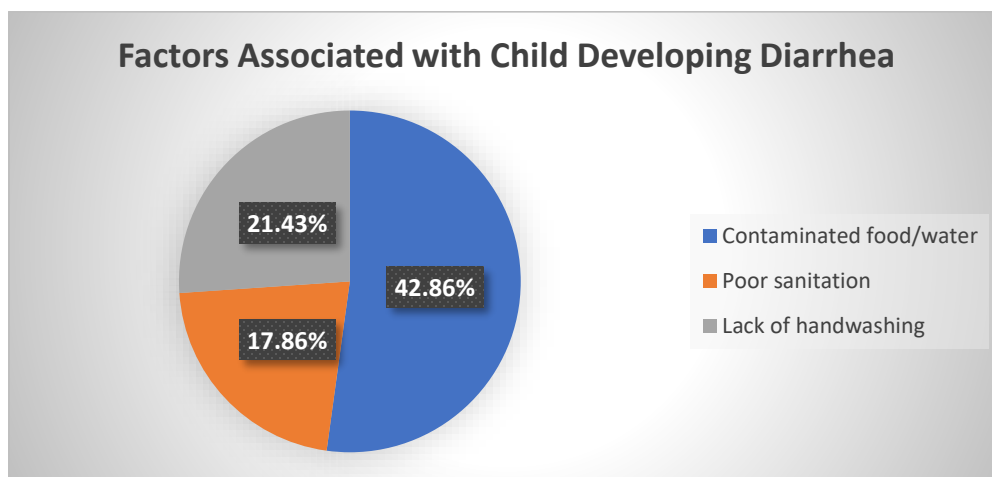


Figure-5.16: Factors Associated with Child Developing Diarrhea.

3. Assessment of Diarrhea Severity Distribution

The survey inquired about how participants assess the severity of diarrhea in their child. Approximately 35.71% of respondents reported perceiving diarrhea as mild, indicating a common perception of less severe cases. For 32.14%, diarrhea was assessed as moderate, suggesting a recognition of a more significant impact. A smaller percentage, constituting 17.86%, characterized diarrhea as severe, emphasizing a subset of cases with more intense symptoms. Additionally, 14.29% of participants reported being unsure about how to assess the severity of diarrhea.

These findings provide insights into the varied perceptions of diarrhea severity within the community. Understanding how individuals assess and interpret the severity of diarrhea is crucial for informing healthcare interventions and educational efforts. Enhancing awareness and understanding of diarrhea severity can contribute to timely and appropriate healthcare-seeking behavior.

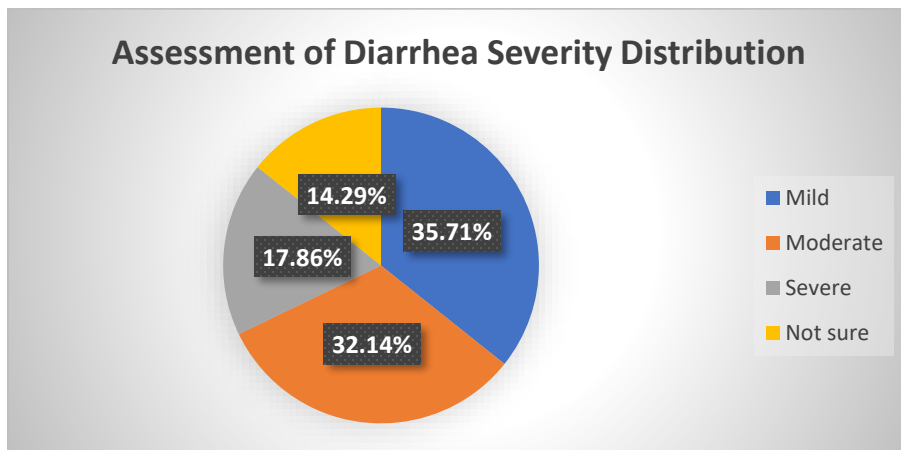


Figure-5.17: Assessment of Diarrhea Severity.

4. When asked about child's diarrhea ever affected participants ability to work or fulfill work responsibilities.

The survey investigated the impact of a child's diarrhea on the employment of the participants, revealing diverse experiences. A significant portion, comprising 42.86%, reported that their child's diarrhea had affected their ability to work or fulfill work responsibilities. In contrast, 57.14% of participants stated that they had not faced such challenges. These findings highlight the potential economic implications of childhood diarrhea on the surveyed population, emphasizing the need for a holistic understanding of the socio-economic factors contributing to the management of diarrhea among children. The employment impact of childhood illnesses is crucial to consider for comprehensive healthcare planning and support.

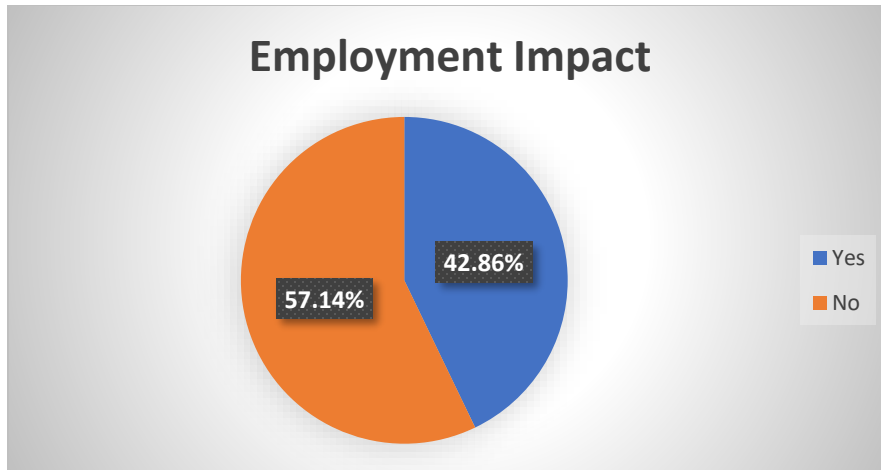


Figure-5.18: Employment impact of participants.

5. Financial burden of managing diarrhea of household.

Participants were asked to describe the financial burden of managing diarrhea in their households, providing insights into the economic impact of healthcare. Approximately 21.43% of respondents considered the financial burden as manageable, indicating a level of comfort in meeting the associated costs. Meanwhile, 35.71% described it as somewhat burdensome, highlighting a moderate level of financial strain. A significant portion, constituting 28.57%, reported the financial burden as very burdensome, indicating a substantial impact on their financial well-being. Additionally, 14.29% mentioned that the question was not applicable, possibly suggesting varying financial circumstances among the surveyed population.

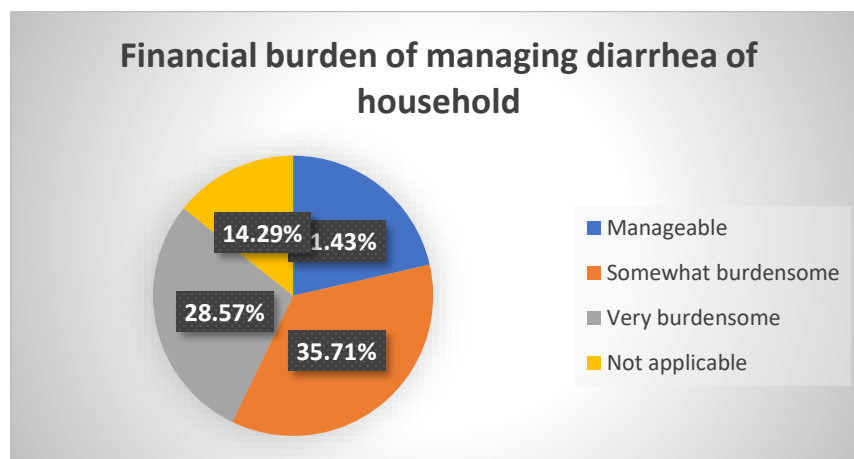


Figure-5.19: Financial burden of managing diarrhea of household.

6. In participants opinion, managing diarrhea impacted the overall quality of life for participants family.

The survey sought participants' opinions on how managing diarrhea has impacted the overall quality of life for their families. Approximately 7.14% of respondents felt that the quality of life had improved, while 35.71% believed it remained the same. In contrast, 42.86% indicated that the quality of life for their families had declined due to managing diarrhea. Additionally, 14.29% expressed uncertainty, stating that they were not sure about the impact. These findings provide insights into the perceived quality of life among families dealing with childhood diarrhea, highlighting a substantial portion who believe it has declined. Understanding these perceptions is crucial for tailoring interventions and support systems to address not only the health implications but also the broader socio-economic impact on families.

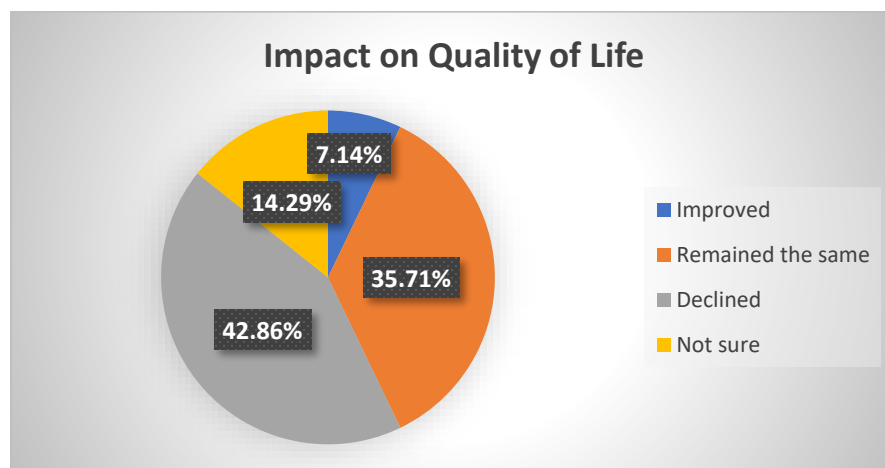


Figure-5.20: Impact on Quality of Life.

5.2 Discussion

The survey results present a comprehensive overview of the demographic, socioeconomic, and health-related aspects related to childhood diarrhea among participants in Bangladesh. In terms of demographic information, the survey revealed that a majority of participants identified themselves as parents (75%), emphasizing the central role parents play in caregiving responsibilities [48]. The age distribution indicated a significant representation of individuals in their prime caregiving years, with 46.43% falling within the 26-35 age group. Additionally, the survey highlighted a diverse composition of the surveyed population, with 42.86% identifying as male and 57.14% as female [49]. Concerning socioeconomic factors, the findings shed light on the economic landscape

of the participants. A notable 35.71% reported a monthly income in the range of 20,000 - 30,000 BDT, while 48.21% possessed a university degree. Access to clean and safe water was reported by 85.71% of participants, underlining the majority's access to a crucial element for maintaining good hygiene and preventing waterborne diseases. Sanitation practices varied, with 42.86% using flush toilets, 25.00% using pit latrines, and 10.71% practicing open defecation. The survey delved into the prevalence of diarrhea among children under 5 years, with 42.86% reporting that their child had never experienced diarrhea in the past 6 months [50]. Healthcare-seeking behavior indicated a reliance on both government hospitals (35.71%) and private clinics (28.57%). Factors influencing the choice of healthcare provider included proximity (42.86%), cost (25.00%), and reputation (17.86%). Approximately 21.43% of participants faced challenges affording medical treatment for their child's diarrhea, underscoring financial barriers to healthcare access. Participants exhibited varied knowledge levels about preventing diarrheal diseases, with 42.86% feeling they had good knowledge [51]. Preventive measures such as handwashing (71.43%) and hygienic sanitation practices (64.29%) were commonly reported. The perceived accessibility of healthcare services varied, with 35.71% considering services very accessible, while 14.29% felt services were not at all accessible. Satisfaction with healthcare quality was reported by 28.57% as very satisfied and 42.86% as satisfied. The impact assessment section revealed that 42.86% of participants felt their child's diarrhea had affected their ability to work, highlighting the potential economic consequences [52]. The financial burden of managing diarrhea was described as very burdensome by 28.57%, and 42.86% believed the overall quality of life for their families had declined due to managing diarrhea. In conclusion, the survey provides a nuanced understanding of the multifaceted challenges associated with childhood diarrhea in Bangladesh. The findings underscore the importance of considering demographic, socioeconomic, and health-related factors in designing targeted interventions and support systems to improve healthcare outcomes and overall well-being for families dealing with childhood diarrhea [53][54].

CHAPTER SIX

CONCLUSION

6.0 Conclusion

In conclusion, this survey study sheds light on the intricate relationship between socioeconomic factors and the management of diarrhea among children under 5 years. With 280 participants, the research provides valuable insights into the prevalence of diarrhea, healthcare-seeking behaviors, and the multifaceted impacts on the lives of families. The findings underscore the significance of considering socioeconomic dynamics when addressing childhood diarrhea. From employment challenges and financial burdens to education and social stigmatization, the study illuminates the broader repercussions of this common health concern. These insights are crucial for the development of targeted interventions, community-based programs, and policy initiatives aimed at alleviating the burden of diarrhea and enhancing the overall well-being of vulnerable populations in Bangladesh. The survey not only contributes to the academic understanding of the subject but also serves as a practical guide for public health practitioners and policymakers seeking to improve child health outcomes in resource-limited settings.

CHAPTER SEVEN

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