



Impact of Social Determinants on Maternal and Child Health Outcomes in Bangladesh

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Abstract: This study examines the intricate network of social factors that impact the health outcomes of mothers and children in Bangladesh. By conducting a comprehensive analysis of existing literature and data, the study identifies significant determinants such as socioeconomic status, education, healthcare accessibility, cultural customs, and geographical disparities. The findings demonstrate the existence of persistent health disparities among various demographic groups, with poverty, limited education, and inadequate healthcare access presenting substantial obstacles. Cultural practices, deeply ingrained in tradition, also shape patterns of seeking healthcare, thereby requiring interventions that are culturally sensitive. The recommendations put forth encompass prioritizing education, implementing initiatives to alleviate poverty, expanding healthcare infrastructure, promoting gender equality, encouraging community involvement, and fostering interdisciplinary collaboration. These recommendations aim to tackle the multifaceted challenges and enhance health outcomes for mothers and children, ultimately contributing to a healthier and more equitable society in Bangladesh.

Keywords: Maternal, Child Health, Early Marriage, Education, Family Support

1. INTRODUCTION

In Bangladesh, the health outcomes of mothers and children are significantly influenced by social determinants, which play a pivotal role in shaping the country's health landscape. Crucial factors such as socioeconomic status, educational attainment, and access to healthcare services contribute to determining the well-being of mothers and their children. Women who belong to a lower socioeconomic status often encounter obstacles when attempting to access adequate prenatal care, resulting in increased risks during pregnancy and childbirth. These challenges are further worsened by limited education, which hampers women's knowledge of appropriate practices for maternal and child health. The location of the slum, the mother's job, the age of the head of the family, and the garbage disposal system in the home were all found to be related to U5y health outcomes (Barua et al., 2023). The World Health Survey (WHS) gathered data on health rates and challenges related to pain, memory, mobility, self-care, sleep, and depression. One-fourth of the sample group reported having moderate physical pains and mobility issues, 10% reported having severe sleeping issues and depression, and 14% reported having severe physical pains. Thirty percent of people reported having slight physical pains, and sixteen percent said they had mild trouble getting dressed or cleaning themselves (Patowary & Kakoly, 2023). With the exception of using contemporary family planning techniques, women from low SES backgrounds were less likely to get all MNCH interventions and comprehensive CoC during the course of their lifetimes (Parvin et al., 2022). In Bangladesh, just 24.4% of the sample women received proper maternity care (Methun et al., 2022, pp. 2017–2018). The research's novelty lies in its thorough exploration of the numerous social determinants that impact the health outcomes of mothers and children in Bangladesh. Unlike conventional studies that may solely focus on healthcare access or educational factors, this research incorporates a wide range of critical elements, including socioeconomic status, educational achievement, and access to healthcare services.

2. SIGNIFICANCE OF THE STUDY

The presented research emphasizes the utmost significance of addressing social factors in Bangladesh in order to enhance the well-being of mothers and children. The investigation identifies various elements, such as the socioeconomic status, educational achievements, and accessibility to healthcare services, as influential factors in the health of mothers and children. Women from disadvantaged socioeconomic backgrounds encounter obstacles in accessing prenatal care, which consequently heightens the risks during pregnancy and childbirth. The limited level of education exacerbates these difficulties, impeding women's understanding of appropriate practices for maternal and child health. Furthermore, the study reveals that the location of slums, maternal employment, the age of the head of the household, and the system of waste disposal are connected to the health outcomes of children under the age of five. The research underscores the pressing necessity for targeted interventions, improved access to healthcare, and educational initiatives in order to address these social factors and enhance the health outcomes of mothers and children in Bangladesh.

3. OBJECTIVES OF THE STUDY

- (a) To identify the key social determinants that influence maternal and child health outcomes in Bangladesh.
- (b) To explore the existence of health disparities among different socio-economic and demographic groups.
- (c) To examine cultural practices and beliefs related to maternal and child health.
- (d) To assess the effectiveness of existing key social determinants on maternal and child health in Bangladesh.

4. LITERATURE REVIEW

Juvenile illness is closely linked to socioeconomic disparity, and during the study period, the degree to which socioeconomic inequality contributed to juvenile morbidity fluctuated (Mahumud et al., 2019). The study looked at how socioeconomic level and migration affected the use of maternity and child health services in a large sample of Bangladeshi slum residents in and around Dhaka City (Kuhn, 2020). Moms with more than six years of education had a 2.5 times lower death rate than those whose moms were uneducated (Chowdhury et al., 2020). In Bangladesh, the LBW concentration index (C-index) was -0.096, suggesting that women in the lowest wealth quintile had a larger concentration of LBW babies (Alam et al., 2022). The datasets utilized in the study were gathered more than nine years ago, but they represent the most recent slum surveys carried out in Kenya and Bangladesh. This is a limitation of the research (Kibuchi et al., 2022). Women reported specific morbidities such as high fever (10.2%), eclampsia (7.4%), hazy vision (12.8%), eclampsia (1.4%), and potentially fatal seizures or convulsions (1.2%) (Islam & Marium, 2022). The availability of health services, political unpredictability, religious culture, and flood-proneness are the four factors that show highly significant effects when the models are re-estimated using the fixed effects of the regions replaced with measures. This highlights the potential benefits of more successful policy interventions at the regional level (Dasgupta, Roy, et al., 2021). The percentage of weddings to female residents under the age of 18 fell from 71% to 57% between 1990 and 2010, while the percentage of marriages to female residents between the ages of 10 and 12 dropped from 22% to 3% (Lee et al., 2021). A cross-sectional study involving 235 pregnant women in rural Sylhet, Bangladesh revealed a 56% prevalence of prenatal depression (Insan et al., 2023). When it came to maternal age, parity, or the spacing between births, 56% of Bangladeshi women were at high risk of having children (Abedin & Arunachalam, 2020). Parent-child relationships and the processes of parenting are emerging as potential determinants of health throughout the life course. In addition to addressing other determinants, interventions aimed at supporting parenting are likely to provide a valuable contribution to reducing health inequalities in childhood (Belsky et al., 2007). The availability of limited data has previously constrained research on how national social policy choices impact health outcomes. Heymann et al. (2011) demonstrate the potential strength of utilizing globally comparative data to examine the social determinants of health. Quansah et al. (2016) aim to identify and evaluate the impact of social factors on child health in Ghana. Key social factors influencing child health in the country include maternal education, rural-urban disparities in place of residence, family income in terms of wealth or poverty, and high dependency due to multiparous. No study has examined the relative contribution of different social determinants to the socioeconomic inequality in child undernutrition in Bangladesh. The objective of Huda et al. (2018) is to measure the extent of socioeconomic-related inequalities in childhood stunting and identify the key social determinants that potentially explain these inequalities in Bangladesh. It is crucial for health policymakers to collaborate across sectors and develop strategies for effective intersectoral actions in order to adequately address the social determinants of equity and reduce inequalities in stunting and other health outcomes. Improving maternal nutrition practices during pregnancy is essential for saving lives and enhancing health outcomes for both mothers and babies. Huda et al. (2018) examine the factors related to maternal, household, and health services that influence maternal nutrition practices within the context of a large-scale maternal, newborn, and child health (MNCH) program in Bangladesh. Given the health benefits associated with fish-intensive diets, Dasgupta, Mustafa, et al. (2021) investigate the potential of fish consumption in alleviating malnutrition. This observational cohort study is conducted in Bangladesh, where child malnutrition surpasses the threshold for public-health emergencies set by the World Health Organization. Social determinants of health (SDH) have both positive and negative influences on health and social outcomes. Ostojic et al. (2024) provide a summary of the landscape of SDH affecting children with cerebral palsy (CP) and their families worldwide. Utilizing data from the China Health and Nutrition Survey (CHNS) spanning from 1991 to 2015 and employing fixed-effect models, Li et al. (2024) investigate the social determinants of stunting ($n = 4012$) measured by height-for-age z score (HAZ) and wasting ($n = 4229$) measured by weight-for-height z score (WHZ) in children under the age of five.

Research gap: The literature presented provides valuable insights into the intricate interplay between socioeconomic factors and various health outcomes in the specific context of Bangladesh. However, there are noticeable gaps that necessitate further exploration. Firstly, the majority of the studies primarily focus on health outcomes related to maternal and child health, particularly morbidity, mortality, and nutritional status. Nevertheless, there is a limited examination of the long-term consequences and developmental trajectories of children who have been exposed to adverse health conditions during their early years. Additionally, there is a requirement for more comprehensive research that addresses the dynamics of social determinants beyond economic factors. The existing literature predominantly emphasizes wealth quintiles, maternal education, and regional disparities. However, a more nuanced understanding of cultural, social, and community-specific determinants, as well as their interactions, could offer a more holistic perspective on the factors that influence health outcomes. This includes investigating the impact of cultural practices, community support systems, and access to social services on the health of mothers and children. Furthermore, the temporal aspect of the studies is a significant gap. Many datasets used in the research are more than nine years old, and considering the dynamic nature of social, economic, and health-related factors, more recent and regularly updated data would enhance the accuracy and relevance of the findings. This is crucial for comprehending how changing socio-political landscapes and evolving health policies may contribute to shifts in health outcomes over time. Moreover, while some studies touch upon the impact of interventions and policies on health outcomes, there is a need for more detailed analysis of the effectiveness of specific interventions. Understanding which policies or programs have been successful in addressing health disparities and improving outcomes can inform future policymaking and public health initiatives.

5. METHODOLOGY

A thorough and multifaceted approach would normally be used in the methodology of a study on the influence of social variables on maternal and child health outcomes in Bangladesh. Initially, a comprehensive analysis of the body of research on mother and

child health in Bangladesh will be carried out in order to pinpoint information gaps and provide guidance for the conceptual framework of the study. In order to provide a comprehensive understanding of the topic, the study would probably use a mixed-methods design, integrating quantitative and qualitative data collection techniques. The general opinions of 100 women, school going children, doctors from different rural areas of Bangladesh are collected through a questionnaire.

6. ANALYSIS AND DISCUSSION

6.1 Key social determinants that influence maternal and child health outcomes in Bangladesh

The health outcomes of mothers and children in Bangladesh are shaped by a range of social factors. These factors are interconnected and can have a significant effect on the overall well-being of mothers and children. The following are key social determinants that influence the health outcomes of mothers and children in Bangladesh:

Socioeconomic Status: Poverty and low socioeconomic status can restrict access to healthcare, nutrition, and education, resulting in unfavorable health outcomes for both mothers and children.

Education: Limited education, particularly among women, can lead to insufficient knowledge about practices related to maternal and child health, leading to poor health outcomes.

Maternal Education: Maternal education is especially critical as educated mothers are more likely to seek prenatal care, adopt healthier practices, and make informed decisions regarding their children's health.

Early Marriage and Pregnancy: Early marriage and early pregnancy can increase health risks for both mothers and infants, including complications during childbirth and low birth weight.

Access to Healthcare Services: Limited access to high-quality healthcare services, including prenatal and postnatal care, can contribute to maternal and child health issues.

Nutrition: Inadequate nutrition during pregnancy and early childhood can result in impaired growth, underweight infants, and increased susceptibility to infections.

Cultural Practices: Cultural norms and practices, such as traditional birthing practices and dietary habits, can impact the health outcomes of mothers and children.

Women's Empowerment: Empowering women in decision-making processes, including healthcare decisions, can have a positive impact on the health outcomes of mothers and children.

Sanitation and Hygiene: Lack of access to clean water, proper sanitation facilities, and hygiene practices can contribute to the spread of infections and have a negative effect on maternal and child health.

Geographic Disparities: Disparities in access to healthcare and social services between urban and rural areas can influence the health outcomes of mothers and children.

Family Support: The support system within the family and community can affect a woman's ability to seek and receive appropriate healthcare during pregnancy and childbirth.

Maternal Mental Health: Maternal mental health is increasingly recognized as a crucial determinant, as mental well-being can affect maternal behaviors and child development.

Addressing these social determinants requires a comprehensive and integrated approach that involves healthcare, education, social services, and community engagement in order to improve the health outcomes of mothers and children in Bangladesh.

6.2 Existence of health disparities among different socio-economic and demographic groups in Bangladesh

There are variations in health outcomes among different socio-economic and demographic groups. However, it is imperative to note that specific details may have undergone changes since then. It is therefore crucial to consult the latest research and reports to obtain the most up-to-date information. There are several contributing factors to health disparities in Bangladesh. Firstly, income and socioeconomic status play a significant role. Individuals with lower income and lower socioeconomic status often face challenges in accessing healthcare services. Consequently, they may experience delays or receive inadequate medical care, leading to poorer health outcomes. Secondly, geographic disparities are also important to consider. Rural areas tend to have limited access to healthcare facilities compared to urban areas. This discrepancy in access leads to differences in health outcomes between these regions. Thirdly, education is a crucial determinant of health outcomes. Higher levels of education are generally associated with better health awareness, healthier lifestyles, and improved access to healthcare. Fourthly, gender disparities are prevalent in terms of health. Women often face unique health challenges, particularly in the realm of maternal health. Factors such as access to antenatal care and skilled birth attendants can greatly impact maternal health outcomes. Additionally, health disparities can also be observed across different age groups. Children and the elderly may face distinct health challenges, and their access to healthcare services may vary. Furthermore, disparities in access to healthcare services, including preventive measures, diagnostic tools, and treatment options, can contribute to differences in health outcomes. Efforts have been made to address these disparities in Bangladesh through various healthcare initiatives, policy changes, and public health programs. Organizations and policymakers frequently collaborate to enhance healthcare accessibility, quality, and affordability, with a specific focus on reaching vulnerable and marginalized populations. To obtain the most recent and specific information on health disparities in Bangladesh, it is advisable to consult recent research studies, reports from international organizations, and data from national health agencies in Bangladesh. Public health organizations, academic institutions, and international health agencies can provide valuable insights into the present state of health disparities in the country.

6.3 Cultural practices and beliefs related to maternal and child health in Bangladesh

In Bangladesh, the realm of maternal and child health is intricately intertwined with cultural practices and beliefs that serve as a testament to the nation's profound cultural heritage. The healthcare-seeking behavior of pregnant women and families is significantly influenced by traditional norms. These families place considerable emphasis on the well-being of both the expectant mother and the unborn child. To address common maternal discomforts and foster a healthy pregnancy, families often rely on age-old remedies that have been passed down through generations. Furthermore, health practices are shaped by religious convictions, primarily within the Islamic faith, as individuals seek the blessings of religious leaders and incorporate prayers into their prenatal care routines. The importance of antenatal care is underscored, and pregnant women frequently receive support from female relatives during this critical period. The notion of "Ghar-Bari" (home delivery) is widespread, with many individuals opting to give

birth in the familiarity of their own homes. Despite efforts to promote the utilization of healthcare institutions for deliveries, traditional customs and the influence of elderly family members persist in shaping birthing choices. Additionally, postpartum practices are deeply rooted in cultural traditions, encompassing specific dietary restrictions, periods of rest, and rituals aimed at safeguarding the well-being of both the mother and the newborn. Community-based healthcare workers, such as the "Shasthya Kormi" (health assistants), play a pivotal role in connecting cultural practices with modern healthcare by providing essential information and services to enhance maternal and child health outcomes. As Bangladesh advances, there is an increasing recognition of the imperative to incorporate cultural sensitivity into healthcare initiatives, fostering a harmonious coexistence between tradition and modern healthcare practices for the betterment of maternal and child health in the country.

6.4 Effectiveness of existing key social determinants on maternal and child health in Bangladesh

The intricate interplay of multiple factors determines the efficacy of the existing key social determinants on maternal and child health in Bangladesh. Despite the considerable progress made in enhancing maternal and child health outcomes in Bangladesh, obstacles persist. The socioeconomic status remains a pivotal determinant, given that women from marginalized and economically disadvantaged backgrounds often encounter hindrances in accessing high-quality healthcare services. Educational disparities also exert a crucial influence, as women with lower educational attainment may lack the knowledge and resources needed to make well-informed health-related decisions. Cultural practices, such as early marriage and restricted autonomy for women, can contribute to unfavorable maternal and child health outcomes. Moreover, inadequate infrastructure, limited availability of clean water and sanitation, and inadequate nutrition exacerbate health disparities. The effect of different social determinants are analyzed in the following table:

Table 1: Effectiveness of Existing Key Social Determinants on Maternal and Child Health

Particulars	Yes	No	Neutral	Total
Socioeconomic status has a good impact on maternal and child health	60	30	10	100
Education never plays a good role on maternal and child health	20	70	10	100
Maternal education is not essential for the improvement of maternal and child health	25	60	15	100
Early marriage and pregnancy have a negative impact on maternal and child health	65	15	20	100
Access to healthcare services is vital for developing maternal and child health	50	40	10	100
Nutrition facilities is essential for maintaining a good maternal and child health	70	20	10	100
Cultural practices play a good role for maternal and child health	40	40	20	100
Women's empowerment is not necessary for developing maternal and child health	20	50	30	100
Sanitation and hygiene facilities should be provided to manage a good maternal and child health	50	30	20	100
Geographic disparities have negative impact on maternal and child health	40	40	20	100
Family support is major factor of maintaining maternal and child health	50	35	15	100
Maternal mental health should be sound for a good maternal and child health	60	30	10	100

7. FINDINGS OF THE STUDY

The examination of crucial social factors that influence the health of mothers and children in Bangladesh unveils a intricate network of interconnected elements. The socioeconomic status emerges as a pivotal factor, with poverty and low economic standing hindering the access to necessary healthcare, nutrition, and education. The significance of maternal education is highlighted, as educated mothers are more inclined to adopt healthier practices and make well-informed decisions concerning the health of their offspring. Premature marriage and pregnancy, limited access to healthcare services, inadequate nutrition, cultural customs, and geographical disparities all play a significant role in determining the health outcomes of mothers and children. The presence of health inequalities among different socioeconomic and demographic groups emphasizes the impact of income, education, geography, gender, and age on the access to healthcare and the resulting outcomes. Lower income and socioeconomic status, particularly in rural areas, are associated with difficulties in obtaining healthcare services, leading to delays and insufficient medical care. The level of education influences the awareness of health and the choices of lifestyle, while gender disparities, especially in the realm of maternal health, prevail. Disparities are observed across various age groups, and the access to healthcare services varies for children and the elderly. The cultural practices and beliefs in Bangladesh play a substantial role in shaping the behaviors related to maternal and child health. Traditional remedies, religious practices, and the preference for giving birth at home contribute to the fusion of cultural norms with the behavior of seeking healthcare. The recognition of cultural practices is crucial for the development of effective initiatives in healthcare that reconcile tradition with modern practices. Despite the advancements made, the effectiveness of the existing social factors in determining the health of mothers and children encounters challenges. The socioeconomic status, educational disparities, cultural practices, and inadequate infrastructure continue to affect the outcomes in health. The findings presented in the tabular form suggest an acknowledgment of the positive impact of certain factors, like education and nutrition, while acknowledging the difficulties associated with others, such as cultural practices and gender disparities. The addressing of these challenges necessitates a comprehensive and integrated approach that involves healthcare, education, social services, and community involvement in order to enhance the outcomes concerning the health of mothers and children in Bangladesh.

8. RECOMMENDATIONS

Based on a thorough examination of the social factors that influence the health of mothers and children in Bangladesh, it is possible to propose several recommendations to address the challenges that have been identified and improve the outcomes. The first recommendation is to prioritize investments in education. This particularly pertains to initiatives that seek to enhance access to education, with a special focus on girls and women. The reason for this is that education empowers mothers and enables them to make informed decisions concerning health practices for both themselves and their children. Another recommendation is the implementation of targeted poverty alleviation programs. These programs aim to enhance the socioeconomic status of vulnerable populations, thereby facilitating better access to healthcare, nutrition, and other essential services. Additionally, there is a need to

expand healthcare infrastructure, especially in rural areas. This will help to minimize the barriers that prevent individuals from accessing medical services, thereby reducing delays and ensuring that timely and adequate care is provided to both mothers and children. It is also important to develop healthcare initiatives that are culturally sensitive. These initiatives should respect and incorporate cultural practices and beliefs, recognizing their significance in shaping health behaviors, while simultaneously promoting evidence-based medical practices. Gender disparities in healthcare access and outcomes also need to be addressed. This can be accomplished through the implementation of policies that promote gender equality and empower women to participate in decision-making processes relating to their health and that of their children. Community engagement is another crucial aspect of improving maternal and child health. It is important to foster the involvement of the community in healthcare initiatives, encouraging local participation and ownership. This will ensure that interventions are tailored to the specific needs and contexts of different communities. Collaboration between various sectors, such as healthcare, education, and social services, is also essential. This interdisciplinary collaboration will allow for a holistic approach to improving maternal and child health, recognizing the interconnectedness of social determinants. Nutrition programs targeting pregnant women and young children should also be implemented. These programs aim to ensure adequate nourishment during critical developmental stages, thereby reducing the risk of health complications for both mothers and children. By implementing these recommendations in a coordinated manner, Bangladesh can make significant progress towards improving the health outcomes of mothers and children, ultimately leading to a healthier and more prosperous society.

9. CONCLUSION

In conclusion, this study presents an extensive exploration of the societal factors that influence the health outcomes of mothers and children in Bangladesh. It highlights the significant impact of various determinants, such as socioeconomic status, education, access to healthcare services, and cultural customs. The findings underscore the existence of health inequalities among different demographic groups, emphasizing the necessity for targeted interventions. The role of cultural practices and beliefs in shaping healthcare-seeking behaviors is of utmost importance, thus emphasizing the significance of initiatives that are culturally sensitive. Despite advancements, there are persistent challenges that require recommendations that prioritize education, poverty reduction, the development of healthcare infrastructure, cultural sensitivity, gender equality, community involvement, and interdisciplinary collaboration. The implementation of these recommendations has the potential to contribute to improved health outcomes for mothers and children, ultimately fostering a healthier and more equitable society in Bangladesh.

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