

A REVIEW ON CHILD AND MATERNAL HEALTH STATUS OF BANGLADESH

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ABSTRACT

Objective: The objective of this study is to summarize the specific conditions of Bangladeshi child and maternal health and related issues.

Methods: This is a systematic review and analysis of the literature regarding child and maternal health of general population living in Bangladesh.

Result: The evidences reflected that infant, child, and maternal mortality in Bangladesh has declined gradually at least over the past years. It is found that infant mortality 2 times, child mortality 6 times, and under-five mortality rates 3 times declined comparatively than the last two decades but it is noted that maternal assassination circumstance is not gradually declined. Role of health knowledge on child and maternal health carries an important portion of the education effect. Health knowledge index significantly improves child and maternal health although differentially.

Conclusion: It is obvious that poverty is one of the root causes that have led to high child and maternal mortality and morbidities faced by Bangladeshi people. The requirement for socioeconomic relief for those living in rural Bangladesh remains one of the core issues. Although Bangladesh is successfully declining the total number of childhood mortalities and nutrition-related mortalities in addition to complexities, maternal health status is not improving with the same pace. Non-government and government-funded organizations and policymakers should come forward for running some effective programs to conquer the situation completely in Bangladesh.

Keywords: Child health, Maternal health, Bangladeshi population.

INTRODUCTION

Bangladesh is a developing country within Southeast Asia sharing borders with India and Myanmar, with a population of over more than 142 million people with a poverty level of 33% in addition to another one-third of the population just above poverty level and also having lots of health-related issues [1-5]. Bangladesh also has low per capita expenses on health care at gross domestic product 3.35%, which places mainly vulnerable populations, for example, women and children at high risk for health as well as quality of life problems. Child and maternal health issue is a “multi-faceted complex phenomenon” and is both an outcome and trigger of health concerns for Bangladesh. There are some numerous causal factors that are intercorrelated and thus make it complicated to empirically resolve the key driving factors and underlying pathways regarding these aspects. Nevertheless, in Bangladesh, it is seen that social, health, nutrition, and economic opportunities are severely lessened for many women and children. Besides that, household food insecurity, insufficient care and feeding practices, and unhealthy family environment along with lack of access or inadequate health services can be enlisted as factors influencing child and maternal health in Bangladesh [6-11].

There are some research-based evidences on the immediate, underlying, and basic determinants of child and maternal health status in accordance with the UNICEF conceptual framework.

To determine the specific health needs of children and mother, it is important to understand the medical needs and other related issues. The purpose of this literature review is to identify, review, and summarize existing research evidence on the determinants of child and maternal status of Bangladeshi population.

METHODS

Every part of the relevant electronic records was searched with value to the requisites to child and maternal health that related to Bangladesh

for in sequence, and data were reviewed from different secondary sources such as WFP and UNDP. All information was collected manually and the information was highlighted in easy way because of trouble-free understanding. The paper is based on an extensive evaluation of published and unpublished data/information on health system in Bangladesh.

FINDINGS

Bangladesh is one of the poorest countries of the world in the midst of the highest population density except then the country has achieved many health indicators for last few years, notwithstanding extraordinary advances in public health during current decades. Child and maternal health is one of the most important issues regarding improving Bangladeshi health sector, and a little outline of child health and maternal health status of Bangladesh is given below.

Child Health Status of Bangladesh

The underlying determinants of child health include income poverty - which is concomitant with household food uncertainty. Water, sanitation, and health facilities (WASH) determine the infection environment which children are exposed to and thus their risk of suffering child health outcomes. Infection and disease interact with child health outcomes, and thus, it should be considered as a causal factor which underlies child mortality (Table 1). It is also known that child undernutrition is widely attributed to a shortage of some key micronutrients obligatory for the physical and mental growth of a child. The key micronutrients are iodine, zinc, Vitamin A, and iron [12-17].

In the context of Bangladesh, the composition of corresponding (post-EBF) feeding is often inadequate or inappropriate and initiated too early or too late, consequently causing low micronutrient ingestion among children. Dietary diversity is a way of conceptualizing best nutrient intake and, in addition to many studies, has connected household dietary diversity indicators to improved nutrient intake in the country.

Table 1: Childhood mortality trends in Bangladesh

Categories	1993-94	1996-97	1999-2000	2004	2007	2011	2014
Neonatal mortality	52	48	42	41	37	32	28
Postnatal mortality	35	34	24	24	15	10	10
Infant mortality	87	82	66	65	52	43	38
Child mortality	50	37	30	24	14	11	8
Under 5 mortality	133	116	94	88	65	53	46

Source: BDHS 1993-94, 1996-97, 1999-2000, 2004, 2007, 2011, and 2014

Limitations in dietary diversity can increase micronutrient deficiencies which are a major cause of child health in Bangladesh. In Bangladesh, diarrhea and acute respiratory infections are the cause of two-thirds of all deaths of children <1 year of age, and in Bangladesh, diarrhea and acute respiratory infections are the cause of two-thirds of all deaths of children <1 year of age. Even though breastfeeding initiation is approximately common in Bangladesh, approximately 70% of mothers do not exclusively breastfeed for the recommended first 6 months of life for various environmental, cultural, and economic reasons [8,18-24].

Maternal health status of Bangladesh

The determinants of child health can spiral out to have intergenerational effects as adolescent girls are likely to become unhealthy mothers, and this can have impact spanning from the intrauterine development phase throughout to the health along with nutritional status of birth outcomes. Maternal health is a major factor in formative the nutritional status of children, particularly in the first stage of infancy. The findings reveal that maternal factors had noteworthy effects on both severe and moderate acute undernutritions in Bangladesh. It is to be noted that low maternal nutrition levels were associated with a higher risk of wasting and low birth weight with acute health problem in children. There are also reasons for maternal health (Fig. 1). The prevalence of malnourishment among adolescent girls and pregnant women is high in Bangladesh, and it is that one-third of such women have low body mass index and anemia [25-33].

Some studies have illustrated that the health condition of mothers can affect the fetal growth and birth size of children. In urban Bangladesh, anemia and Vitamin A deficiency were found to be prevalent among most of the pregnant mothers and child undernutrition was more prevalent among those born to mothers under the age of 18 or over 34 years. The children of well-nourished mothers were shown to have a lower risk of being underweight compared to children of unhealthy mothers. A research showed that children of adolescent mothers were shown to have a higher risk of health problems in this country [27,34-40].

Diet and nutrition of mother and children

Food uncertainty has been defined as a condition that exists while people do not have adequate physical, social, or economic access to food. Food security has major impacts on hunger as well as undernutrition. A lack of nutrients can direct to a vicious cycle of illness as well as undernutrition. A strong positive involvement has been observed between household food timidity and poor infant feeding practices. In the Bangladeshi context, another factor to take into deliberation is how food security itself is prejudiced by seasonality. A previous study based in Northern Bangladesh shows that confirmation of a strong association has also been observed between home food anxiety and child wasting along with maternal health. In Fig. 2, trends in nutritional status of child under age 5 were discussed. There are widespread overlaps here by means of the basic socioeconomic and gender-based factors of child and maternal undernutrition. Furthermore, recent studies have seemed at the relationship between food prices and undernutrition [41-47].

In Bangladesh, it is well known that rice prices are known to be certainly associated with the prevalence of underweight of mothers and children and inversely associated by means of household non-grain food expenditures, an indicator of dietary quality. Low dietary diversity throughout the period before major food price increase indicates a

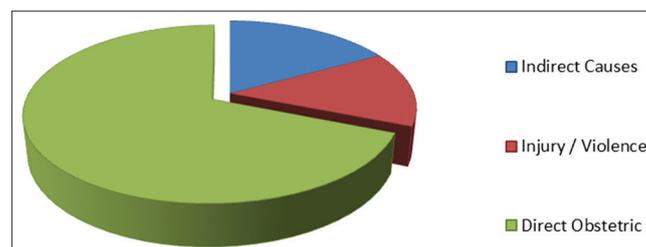


Fig. 1: Causes of maternal deaths. Source: UNICEF, 1999

probable risk for intensified micronutrient deficiencies in addition to consequent child and maternal undernutrition in Bangladesh. One study based on women in the northwest region of Bangladesh where food insecurity is widespread identifies socioeconomic variables which forecast food insecurity, such as level of education and gender of the skull of household plus house ownership [48-54].

Challenges for the health system in Bangladesh

Tertiary hospitals also include national level super specialty hospitals or centers which provide high-end medical care services, particularly in only one particular area of healthcare. It is found that a total of 536 public hospitals with 37,387 beds provide inpatient care services in Bangladesh intended for a population of 160 million. Details about types of health facilities are in Table 2. There are also 413 Upazila (sub-district) Health Complexes which have very limited inpatient care services. Most Upazila Health Complexes (UHCs) have 20 beds first and foremost to cater to emergency needs of pregnant women [55-59].

District hospitals (DHs) are typically termed secondary care hospitals since, unlike the medical college hospitals, these have smaller amount specialty care facilities. The medical college hospitals are situated in the regional urban hubs casing several districts and provide specialty care in a broad range of disciplines. Over the past few decades, Bangladesh has experienced a rapid expansion of the secondary and tertiary care networks all over the country but that is not up to the mark yet. While compared with other developing countries, it becomes obvious that Bangladesh does not have an adequate number of hospital beds to provide its large population. For example, as Bangladesh has only 0.4 bed per 1000 population, Ghana has 0.9 bed per 1000 population and Kenya at the same level of economic growth as Bangladesh has 35% elevated number of hospital beds than Bangladesh. It should be noted that as basic health-care service is invented to be free in public hospitals and other facilities, patients end up bearing the costs of medicine as well as laboratory tests, on top of some additional hidden costs. Furthermore, in many public hospitals, the available ambulances are either inoperative or being used by the physicians along with other staff. It is very clear that Bangladesh has a chronic shortage of appropriately trained human resources of health including physicians, nurses, and midwives. In short, there is a gap between principle and practice in public health facilities seriously compromising the accessibility of general people [60-62].

Maternal and child health (MCH) care delivery system

MCH services have been given highest priority in the health system of Bangladesh. At the society level, the services are provided by the Family Welfare Assistants and Health Assistants as of the community clinics. At

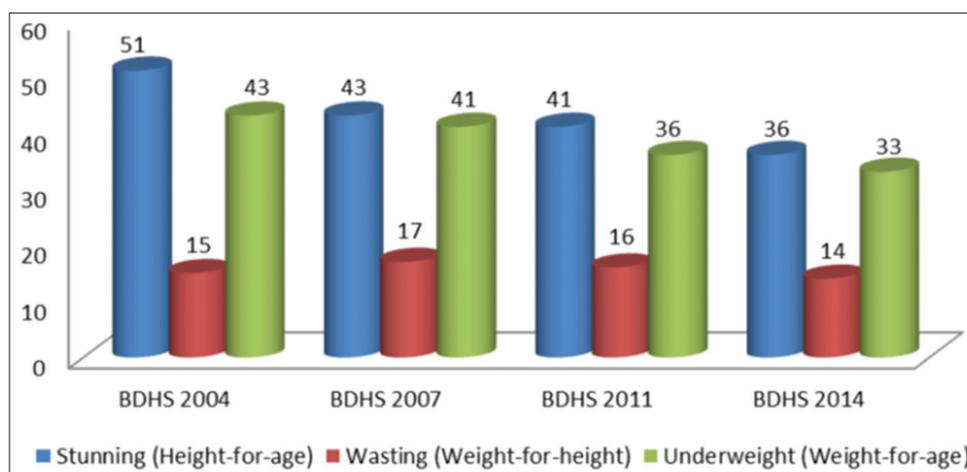


Fig. 2: Trends in nutritional status of child under age 5, 2004–2014. Data source: BDHS 2004, 2007, 2011 and 2014

Table 2: Level of care and type of health facility

Level of care	Administrative unit	Health facility
Tertiary level	Division or national/ Capital	Teaching hospital/institute (16), 250–1050 Beds each
Secondary level	District	DHs (59), 50–150 beds each
Primary level	Upazila	UHCs (397), 31 beds each
Primary level	Union	Union Health and Family Welfare Centers (3275)
Primary level	Ward	CC (6000+)

Source: Directorate general of health services, 2010. CC: Community clinics, UHCs, DHs: District hospitals

the union level, a Family Welfare Visitor (FWV) along with a Sub-Assistant Community Medical Officer or Medical Assistants is mostly responsible for providing the services. It is known that around 250 Graduate Medical Officers posted in 3275 UHFWCs for providing MCH services. At the Upazila level, the MCH unit of the UHC headed by a Graduate Medical Officer is responsible for providing MCH services. The activities of the MCH unit along with other maternal health care services are overseen by the Upazila Health and Family Planning Officer in the UHC. Still, there are a lot of vacant positions in health sector (Table 3). Trained support personnel such as FWV and “Ayas” (female ward assistants) help as well. There is also a position called junior consultant (gynecological) who provides services in case of emergencies, mostly attending all deliveries at the UHC and all referred maternal patients [63-65].

The DHs in the district headquarters give maternal services through an outpatient consultation center plus a labor ward. These facilities are likely to be equipped to provide basic EOC and obstetric first aid.

History and policy regarding MCH care

Since independence, the government's population policy was pedastaled on the need to curb population growth and the program was treated as a model whereby development goals were attained through an self-confident MCH-based family planning program. NGOs have played a vital role behind the success in the population subdivision as they provided specific policy recommendations based on their research-based intervention programs related to child and maternal health. In 1953, it is known that the initiative of professionals and social workers an organization called Family Planning Association of Bangladesh (FPAB) was founded. The voluntary activities of FPAB received government sustain in 1958, and the first national FP program began in 1960 when the government recognized the Directorate of Family Planning. As a result of these efforts, the country has experienced an amazing demographic transition over the past three decades with a population growth speed of only 1.48% between the 1991 and 2001 censuses. It is also notable that the Health and Population Sector Program (HPSP) consists of a series of interventions to be undertaken between 1998 and 2003, which are expected to decrease maternal mortality and morbidity [66-70].

Table 3: Shortage of health service providers in public facilities in Bangladesh

Types of medical care and staff	Sanctioned	Vacant
Allopathic medicine physicians	20,234	8934
Senior nurse	161	155
Junior nurse	463	313
Aide nurse	16,559	3232
Medical technologists	6150	1492
Medical assistants	5411	1717
Domiciliary staff	26,416	3131
Unani	66	46
Homeopathic	66	50

Source: Directorate general of health services, 2010

Improvement, research, and development of MCH

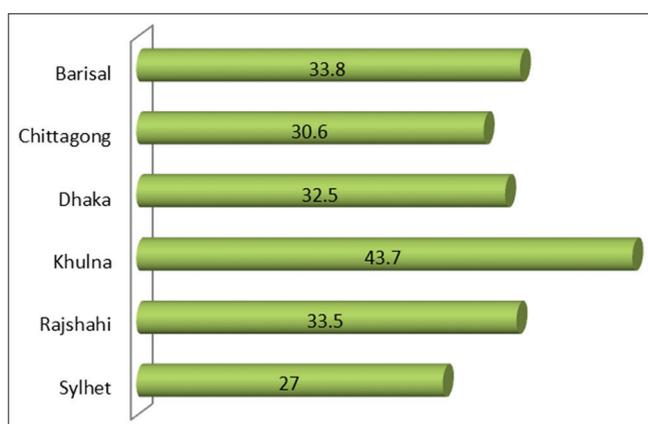
In Bangladesh, many institutions are involved in MCH improvement, research, and development. Apart from those agencies within the Ministry of Health and Family Welfare, there are many government and non-government organizations, which are involved in maternal health research and development and these organisations comprise the National Institute of Population Research and Training, the Bangladesh Institute for Promotion of Essential and Reproductive Health Technologies, Association for Prevention 16 of Septic Abortion (BAPSA), and the International Centre for Diarrhoeal Disease Research, Bangladesh. It is to be noted that most of these carry out their activities with financial assistance from donors. International and bilateral organizations counting WHO, UNFPA, UNICEF, UNDP, UNHCR, World Bank, ADB, and DFID are also playing a vital role providing policy guidelines, completion support in addition to infrastructure development for improvement of the health sector [71-73].

Antenatal Care (ANC) in Bangladesh:

The 1999–2000 DHS indicates that many mothers in Bangladesh do not receive ANC. It is found in some research that births that occurred in the 5 years nearly two-thirds (63%) of mothers received no ANC during

Table 4: Primary reasons for refusing referral, Matlab Bangladesh

Reason	Patients	Decision-makers
Decision-maker refused	10	N/A
Not necessary	8	4
Too ill to go	5	0
Husband absent	5	N/A
Hospital costs	4	5
Already in labor	4	0
Workload	3	0
No childcare available	3	0
Fear of medical intervention	3	0
Evil spirits	2	0
Shame	2	1
Delivery at home (insistence to do so)	1	0
Security of the house	1	1
No company available	1	0

**Fig. 3: Antenatal care by division.**

pregnancy. Those who do receive care tend to receive it from doctors (24%), or nurses, midwives otherwise family planning visitors (10%). There are also regional variations in the use of antenatal services, as 59% of urban births had received ANC compared to only 28% in rural areas. Details are shown in Fig. 3. The difference in antenatal coverage by division is minimal. Mothers in Sylhet Division are least likely to receive ANC, and for only 27% of births, the mothers in this division have at least one ANC visit [74].

Refusal of Referrals

Cultural and social norms have been shown to affect preference of location and attendant for delivery. They also may lead to needless delays in seeking care, particularly if danger signs are not recognized or understood. However, there have been additional examples of cases where such factors may have also led to women refusing referrals, even when potential difficulties have been professionally identified. A study was conducted to specifically identify the factors that lead to refusal of referral among pregnant women in the Matlab region of Bangladesh (Table 4).

It is found in previous studies that responses of fear of "medical intervention," "evil spirits," "shame," and "delivery at home" as all rooted in the specific cultural background of the women and children, even though they comment that the percentages of Muslim and Hindu women refusing referral are similar, which seems to corroborate [75].

CONCLUSION

Bangladesh is one of the developing countries of the world where child and maternal health and nutrition-related indicators improved over the past few decades. Women living in Bangladesh are at a high risk for maternal mortality and morbidity and children health conditions are not up to the

mark at all. Overall, there remains a need for the evaluation of cultural barriers that negatively impact maternal health and socioeconomic relief in the form of policy changes to specifically address gender inequity for women and children living in Bangladesh and successfully declines the total number of childhood and maternal mortalities and nutrition-related mortalities and complexities. Many non-government and government-funded organizations should run some valuable programs to overcome the situation completely in Bangladesh.

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