**Assessing Contributory Factors of Diarrhea among Under-Five Children in Bangladesh: A Comprehensive Analysis of Three Waves of Nationally Represent Data**

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**Abstract**

Diarrhea remains a significant cause of child mortality in Bangladesh. One-third of all child deaths in this country are caused by diarrhea. This study aimed to investigate the changing patterns and contributory factors of diarrheal diseases among children 0-5 years by analyzing three distinct survey years, 2006, 2012, and 2019.

In this study, using the data from the Multiple Indicator Cluster Survey (MICS), a total of 31,566, 23,402, and 24,686 children under five were included from, 2006, 2012, and 2019, respectively. Logistic regressions were applied to analyze the factors influencing childhood diarrhea.

The results revealed a decline in diarrhea prevalence from MICS 2006 (7.1%) to MICS 2012 (3.9%). However, there was an unfortunate increase to 6.9% in MICS 2019. Notably, children aged 12-23 months exhibited consistently 2.22 (adjusted odds ratio (AOR) = 2.22, 95% confidence interval (CI: 1.86 – 2.65), 5.24 (CI: 2.51 – 10.95) and 3.36 (CI: 2.67 – 4.22) times higher likelihood of experiencing diarrhea compared to the older age group (48-59 months) in MICS 2006, 2012 and 2019, respectively. Children whose mothers had no or incomplete primary education had higher chances of diarrhea compared to children of mothers with secondary complete or higher education.

Furthermore, underweight status, geographical division, household wealth status, and toilet facility type and its shared status emerged as contributing factors of diarrhea among children aged 0-5 years. The findings underscore the importance of child nutrition, basic hygiene practice, and special care to mitigate the under-five mortality rate associated with diarrhea.

**Keywords:** Children, Nutrition, Childhood diseases, Diarrhea, Trend, Determinant