

Double Burden of Malnutrition among Mother-Child Pairs of Bangladesh: Prevalence and Socio-demographic Determinants

Introduction: In Bangladesh, the persistence of childhood undernutrition is accompanied by an increasing prevalence of overweight and obesity among reproductive age women. But to our knowledge, no analysis was done to explore its coexistence at household level. Considering the context, we measured the nationwide prevalence and identified socio-demographic determinants of household level mother-child double burden (MCDB) of malnutrition in Bangladesh.

Methods: The analysis was done using Bangladesh Demographic and Health Survey (BDHS) 2014 data and a total of 5951 households where a mother had at least one under five children were included. Multivariable logistic regression was performed to identify the socio-demographic determinants of MCDB of malnutrition. We reported odds ratio (OR) with 95% confidence interval (CI) and considered p-value <0.05 as significant.

Results: Overall 6.4% households demonstrated a coexistence of overweight or obese mother and underweight or stunted or wasted child (OWOBM/USWC). The prevalence of overweight or obese mother and underweight child (OWOBM/UWC) was 3.8%, overweight or obese mother and stunted child (OWOBM/STC) was 4.7% and overweight or obese mother and wasted (OWOBM/WSC) child was 1.7%. For OWOBM/USWC pairs, households with mother's age 21-25 years at first birth [OR: 1.8 (95% CI: 1.1-3.2), p<0.05], the middle wealth index group [OR: 1.7 (95% CI: 1.0-2.8), p<0.05], no exposure to information media [OR: 1.5 (95% CI: 1.1-2.2), p<0.05], having two to three children [OR: 2.04 (95% CI: 1.34-2.9), p<0.05] and four or more children [OR: 3.3 (95% CI: 2.1-5.20), p<0.05] were associated with higher odds of MCBD of malnutrition. The presence of OWOBM/UWC showed statistically significant positive association with mother's age 21-25 at first birth [OR: 1.9, 95% CI: 1.01-3.5], middle wealth index group [OR: 2.2, 95% CI: 1.2-4.2], having two to three children [OR: 2.18, 95% CI: 1.1-3.2] and four or more children [OR: 2.9, 95% CI: 1.7-5.0]. The statistically significant determinants of OWOBM/STC also include mother's age being 21-25 years at first birth [OR: 1.9 (95% CI: 1.02-3.5), p<0.05], middle wealth index group [OR: 2.3 (95% CI: 1.2-4.2), p<0.05], no exposure to information media [OR: 1.8 (95% CI: 1.1-2.9), p<0.05], having two to three children [OR: 1.8 (95% CI: 1.1-3.2), p<0.05] and four or more children [OR: 2.9 (95% CI: 1.7-5.0), p<0.05].

Conclusion: Malnutrition prevention programs must not ignore the nutrition concerns of the whole household. Such programs need to be tagged with family planning and increasing awareness through social and behavior change counseling and exposure to information media.

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