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June 2019

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Recommended Citation

Baxter, J., Wasan, Y., Soofi, S., Ahmed, I., Bhutta, Z. A. (2019). Association of nutritional status measures with self-efficacy and experiencing depressed mood among Pakistani young women (P10-090-19). *Current developments in nutrition*, 3(1).

Available at: https://ecommons.aku.edu/pakistan_fhs_mc_women_childhealth_paediatr/773

Association of Nutritional Status Measures with Self-efficacy and Experiencing Depressed Mood Among Pakistani Young Women (P10-090-19)

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Objectives: We aimed to assess self-efficacy and the experience of depression-related emotions among non-pregnant adolescent and young women (15–23 years) living in rural Pakistan, and determine their association with measures of nutritional status.

Methods: Outcomes were assessed from the Matiari emPowerment and Preconception Supplementation (MaPPS) Trial baseline data ($n = 25,279$). Self-efficacy and depression-related emotions were determined and categorized using the general self-efficacy scale (low, moderate, and high) and DASS-21 tool (normal, mild, moderate, severe, and extremely severe), respectively. Nutritional status was evaluated using hemoglobin concentration (HemoCue Hb 301 System) and body mass index (BMI). Associations were assessed using ordinal logistic regression, and multivariate models were adjusted for education, parity, wealth index, and clustering.

Results: The majority of participants were categorized as having moderate self-efficacy (50.6%) and experienced normal range depression-related emotions (76.3%). The mean hemoglobin concentration and BMI were 11.5 ± 1.9 g/dL and 20.2 ± 3.8 kg/m², respectively. Each unit of increase in hemoglobin was associated with having higher self-efficacy ($\beta = 0.018$; 95% confidence interval (CI): 0.005 to 0.031) and lower severe depression-like emotions ($\beta = -0.018$; 95% CI: -0.033 to -0.002). Similarly, BMI was associated with higher self-efficacy ($\beta = 0.010$; 95% CI: 0.004 to 0.017) and lower severe depression-like emotions ($\beta = -0.014$; 95% CI: -0.022 to -0.007). For all models, however, wealth index had a stronger effect on the outcomes of interest.

Conclusions: Poor nutritional status is suggested to be associated with behavioral organization and one's emotional state. In this setting with a high prevalence of micronutrient deficiencies, we observed associations between lower hemoglobin and BMI with low self-efficacy and experiencing depressed mood, although the effect sizes were small. Findings may reflect potential confounding in the link between empowerment and mood, and poverty.

Funding Sources: Bill and Melinda Gates Foundation, World Food Programme.