

TITLE

Associations Between Health Behaviors and Illness in Indonesia: Using the Health Belief Model to Improve Infant & Child Health

AUTHORS

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ABSTRACT

Background: Appropriate sanitation and hygiene behaviors have a substantial influence on infant and child health. Evidence shows that promoting breastfeeding, washing hands with soap, using an improved water source, boiling water, and providing water and food during the course of diarrheal disease are low cost, high impact health behaviors that have been shown to protect against child illness. Objectives: The objective of this study was to examine health perceptions and behavioral practices that influence child health among families in Indonesia. This study assesses the relationship between nutrition, hygiene, and sanitation behaviors that may impact diarrhea, fever, and respiratory illness in children under two years old. **Methodology:** A cross-sectional survey was conducted with 2,100 Indonesian mothers of children under two years old. Logistic regression models assessed if there is a relationship between eight variables (presence of soap at the handwashing basin, improved vs unimproved water source, boiling water before drinking it, maternal hand washing with soap before breastfeeding, child consumption of breastmilk in the first three days of life, child consumption of breastmilk the day before the survey, child consumption of baby formula the day before the survey, and water consumption the day before the survey) and acute health status (e.g., diarrhea, cough, or fever).

Results: After adjusting for potential confounding variables, households who did not have soap at handwashing basin had lower odds of the child having diarrhea (OR = 0.756; 95% CI=0.584-0.980), fever (OR=0.777; 95% CI= 0.639-0.946), and cough (OR=0.789; 95% CI= 0.649-0.959) compared to homes with soap at the handwashing basin. Children who were not given water the day before had lower odds of having diarrhea (OR = 0.484; 95% CI = 0.358-0.655), fever (OR=0.636; 95% CI= 0.517-0.782), and cough (OR=0.582; 95% CI= 0.478-0.715) compared to children who were given water the day before. Furthermore, after adjusting for possible confounders, those mothers who did not wash hands with soap before breastfeeding had a child with lower odds of having fever (OR =0.751; 95% CI= 0.589-0.959) than those who did wash hands with soap before breastfeeding.

Discussion: This study expands the understanding of the relationship between health behaviors and adverse health outcomes among children under two years old in Indonesia. Some of the results were contrary to previous findings, suggesting the possibility of reverse causality and the importance of future research that assesses the temporality of events. For example, additional research is needed to determine if certain disease-preventative behaviors precede illness or if members of the Indonesian population adapt their behaviors in response to a greater abundance of child illness. Results will assist with future behavior change communication efforts to inform sustainable behavior change and improve infant and child health in Indonesia.