



Determinants of diarrhea among children under two years old in Indonesia

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ABSTRACT

Introduction: Diarrhea among children under two years old remains a big challenge for the Indonesian government due to its association with fatal cases. Diarrhea can be caused by factors such as socio-demographics, the environment, and behavioral childcare practices. This study aimed to assess the associated factors of diarrheal diseases among children under two years old in Indonesia.

Methods: Cross-sectional data was obtained from the 2017 Indonesia Demographic and Health Survey (IDHS) used for the study. A total of 5858 children, aged 0–23 months and who lived with their mothers, were selected for this study. Binary logistic regression was utilized to examine the determinants of diarrhea.

Results: The prevalence of diarrhea among Indonesian children under two years old was 17.16%. The mother's age [AOR = 1.63; 95% CI = 1.28–2.08], the education of the mother [AOR = 1.80; 95% CI = 1.35–2.40], the type of toilet [AOR = 1.40; 95% CI = 1.14–1.72], non-exclusively breastfeeding [AOR = 3.30; 95% CI = 2.32–4.69], and feeding from a bottle [AOR = 1.21; 95% CI = 1.02–1.45] were all significantly associated with the occurrence of diarrhea.

Conclusions: socio-demographic, environmental, behavioral and childcare practice characteristics are associated with diarrhea among children under two years old in Indonesia. This study highlighted the need for environmental improvement and healthy behavior to reduce the number of diarrhea cases. Increasing the awareness of the mother through counseling and health promotion about the essential benefit of breastfeeding is inevitable. Hygiene practices should be promoted at the household level for those who care for young children.

1. Introduction

Globally, diarrhea is the second leading cause of death in children after pneumonia (WHO, 2017). Every year, there are 1.7 billion children who experience diarrhea and at least 525,000 die from diarrhea. Child under 3 years old experience about 3 episodes of diarrhea per year (WHO, 2017). In low-middle income countries such as Indonesia, diarrhea still remains one of the health problems due to its high morbidity and mortality (Kemenkes, 2011). In Indonesia, diarrhea was the third leading cause of death in children after pneumonia and nervous system disease (BAPPENAS, 2015). According to recent reports, it was estimated that around 7 million diarrhea cases occurred at health facilities in 2018 (Kementerian Kesehatan, 2018). All ages are at risk of diarrhea, but the highest case of diarrhea was in children under 2 years of age, with the highest percentage being at the age of 12–23 months at 20%, followed by age 6–11 months at 19% (BPS, BKKBN, Kemenkes, &

ICF, 2018).

According to the national data from Indonesian Demographic and Health Survey (IDHS) between 2002 and 2007, the prevalence of diarrhea among children under-five increased. In 2002, the prevalence of diarrhea among children under-five was 11% and increased to 13.7% in 2007 (BPS, BKKBN, Kemenkes, & ICF, 2003, 2007). Further, data from 2012 to 2017 showed the prevalence of diarrhea at 14% in children (BPS, BKKBN, Kemenkes, & ICF, 2012, 2018). In addition, according to data from the Basic Health Survey 2018, the incidents of diarrhea among children under five years of age has decreased from 2013; however, it still shows a high rate of 12.3% (Kemenkes, 2018). Both IDHS and the Basic Health Survey show that the percentage of diarrhea among those under 2 years old is the highest among children under five years of age. Indonesia is not only struggling to decrease the maternal mortality rate (Kurniati, Chen, Efendi, & Berliana, 2018) but also the infant and child mortality rate as well (UNICEF, 2019); hence,

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