

## Bacterial food contamination and its impact on diarrhea and nutritional status of children 6 months to 2 years old

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### Abstrak

#### **ABSTRACT**

Worldwide it is estimated that 1400 million episodes of diarrhea occur annually in children under the age of 5 years. In 1990, over 3 million of such children died. Up to 70% of diarrhea episodes could be due to pathogens transmitted through food (Motarjemi, et. al., 1993). A prospective cohort study was conducted in Kelurahan Kapuk, West Jakarta. The purpose was to identify relationship between food contamination, diarrhea, and nutritional status of children age 6 months to 2 years.

Food samples such as drinking water (DW), rice mixture (RH), and milk formula (ME) consumed by 99 children were tested for contamination of *Escherichia coli*, total coliform, and total aerobic bacteria (APO). Diarrhea occurrence during 2-weekperiod were noted along with measurements of weight and height.

The results were as follow: 6% DW, 18% RM, and 7% MF were contaminated by faecal coliform; 29% DW, 26% RM, and 46% MF had total coliform below the recommended guideline values of Health Department and WHO (Depkes, RI 1990, Depkes, RI 1991 & WHO, 1985); as well as 74% DW, 43% RM, and 12% MF for APC. However, no statistical significant relationship was found between food contamination and diarrhea.

Seventeen children suffered diarrhea during the 2-week study period; ranging from 1-6 days with average of 3 days. No persistent diarrhea was found. About half (53%) of the diarrhea children had mild dehydration problem.

Mean x-scores of weight-for-height for the diarrhea children at food sampling and 7 day afterward were ( $-1.39 \pm 1.03$ ) and ( $-0.62 \pm 2.90$ ). Six children were wasted at food sampling day, but only 5 were still wasted at 7th day visit. No statistical significant relationship was found between diarrhea and nutritional status after the disease.