

## ABSTRACT

Food is one of a causes health problems because contaminated by microbes Hygiene and sanitation are still a serious problems in food production. Sample of Snack food of 866 Primary Schools in Indonesia showed 35,46% of them didn't qualyfying food safety. Examination of microbiology contamination is known 11,86% and 3,10% were contaminated by Coliform and E.coli. Children are high-risk group of foodborne disease. The incidence of food poisoning in primary school childrens should be prevented. This study was to analyze the relationship of hygiene knowlegde, attitude, practice and environment sanitation with bacteria contamination on snack food are sold in school canteen and street vendors with MPN Coliform and Escherichia Coli method.

This was an observational analytic study with cross sectional design on 25 vendors and 25 food item as samples using questionnaire and checklist. The dependents variable is MPN Coliform and Escherichia Coli, whereas the independents variable is hygiene knowlegde, attitude, practice and environment sanitation.

Results showed mostly 40% of snack foods are contaminated by coliform (>10counts/gram) were found in the typical one dish snack (n=5) were found in the school canteen (n=7). The highest contamination of E.coli (240counts/gram) were in the typical wet snack (n=2) were found in the school canteen(n=2). Based on statistical analysis using Spearman's rho test showed that there was a relationship of MPN of Coliform between hygiene knowledge, attitude, practice, and environmental sanitation (p=0.022, p=0.005 and p=0.000). Whereas hygiene knowledge, attitudes, practice and environmental sanitation are not related to the food safety indicator MPN Escherichia Coli (p=0.582, p=0.203, p=0.617, p=0.217).

Practice, knowledge, environmental sanitation is not a major factor in food safety. The availability factor of closed bins can improve sanitation scores, especially in preventing contamination of escherichia coli(p=0.032). Need more in-depth supervision on the behavior of food processing and holding time in the form of training and routine food sampling.

Keywords: Food Safety, Most Probably Number of Bacteria, Escherichia Coli, Coliform, Snack Food

**ABSTRAK**

Makanan dapat menjadi penyebab gangguan kesehatan karena terkontaminasi. *Hygiene* dan sanitasi masih menjadi masalah serius. Pengujian makanan jajanan anak sekolah (PJAS) di 866 Sekolah Dasar di Indonesia menunjukkan 35,46% tidak memenuhi syarat keamanan makanan. Pemeriksaan uji cecaran mikroba 11,86% dan 3,10% makanan jajanan tercemar *Coliform* dan *E. Coli*. Anak sekolah merupakan kelompok usia berisiko tinggi *foodborne disease*. Kejadian *foodborne disease* di Sekolah perlu dicegah dengan pengawasan *hygiene* sanitasi pedagang. Penelitian bertujuan untuk menganalisis hubungan pengetahuan, sikap, tindakan hygiene dan sanitasi lingkungan pedagang dengan kontaminasi mikroba pada makanan jajanan yang dijual di kantin serta pedagang keliling dengan Metode MPN *Coliform* dan *Escherichia Coli*.

Penelitian ini merupakan jenis penelitian observasional analitik dengan desain penelitian cross sectional. Sampel penelitian 25 pedagang dan 25 sampel makanan. pengumpulan data menggunakan kuesioner dan *checklist*. Variabel terikat penelitian ini adalah MPN *Coliform* dan *E.coli*, sedangkan variabel bebas penelitian ini adalah pengetahuan, sikap, tindakan dan sanitasi lingkungan pedagang.

Hasil penelitian menunjukkan 40% makanan jajanan terkontaminasi *Coliform* (>10 jumlah/gram) ditemukan pada makanan utama (n=5) yang dijual dikantin (n=7). Kontaminasi tertinggi *Escherichia Coli* (240jumlah/gram) ditemukan pada makanan camilan (n=2) yang dijual dikantin (n=2). Uji statistik *Spearman's rho* menunjukkan bahwa pengetahuan, tindakan dan sanitasi lingkungan pedagang berhubungan dengan keamanan makanan jajanan menggunakan metode MPN *Coliform* ( $p=0.022$ ,  $p=0.005$ , dan  $p=0.000$ ). Sedang tidak terdapat hubungan antara Pegetahuan, sikap, tindakan, dan sanitasi lingkungan pedagang dengan keamanan makanan jajanan menggunakan metode MPN *Escherichia Coli* ( $p=0.582$ ,  $p=0.203$ ,  $p=0.617$ ,  $p=0.217$ )

Tindakan, pengetahuan, sikap sanitasi lingkungan bukan faktor utama keamanan makanan. Faktor ketersediaan tempat sampah tertutup dapat meningkatkan skor sanitasi, terutama dalam mencegah kontaminasi pada *Escherichia Coli* ( $p=0,032$ ). Perlu Adanya pengawasan lebih mendalam mengenai perilaku proses pengolahan dan holding time berupa pelatihan serta pengambilan sampel makanan rutin.

Kata Kunci: Keamanan Makanan, Most Probably Number Bakteri, *Escherichia Coli*, *Coliform*, Makanan Jajanan.