

Relationship between soil transmitted helminth infection and thinness in children living in Nangapanda subdistrict East Nusa Tenggara = Hubungan antara infeksi cacing tanah dan kekurangan pada anak-anak di Nangapanda Nusa Tenggara Timur

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Abstrak

Infeksi parasit, khususnya soil-transmitted helminth (STH), adalah infeksi yang tersebar luas di dunia. Anak usia sekolah mempunyai resiko yang tinggi untuk terinfeksi dan telah dikaitkan dengan berbagai konsekuensi seperti anemia, keterlambatan pertumbuhan, dan hilangnya berat badan. Studi ini bertujuan untuk menginvestigasi hubungan antara infeksi STH dan kekurangan di anak usia sekolah. Peserta adalah anak usia sekolah kurang dari 18 tahun yang tinggal di Nangapanda, Nusa Tenggara Timur. Data demografis diperoleh dan deteksi infeksi STH dalam tinja dilakukan dengan real-time PCR. Analisa univariat dan multivariat dilakukan untuk melihat hubungan antara infeksi STH dan BMI, disesuaikan dengan usia dan jenis kelamin. Dari 185 anak, 179 (96.7%) terinfeksi oleh STH. 91 anak didapatkan berada dalam kategori kurus dan sangat kurus. Infeksi Necator adalah infeksi yang paling sering (174 kasus, 94.1%), diikuti oleh Ancylostoma (24 cacasuses, 13%) and Ascaris infection (49 kasus, 26.5%). Infeksi STH tidak ditemukan, namun menunjukkan pola untuk, memiliki hubungan yang signifikan dengan kekurangan (p-value=0.089). Poliinfeksi STH tidak ditemukan memiliki perbedaan signifikan dengan monoinfeksi. Usia dan jenis kelamin tidak ditemukan berasosiasi signifikan dengan infeksi STH. Studi lebih lanjut dengan populasi yang lebih besar diperlukan untuk mengkonfirmasi hasil ini. Studi longitudinal juga diperlukan untuk mengkonfirmasi hubungan sebab-akibat pada studi ini.

.....Soil-transmitted helminth (STH) infection is widely distributed in the world. School-aged children are at high risk of acquiring this infection, which has been linked with various consequences such as anemia, stunting, and weight loss. This study aims to investigate the relationship between STH infection and thinness in school children. The study participants were children below 18 years living in Nangapanda Subdistrict, East Nusa Tenggara. The basic demographic data was taken and detection of STH infection in stool samples was done by real time PCR. Univariate and multivariate analyses were done to examine the relationship between STH infection and BMI, with age and gender as potential confounding factors. Out of 185 children, 179 (96.7%) were infected with STHs by PCR. 91 children were shown to be in the thinness and severe thinness category. Necator infection was found to be the most common infection (174 cases, 94.1%); followed by Ancylostoma (24 cases, 13%) and Ascaris infection (49 cases, 26.5%) respectively. STH infection was not, but showed a tendency, to be associated with thinness (p-value=0.089). Polyinfection of STHs did not show a significant difference with monoinfection. Age and gender were not found to be associated with STH infection. We found that there was a tendency of positive association between STH infection and thinness. Age and gender were not found to be significantly associated with STH infection. Future studies with a larger number of population are needed to confirm these results. In addition, longitudinal studies are needed to confirm the cause-effect relationship.