

**HUBUNGAN INFEKSI CACING *SOIL TRANSMITTED HELMINTH*
DENGAN KEJADIAN ALERGI: SEBUAH TINJAUAN LITERATUR
SISTEMATIS**



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Skripsi

Oleh

BETTI ENDANG SUTRISNA

NIM: 1810319001

Pembimbing:

Dr.dr. Nurhayati, M. Biomed

Dr.dr. Alvarino, Sp.B Sp.U (K)

**FAKULTAS KEDOKTERAN
UNIVERSITAS ANDALAS
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ABSTRACT

RELATIONSHIP OF SOIL TRANSMITTED HELMINTH INFECTION WITH ALLERGIC INCIDENCE: A SYSTEMATIC LITERATURE REVIEW

By

Betti Endang Sutrisna, Nurhayati, Alvarino, Nuzulia Irawati, Fathiyyatul Khaira

Background: Allergy is an inflammatory disorder that is generally caused by an inappropriate immune response to environmental allergens. The body's immune response to allergic diseases is similar to the host to helminth infections. This review was conducted to determine the correlation between soil-transmitted helminth infection and the incidence of allergies.

Methods: This research is a literature review. A literature search was conducted through databases electronic Pubmed and Proques using inclusion and exclusion criteria. The selected literature was assessed for its feasibility using The Joanna Briggs Institute (JBI checklist) which was adjusted to the design of each literature.

Result: A total of 13 studies were included in the systematic review. There were 7 out of 13 articles which explained that there was a negative relationship where infection with soil transmitted helminth could protect against allergic diseases. Meanwhile, 3 studies showed that there was a positive relationship between the two variables or soil transmitted helminth was not protective against allergic diseases. However, there were 3 articles which stated that there was no correlation between soil transmitted helminth and the incidence of allergies. Soil-transmitted helminth infection that have a significant relationship with the incidence of allergies are *Ascaris lumbricoides* (roundworm), *Trichuris trichiura* (whipworm), *Necator americanus* and *Ancylostoma duodenale* (hookworm). The influencing factors are maternal factors, environmental factors and antihelminthic drug factors.

Conclusion: There are various result related to the relationship between soil transmitted helminth infection with allergies, most of them show a negative relationship which are influenced by various factors.

Keywords: Soil Transmitted Helminth Infection, Allergy, Systematic Literature Review

ABSTRAK

HUBUNGAN INFEKSI CACING *SOIL TRANSMITTED HELMINTH* DENGAN KEJADIAN ALERGI: SEBUAH TINJAUAN LITERATUR SISTEMATIS

Oleh

Betti Endang Sutrisna, Nurhayati, Alvarino, Nuzulia Irawati, Fathiyyatul Khaira

Latar Belakang : Alergi adalah gangguan inflamasi yang umumnya disebabkan respon imun yang tidak tepat terhadap alergen lingkungan. Respon imun tubuh terhadap penyakit alergi mirip dengan respon tubuh *host* terhadap infeksi cacing. Tinjauan ini dilakukan untuk mengetahui hubungan infeksi cacing *soil transmitted helminth* dengan kejadian alergi.

Metode: Penelitian ini merupakan *systematic literature review* (tinjauan literatur sistematis). Pencarian literatur dilakukan melalui *database* elektronik *Pubmed* dan *Proques* menggunakan kriteria inklusi dan eksklusi. Literatur terpilih dinilai kelayakannya menggunakan kuesioner *The Joanna Briggs Institute (JBI checklist)* yang disesuaikan dengan desain masing-masing literatur.

Hasil: Sebanyak 13 studi dimasukkan kedalam tinjauan sistematis. Terdapat 7 dari 13 artikel yang menjelaskan adanya hubungan negatif dimana infeksi cacing *soil transmitted helminth* dapat memproteksi terhadap penyakit alergi. Sementara itu, 3 studi menunjukkan adanya hubungan positif antara dua variabel tersebut atau infeksi cacing *soil transmitted helminth* tidak bersifat proteksi terhadap penyakit alergi. Namun, terdapat 3 artikel yang menyatakan bahwa tidak terdapat hubungan antara infeksi cacing *soil transmitted helminth* dengan kejadian alergi. Jenis cacing *soil transmitted helminth* yang mempunyai hubungan signifikan dengan kejadian alergi adalah *Ascaris lumbricoides* (cacing gelang), *Trichuris trichiura* (cacing cambuk), *Necator americanus* dan *Ancylostoma duodenale* (cacing tambang). Faktor yang mempengaruhi yaitu faktor ibu, faktor lingkungan dan faktor obat antihelmintik.

Kesimpulan: Terdapat hasil yang bervariasi terkait dengan hubungan infeksi cacing *soil transmitted helminth* dengan kejadian alergi, sebagian besar menunjukkan adanya hubungan negatif yang dipengaruhi oleh berbagai faktor.

Kata Kunci: Infeksi *Soil Transmitted Helminth*, Alergi, Tinjauan Literatur Sistematis