



## BAD Project Grant

Assessing the Validity of the Diagnostic Criteria for Scabies and Investigating Complications of Scabies in Surabaya, Indonesia

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## Introduction

Scabies is a common, pruritic skin condition caused by the parasite *Sarcoptes scabiei*. In addition to pruritus and rash, scabies can have severe consequences because of secondary bacterial infections. The diagnosis of scabies is usually made clinically which can be difficult because of the variable presentation and lack of a reliable diagnostic test. The International Alliance for the Control of Scabies (IACS) have developed scabies diagnostic guidance which require validation.



Anti-clockwise from top-left: The *S. scabiei* mite under light microscopy. The *S. scabiei* imaged using scanning electron microscopy. Typical lesion of scabies affecting the inter-digital regions. Example of severe/crusted scabies on a patient's feet.

## Study Aims

We sought to evaluate the validity of the IACS Diagnostic Criteria for Scabies (DCS) in Indonesian patients presenting to the outpatient department of a large teaching hospital in Surabaya. We also investigated rates of scabies-associated bacterial infections and the associated impact the condition had on patients' lives.

## Methods

A prospective case-control study in patients with pruritic skin conditions attending the Dermatology Clinic at RSUD Dr Soetomo General Hospital between June and August 2018 was conducted. We compared routine diagnoses of scabies and other pruritic skin conditions by one clinician with diagnoses made by another blinded clinician using the DCS. Diagnoses of secondary bacterial infections were also noted. Scabies patients'

Dermatology Life Quality Index (DLQI) questionnaire scores were compared before and after treatment with 5% permethrin cream.

## Results

97 individuals were enrolled in the study. 64 patients were diagnosed with scabies and 33 had another pruritic skin condition. All 64 scabies patients were correctly identified by the DCS. 15/64 (23.4%) patients had confirmed scabies, 38/64 (59.4%) had clinical scabies and 11/64 (17.2%) suspected scabies. No patients with other itchy skin conditions were misdiagnosed by the DCS. 42/64 (65.6%) scabies patients had secondary bacterial infections. At baseline the mean DLQI score of scabies patients was  $20.83 \pm 3.78$ . The reduction in mean scores was 6.78 after treatment.

## Conclusions

The DCS was shown to be a valid aid to identify scabies patients. Topical treatment was associated with a moderate improvement in health-related quality of life.

## Clinical Implications

The DCS should be a useful tool to help healthcare workers diagnosis patients with scabies and facilitate their ability to manage patients appropriately in the tropical setting.

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I believe through the project I have better understanding of the diagnosis and management of tropical skin pathologies in addition to an understanding of a health system in a developing country. I loved the Indonesian culture and believe some of the people I worked will be friends for many years to come.



At least half the team were happy with their picture being taken.