

Prevalence and determinants of scabies: a global systematic review and meta-analysis

P3-L14

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Highlights

- The meta-analysis conducted using 70 studies from 30 countries estimated a **pooled prevalence** of scabies at **11.9%** (95% CI: 9.60%-14.7%).
- The **greatest burden** of scabies was reported in the **Western Pacific region** followed by Africa and South-East Asia.
- Risk factors** included: contact with a **person with itch**, **bed and clothes sharing**, **daily hygienic practices** and the **presence of pets**.
- Efforts to reduce scabies through **carrying out health promotion and mass-drug administration in high prevalence areas** are essential to reduce scabies and its complications.

BACKGROUND

- Scabies is a contagious disease that affects an estimated 200 million people globally.
- About 10% of children in resource-poor areas are affected.
- Recent epidemiological evidence has linked scabies to secondary bacterial infections that can lead to serious bacterial infection and septicaemia, resulting in post-strep. glomerulonephritis and acute rheumatic fever.
- Despite the complications of scabies, there is limited information about its global prevalence and distribution.
- This meta-analysis aims to determine the prevalence and risk factors associated with scabies at a global scale.

METHODS

- A search was conducted using PubMed, Scopus and Cochrane database studies published between 2000 and 2024 were included.
- Subgroup analyses were conducted to explore the prevalence of scabies infestation based on region, location, method of diagnosis, etc.
- Odds ratio (OR) with 95% confidence intervals (CI) were calculated separately for demographic and behavioral risk factors
- Meta-regression was performed on indicators of the country level socio-economic factors like Gross Domestic Product (GDP), Human Development Index (HDI) and Gini index.

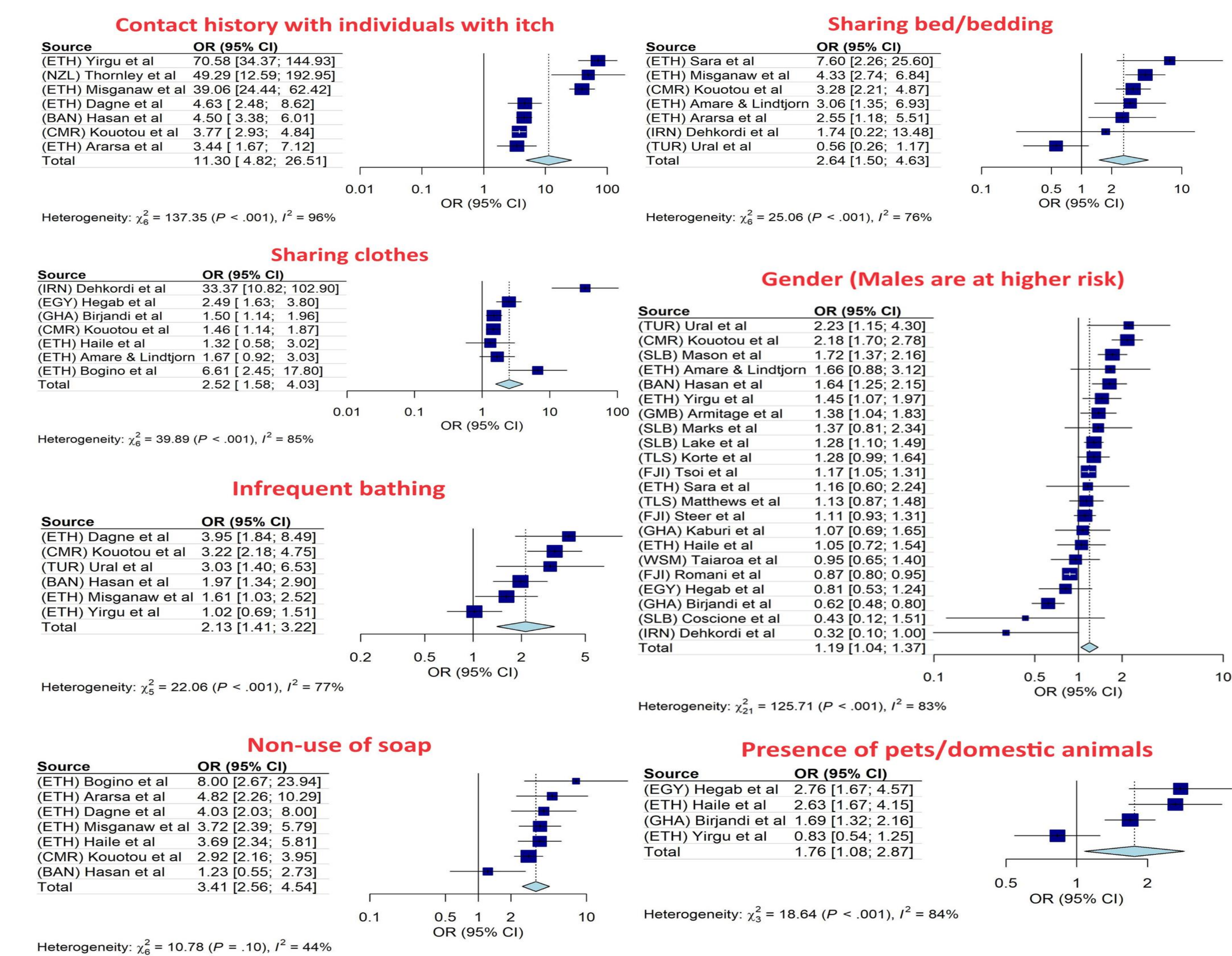
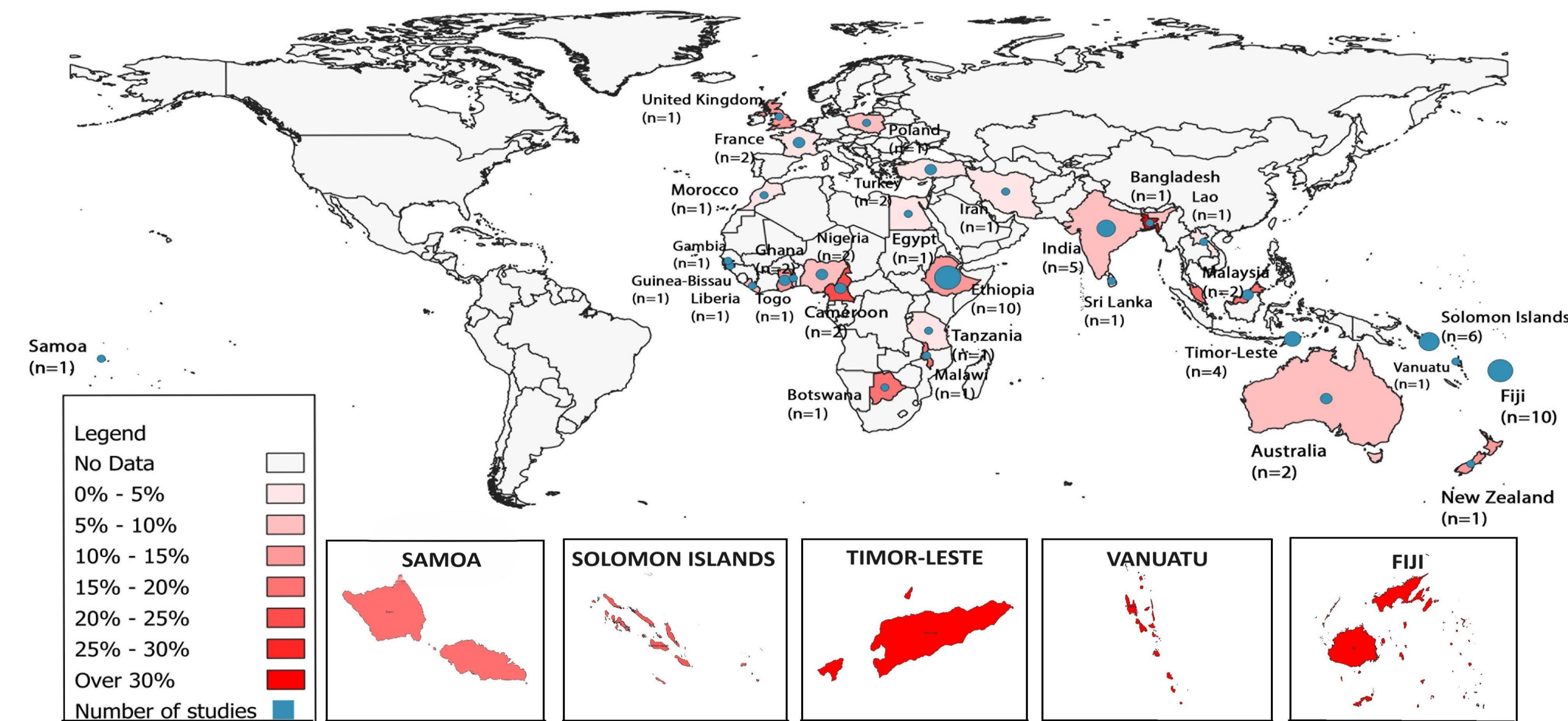
- meta*, *metafor* and *dmetar* packages of R software (version 4.3.2) were used.

RESULTS

- Pooled global prevalence was 11.9% (95% CI: 9.60%-14.7%).
- Scabies prevalence differed significantly based on method of diagnosis, WHO regions and UNSD regions.

RESULTS CONTINUED

- The highest pooled prevalence was in the Western-Pacific (17.8%; 95% CI: 13.9-22.5%)



- Separate meta-regression models showed no association with GDP, HDI or the Gini index with scabies.

CONCLUSIONS

- Global prevalence of scabies remains high.
- Scabies risk factors include: contact with a person with itch and sharing beds and clothes. These are consistent and are also biologically plausible.
- Our result strongly indicates MDA in areas of high scabies prevalence (>10%) as per the guidelines of the World Health Organization.
- Our study indicates that health promotion related to behavioral interventions in adjunct to MDA are likely to further reduce long term scabies prevalence.

ADDITIONAL KEY INFORMATION

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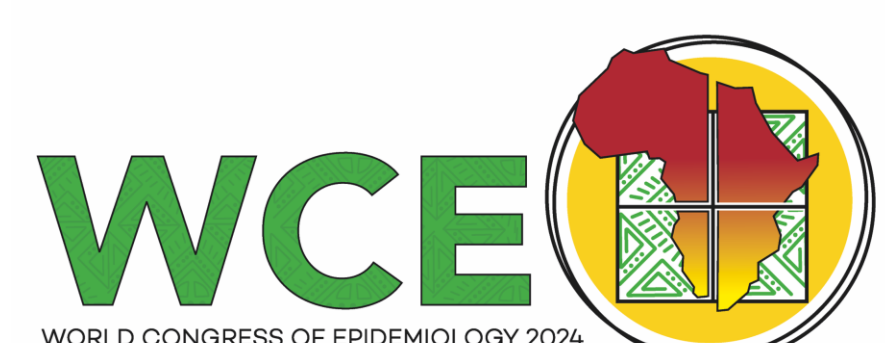


Table 1. Subgroup analysis: Difference in scabies prevalence

	Studies (n=66)	Prevalence	95% CI	I ²	P-value for subgroup difference
Method of Diagnosis*					0.005
International Alliance for Control of Scabies (IACS)	12	19.5%	13.4-27.5	98.7%	
Integrated Management of Childhood Illness (IMCI)	6	16.0%	10.3-24.2	98.8%	
Traditional Method	48	9.94%	7.90-12.4	98.6%	
World Health Organization (WHO) Region*					<0.001
Western Pacific Region	22	17.7%	13.9-22.5	98.5%	
South-East Asian Region	12	11.4%	6.39-19.5	98.6%	
African Region	23	11.2%	8.88-14.1	97.9%	
European Region	6	6.23%	3.51-10.8	92.6%	
Eastern Mediterranean Region	3	2.48%	1.05-5.74	91.1%	
United Nations Statistics Division (UNSD) of Countries*					0.001
Oceania	20	17.9%	13.9-22.8	98.6%	
Asia	17	10.1%	6.19-16.1	98.5%	
Africa	25	9.95%	7.48-13.1	98.0%	
Europe	4	6.91%	3.81-12.2	91.2%	