



Systematic review

The Burden of Tinea Capitis in Paediatric Refugee Populations: A Systematic Review

Dasmesh Sron^{1,2}, Hayley Chai¹, Sarah Cherian³, Asha Bowen^{4,5,6} and Bernadette Ricciardo^{1,4,5,7}

¹Department of Dermatology, Fiona Stanley Hospital, Murdoch, Australia;

²School of Medicine & Dentistry, Griffith University, Southport, Australia;

³Perth Children's Hospital, Nedlands, Australia;

⁴Healthy Skin and ARF Prevention Team, Wesfarmers Centre of Vaccines and Infectious Diseases, The Kids Research Institute Australia, Nedlands, Australia;

⁵School of Medicine, University of Western Australia, Crawley, Australia;

⁶Department of Infectious Diseases, Perth Children's Hospital, Nedlands, Australia;

⁷Department of Dermatology, Perth Children's Hospital, Nedlands, Australia

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CORRESPONDING AUTHOR

Dr. Dasmesh Singh Sron,
Department of Dermatology,
Fiona Stanley Hospital,
Murdoch, WA, 6150,
Australia
tel: (08) 6152 2222
e-mail: Dasmeshsron@gmail.com

ABSTRACT

Tinea capitis (TC) is a dermatophytic fungal infection that infects the scalp predominantly in children resulting in both physical and psychosocial impacts. Refugee children have increased risk factors for infection due to factors related to overcrowding, sharing of grooming items or reduced sanitation access during transit and decreased access to healthcare services. This systematic review examined the burden of tinea capitis in paediatric refugee populations until September 2025. Of 449 studies screened, 6 were included for review. Four studies were from the Middle East region and two studies were from Australia. Overall, our study highlights the limited refugee-specific evidence on Tinea capitis in paediatric populations but published studies span over two decades and reveal a lack of recent, systematic epidemiological data. Higher infection rates were found in younger children and males, particularly among those of African descent. Rates of infection ranged from 0.43–1.06% in the Middle East to 9–15% in Australia. *Trichophyton violaceum* was the predominant pathogen with an increasing burden among displaced children. Strengthened surveillance and integration of fungal screening through skin checks into refugee health assessments are needed to improve early detection, treatment, and reduce health inequity.

1. Introduction

Tinea capitis is a fungal scalp infection caused by dermatophytes. It is most common in children, due to close contact with peers and household members increasing contagion, and underdeveloped sebaceous activity reducing the protective effect of sebum. (1). Clinically, it presents with patchy alopecia, scalp scaling, and sometimes inflammatory lesions such as kerion (2). The most common causative organisms are *Trichophyton* and *Microsporum* species, though distribution varies with geography and migration patterns (3). Globally, it is one of the most common communicable childhood skin infections, with prevalence in some regions exceeding 20–30% (4). Beyond physical symptoms, tinea capitis can cause embarrassment, stigma and school absenteeism, reducing self-esteem and affecting academic performance and peer relationships (5). It may also predispose to secondary bacterial infection, which can lead to complications including invasive infection, acute rheumatic fever, poststreptococcal glomerulonephritis and chronic kidney disease (6).

Prevalence varies widely and is influenced by region,

climate, crowding and socioeconomic factors. Fungal skin infections remain among the most common conditions in children globally, with prevalence above 20% in some low- and middle-income regions (1). In high-income countries, outbreaks occur in schools and immigrant communities, typically caused by *Microsporum canis* and *Trichophyton* species (1).

Children and adolescents make up over half of the global refugee population (7). Those in refugee and displaced settings face overlapping risk factors that heighten susceptibility, including shared beds and clothing, proximity to animals, limited access to clean water and sanitation, and poor housing (4). Sharing grooming products and close physical contact further promotes transmission, reported in some immigrant and displaced communities (3). Frequent relocation, limited primary care access, language barriers and low health literacy also hinder treatment and increase spread (8).

This paper aims to assess the burden of tinea capitis in paediatric refugee populations.

2. Methods

The systematic review was registered on PROSPERO (international prospective register of systematic reviews) at the National Institute for Health Research and Centre for Reviews and Dissemination (CRD) at the University of York.

This systematic review has been conducted using stan-

dard methodology and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) 2020 statement checklist ([Appendix A](#)).

Eligibility criteria

Primary observational studies with epidemiological data on tinea capitis in refugee cohorts were eligible for inclusion. This included all population based, cross sectional and/or cohort studies (both prospective and retrospective), with both population and institutional based studies considered. Studies with clinically or mycologically proven tinea capitis were included. In studies that reported tinea capitis in conjunction with other tinea infections (ie tinea corporis), efforts were made to obtain original data sets to see if separated data

were available. If not possible, and where a clear distinction could not be established, the study was excluded. Children/young people were defined as those below the age of 24 years (9) and refugees defined as a person who has been forced to flee their country to escape conflict, violence, or persecution and have sought safety in another country (10).

There was no restriction on geographical or countries income levels.

Information sources

Literature searches were conducted using various national electronic databases including MEDLINE (Ovid), Embase (Ovid), Emcare (Ovid), Web of science and PubMed. The reference list of all included articles

was hand-searched for additional manuscripts. Google scholar, BASE and MedNar were used to identify grey literature.

Search strategy

The search was limited to studies published in the English language. A predefined search strategy adapted

for MEDLINE is provided, with the search last conducted in September 2025 (See [Appendix B](#)).

Selection process

Duplicate records were removed before two independent investigators (DS and HC) working separately reviewed titles and abstracts for their relevance. Any

discrepancies between investigators were resolved by a senior investigator (BR).

Data collection process

Independent data extraction was completed (DS and HC) on all papers meeting the inclusion criteria.

Data items

Data was extracted for the primary outcome of tinea capitis disease frequency (proportion, prevalence and incidence). Where available the secondary outcomes of clinical features, risk factors, close contacts, comorbidities, complications and culture were extracted. Data

was sought for the variables of study period, diagnostic criteria, age range, sex, ethnicity, population location, country of origin of the refugee population and method of data collection.

Risk of bias assessment

Where relevant, two authors (DS and HC) independently appraised the studies, reporting prevalence data using the Joanna Briggs Institute (JBI) appraisal checklist ([Appendix C](#)).

3. Results

Study selection

In total, 438 studies were identified with 11 duplicates removed. Of the 438 screened articles, 409 were removed. Full text of two papers could not be retrieved and following full text review of the remaining 27 papers, 21 were excluded. Grey literature and citation searching did not reveal any further articles for inclu-

sion. Overall, six manuscripts were included for review and from three countries over a 27-year period (Fig. 1, Table I).

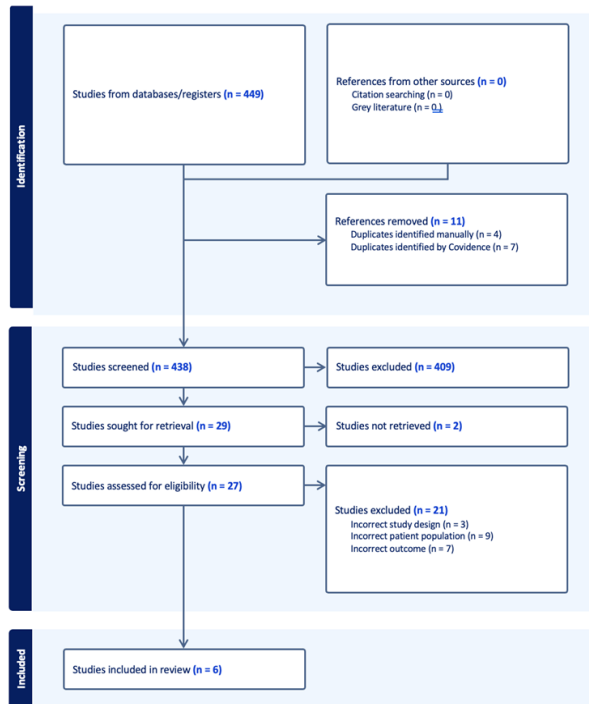


Fig. 1. Flowchart of systematic review according to the PRISMA 2020 statement.

Table I. Number of articles on tinea capitis based on country, year and refugee population characteristics.

Author	Country	Year	Region	Refugee Population – Ethnic characteristics
Ali-Shtayeh et al. (11)	Palestine (West bank)	1996	Middle East	No further demographic information given about ethnic origin of refugee population
Ali-Shtayeh et al.(12)	Palestine (West bank)	1998	Middle East	No further demographic information given about ethnic origin of refugee population
McPherson et al. (13)	Australia	2005	Oceania	Arabic 41.6%, Sudanese 21.5%, Dari 13.7%, Asian 11.1%, Other African 6.5%, Other 4%, 1.6% (not stated)
Mutch et al. (14)	Australia	2012	Oceania	Sudanese 32.7%, Burmese 15%, Other African 49.6%), Afghani (0.6%), Iraqi (0.6%), Iranian (0.2%), Sri Lankan (0.1%), Serbian (0.1%)
Mashiah et al. (15)	Israel	2011-2014	Middle East	African Refugee population – Eritrean (86.9%), Other African (13.1%)
Kaseem et al. (16)	Israel	2023	Middle East	African Refugee population – Eritrea and Republic of Sudan (no percentage breakdown given)

Tinea capitis

Six studies were included: four from the Middle East and two from Australia (Table II). The Middle Eastern studies comprised two cross-sectional surveys from refugee schools in the West Bank (11, 12) and two retrospective reviews from the Tel Aviv Medical Centre, Israel (15, 16). The Australian studies were prospective longitudinal studies – one in a refugee school in Melbourne (13) and one in a refugee clinic in Perth (14).

Four studies reported ethnicity, showing predominance of African refugee children (43.5–100%), with smaller representations of Afghani, Iraqi, Iranian, Sri Lankan, and Serbian backgrounds (13-16). Diagnosis of TC was based on clinical suspicion with microbiological confirmation in five studies (11-13, 15-16), and on clinical findings alone in one (14).

Four of the six studies reported age-related data, con-

sistently showing higher TC risk among younger children. One study found the highest incidence among children aged 6–10 years (1.2–1.6%) compared with 10–14 years (0.2–0.7%) (11). Another reported 81.8% of TC cases occurred in children aged 10–12 years (12). A third study identified a peak prevalence at 9 years (26.1%), followed by 6 and 11 years (17.4%) and 8 and 10 years (13.0%) (13). More recently, the average age of infected refugee children was 2.5 years younger than non-refugee Israeli children—3.97 vs 6.1 years in girls and 3.7 vs 6.58 years in boys (15). Collectively, data from 1998 to 2023 support that younger refugee children are at increasingly higher risk of TC than their older counterparts.

Table II. *Tinea capitis* in refugee children populations, study characteristics and findings.

Author, Site, Country	Age range	Study period	Study design	Participants	M/F (%)	Diagnostic criteria	Proportional	Incidence data	Prevalence data (over study period)	Causative Dermatophyte
Ali-Shtayeh et al. West Bank Palestine (11)	6 – 14 years	January - June 1994	School-children cross-sectional study Clinic children prospective study	2252 school children, 117 clinic children (mix of refugee, rural, and urban)	69.3/30.7** (estimate based on overall population)	Clinical inspection Direct microscopy and culture	School children - 32% (24/75), Clinic children - 22.5% (20/89)	-	24/2252 (1.06%) <i>in school children</i>	In school children: T. violaceum (54.2%) M. canis (41.7%) T. schoenleinii (4.1%) In clinic children: T. violaceum (65%) M.canis (25%), T.mentagrophytes (10%), T.schoenleinii (1.13%)
Ali-Shtayeh et al. West Bank Palestine (12)	6-14 years	October 1998 - May 1999 (examined at 3 monthly interval)	Cross-sectional study	2572	72.7/23.5	Clinical inspection Direct microscopy and culture Hair brushings cultured for asymptomatic carriage rates	Tinea capitis - 47% (11/23) Carrier – 37.5% (12/32)	-	11/2572 (0.43%) – 8 boys (0.59%), 3 girls (0.25%) <i>Asymptomatic carriage rates - 12/788 (1.52%)</i>	T. violaceum (90.9%) M. canis (9.1%)

Author, Site, Country	Age range	Study period	Study design	Participants	M/F (%)	Diagnostic criteria	Proportional	Incidence data	Prevalence data (over study period)	Causative Dermatophyte
Mashiah et al. Tel Aviv Medical Centre Israel (15)	7 months – 10 years	Jan 2011 – Dec 2014	Retrospective study	130	70/30	Skin scraping and hair sample for direct microscopy and culture	Overall 130/145 (89.7%)* 2011 – 4/6 (66.7%) 2012 – 18/22 (81.8%) 2013 - 15/20 (75%) 2014 – 93/97 (95.8%) *100% TC in population group (89.7%)* 2011 – 4/6 (66.7%) 2012 – 18/22 (81.8%) 2013 - 15/20 (75%) 2014 – 93/97 (95.8%) *100% TC in population group	Overall new cases per year: 2011 – 4 2012 – 18 2013 – 15 2014 – 93	-	T viola-ceum (48.5%) M audouinii (44.6%) M Canis (3%)
McPherson et al. Melbourne Australia (13)	5-12 years	November 2005 – 2 studies a fortnight apart	Prospective study	153	52/48	Clinical examination, microbiological specimen taken from scalp/hair of suspicious areas	23/153 (15.0%) *22/23 have ethnicities listed	-	-	T soudanese (47.8%) M audouinii (26.1%) T violaceum (17.4%) Both T Soudanese and T violaceum (8.7%)
Mutch et al. Western Australia Australia (14)	2 months – 17.3 years	March 2006 – December 2008	Prospective study	1026	-	Symptom history and clinical exam	93/1026 (9.1%)	-	-	-
Kassem et al. Israel (16)	2 months – 13 years	Jan 2004 – Jan 2020	Retrospective, population-based cohort study	1861	61.4/38.6%	Clinical and mycological diagnosis	1861/3358 (55.4%)	-	-	Trichophyton (95%) -Trichophyton violaceum (85%)

Two studies from the Nabulus Area in the Middle East compared the prevalence in rural, refugee, and urban groups. One study showed TC was the second most common (1.1%) with rural children having the most (1.9%) and urban children the least (0.4%) (11). A second study in a similar population group identified that refugee children had the highest prevalence (0.43%) (12). Similarly, an Israeli study observed a rising proportion of new cases of TC attributed to paediatric refugees between 2011–2014 (66.7% to 95.8%) (15).

Five studies reported male predominance, (52–73%)

(11-13, 15-16) and one did not specify gender (14). Two studies also reported asymptomatic dermatophyte carriage in refugee children, ranging from 1.5% to 5.8% (12, 13).

Five studies identified the causative organisms (11-13, 15, 16). *Trichophyton violaceum* was predominant (48–95%) (11, 12, 15, 16), followed by *Microsporum audouinii* (26–45%) (13, 15) and *M. canis* (3–42%) (11, 12, 15), *T. soudanense* was the most common in one study, (13) and *T. schoenleinii* was occasionally isolated (11).

One Israeli study had incidence data on new cases of TC per year in the paediatric population increasing from four in 2011 to 93 in 2014 (15). Importantly, the overall population was not stated so percentage increases could not be obtained, however it supports the rise in morbidity in this region.

Overall data was limited and heterogeneous, precluding meta-analysis. Middle Eastern cross-sectional studies reported TC prevalence between 0.43–1.06% (11, 12), while Australian data from the proportion of those with TC positive cases from paediatric refugees referred for assessment showed much higher rates of 9–15%

4. Discussion

This review highlights the limited refugee specific evidence on TC in paediatric populations. Despite the scarcity of the data, the studies appraised revealed these key findings:

1. Primary school aged children had the highest TC

Global context and relevance to refugee populations

Placing the results of this review in the broader global context shows that TC is consistently over-represented in refugee and immigrant populations. A recent systematic review of infectious dermatological conditions in adult and paediatric refugee groups identified fungal infections as the most common type, highlighting the disproportionate burden of superficial mycoses in refugee children (17). Epidemiological reports reinforce this pattern: an Israeli study found 84% of African refugee children with scalp scale were culture-positive for dermatophytes, mainly *T. violaceum* (18). Another Israeli analysis reported 40–50 paediatric TC cases annually with a median age of 6 years, showing a sustained

Burden of disease

From the two included Middle Eastern cross-sectional studies, TC prevalence among refugee children ranged from 0.43–1.06% (11). Initially, rates were intermediate between rural and urban groups (rural 1.9%, refugee 1.1%, urban 0.4%), but later data showed the highest prevalence in refugee populations (0.43% vs 0.2% in rural and urban groups) (12), suggesting an increasing burden over time.

Higher burden in refugee populations aligns with data from countries of origin, where endemicity is greater. A study from Gondor, Ethiopia reported 29.4% TC prevalence among schoolchildren, with younger age, ani-

(13, 14). Proportional data from Israel showed the percentage of TC attributed to paediatric refugees ranging from 55.4% - 89.7 (15, 16).

The risk of bias assessment was completed using the JBI critical appraisal tool where both reviewers DS and HC independently assessed and collated a score for each article with the consensus scoring reported ([Appendix C](#)). All articles were deemed appropriate for inclusion.

burden;

2. Refugee populations had higher TC burden than non-refugees;

3. There was a slight male predominance.

burden (19). In Greece, after the 2015 refugee influx, refugee and immigrant children accounted for 30–35% of paediatric TC (3). In Australia, a Western Australian refugee clinic audit found 9.1% of newly arrived children had TC at first assessment (14). Broader reviews of dermatological disease in refugee camps report that 5–25% of presentations were skin-related, with fungal infection prevalence ranging from 7.9–37.8% in high-density camp environments (20). Collectively, these findings demonstrate the heightened vulnerability of refugee children to TC and emphasises the importance of examining its burden more closely.

mal contact and crowding as major risk factors (21). A meta-analysis of over 9,400 Ethiopian schoolchildren showed a pooled prevalence of 29%, confirming a large disease reservoir (4). Outside Africa, prevalence is lower but clinically significant: paediatric dermatology clinics in Athens reported 2–4% annual TC prevalence between 2012–2019, with higher rates during increased immigration (3).

Across studies, TC was more common in younger children, with much lower rates above age 12 (11–13, 15). A meta-analysis showed children under 10 had 1.65 times higher odds of TC (4). Risk drivers include

immature sebaceous activity, close contact, shared grooming, animal exposure and limited healthcare access.

Asymptomatic dermatophyte carriage was higher in refugee children (1.5%) compared with rural (0.7%) and urban (0.5%) groups (12), and reached 5.8% in one Australian study (13). Carrier prevalence correlated with community TC rates and contributed to household clustering, especially among siblings (13). Larger families and classrooms also showed higher prevalence, supporting the value of early household and school-based screening (11, 12).

Israeli studies reported increased TC cases among refugee children from 66.7% to 95.8% over three years, with higher incidence than non-refugee groups (22). Males were more frequently affected, consistent with global patterns (3).

Causative dermatophytes

T. violaceum was the predominant pathogen in Middle Eastern refugee cohorts (17, 18, 20), consistent with regional data showing it as the leading cause among 76 paediatric refugees in Israel in 2016–17 (18) and across African/Middle Eastern migrant groups (16). In contrast, one Australian study identified *T. soudanense* as most common, with *T. violaceum* third (13). The predominance of *T. violaceum* reflects the high proportion of African refugee children. In Israel, Ethiopian children

Two Australian studies reported higher TC proportions (9.1–21%) (13–14) than Middle Eastern data, mirroring African prevalence estimates (23–29%) (4, 23). These findings likely reflect national screening guidelines (24) and migration patterns prioritising resettlement of African refugees (25, 26). Clustering within newly arrived groups likely reflects spread in communal housing and schools, consistent with broader infection trends during resettlement (27). Within the Australian context, refugee families are resettled in temporary housing initially for the first 1-2 months, then relocated to more stable housing (6-12 month leases). Families are not colocated with other families or groups, reducing the risk of over-crowding and inter-family transmission, however intra-family spread may still occur.

(<2% of the population) accounted for 16% of TC cases (19). Similar shifts have been reported across Europe and the US, where refugee arrivals have altered pathogen patterns towards *T. violaceum* and *T. tonsurans* (4, 28–30). These findings demonstrate migration's influence on dermatophyte epidemiology and the need for routine skin checks in refugee children. Diagnostic challenges related to skin of colour further reinforce this need (31).

Limitations

Our study has several limitations. Firstly, there was significant heterogeneity in the data available not allowing for any meta-analysis. Only two papers had prevalence data and the overall number of papers included in the study was small. The included papers only represented two different world regions in the Middle East and Australia which may not be reflective of the broader global context and impact the generalisability of the

results found. Whilst TC appears to disproportionately impact refugee children of African ethnicity, the lack of prevalence data from African countries (including transit countries) did not enable direct comparative analyses. Time intervals between the included studies varied significantly as did study settings and refugee screening protocols in addition to laboratory investigations and microscopy.

5. Conclusion

Tinea capitis remains an under-recognised yet important burden among paediatric refugee populations, with evidence limited to a few studies from the Middle East and Australia. Although overall prevalence rates appear modest, younger children and boys are disproportionately affected. The predominance of *T. violaceum* has been observed, consistent with the organism's endemi-

city in African regions, highlighting the role of migration in shaping dermatophyte epidemiology.

Our findings highlight the need for strengthened epidemiological surveillance and integration of fungal infection screening and skin checks into refugee health assessments, which are recommended in some countries (32). This will improve early detection, treatment,

and prevention of TC. Addressing tinea capitis within refugee health frameworks offers an opportunity to reduce health inequities and prevent avoidable morbidity among paediatric refugee populations.

Key Points:

- There remains limited current epidemiological data on tinea capitis in paediatric refugee populations however we show that from the available data tinea capitis remains an important burden amongst this population group that should be addressed;

- Younger children and boys remain disproportionately affected, and causative organisms are likely reflective of the endemicity of the country of origin of refugee;
- There remains a need for further epidemiological surveillance and screening to ensure that refugee health assessments can reduce the burden of tinea capitis in refugee populations;
- Delayed access to healthcare or misunderstanding of different treatments available in arrival country may undermine efforts to treat and prevent onwards transmission.

References

1. Hay RJ, Johns NE, Williams HC, et al. The Global Burden of Skin Disease in 2010: An Analysis of the Prevalence and Impact of Skin Conditions. *Lancet Infect Dis.* 2017;17(9):1063–1072.
2. Fuller LC, Child FJ, Midgley G, Higgins EM. Scalp ringworm in south-east London and an analysis of a cohort of patients from a paediatric dermatology clinic. *Br J Dermatol.* 2003;148(5):985–988.
3. Charpantidis S, Siopi M, Pappas G, et al. Changing epidemiology of tinea capitis in Athens, Greece: the impact of immigration and review of literature. *J Fungi.* 2023;9(7):703.
4. Birhanu MY, Temesgen H, Ketema DB, Desta M, Getaneh T, Bekele GM, Zeleke B, Jemberie SS. Tinea capitis among schoolchildren in Ethiopia: A systematic review and meta analysis. *Plos one.* 2023 10;18(2):e0280948.
5. Alshammari SA, Alharbi AA, Alajmi AM, et al. Psychosocial impact of dermato-phytosis among school-aged children: a cross-sectional study. *Int J Environ Res Public Health.* 2021;18(14):7491.
6. Ricciardo BM, Kessar HL, Cherian S, Kumarsinghe SP, Amgarth-Duff I, Sron D, Oladokun R, Tatian AH, Bowen AC. Healthy skin for children and young people with skin of colour starts with clinician knowledge and recognition: a narrative review. *Lancet Child Adolesc Health.* 2025;9(4):262–73.
7. United Nations High Commissioner for Refugees. UNHCR Figures at a Glance. Geneva: UNHCR; 2018. Available from: <https://www.unhcr.org/figures-at-a-glance.html> [accessed 26 November 2025].
8. Davidson N, Skull S, Burgner D, Kelly P, Raman S, Silove D, et al. An issue of access: delivering equitable health care for newly arrived refugee children in Australia. *J Paediatr Child Health.* 2004;40(9-10):569–75.
9. World Health Organization. Adolescent Health World Health Organization 2025 [Available from: <https://www.who.int/southeastasia/health-topics/adolescent-health>].
10. The-United-Nations-Refugee-Agency. Emergency Handbook UNHCR; [cited 2025]. [Available from: <https://emergency.unhcr.org/protection/legal-framework/refugee-definition>].
11. Ali-Shtayeh MS, Arda HM, Abu-Ghdeib SI. Epidemiological study of tinea capitis in schoolchildren in the Nablus area (West Bank) Zur Epidemiologie der Tinea capitis bei Schulkindern im Raum Nablus (West Bank). *Mycoses.* 1998;41(5-6):243–8.
12. Ali-Shtayeh MS, Salameh AA, Abu-Ghdeib SI, Jamous RM, Khraim H. Prevalence of tinea capitis as well as of asymptomatic carriers in school children in Nablus area (Palestine) Häufigkeit von Tinea capitis und asymptomatischen Trägern bei Schulkindern in der Nablus-Region (Palästina). *mycoses.* 2002;45(5-6):188–94.
13. McPherson ME, Woodgyer AJ, Simpson K, Chong AH. High prevalence of tinea capitis in newly arrived migrants at an English-language school, Melbourne, 2005. *Med J Aust.* 2008;189(1):13–6.
14. Mutch RC, Cherian S, Nemba K, Geddes JS, Rutherford DM, Chaney GM, et al. Tertiary paediatric refugee health clinic in Western Australia: analysis of the first 1026 children. *J Paediatr Child Health.* 2012;48(7):582–7.
15. Mashiah J, Kutz A, Ben Ami R, Savion M, Goldberg I, Gan Or T, et al. Tinea capitis outbreak among paediatric refugee population, an evolving healthcare challenge. *Mycoses.* 2016;59(9):553–7.
16. Kassem R, Barzilai A, Baum S, Kempfner A, Pavlitsky F. Improved effectiveness of an increased dose of griseofulvin for treating Tinea capitis among refugee children in Israel: A retrospective cohort study. *Mycoses.* 2023;66(12):1064–70.

17. Burke OM, Yang S, Beer J, Htet KZ, Elman SA. Infectious Dermatological Conditions Among Refugee and Immigrant Populations: A Systematic Review. *Int J Dermatol*. 2025. doi: 10.1111/ijd.70042. Epub ahead of print.
18. Kassem R, Shemesh Y, Nitzan O, Azrad M, Peretz A. Tinea capitis in an immigrant pediatric community; a clinical signs-based treatment approach. *BMC Pediatr*. 2021;21(1):363.
19. Dascalu J, Zaaroura H, Renert-Yuval Y, Khamaysi Z, Avitan-Hersh E, Friedland R. Pediatric Tinea Capitis: A Retrospective Cohort Study from 2010 to 2021. *J Fungi (Basel)*. 2023;9(3).
20. Maju M, Siddiqui N, Dunlop-Korsness K, Brandt-Flores C, Emery E, Valladares HC. Dermatologic disease prevalence in refugee camps: a scoping review. *Discover Soc Sci Health*. 2025;5(1):1–13.
21. Alemu TG, Alemu NG, Gonete AT. Tinea capitis and its associated factors among school children in Gondar town northwest, Ethiopia. *BMC Pediatr*. 2024;24(1):448.
22. Bar J, Samuelov L, Sprecher E, Mashiah J. Griseofulvin vs terbinafine for paediatric tinea capitis: When and for how long. *Mycoses*. 2019;62(10):949–53.
23. Bongomin F, Olum R, Nsenga L, Namusobya M, Russell L, de Sousa E, et al. Estimation of the burden of tinea capitis among children in Africa. *Mycoses*. 2021;64(4):349–63.
24. Murray RJ, Davis JS, Burgner DP. The Australasian Society for Infectious Diseases guidelines for the diagnosis, management and prevention of infections in recently arrived refugees: an abridged outline. *Med J Aust*. 2009;190(8):421-5.
25. Department-of-Immigration-and-Citizenship. Annual report 2008-09 2009 [Available from: <https://www.homeaffairs.gov.au/reports-and-pubs/Annualreports/diac-annual-report-2008-09.pdf>].
26. Department-of-Immigration-and-Citizenship. Annual Report 2006–07 [updated 2007]. Available from: <https://www.homeaffairs.gov.au/reports-and-pubs/Annualreports/diac-annual-report-2006-07.pdf>.
27. Hay RJ. Fungal Infections. *Rook's Textbook of Dermatology*. p. 1–106.
28. Grigoryan KV, Tollefson MM, Olson MA, Newman CC. Pediatric tinea capitis caused by *Trichophyton violaceum* and *Trichophyton soudanense* in Rochester, Minnesota, United States. *Int J Dermatol*. 2019;58(8):912–915. doi: 10.1111/ijd.14352
29. Mapelli ETM, Cerri A, Bombonato C, Menni S. Tinea capitis in the Paediatric population in Milan, Italy: the emergence of *Trichophyton violaceum*. *Mycopathologia*. 2013;176(3–4):243–246. doi: 10.1007/s11046-013-9637-0.
30. Bhanusali D, Coley M, Silverberg JI, Alexis A, Silverberg NB. Treatment outcomes for tinea capitis in a skin of color population. *J Drugs Dermatol*. 2012;11(7):852–6.
31. The Australian Healthy Skin Consortium. National Healthy Skin Guideline: for the Diagnosis, Treatment and Prevention of Skin Infections for Aboriginal and Torres Strait Islander Children and Communities in Australia (2nd edition), 2023.
32. Chaves NJ, Paxton GA, Biggs BA, Thambiran A, Gardiner J, Williams J, Smith MM, Davis JS. The Australasian Society for Infectious Diseases and Refugee Health Network of Australia recommendations for health assessment for people from refugee-like backgrounds: an abridged outline. *Med J Aust*. 2017;206(7):310-5.