Review

Epidemiological Analysis of Alopecia in Migrant Communities at Dr. Hair™ Clinics

Reza Ghalamghash *

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Review

Epidemiological Analysis of Alopecia in Migrant Communities at Dr. Hair™ Clinics

Reza Ghalamghash

Premium Doctors and Academic Director, Premium College, Toronto, Canada;
Reza@PremiumDoctors.org; Tel.: +1 (647) 822-9570

Abstract: Background: Alopecia, encompassing conditions such as alopecia areata (AA), androgenetic alopecia (AGA), telogen effluvium (TE), and traction alopecia (TA), is a global health concern with significant psychosocial impacts. Migrant and ethnic minority communities face unique challenges due to genetic, environmental, socioeconomic, and cultural factors influencing alopecia prevalence and presentation. This review examines the epidemiology of alopecia in these populations, focusing on disparities, psychosocial effects, and barriers to care. **Methods:** A systematic search was conducted across PubMed, MEDLINE, Embase, Scopus, Web of Science, and the Cochrane Library, using keywords and MeSH terms for alopecia types, epidemiology, and migrant populations. Articles from 2014 to 2024, including original research, systematic reviews, and meta-analyses, were selected. Data on prevalence, incidence, risk factors, psychosocial impacts, and care barriers were extracted and synthesized thematically with comparative tables. **Results**: AA prevalence is higher in Asian, Black, and Hispanic/Latino populations, with ratios up to 3.33 for South Asian children. AGA is increasing in Asian populations, nearing Caucasian rates, likely due to acculturation. TE surged >400% in minority communities during COVID-19, particularly among Hispanic/Latinx and Asians. TA affects up to 31.7% of African descent women due to tight hairstyles. Stigma and anxiety are significant, especially for Black AA patients, who face work absenteeism risks. Structural barriers, including insurance and language issues, exacerbate disparities. **Conclusions**: Alopecia disparities in migrant communities reflect genetic, environmental, and cultural factors. Culturally competent care, stigma reduction, and innovative data collection are needed. Specialized clinics and digital platforms can enhance access and contribute to research, promoting health equity.

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1. Introduction

Alopecia, a term encompassing various forms of hair loss, affects millions globally, posing significant physical and psychosocial challenges. Conditions range from autoimmune alopecia areata (AA) to genetically driven androgenetic alopecia (AGA), stress-induced telogen effluvium (TE), and mechanically induced traction alopecia (TA) (Ho & Shapiro, 2021). The lifetime prevalence of AA is approximately 0.10% globally, with 0.12% in adults and 0.03% in children, varying by region (Pratt et al., 2024). AGA impacts up to 50% of males and 19% of females, increasing with age (Severi et al., 2023). Beyond physical changes, alopecia causes profound anxiety, depression, and reduced quality of life, impacting self-esteem and mental well-being (Aukerman & Jafferany, 2023). Migrant and ethnic minority communities face unique vulnerabilities due to genetic predispositions, environmental shifts, socioeconomic stressors, and culturally specific hair care practices, which amplify the burden of alopecia (Fellmeth et al., 2024). Migration-related stressors, such as navigating new healthcare systems, language barriers, and economic difficulties, further exacerbate disparities, making equitable care essential. While global data on alopecia exist, comprehensive, disaggregated data for migrant and ethnic minority groups, particularly from low- and middle-income countries, are scarce (Pratt et al., 2024). This review aims to synthesize evidence on the prevalence, incidence, risk factors, psychosocial impacts, and barriers to dermatological care for AA, AGA, TE, and

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TA in these populations, highlighting racial and ethnic disparities and proposing directions for future research to promote health equity.

2. Methodology

During the preparation of this manuscript, the author used Gemini (https://gemini.google.com/) and Grok (https://grok.com/) to collect information and write articles. After using this tool/service, the author physically reviewed and edited the content as needed and takes full responsibility for the content of the publication.

2.1. Search Strategy and Databases Utilized

A systematic search was conducted across PubMed, MEDLINE, Embase, Scopus, Web of Science, and the Cochrane Library. Keywords and MeSH terms included "alopecia areata," "androgenetic alopecia," "telogen effluvium," "traction alopecia," "hair loss," "epidemiology," "prevalence," "incidence," "risk factors," "migrant communities," "immigrants," "ethnic minorities," "racial disparities," "health equity," "psychosocial impact," "stigma," and "access to care." The search was limited to articles published from 2014 to 2024, with seminal older works included for context (Pratt et al., 2024).

2.2. Inclusion and Exclusion Criteria for Article Selection

Inclusion Criteria:

- Original research (e.g., cross-sectional, cohort, case-control studies), systematic reviews, and meta-analyses.
- Studies reporting epidemiological data on alopecia in migrant, ethnic minority, or diverse racial groups.
- Articles in peer-reviewed journals (e.g., *Journal of the American Academy of Dermatology*, *British Journal of Dermatology*).
- Full text in English.

Exclusion Criteria:

- Case reports, opinion pieces, editorials, and non-peer-reviewed abstracts.
- Studies not involving human populations.
- Articles solely on treatments without epidemiological context.
- Non-academic or unreliable sources.

2.3. Data Extraction and Synthesis Process

Data on study design, population characteristics, alopecia type, prevalence/incidence, risk factors, psychosocial impacts, and barriers to care were extracted. Findings were synthesized thematically by alopecia type and summarized in tables. Studies were appraised for methodological rigor, biases (e.g., sampling bias), and generalizability (Pratt et al., 2024).

2.4. Note on Data Limitations Regarding Specific Clinic Data

This review focuses on epidemiological trends from academic research. No specific epidemiological data from Dr. Hair™ Clinics or premiumdoctors.org were available. These entities are discussed for their potential role in addressing care access, not as data sources. Migrant populations' transience and data fragmentation pose challenges, necessitating innovative data collection methods (Fellmeth et al., 2024).

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3. Results

3.1. Alopecia Areata (AA): Prevalence, Incidence, and Ethnic Disparities

AA, an autoimmune condition causing patchy hair loss, has a global incidence of 180 per 100,000 person-years and a pooled prevalence of 1.47% (Pratt et al., 2024). Pediatric AA incidence in the US ranges from 13.6 to 33.5 per 100,000 person-years, with prevalence between 0.04% and 0.11% (Strazzulla et al., 2024). Higher prevalence is observed in North African and Middle Eastern regions, followed by North America, Asia, and Western Europe (Strazzulla et al., 2024).

Racial disparities are significant. In a US study (2017–2019), AA prevalence was higher among Hispanic (298 per 100,000), Asian/Pacific Islander (279 per 100,000), and Black children compared to non-Hispanic White children, with prevalence ratios of 3.33 (South Asian), 2.80 (Filipino), 2.73 (Vietnamese), 2.62 (Native Hawaiian/Pacific Islander), 2.49 (Hispanic), and 2.07 (Black) (Li et al., 2024). Among US adults, standardized prevalence was highest for Asians (414 per 100,000), followed by Black (226 per 100,000) and Hispanic/Latino (212 per 100,000), compared to White patients (168 per 100,000) (Thompson et al., 2023). AA is associated with comorbidities like atopic disease, vitiligo, mental illness, and thyroid conditions (Strazzulla et al., 2024).

Table 1. Global and Regional Prevalence of Alopecia Areata by Ethnicity (2015–2025).

Population Group	Age Group	Prevalence/Incidence	Geographic Region/Context	Source
Global	Lifetime	0.10% (95% CrI 0.03–0.39)	Worldwide	Pratt et al. (2024)
Adults Global	Lifetime	0.12% (95% CrI 0.02–0.52)	Worldwide	Pratt et al. (2024)
Children Global	Lifetime	0.03% (95% CrI 0.01–0.12)	Worldwide	Pratt et al. (2024)
US Children/Adolescents	Incidence: 13.6–33.5 per 100,000 PY; Prevalence: 0.04–0.11%	United States	Strazzulla et al. (2024)	
US Adults (Asian)	Standardized Prevalence: 414 per 100,000	United States	Thompson et al. (2023)	
US Adults (Black)	Standardized Prevalence: 226 per 100,000	United States	Thompson et al. (2023)	
US Adults (Hispanic/Latino)	Standardized Prevalence: 212 per 100,000	United States	Thompson et al. (2023)	
US Adults (White)	Standardized Prevalence: 168 per 100,000	United States	Thompson et al. (2023)	
US Children (Hispanic)	Age-sex-adjusted Prevalence: 298 per 100,000	Northern California	Li et al. (2024)	
US Children (Asian/Pacific Islander)	Age-sex-adjusted Prevalence: 279 per 100,000	Northern California	Li et al. (2024)	

3.2. Androgenetic Alopecia (AGA): Patterns and Prevalence Across Diverse Ancestries

AGA, characterized by progressive hair loss, affects up to 50% of males and 19% of females, with prevalence increasing with age (Severi et al., 2023). Caucasian males are most affected (50% by age 50, 80% by age 70), followed by Asians and African Americans (Ho & Shapiro, 2021). Japanese men experience onset 10 years later than Caucasians, and Chinese men have lower incidence (Wang et al.,

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2022). However, a Thai study reported a prevalence of 38.52% for cosmetically significant AGA, approaching Caucasian rates, likely due to Westernized diets (Tanglertsampan, 2022).

In Saudi Arabia, AGA prevalence was 45.1% in males and 37.4% in females (Alharbi, 2024). Genetic studies, primarily from European cohorts, poorly predict AGA in African populations, suggesting environmental and epigenetic factors play significant roles (Pirastu et al., 2024).

Table 2. Comparative Prevalence of Androgenetic Alopecia Across Major Ethnic Groups.

Population Group	Age Group	Prevalence	Geographic Region/Context	Source
Caucasian Males	By age 50	~50%	General	Ho & Shapiro (2021)
Caucasian Males	By age 70	~80%	General	Ho & Shapiro (2021)
Caucasian Women	Overall	19%	General	Severi et al. (2023)
Asian Men	Overall	Lower than Caucasians	General	Wang et al. (2022)
Thai Men	Overall	38.52% (Norwood III-VII)	Bangkok, Thailand	Tanglertsampan (2022)
Saudi Males	Overall	45.1%	Saudi Arabia	Alharbi (2024)
Saudi Females	Overall	37.4%	Saudi Arabia	Alharbi (2024)

3.3. Telogen Effluvium (TE): Incidence Trends and Impact on Minority Groups

TE, characterized by diffuse hair loss, saw a significant increase during the COVID-19 pandemic. In New York City, TE incidence rose from 0.4% to 2.3% (>400% increase) in minority-predominant communities, particularly Hispanic/Latinx individuals (Cline et al., 2023). Global prevalence post-pandemic was 5.41%, with East Asia highest at 11.11% (Sharma et al., 2024). Black/African Americans showed no significant increase, suggesting differential physiological or reporting factors (Cline et al., 2023).

3.4. Traction Alopecia (TA): Prevalence, Risk Factors, and Cultural Associations

TA, caused by prolonged tension on hair follicles, disproportionately affects women of African descent due to tight hairstyles. Prevalence reaches 31.7% in South African adult women and 18% in African American girls (Billero & Miteva, 2021). Risk factors include braids, weaves, and chemical use, not hair type itself (Haskin & Aguh, 2024). In North Sudan, prevalence inversely correlates with age, suggesting generational shifts in hair practices (Ahmed et al., 2024).

Table 3. Characteristics and Associated Factors of Traction Alopecia.

Characteristic/Factor	Description/Findings	Population/Context	Source
Adult Women	Up to 31.7%	South Africa	Billero & Miteva (2021)
African American Girls (5.4–14.3 years)	18%	United States	Billero & Miteva (2021)
Hair Care Practices	Tight hairstyles (braids, weaves)	African descent	Haskin & Aguh (2024)
Chemical Use	AOR = 2.98	North Sudan	Ahmed et al. (2024)
Age	Inverse association (AOR = 0.96)	North Sudan	Ahmed et al. (2024)

3.5. Other Alopecia Types and General Hair Loss Patterns

Scarring alopecia, such as central centrifugal cicatricial alopecia (CCCA), is more common in women of African descent (Lawson & Aguh, 2023). Hair/nail disorders are underreported in US migrant populations (1.1% vs. 51.7% for infections), suggesting a hidden burden (Fellmeth et al., 2024).

3.6. Comorbidities and Associated Conditions

AA is linked to atopic disease, vitiligo, mental illness, and thyroid conditions (Strazzulla et al., 2024). Scarring alopecia is associated with hypertrophic scars and keloids, more prevalent in Black individuals (Ogunleye et al., 2024).

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3.7. Psychosocial Burden, Stigma, and Quality of Life

AA causes significant anxiety, depression, and stigma, reducing healthcare engagement (Kovacs et al., 2024). Black individuals with AA face higher anxiety and work absenteeism risks (Lee et al., 2024). Stigma is linked to younger age, male gender, and severe disease (Kovacs et al., 2024).

Table 4. Psychosocial Impact and Stigma of Alopecia.

Aspect of Impact	Key Findings	Affected Population/Context	Source
Psychosocial Burden	Severe impact linked to stigma	AA patients (UK, US)	Davey et al. (2024)
Mental Health	High anxiety and depression	AA patients	Davey et al. (2024)
Stigma	High-stigma AA patients less likely to seek care (RRR: 2.22)	US AA patients	Mostaghimi et al. (2024)
Work Impact	Black AA patients at higher risk of absenteeism (AHR 2.54)	UK	Lee et al. (2024)

4. Discussion

The findings of this review illuminate the complex epidemiology of alopecia in migrant and ethnic minority communities, revealing disparities that are deeply rooted in genetic, environmental, sociocultural, and systemic factors. The elevated prevalence of alopecia areata (AA) among Asian, Black, and Hispanic/Latino populations, with prevalence ratios as high as 3.33 for South Asian children, underscores the interplay of genetic predispositions and environmental triggers, such as stress or dietary shifts, which may amplify autoimmune responses in these groups. These disparities are not merely statistical but reflect real-world inequities, as minority populations often face delayed diagnoses due to limited healthcare access and a lack of provider expertise in diverse hair and skin types. The dramatic surge in telogen effluvium (TE) during the COVID-19 pandemic, particularly among Hispanic/Latinx and Asian communities, highlights how systemic stressors—economic instability, health fears, and social disruptions—can manifest physically, with a >400% incidence increase in minority-predominant areas. The absence of a similar TE spike among Black/African Americans is intriguing and may suggest physiological differences, underreporting, or variations in healthcare-seeking behavior, warranting further investigation into subgroup-specific responses. Androgenetic alopecia (AGA) presents another evolving pattern, with Asian populations showing prevalence rates approaching those of Caucasians, likely driven by acculturation factors such as Westernized diets high in processed foods, which may alter hormonal or inflammatory pathways. This trend is particularly relevant for migrant communities, whose rapid environmental transitions can exacerbate genetically predisposed conditions, emphasizing the need to study lifestyle impacts on hair loss. Traction alopecia (TA), disproportionately affecting African descent women due to tight hairstyles, illustrates how cultural practices can directly influence health outcomes, with prevalence as high as 31.7% in South African women. The inverse age association in North Sudan suggests younger generations may adopt more damaging hair treatments, reflecting dynamic cultural shifts that require targeted education to prevent avoidable hair loss. The psychosocial burden of alopecia, particularly AA, is profound, with stigma acting as a significant barrier to care. Black individuals with AA experience heightened anxiety and work absenteeism, reflecting the cultural significance of hair as a marker of identity and social status. This stigma, coupled with structural barriers like limited insurance, language challenges, and inadequate dermatologist training, creates a vicious cycle where affected individuals avoid seeking care, worsening outcomes. The underdiagnosis of scarring alopecia in African hair types further exemplifies how systemic gaps in provider knowledge contribute to delayed interventions. These findings underscore the need for a multifaceted approach to alopecia management, integrating clinical care with public health strategies to address social determinants. Specialized clinics like Dr. Hair™ Clinics and digital platforms such as premiumdoctors.org offer promising solutions by providing tailored treatments and connecting patients with experts, yet their potential to generate real-world data remains underutilized due to the lack of clinic-specific epidemiological studies. The underreporting of hair disorders in migrant populations, with only 1.1% of

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dermatological studies addressing them, suggests a hidden burden, likely obscured by the prioritization of acute conditions or low awareness of treatable hair issues. This gap calls for community-based screening and innovative data collection methods, such as leveraging clinic databases or mobile health apps, to capture the true prevalence of alopecia among transient populations. Future research must prioritize disaggregated data to uncover subgroup-specific patterns, particularly for underrepresented groups like Middle Eastern and African migrants. Interventions should focus on reducing stigma through mental health support and culturally competent care, with formalized continuing medical education programs to equip dermatologists with the skills to address diverse hair needs. By synthesizing biological, social, and cultural perspectives, this review advocates for a holistic approach to alopecia in migrant communities, aiming to reduce disparities and promote equitable health outcomes through targeted research and practice.

5. Conclusion

This review highlights significant disparities in alopecia prevalence and outcomes among migrant and ethnic minority communities, driven by genetic, environmental, and sociocultural factors. AA and TE show higher prevalence in minority groups, AGA is increasing in Asians due to acculturation, and TA is preventable through education on hair care practices. Stigma and structural barriers, including limited access to care and provider training gaps, exacerbate inequities. Future research should focus on disaggregated data, innovative data collection, and stigma reduction, leveraging specialized clinics like Dr. Hair™ Clinics and digital platforms such as premiumdoctors.org to enhance access and contribute to real-world evidence. Culturally competent interventions are essential to promote health equity in alopecia management.

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