

# Prevalence of oily scalp in women : the situation in the United States versus the rest of the world.

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## 1 Rational

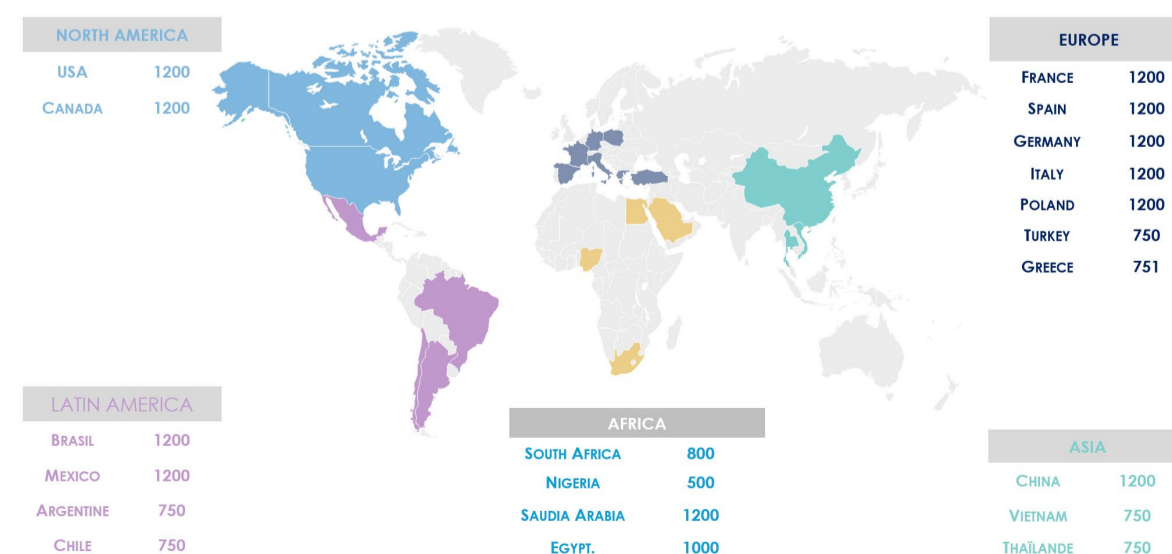
An oily scalp (OS) represents a significant challenge for women, affecting both their aesthetic appearance and hair health. An excess of oil can result in greasy hair, scalp acne, and difficulties in styling the hair, which can in turn affect an individual's self-esteem and confidence.

Despite its prevalence, there is a paucity of large-scale studies examining the prevalence of oily scalp in women. It is imperative that studies on the prevalence of oily scalp be conducted in order to gain a comprehensive understanding of the extent of the issue and to inform the development of targeted interventions designed to promote scalp health and well-being among women. Accordingly, the objective was to conduct a global study on the prevalence of oily scalp in women with regular versus irregular menstruation.

## 2 Methodology

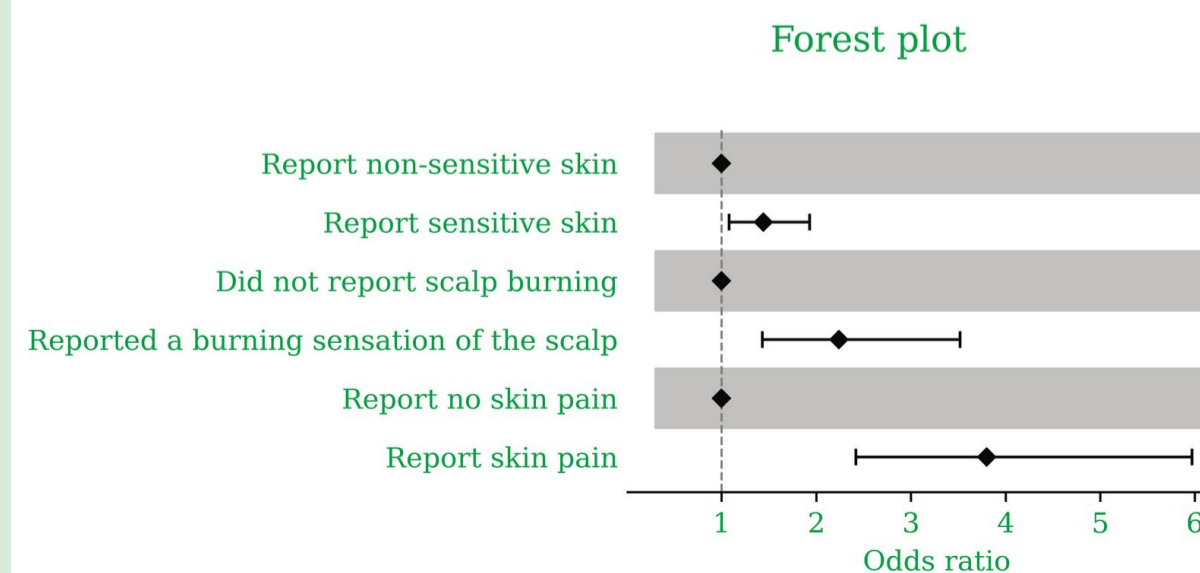
A representative sample of 20,000 women aged 18 to 55 from 20 countries was surveyed using the quota method. The women were also queried about the presence of other symptoms, including sensitive skin, scalp pruritus, burning sensations, and the possible presence of scalp pain.

A p-value of less than 0.05 was considered statistically significant. The statistical analysis was conducted using EasyMedStat (version 3.34.2; www.easymedstat.com), and a p-value of less than 0.05 was considered statistically significant.



## 3 Results

A total of 1,200 AWs were interviewed (18,801 in the rest of the world [RoW]). The AWs exhibited slightly elevated age ( $36.96 \pm 10.68$  vs.  $36.14 \pm 10.45$  years), and 38.33% of them reported irregular menstrual cycles, compared with 37.8% in the rest of the world (RoW). The prevalence of OS was 31% for AW women, compared with 46.7% for RoW women ( $p < 0.001$ ). The prevalence of pruritus (62.9%), scalp pain (37.9%), and dandruff (60.7%) was observed to be lower in American women than in women from the rest of the world (68.2%, 45.9%, 66.7%, respectively;  $p < 0.01$ ). American women with oily scalps were less likely to report irregular menstrual cycles (36.8% vs. 46.5%,  $p < 0.001$ ) than women in other regions. In the US population, women with oily scalps were younger than women with OS ( $33.1 \pm 10.2$  years vs.  $38.7 \pm 10.5$  years) and were more likely to have irregular periods (52.7% vs. 31.8%). One in two respondents (54%) reported having sensitive skin, a figure that was slightly higher than that reported by those who did not have oily scalp (36%). The prevalence of scalp pruritus, burning sensation, and scalp pain was 62.9%, 38.7%, and 37.9%, respectively (32.5%, 8.45%, and 11.2% in the non-OS population). The prevalence of smoking was 34.1%, and 52% of the respondents reported sun exposure of more than two hours per week (compared to 22.9% and 46.3% in the non-OS population). In the multivariate analysis, the following variables were identified associated with higher rates of Oily scalp : smoking (OR=1.1, [1.01 ; 1.2],  $p= 0.0242$ ), irregular periods (OR=1.11, [1.04 ; 1.19],  $p= 0.0025$ ), age <40 years (OR=1.32,  $p < 0.0001$ ), scalp pain (OR=1.95, [1.79; 2.12],  $p < 0.0001$ ) , a burning sensation (OR=2.2, [2.01 ; 2.41],  $p < 0.0001$ ), scalp pain (OR=1.95, [1.79 ; 2.12],  $p < 0.0001$ ), American women exhibited a reduced likelihood of experiencing an oily scalp (OR=0.62, [0.54; 0.72],  $p < 0.0001$ ).



CI - internal use

## 4 Discussion

The findings of this global study offer novel insights into the prevalence of oily scalp in women, particularly with respect to regional variations and associated risk factors. The prevalence of oily scalp in American women (31%) is significantly lower than that observed in other regions of the world (46.7%), suggesting potential differences in hair care habits, lifestyle, or environmental conditions between these regions. Furthermore, American women with oily scalps were less likely to report irregular menstrual cycles compared to women in other regions, which suggests a potential hormonal influence on scalp health. Moreover, the findings indicate that women under the age of 40 are at an elevated risk of developing an oily scalp, which is associated with factors such as smoking and irregular menstruation. In conclusion, this study highlights the disparities in the prevalence of oily scalps worldwide and identifies key risk factors. This information is vital for the development of targeted, personalized interventions to improve women's scalp health. Further research is required to gain a deeper understanding of the underlying mechanisms responsible for these regional and hormonal variations, as well as to evaluate the efficacy of prevention and treatment strategies that are tailored to the specific profiles of different women.

An oily scalp (OS) represents a significant challenge for women, affecting both their aesthetic appearance and hair health. The objective was to conduct a global study on the prevalence of oily scalp in American women [AW] compared to the women of Rest of the World [W-RoW]. We surveyed a representative sample (constructed according to the quota method) of 20,000 women aged 18 to 55 in 20 different countries. A total of 1,200 AW were interviewed (18,801 in the RoW). The prevalence of OS was 31% for AW, compared with 46.7% for W-RoW ( $p < 0.001$ ). The prevalence of scalp pruritus [SP] (62.9%), scalp pain [SPn] (37.9%), and dandruff (60.7%) was observed to be lower in AW than in W-RoW (68.2%, 45.9%, 66.7%, respectively;  $p < 0.01$ ). The prevalence of smoking was 34.1%, and 52% reported sun exposure of more than two hours per week (compared to 22.9% and 46.3% in the non-OS population).

In the multivariate analysis, the following variables were identified associated with higher rates of Oily scalp : smoking (OR=1.1,  $p= 0.0242$ ), irregular periods (OR=1.11,  $p= 0.0025$ ), age <40 years (OR=1.32,  $p < 0.0001$ ), scalp pain (OR=1.95,  $p < 0.0001$ ) , a burning sensation (OR=2.2,  $p < 0.0001$ ), scalp pain (OR=1.95,  $p < 0.0001$ ), American women exhibited a reduced likelihood of experiencing an oily scalp (OR=0.62,  $p < 0.0001$ ). The results underscores the importance of educating women, particularly younger women, about the benefits of adopting healthy lifestyle habits and appropriate hair care practices to prevent excess sebum and its associated aesthetic and health consequences.

The Essentials