ETHNIC DISPARITIES IN FACIAL ACNE SCARRING BETWEEN CAUCASIANS AND ASIANS

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INTRODUCTION

Acne vulgaris, a common inflammatory dermatosis affecting approximately 9.4% of the global population, is one of the most prevalent skin conditions. Its sequelae, particularly scarring, can lead to significant psychological, social, and economic consequences. Although some studies have suggested variations in the clinical expression of scars based on ethnicity, few have specifically compared Caucasian and Asian populations. This study aims to identify demographic, clinical, and psychosocial differences in acne scarring among Caucasian and Asian patients, focusing on sociodemographic characteristics, clinical manifestations, and psychological impact in North American and European contexts.

MATERIELS & METHODS

A cross-sectional observational study was conducted with representative samples of the general population aged 16 and older across 20 countries: Europe (France, Italy, Germany, Poland, Portugal, Spain, Denmark; n=17,500), North America (Canada, United States; n=7,500), and Asia (China, South Korea; n=4,300). Patients diagnosed with acne in the past 12 months by a healthcare professional were selected based on self-reported ethnicity (Caucasians [C], Westernized Asians [AO], and Southeast Asians [ASE]). Participants completed standardized questionnaires assessing demographic data (age, sex), lesion localization, and psychosocial impact

RESULTS

The study included 2,970 adult patients with facial acne: 1,852 Caucasians (C, 62.4%), 150 Westernized Asians (AO), and 968 Southeast Asians (ASE). The mean age was higher in C (34.79 ± 12.85 years) than in AO (29.76 ± 10.84 years) and ASE (33.68 ± 11.2 years; $p<0.05$). Men were more prevalent in AO (43.3%) and ASE (45.8%) compared to C (33.5%; $p<0.05$). AO and ASE more frequently reported lesions limited to the face (80.7% and 75.2% vs. 71.1% for C; $p<0.05$), while C reported lesions on both the face and upper body (28.9% vs. 19.3-24.8%; $p<0.05$). Scar prevalence was higher in AO (65.3%; OR=1.9) and ASE (57%; OR=1.34) than in C (49.8%; $p<0.05$). Fear of new scars was more pronounced in AO (72%; OR=1.95) and ASE (80.8%; OR=3.19) than in C (56.9%; $p<0.05$).

Psychosocially, ASE reported greater personal discomfort (71.2% vs. 61.6%; $p<0.001$), professional impairment (59.4% vs. 51.2%; $p=0.003$), reduced productivity (48.9% vs. 43.3%; $p=0.048$), and absenteeism (31% vs. 25.5%; $p=0.032$). ASE were also more concerned about treatment side effects (64.3% vs. 52.3%; $p<0.001$), while C reported greater treatment fatigue (63.6% vs. 50.9%; $p<0.001$). C more frequently reported stigmatization and sexual life impact (42.9% vs. 34.2%; $p=0.002$).

Variable	Caucasians Living in North America and Europe (C)	Asians	Asians Living in Southeast Asia (ASE)	Asians Living in North America and Europe (AO)
	N = 922	N=650	N = 552	N = 98
Age	33.87 (± 12.28)	32.76 (± 10.83)	33.2 (± 10.8)	30.33 (± 10.76)
Male	286 (31.02%)	306 (47.08%)	265 (48.01%)	41 (41.84%)
With each acne flare-up, do you worry about the appearance of scars or persistent marks?	728 (78.96%)	613 (94.31%)	528 (95.65%)	85 (86.73%)
Number of scars on the face:	4.02 (± 6.63)	2.64 (± 4.0)	2.26 (± 3.2)	4.47 (± 6.39)
Number of scars on the body outside of your face:	6.25 (± 9.27)	3.24 (± 3.34)	2.97 (± 2.7)	4.61 (± 5.39)
Are your scars on your face related to acne?	489 (98.0%)	273 (98.91%)	226 (98.69%)	47 (100.0%)
Personal discomfort	568 (61.61%)	445 (68.46%)	393 (71.2%)	52 (53.06%)
Professional gene	472 (51.19%)	377 (58.0%)	328 (59.42%)	49 (50.0%)
Were you forced to take time off from your job or studies?	221 (25.52%)	185 (30.38%)	160 (31.01%)	25 (26.88%)
Did you feel less productive in your work/studies?	380 (43.28%)	297 (47.83%)	258 (48.86%)	39 (41.94%)
Have you had to give up participating in a family or professional event?	281 (32.26%)	196 (32.08%)	164 (31.66%)	32 (34.41%)
Have you grown tired of taking medication every day?	540 (63.6%)	323 (52.44%)	266 (50.86%)	57 (61.29%)
Have you experienced difficulties in your relationship?	365 (42.39%)	247 (40.49%)	219 (42.2%)	28 (30.77%)
Have you noticed any changes in your family, social or professional relationships?	303 (34.67%)	210 (34.94%)	177 (34.84%)	33 (35.48%)
Have you felt that you were absent from your work while still being present?	360 (41.47%)	273 (44.39%)	236 (45.21%)	37 (39.78%)
Did you lack time to spend with your family?	246 (28.64%)	192 (31.84%)	166 (32.55%)	26 (27.96%)
Did you feel that you were absent from your family life?	299 (34.33%)	181 (29.82%)	148 (28.85%)	33 (35.11%)
Have you put off doing things that you thought were important?	418 (47.07%)	266 (43.54%)	220 (42.64%)	46 (48.42%)
Do you feel that your sex life has been affected?	369 (42.86%)	202 (34.41%)	171 (34.2%)	31 (35.63%)
Have you had to change plans that were important to you?	330 (35.79%)	208 (32.0%)	176 (31.88%)	32 (32.65%)
Did you feel discouraged?	538 (58.35%)	282 (43.38%)	231 (41.85%)	51 (52.04%)
Did you have to be more careful with your spending or dip into your savings?	408 (44.25%)	317 (48.77%)	271 (49.09%)	46 (46.94%)
Do you have difficulty falling asleep?	462 (50.11%)	250 (38.46%)	205 (37.14%)	45 (45.92%)
Do you tend to check your appearance every time you pass a mirror?	626 (67.9%)	419 (64.46%)	351 (63.59%)	68 (69.39%)
Do you ever feel excluded or rejected by others?	359 (38.94%)	183 (28.15%)	146 (26.45%)	37 (37.76%)
Do you feel that people look at you with contempt?	326 (35.36%)	161 (24.77%)	128 (23.19%)	33 (33.67%)
Do you feel that people avoid touching you?	287 (31.13%)	163 (25.08%)	134 (24.28%)	29 (29.59%)
Do you feel that people avoid coming near you?	274 (29.72%)	172 (26.46%)	136 (24.64%)	36 (36.73%)
Do you avoid taking selfies?	601 (65.18%)	410 (63.08%)	353 (63.95%)	57 (58.16%)

DISCUSSION

This study is the first to compare acne scarring and psychosocial impacts across Caucasians, Westernized Asians, and Southeast Asians. Asians reported more facial lesions and higher scar prevalence, likely due to skin characteristics like high melanin content. Greater fear of scarring in Asians may reflect strict aesthetic norms. ASE showed more psychosocial impairment (discomfort, absenteeism), while Caucasians reported more stigmatization and sexual life impact. AO had a mixed profile, suggesting environmental influence. Limitations include self-reported data and lack of clinical scar assessment. Personalized care considering ethnicity and culture is vital for improving quality of life. Future studies need objective clinical evaluations and finer Asian subgroup stratification.