

Impact of Skin Type and Sensitivity on Dermatological Concerns and Self-confidence: Insights from an International Study of 14,317 Women

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Dear Editor,

The skin plays a substantial role in women's lives, transcending mere aesthetics to encompass broader health, psychological, and social dimensions. It exhibits a remarkable diversity across individuals with varying types and different degrees of sensitivity (1, 2). Self-reported dermatological concerns encompass a wide range of issues that individuals perceive and report regarding their skin health and appearance. Women, in particular, may be more likely to report dermatological concerns due to societal pressures related to beauty standards and skincare practices (3). Hence, an international study was conducted to assess the relation between skin type/sensitivity and self-reported dermatological feminine concerns and their impact on self-confidence. The survey, conducted between February 2022 and June 2023, involved individuals ≥ 18 years old from the USA ($n=1,750$), France ($n=1,271$), Brazil ($n=1,557$), India ($n=2,104$), China ($n=1,955$), Mexico ($n=1,616$), Japan ($n=333$), South Africa ($n=2,030$), and Indonesia ($n=1,701$) (response rate=100%). In each country, proportional quota sampling was used based on the distribution of the po-

pulation according to age, sex, environment (large cities, towns, and rural areas), and income, in order to guarantee national representativeness of the sample. Participants were contacted by mail to complete a structured digital questionnaire. Questions included sociodemographic data, skin type, presence/absence of skin sensitivity, presence/absence of 8 dermatological concerns (Table I), lack or not of self-confidence.

In total, 14,317 women were involved (mean age was 40.49 ± 12.73 years). **Table I** presents the proportion of individuals with the 8 studied dermatological concerns and those with lack of self-confidence with respect to the skin type, presence/absence of skin sensitivity, and age. **Table II** presents the logistic regression with univariate and multivariate analysis to determine risk factors for lack of self-confidence.

Understanding the dermatological concerns that are present in different skin types is pivotal in formulating effective skincare strategies and addressing dermatological concerns (4–6). As expected, women with skin sensitivity express more dermatological concerns than those without. Moreover, they are significantly more

Table I. Proportion of individuals with the 8 studied dermatological concerns and those with lack of self-confidence with regard to the skin type, presence/absence of skin sensitivity, and age

																				Lack of expressed self-confidence	
		Skin lack of firmness		Skin feeling tight		Skin tired look		Skin pimple breakout blemishes		Skin redness		Skin loss of elasticity		Skin getting thinner weakened		Skin dark spots					
Gobal Population																					
Sensitive Skin		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Yes		6603	46.1%	1318	20.0%	842	12.8%	1853	28.1%	1985	30.1%	1128	17.1%	927	14.0%	519	7.9%	1774	26.9%	2988	45.3%
No		7714	53.9%	1626	21.1%	588	7.6%	1970	25.5%	1523	19.7%	474	6.1%	942	12.2%	348	4.5%	1958	25.4%	2938	38.1%
Type of skin		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Very dry / Dry		3694	25.8%	782	21.2%	525	14.2%	1052	28.5%	558	15.1%	403	10.9%	556	15.1%	277	7.5%	956	25.9%	1667	45.1%
Mixed		5599	39.1%	1247	22.3%	576	10.3%	1649	29.5%	1711	30.6%	793	14.2%	829	14.8%	378	6.8%	1497	26.7%	2317	41.4%
Oily / Very oily		2699	18.9%	346	12.8%	141	5.2%	601	22.3%	920	34.1%	250	9.3%	166	6.2%	94	3.5%	774	28.7%	1077	39.9%
<40 years																					
Sensitive Skin		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Yes		3315	49.6%	417	12.6%	364	11.0%	826	24.9%	1438	43.4%	611	18.4%	224	6.8%	180	5.4%	763	23.0%	1640	49.5%
No		3364	50.4%	455	13.5%	252	7.5%	754	22.4%	1049	31.2%	235	7.0%	208	6.2%	102	3.0%	674	20.0%	1398	41.6%
Type of skin		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Very dry / Dry		1505	22.5%	182	12.1%	182	12.1%	364	24.2%	353	23.5%	172	11.4%	99	6.6%	76	5.0%	305	20.3%	754	50.1%
Mixed		2786	41%	426	15.3%	295	10.6%	722	25.9%	1228	44.1%	450	16.2%	225	8.1%	137	4.9%	601	21.6%	1280	45.9%
Oily / Very oily		1503	22.5%	140	9.3%	63	4.2%	319	21.2%	691	46.0%	158	10.5%	65	4.3%	39	2.6%	399	26.5%	657	43.7%
40 years and more																					
Sensitive Skin		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Yes		3288	43.0%	901	27.4%	478	14.5%	1027	31.2%	547	16.6%	517	15.7%	703	21.4%	339	10.3%	1011	30.7%	986	30.0%
No		4350	57.0%	1171	26.9%	336	7.7%	1216	28.0%	474	10.9%	239	5.5%	734	16.9%	246	5.7%	1284	29.5%	764	17.6%
Type of skin		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Very dry / Dry		2189	28.7%	600	27.4%	343	15.7%	688	31.4%	205	9.4%	231	10.6%	457	20.9%	201	9.2%	651	29.7%	408	18.6%
Mixed		2813	36.8%	821	29.2%	281	10.0%	927	33.0%	483	17.2%	343	12.2%	604	21.5%	241	8.6%	896	31.9%	744	26.4%
Oily / Very oily		1196	15.7%	206	17.2%	78	6.5%	282	23.6%	229	19.1%	92	7.7%	101	8.4%	55	4.6%	375	31.4%	381	31.9%

Table II. Logistic regression with univariate and multivariate analysis to determine risk factors for lack of self-confidence

Variable	Univariate			Multivariate		
	Odds Ratio	SD	P-value	Odds Ratio	SD	P-value
Sensitive skin	1.34	0.03	< 0.0001	1.24	0.04	< 0.0001
Dry skin	1.23	0.04	< 0.0001	1.01	1.59e+06	1.00
Mixed skin	0.81	0.05	< 0.0001	0.78	1.59e+06	1.00
Oily skin	0.95	0.03	0.167	0.81	1.59e+06	1.00
Skin lack of firmness	1.05	0.04	0.241	1.01	0.05	0.89
Skin feeling tight	1.08	0.06	0.182	0.99	0.06	0.84
Skin tired look	1.42	0.04	< 0.0001	1.40	0.04	< 0.0001
Skin pimple breakouts blemishes	1.39	0.04	< 0.0001	1.28	0.04	< 0.0001
Skin redness	1.32	0.05	< 0.0001	1.14	0.06	0.019
Skin loss of elasticity	1.12	0.05	0.031	1.06	0.06	0.299
Skin getting thinner weakened	1.20	0.07	0.011	1.04	0.08	0.639
Skin dark spots	1.16	0.04	< 0.0001	1.10	0.04	0.013

likely to express lack of self-confidence. This is particularly true in women below 40 years of age, whereby more than 50% of women with skin sensitivity express lack of confidence. Moreover, almost half of women with very dry/dry skin and around 40% of those with oily/very oily skin also express a lack of self-confidence. Multivariate analysis shows that the risk factors for lack of self-confidence are: skin looking tired, presence of skin pimple breakouts/blemishes, skin sensitivity, skin redness, and dark spots. Conversely, dry/oily skin, lack of firmness, skin tightness, loss of elasticity, and skin getting thinner/weakened do not seem to be significantly associated with lack of self-confidence.

In essence, grasping the connections between skin sensitivity, skin type, self-reported dermatological concerns, and self-confidence in women is crucial for creating customized skincare routines that address issues affecting confidence. Comparing these concerns with those in males might help personalize skincare approaches that take individual skin traits and needs of each gender into account (7). In this context, a similar study conducted in males has shown different perceptions. Recognizing the distinctive aspects of female skin compared with male skin, and the factors that may impact their confidence, is key to fostering a comprehensive, healthy appearance, improving quality of life, and empowering women to embrace the many dimensions of femininity.

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Conflicts of interest: FF; AM; MB-V; AIL; CD, DA and LL are employees of L’Oréal. CT is sub-contracted for data analysis and writing. CS has no conflict of interest.

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