

Socio-demographic diversity of the impact of dermatological diseases: Results from the patient-initiated Global Research on the Impact of Dermatological Disease (GRIDD) study

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Aims: Using the newly developed Patient-Reported Impact of Dermatological Diseases (PRIDD) measure, this study aimed to collect global data on the impact of dermatological conditions on patient's lives and to compare the disease burden across different socio-demographic groups (sexes, age groups, regions of living, country income levels, ethnicities, and skin types).

Methods: A global online cross-sectional survey was conducted between June 2023 and January 2024. Adults (≥ 18 years) with a self-reported dermatological condition were recruited through the International Alliance of Dermatology Patient Organizations' membership network. Participants completed the PRIDD questionnaire (16 items assessing physical impact, life responsibilities, psychological impact and social impact; total score ranging 0-63) and a socio-demographic questionnaire. The survey was available in 17 different languages. Data were analyzed descriptively and group comparisons were conducted with uni-/multivariate analysis of variance, with Post-Hoc multiple comparisons with Bonferroni correction.

Results: After excluding 327 participants who did not meet the inclusion criteria or had missing data on core variables, the sample was composed of 3811 patients (76.6% female, mean age 48.49 ± 15.74 , range 18-98), from 90 different countries and representing more than 100 dermatological conditions (12.6% Lichen sclerosus, 12.4% Psoriasis, 8.2% Hidradenitis suppurativa, 7.5% Vitiligo, 6.9% Eczema, 48.2% other diagnoses). Group comparison analyses showed that higher overall impact of dermatological diseases was reported by women, by participants younger than 65 years, by inhabitants of the Eastern Mediterranean and African regions, by residents in low income countries, by participants with Oceania, Black, Latino or mixed ethnic origins, and by participants with darker skin types (Fitzpatrick skin types V and VI) but also for those with very sensitive skin type I (Table 1). Similar results were observed for the four PRIDD dimensions of physical, life responsibilities, psychological and social impact.

Conclusion: This is the first study using the patient-driven PRIDD questionnaire and collecting data on a global level. While some results should be interpreted with caution because of potential strong correlations between some socio-demographic variables (e.g., ethnic origin and skin type), this study allowed for the identification of socio-demographic groups at higher risk of suffering high impact of their dermatological condition in their lives.

Table 1. Comparison of PRiDD scores across socio-demographic groups.

	PRiDD total score			F	p	Post-hoc comparisons with Bonferroni correction
	n	M	SD			
Biologic sex						
Female	2918	28.91	7.89	19.25	<0.001	-
Male	886	27.52	9.30			
Age groups						
Emerging adults (18-30 years)	576	29.33	8.05	39.15	<0.001	Emerging adults > Elderly Adults > Elderly
Adults (31-64 years)	2549	29.09	8.13			
Elderly (65+ years)	686	26.09	8.45			
WHO region of living						
Eastern Mediterranean Region (EMR)	19	33.56	8.32	20.66	<0.001	EMR > EUR, SEAR AFR > AMR, WPR, EUR, SEAR AMR > EUR, SEAR WPR > SEAR EUR > SEAR
African Region (AFR)	373	31.25	9.17			
Region of the Americas (AMR)	1202	29.13	8.19			
Western Pacific Region (WPR)	390	29.03	7.78			
European Region (EUR)	1747	27.72	7.95			
South-East Asian Region (SEAR)	80	23.58	8.72			
Country of living by income (cf. New World Bank country classifications by income level: 2022-2023)						
High income	2897	28.24	8.13	9.42	<0.001	Low > High income
Upper middle income	345	29.35	7.68			
Lower middle income	351	29.27	8.80			
Low income	213	30.96	9.33			
Ethnic origin, group or background						
Oceania (OC)	15	35.13	10.78	10.94	<0.001	OC > EU, EA, SA BL > EU, EA, SA MIX > SA LAT > EU, EA, SA SEA > SA
Black (BL)	412	31.09	9.09			
Other/ Mixed ethnicity (MIX)	54	30.54	8.45			
Latino (LAT)	283	30.19	8.45			
South-East Asian (SEA)	121	29.57	6.44			
Middle Eastern (ME)	38	28.27	10.56			
White/ European descent (EU)	2527	28.10	7.88			
East Asian (EA)	198	27.62	8.50			
South Asian (SA)	110	25.98	9.21			
Fitzpatrick skin type						
I: skin always burns, never tans, and is sensitive to UV exposure	212	29.88	8.22	7.71	<0.001	I > III, IV V > III, IV VI > II, III, IV
II: skin burns easily and tans minimally	736	28.65	8.27			
III: skin burns moderately and tans gradually to light brown	1644	28.07	8.06			
IV: skin burns minimally and always tans well to moderately brown	714	28.00	8.00			
V: skin rarely burns and tans profusely to dark	354	29.92	9.13			
VI: skin never burns, is deeply pigmented, and is least sensitive to UV exposure	44	33.18	7.36			