

RESEARCH LETTER

Skin pain: A symptom to be investigated

To the Editor: Skin pain is an important symptom in dermatological conditions. It is associated with low quality of life (QoL) and high psychological distress, including suicidal ideation.¹

Chronic skin pain was reported by 36.4% of French dermatological patients,² with the highest prevalence in those with leg ulcers, atopic dermatitis, and psoriasis. In a group of patients with skin diseases in general practice,³ the prevalence was 23%. Pain has been reported as the most frequent symptom associated with atopic dermatitis, after itching and sleep difficulties,⁴ and it is frequent in psoriasis, with prevalence up to 43.6%,⁵ and in hidradenitis suppurativa. However, skin pain may be also present in the general population without

dermatological disease and may be an early sign of a not-yet-diagnosed skin condition but also a symptom of nondermatological diseases, such as fibromyalgia or peripheral neuropathy. The aim of the present observational study was to investigate the presence of skin pain (by the question “do you feel pain in your skin?”) in persons with and without skin conditions (both inflammatory and noninflammatory). The study was conducted on a representative sample (guaranteed by the method of quotas stratified by age and gender with strict cross-quotas, regions, and income levels) of the population of Canada, China, France, Germany, Italy, and Spain, aged from 18 to 75 years, extracted from the Epi Database (<https://kantarhealth.com/docs/databases/kh-epi-database>, last accessed on March 30, 2022).

Table I. Frequency of skin pain and mean VAS pain scores in different subgroups of patients

Variable	Level	Total n	Pain n (%)	P (χ^2 test)	RR	VAS pain (range 0-10)	P (χ^2 test)
Overall		13,138	1478 (11.2)			5.3 (2.2)	
Sex	Male	6577	772 (11.7)	.076	Ref.	5.3 (2.2)	.758
	Female	6561	706 (10.8)		0.92	5.4 (2.2)	
Country	Canada	2011	214 (10.6)	<.001	1.58	5.2 (2.3)	<.001
	China	3050	422 (13.8)		2.06	5.5 (2.3)	
	France	2000	179 (9.0)		1.34	4.6 (2.2)	
	Germany	2037	385 (18.9)		2.82	5.8 (2.2)	
	Italy	2000	134 (6.7)		Ref.	5.2 (2.1)	
	Spain	2040	144 (7.1)		1.06	5.2 (2.0)	
Age (y)	15-30	3032	493 (16.3)	<.001	Ref.	5.2 (2.3)	.202
	31-45	3506	490 (14.0)		0.86	5.4 (2.1)	
	46-60	3698	305 (8.2)		0.50	5.5 (2.2)	
	>60	2902	190 (6.5)		0.40	5.4 (2.2)	
Skin diseases (SD)	No	9688	639 (6.6)		Ref.	5.1 (2.2)	
	Yes	3450	839 (24.3)	<.001	3.68	5.6 (2.1)	<.001
	1 SD	2461	451 (18.3)		2.77	5.2 (2.3)	
	2 SD	751	252 (33.6)		5.09	5.7 (2.0)	
	3 SD	175	89 (50.9)		7.71	6.0 (2.0)	
	>3 SD	63	47 (74.6)	<.001	11.30	6.4 (2.0)	<.001
Skin disease				Compared to « no skin disease »	Compared to « no skin disease »		Compared to patients without this disease
	Acne	606	93 (15.3)	<.001	2.35	5.0 (2.2)	.504
	Eczema	717	130 (18.1)	<.001	2.79	5.3 (2.1)	.346
	Hand eczema	138	39 (28.3)	<.001	4.35	5.4 (1.9)	.472
	Psoriasis	320	61 (19.1)	<.001	2.94	5.1 (2.3)	.937
	Rosacea	166	32 (19.3)	<.001	2.97	4.8 (2.1)	.489

Table II. Characteristics of skin pain in participants with and without skin disease

	No skin disease		With skin disease		<i>P</i> (χ^2 test)
	<i>N</i>	%	<i>N</i>	%	
Mean duration (mo)	19.0		31.3		.002 (t-test)
Permanent	263	41.2	418	49.8	<.001
Transient	376	58.8	421	50.2	
Unbearable					.006
Yes	510	77.5	703	83.2	
No	148	22.5	142	16.8	
Localization					
Face	161	25.2	285	34.0	<.001
Hands	264	41.3	362	43.1	.392
Body	314	49.1	432	51.5	.334
It does not interfere with any activity	261	40.8	250	29.8	<.001
It interferes with professional activities	127	19.9	247	29.4	<.001
It interferes with family activities	164	25.7	208	24.8	.815
It interferes with daily activities	173	27.1	341	40.6	<.001
Sensations					
None	198	31.0	130	15.5	<.001
Burning	245	38.3	436	52.0	<.001
Cold	144	22.5	207	24.7	.271
Electric discharge	144	22.5	248	29.6	.001
Symptoms					
None	159	24.9	71	8.5	<.001
Tingling	162	25.3	258	30.7	.014
Stinging	189	29.6	345	41.1	<.001
Numbness	118	18.5	218	26.0	<.001
Itch	181	28.3	419	49.9	<.001

On a total of 13,138 adults, 11.2% reported skin pain. Among those who reported at least 1 skin condition ($n = 3450$), the frequency of skin pain was 24.3%, while in the 9688 participants with no skin conditions, it was 6.6% ($P < .001$, χ^2 test). There were differences in pain prevalence by age, country, and skin disease (the 5 most frequent were analyzed), and prevalence increased with the increasing number of skin conditions (Table I). When a dermatological condition was present, the mean duration of skin pain was significantly higher, and permanent or unbearable pain was more frequent than in patients with no skin disease (Table II). Also, the impact of skin pain on daily and work activities was higher in participants with skin conditions. Sensations and symptoms associated with pain differed between the 2 groups. Among patients with skin conditions reporting pain, 53.5% had a Dermatology Life Quality Index (DLQI) score >10 (ie, low dermatology-related QoL) compared to 14.7% in participants with no skin pain ($P < .001$, χ^2 test). QoL was particularly impaired when pain was permanent, unbearable, or associated with at least 1 sensation or symptom.

Limitations of the study are that it is possible that some of the patients may perceive skin pain with other types of pain, that we do not know if the pain was felt on the surface of a normal-looking skin or a lesional skin, and that the dermatological diagnosis was not verified by a clinical examination.

In conclusion, skin pain is a frequent symptom in patients with dermatological conditions and should be considered in the management of the disease, in order to improve a patient's QoL and well-being.

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Conflict of interest

Marketa Saint Aroman and Fabienne Carballido are employed by Pierre Fabre.

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