

# PIGMENTARY DISORDERS, PREVALENCE, IMPACT ON QUALITY OF LIFE, SOCIAL STIGMATIZATION: RESULTS OF THE FIRST LARGE INTERNATIONAL SURVEY

T. Passeron<sup>1</sup>, L. Wei<sup>2</sup>, A. Morita<sup>3</sup>, C.L Goh<sup>4</sup>, A. Alexis<sup>5</sup>, B. Dreno<sup>6</sup>, H.Y. Kang<sup>7</sup>, F. Ly<sup>8</sup>, S. Puig<sup>9</sup>, S. Schalka<sup>10</sup>, J. Ocampo Candiani<sup>11</sup>, A.L Demessant<sup>12</sup>, C. Le Floc'h<sup>12</sup>, D. Kerob<sup>12</sup>, J. Krutmann<sup>13</sup>, H.W Lim<sup>14</sup>

1 Department of Dermatology, Côte d’Azur University, Nice University Hospital Center, Nice, France INSERM U1065, C3M, Côte d’Azur University, Nice, France. 2 Department of Dermatology, The General Hospital of Air Force PLA, Beijing, China. 3 Department of Geriatric and Environmental Dermatology, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan. 4 National Skin Centre, Singapore, Singapore. 5 Department of Dermatology, Weill Cornell Medical College, New York, NY, USA. 6 Nantes Université, INSERM, CNRS, Immunology and New Concepts in ImmunoTherapy, INCIT, UMR 1302/EMR6001. F-44000 Nantes, France. 7 Department of Dermatology, Ajou University School of Medicine, Suwon, South Korea. 8 Department of Dermatology, Cheikh Anta Diop Dakar University, EPS Institute of Social Hygiene, Dakar, Senegal. 9 Melanoma Unit, Dermatology Department, Barcelona University Hospital Clinic, Barcelona, Spain. 10 Medcin Skin Research Center and Biochemistry Department, Chemistry Institute of Sao Paulo University, Sao Paulo, Brazil. 11 Department of Dermatology, Medical Faculty University Hospital of Nuevo Leon, Monterrey, Mexico. 12 La Roche-Posay Laboratoire Dermatologique, Levallois, France. 13 IUF Leibniz Research Institute for Environmental Medicine, Dusseldorf, Germany Medical Faculty, Heinrich-Heine-University, Dusseldorf, Germany. 14 Department of Dermatology, Henry Ford Health, Detroit, MI, USA

## INTRODUCTION & OBJECTIVES

Pigmentary disorders (PD) such as Melasma, Post-inflammatory Hyperpigmentation (PIH), Solar Lentigo, Vitiligo, Peri-Orbital Hyperpigmentation (POH) and Axillary Hyperpigmentation (AH) are frequent dermatological conditions, but little is known on their real-world prevalence and impact. This first worldwide survey evaluates the prevalence of PD and its impact on quality of life (QOL) and stigmatization.

## MATERIAL & METHODS

Survey (N= 48,000) conducted in 34 countries from all continents from December 2022-February 2023. An automated selection from the Ipsos Panel ensured representative samples (gender, age, employment status and country region) based on quota method.

The online auto-administered questionnaire covered demographics, phototype, self-reported pigmentation condition based on a descriptive text and image; its management and impact on QOL, stigmatization, and sun protection behavior.

## RESULTS

50% of the population report having at least one pigmentation disorder such as solar lentigo 27%, AH 18%, PIH 15%, POH 15%, melasma 11% and vitiligo 8% (Fig.1), with an average age of 44yo and affecting more women (59%). Previous dermatological diagnosis was reported in a third (36%) of the population, and 19% made their own diagnosis thanks to the questionnaire (Fig.2).

All pigmentation disorders significantly impact QOL and lead to stigmatization. DLQI was >10/30 for 28% of them, from 15% for solar lentigo to 47% for vitiligo (Fig. 3). Stigmatization is important in all conditions: 45% of patients with a PD have concealed/hidden the visible parts of their affected skin and 30% have avoided some people (Fig. 3.).

Although sun exposure is well recognized by the medical community to worsen the pigmentation, respondents reported a low-level protection against the sun: only 38% protect their skin all year (Fig. 4), and only 38% consider that sun exposure is deleterious to their condition. Only 42% select their sunscreen more cautiously, about UVB protection and 37% for UVA. 25% of people without PD do not take care of any particular mention before choosing their sunscreen. Among sunscreen users, 13% of sufferers use an SPF < 30 and 18% among those without PD.

And yet, 80% of sufferers and 70% of those without PD regret not having better protected their skin from the sun in the past.

Figure 3: Dermatology Life Quality Index AND Stigmatization per Pigmentation Disorder (%)

DLQI	All PD	Melasma	PIH	Solar lentigo	Vitiligo	POH	AH
No effect or small effect on patient's life (=0to5)	54	46	42	72	35	50	45
Moderate effect on patient's life (=6to10)	18	20	23	13	18	20	22
Very or extremely large effect on patient's life (=11to30)	28	34	35	15	47	30	33
STIGMATIZATION							
Over the last 4 weeks, because of the way others look at you, did you feel that it was better to... (% at least sometimes)							
...conceal/hide the visible parts of your affected skin	45	51	57	30	52	48	55
...refuse direct contact with the public	30	33	39	17	46	32	35
...that you have been left out by your colleagues at work	21	23	25	11	40	21	23
...that you were pushed away by your partner	20	22	22	10	35	20	24
...that you brought shame to your family, your relatives	19	23	23	11	37	20	23

Figures significantly lower / higher (P<.05) compared to the whole population who reported PD (All PD)

Figure 1: Proportion of population who report Pigmentation Disorders

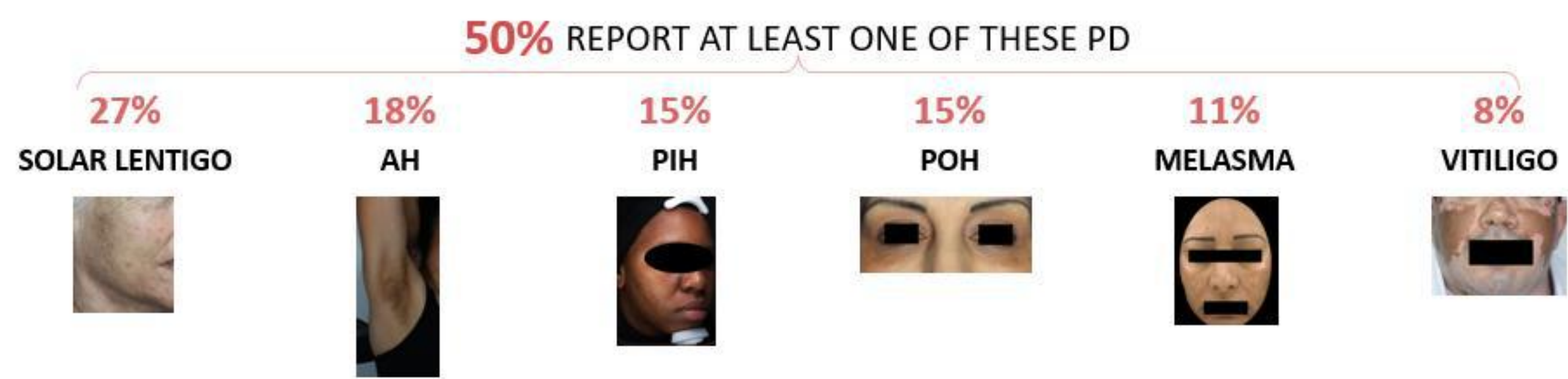
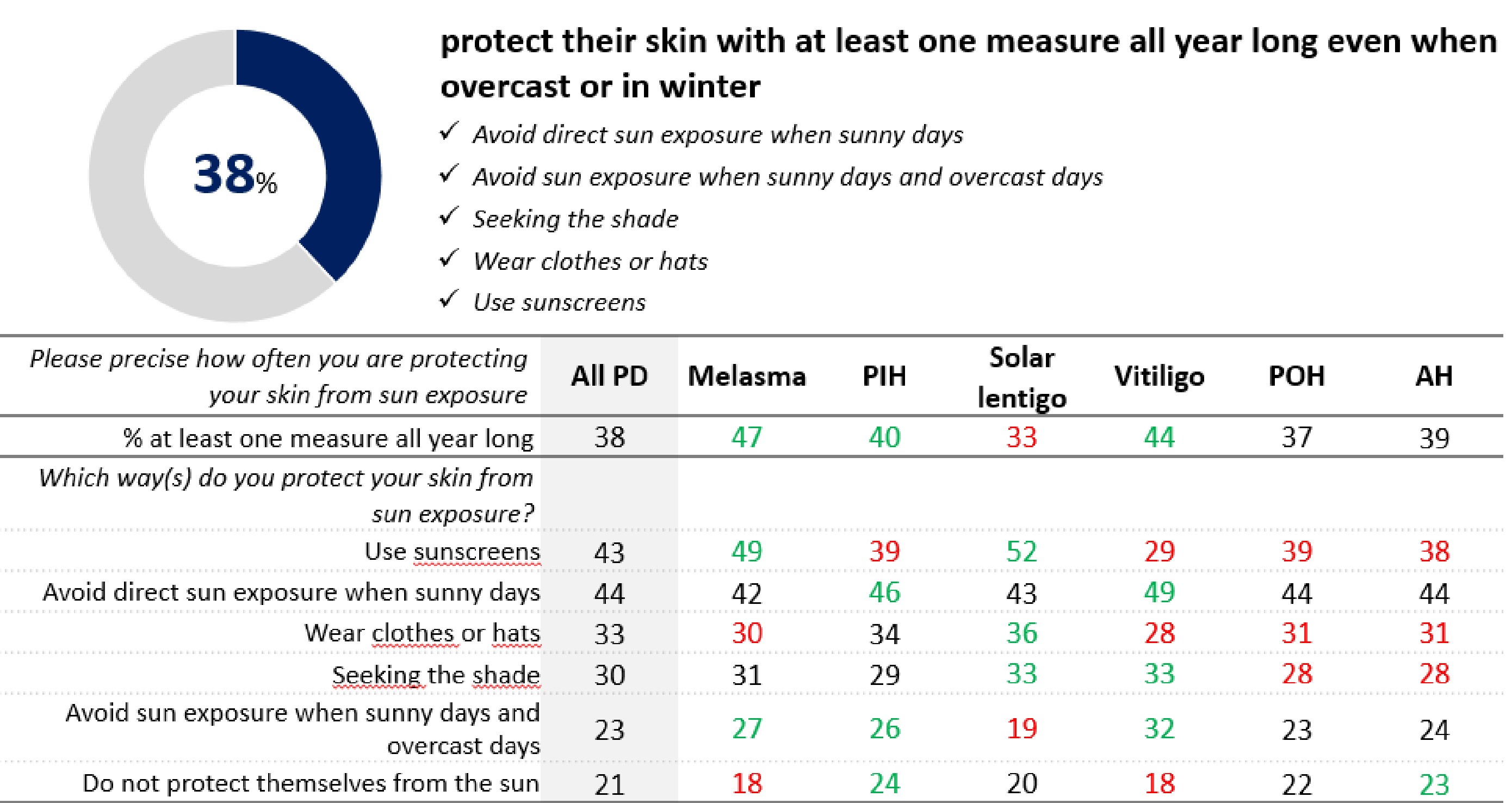


Figure 2: Proportion of population diagnosed and self-diagnosed

How was the diagnosis made for your pigmentation disorder?	All PD	Melasma	PIH	Solar lentigo	Vitiligo	POH	AH
By a Dermatologist	36	41	38	33	49	34	34
By your own before the survey	20	19	20	23	10	22	21
Reading the descriptions filling this questionnaire	19	13	16	23	4	24	20

Figures significantly lower / higher (P<.05) compared to the whole population who reported PD (All PD)

Figure 4: Photoprotection behaviours



Figures significantly lower / higher (P<.05) compared to the whole population who reported PD (All PD)

## CONCLUSION

This first large international survey on Pigmentation disorders shows the high prevalence of pigmentation disorders worldwide, their significant impact on QOL and stigmatization, highlighting the need for photoprotection education.

### Acknowledgements:

Survey conducted by IPSOS

### References:

Ezzedine K, Shourick J, Bergqvist C, Misery L, Chuberre B, Kerob D, Halioua B, Le Fur G, Paul C, Richard MA, Taieb C. Patient Unique Stigmatization Holistic tool in dermatology (PUSH-D): Development and validation of a dermatology-specific stigmatization assessment tool. J Eur Acad Dermatol Venereol. 2023 Feb;37(2):443-450.