Clinical, Cosmetic and Investigational Dermatology

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SHORT REPORT

Habits and Preferences in Sunscreen Usage Among Healthcare Professionals in the UK

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Abstract: Raising awareness about sun protection is an ongoing challenge. In 2018, a Survey Monkey questionnaire was distributed among healthcare professionals in the United Kingdom looking at their own habits of sunscreen usage. A total of 165 responses were collected. Eighty-nine percent of our respondents would use sunscreen when outdoors 11am–3pm on a cloudless, sunny day in August in the UK. However, only 27% of these healthcare professionals would regularly reapply sunscreen every 2 hours. The most important reason for using sunscreen was avoiding sunburn (importance weighted average of 4.71, on a scale from 1 to 5), followed by avoiding skin cancer (4.49) and skin ageing (4.06). On an importance scale from 1 to 5, the most important sunscreen characteristics, when choosing or recommending a product, were the level of UVA protection (importance weighted average 4.48), its stickiness (3.85) and degree of water-resistance (3.77).

Keywords: photodermatology, ultraviolet radiation, cancer

Plain Language Summary

Raising awareness about sun protection is an ongoing challenge. In 2018, a Survey Monkey questionnaire was distributed among healthcare professionals in the United Kingdom looking at their own habits of sunscreen usage. A total of 165 responses were collected. Eighty-nine percent of our respondents would use sunscreen when outdoors 11am–3pm on a cloudless, sunny day in August in the UK. However, only 27% of these healthcare professionals would regularly reapply sunscreen every 2 hours. The most important reason for using sunscreen were avoiding sunburn (importance weighted average of 4.71, on a scale from 1 to 5), followed by avoiding skin cancer (4.49) and skin ageing (4.06). On an importance scale from 1 to 5, the most important sunscreen characteristics, when choosing or recommending a product, were the level of UVA protection (importance weighted average 4.48), its stickiness (3.85) and degree of water-resistance (3.77).

Introduction

Raising awareness about sun protection is an ongoing challenge. In 2018, a Survey Monkey questionnaire was distributed among healthcare professionals in the United Kingdom, to investigate if we are providing appropriate advice on sunscreen usage, as per guidelines set by the British Association of Dermatologists (BAD) and WHO.[1,2] The study showed that most healthcare professionals do not routinely discuss sun protection with their patients.[3] This paper aims to present data collected from the same Survey Monkey questionnaire about the habits of sunscreen usage of healthcare professionals in the UK. Are we leading by example?

Results

A total of 165 responses were collected. The respondents' demographics are represented in Figures 1 and 2. The majority of respondents (93%, n=151) work in healthcare while 68% (n=112) do not work in a dermatology-oriented specialty.

The habits in sunscreen usage among healthcare professionals in the UK are shown in Table 1.

Received: 12 February 2023
Accepted: 3 May 2023
Published: 20 July 2023

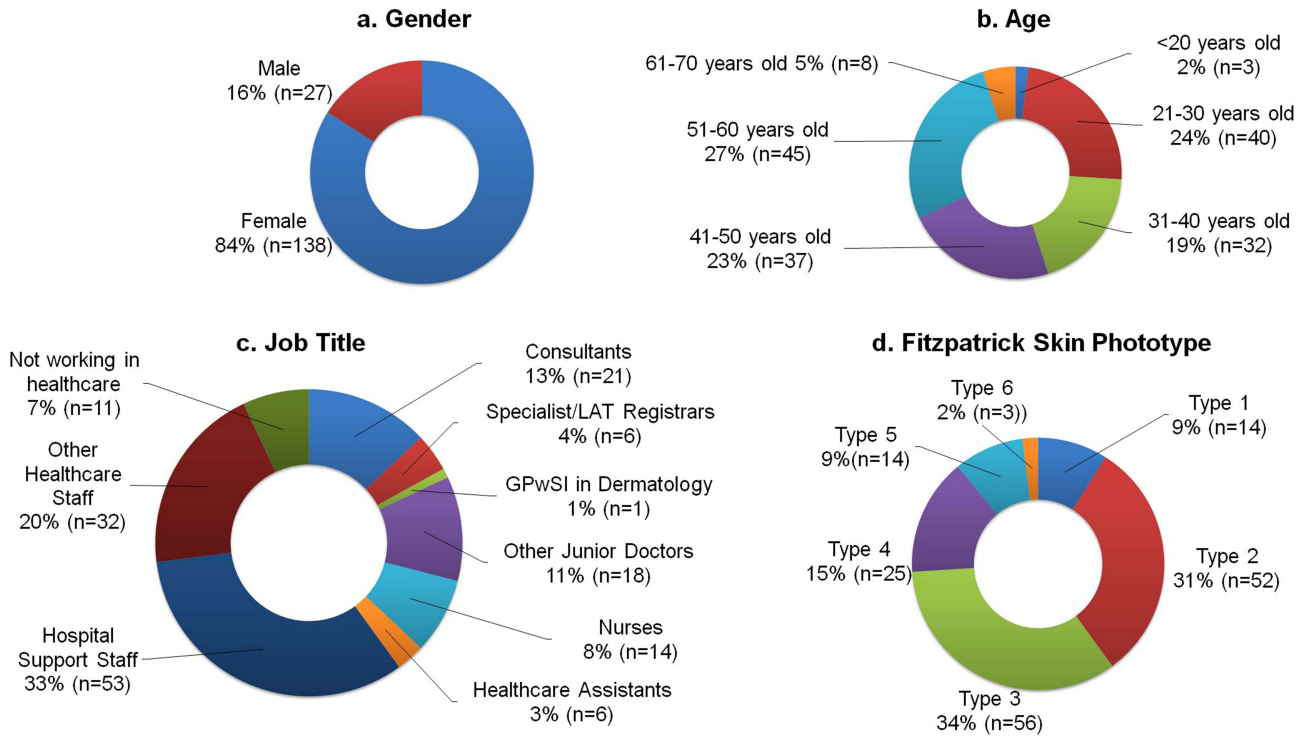

Figure 1 The demographics of the survey respondents. The total number of respondents was 165 and here we present their demographics in terms of Gender, Age group, Job Title and Fitzpatrick Skin Phototype. (**a**) Gender: 84% (n=138) of respondents were females and 16% (n=27) were males. (**b**) Age group: Majority of respondents belonged in the 51–60 age group (27%, n=45) and the 21–30 age group (24%, n=40). 23% (n=37) of our respondents were 41–50 years old, whereas 19% (n=32) were 31–40 years old. A minority of respondents were 61–70 years old (5%, n=8) or ≤20 years old (2%, n=3). (**c**) Job Title: 33% (n=53) of our respondents were Hospital Support Staff, followed by Other Healthcare Professionals (20%, n=32) and Consultants (13%, n=21). 11% (n=18) of respondents were Other Junior Doctors, while 6% (n=10) of respondents were Nurses. Of note that 7% (n=11) of respondents were not working in healthcare. The rest were Healthcare Assistants (3%, n=6), Specialist Nurses (2%, n=4), Specialist Registrars/ LAT Registrars (2%, n=3), Specialty Doctors including Clinical Fellow or Staff Grade (2%, n=3) and GPs with Special interest in Dermatology (1%, n=1). (**d**) Fitzpatrick Skin Phototype: 14% (n=9) of our respondents had Fitzpatrick skin type 1, 31% (n =52) had Fitzpatrick skin type 2 and 34% (n=56) had skin type 3. 15% (n=25) had skin type 4, 9% (n=14) had skin type 5 and 2% (n=3) had Fitzpatrick skin type 6.

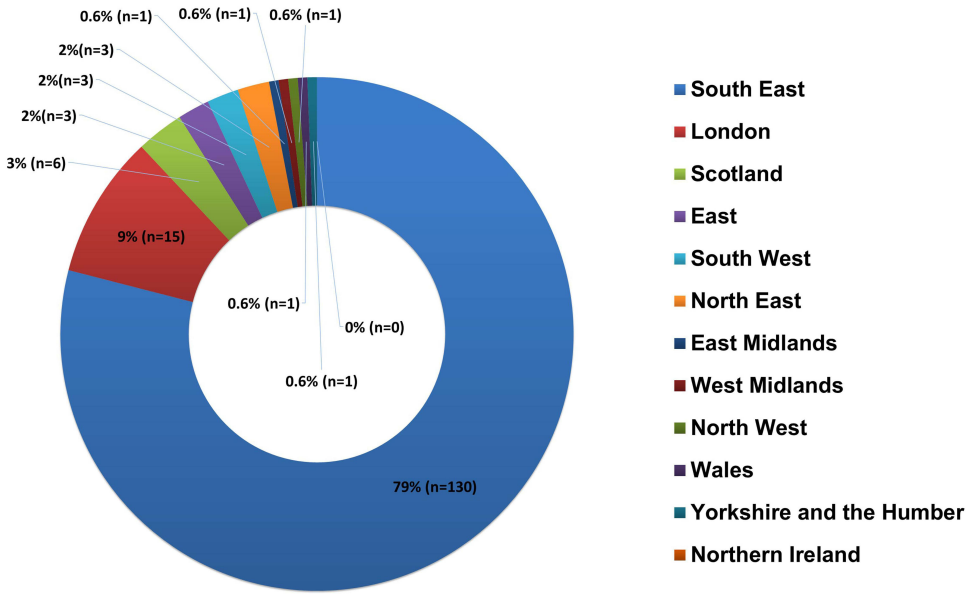

Figure 2 Respondents' Demographics: UK Regions. 130 out of 164 respondents were based in the South East region (79%, n=130). They are followed by respondents based in London (9%, n=15), Scotland (3%, n=6), East (2%, n=3), South West (2%, n=3), North East (2%, n=3). East Midlands, North West, Wales, West Midlands, Yorkshire and The Humber were represented by one respondent each (0.6%, n=1 respectively). There were no respondents based in Northern Ireland.

Table 1 Habits in Sunscreen Usage Among Healthcare Professionals in the UK

If You are Outdoors from 11am to 3pm on a Cloudless, Sunny Day in August in the UK, How Often Would You Apply Your Sunscreen		When Using Your Sunscreen, Do You Apply BEFORE Stepping Out in the Sun?		On your FACE, When Do You Use Sunscreen?		What is the Minimum Sun Protection Factor (SPF*) You Would Normally Use on Your FACE, if You are Outdoors from 11am to 3pm on a Cloudless, Sunny Day in August in the UK?	
At least every 2 hours	27% (n=40)	Yes, approximately 10–20 minutes before going outside	54% (n=78)	When it's sunny, or in summer and when I am outdoors for more than 20 minutes	41% (n=60)	SPF 30	47% (n=68)
I do not tend to reapply	24% (n=35)	Yes, right before I step out into the sun	31% (n=44)	Routinely all year round	27% (n=40)	SPF 50	21% (n=31)
Whenever I remember or feel like it	23% (n=34)	No, I apply when I am out in the sun	15% (n=22)	Only during sunny holidays abroad	23% (n=34)	SPF 15	20% (n=30)
I do not usually use any sunscreen	11% (n=17)			Routinely in summer months eg March to October	9% (n=13)	SPF 50+	9% (n=13)
Whenever it gets washed/ rubbed off	10% (n=16)					Not bothered with the SPF, anything is better than nothing	3% (n=4)
If I notice my skin going red	5% (n=7)						

Notes: *Sun protection Factor (SPF) is a measure of how much UV radiation is required to produce sunburn on protected skin and refers to the level of protection against UVB. When asked a hypothetical question of how often our respondents would apply sunscreen if outdoors 11am–3pm on a cloudless, sunny day in August in the UK, 27% (n=40) would do so at least every 2 hours, 23% (n=34) would reapply whenever they remember and 24% (n=35) tend not to reapply. 10% (n=16) would reapply sunscreen if it gets washed/rubbed off, while 5% (n=7) do so when their skin gets red. 11% (n=17) would not use sunscreen. When asked about applying sunscreen before stepping out in the sun, 54% (n=78) of respondents would do so 10–20 minutes in advance. 31% (n=44) apply sunscreen right before stepping out, whereas 15% (n=22) apply when already out in the sun. Regarding the application of sunscreen on their face, 41% (n=60) would do so only when it is sunny or in summer when outdoors ≥20 minutes. 27% (n=40) do so routinely all year round, while 23% (n=34) only during sunny holidays abroad. The remaining 9% (n=13) apply sunscreen on their face routinely throughout summer (March-October). 47% (n=68) of respondents use a minimum Sun Protection Factor (SPF) of 30 on their face. 21% (n=31) use at least SPF50, 20% (n=30) choose a minimum of SPF15 while 9% (n=13) use SPF50+. 3% (n=4) were not "bothered" with the SPF rating.

The respondents were asked to rate the importance of various reasons for using sunscreen (scale 1–5). Avoiding sunburn had the highest weighted average of 4.71, followed by avoiding skin cancer (4.49) and skin ageing (4.06). Avoiding tanning and having a photodermatosis were given a low weighted average of 1.73 and 1.53, respectively.

Our respondents were asked to rank the factors deemed important when choosing or recommending a sunscreen (Figure 3). On an importance scale from 1 to 5, the most important sunscreen characteristics were level of UVA protection (importance weighted average 4.48), its stickiness (3.85) and degree of water-resistance (3.77). Whether a sunscreen can be prescribed on the NHS was deemed to be the least important consideration.

Discussion

As far as we are aware, this is the first study on UK healthcare professionals' own sunscreen practice. The majority of respondents (77%, n=112) would choose a sunscreen with an SPF of 30 or higher (47% would choose SPF30, 21% would choose SPF 50 and 9% would choose SPF50+), which is in line with BAD and WHO guidelines.[1,2] Sun protection Factor (SPF) is a measure of how much UV radiation is required to produce sunburn on protected skin and refers to the

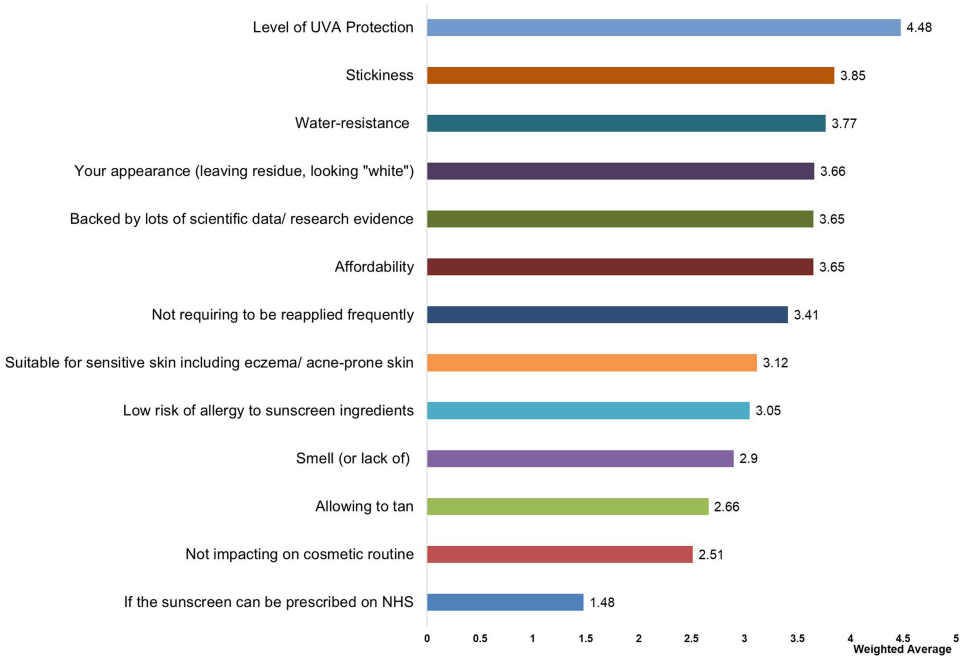

Figure 3 How much importance do you attach to the following factors when choosing or recommending a sunscreen? Factors were rated by responders on a 1–5 scale from "not important" to "very important" and then graphed based on the weighted average of the importance given. "Level of UVA protection", "Stickiness" and "Water resistance" were the top three parameters taken into consideration by our responders.

level of protection against UVB. UVB exposure is considered a main risk for skin cancer. In a 2019 study on consumers' preferences about sunscreens, 72% of participants considered SPF as the most important parameter when choosing sunscreen, rather than the active ingredients in the product.[4] Additionally in our study, the most important factor when choosing a sunscreen was the level of UVA protection, which is perhaps explained given the educated group surveyed. Increasingly people realise the impact of UVA in the development of both skin cancers and ageing, thus looking for products with balanced protection across the UV spectrum. In the UK, the UV Star Rating System is used as a measurement of the level of protection of a sunscreen against UVA radiation. This rating expresses the degree of UVA protection in comparison with UVB protection of the product.

We found that 89% of our respondents would use sunscreen when outdoors 11am–3pm on a cloudless, sunny day in August in the UK, which is in keeping with the BAD and WHO guidelines.[1,2] However, only 27% of these healthcare professionals would regularly reapply sunscreen every 2 hours on themselves, which is against recommended practice. According to another study among patients receiving sunscreen prescription, factors associated with less compliance with sun protection measures were: age ≤20 or ≥64 years, male gender and less awareness about sun protection/UV-associated risks.[5] We expected better compliance from our respondents because they have opposite characteristics to the above.

There are several study limitations to be mentioned. Firstly, majority (84%) of our respondents are females and many cosmetic products do already contain SPF. 28% of our respondents work in a dermatology-oriented specialty, which could be a source of bias. Lastly, the study sample size is relatively small (n=165) and it is important to highlight that our survey mainly reflects the preferences of adult population living in the UK.

Conclusion

While the habits and preferences of healthcare professionals around sunscreen usage highlighted in this study do not reflect that of the general population, it is interesting to note that healthcare professionals may not necessarily practise what they preach at times. Sun protection campaigns still have a crucial role to play in our modern society.

Ethics Requirements

No formal ethics approval required in accordance with local/institutional regulations.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Disclosure

Dr Birnie co-owns the trademark Altruist issued to European Union Intellectual Property Office, has received travel and expenses from Altruist Dermatologist Sunscreen and personal fees, non-financial support from Westmark BV, outside the submitted work. The authors report no other conflicts of interest in this work.

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