

Introduction

Skin cancer is the most common cancer in Ireland, with over 13,000 cases diagnosed annually, and rising incidence.¹ Ultraviolet (UV) radiation exposure is the strongest risk factor. Cancer prevention remains a cornerstone of the National Cancer Strategy. Public health efforts, including Ireland’s Skin Cancer Prevention Plan, encourage those at risk to adopt sun-safe practices. The COVID-19 pandemic has prompted re-imagination of traditional health promotion. In collaboration with the Irish Skin Foundation (ISF) and the National Cancer Control Programme, our aim was to create a novel video-based sun protection campaign in response to these circumstances, and explore how digital health promotion initiatives could support adoption of healthy sun protective behaviours.

Methods

The study was open to all staff of University of Limerick Hospital Group (ULHG). Five short animated videos were created in collaboration with the ISF (Fig. 1). Videos were displayed across the six hospitals and on hospital social media channels between June and August 2021. The first part of paired surveys was launched and advertised in May 2021, with part 2 commencing in late August, at the end of the video campaign. Advertising of surveys was through posters in staff areas of the hospital, staff email and information stands on select days in the pre-campaign phase. Surveys were conducted using SmartSurvey, comprising questions on attitudes and behaviours related to sun exposure, and utilising the Sun Exposure and Protection Index (SEPI). SEPI is a validated 13-item questionnaire for the assessment of sun protection behaviour.² It incorporates two parts: firstly (SEPI-1) assessing sun habits and sun protection behaviour, with a higher score corresponding with higher risk behaviour. The second part (SEPI-2) evaluates readiness to increase or improve safe sun behaviour. A higher SEPI-2 score indicates low propensity to improve sun protection. Data were collected from SmartSurvey and analysed using IBM SPSS Statistics software. Matched survey participants were identified (n=177), and a paired-samples t-test was performed to assess change in SEPI scores.



Figure 1. Images of elements of the animated video campaign created in collaboration with the Irish Skin Foundation. Themes included children’s exposure to UV, outdoor work, sun tanning, sun bed use, outdoor leisure, and general sun protection. Each video emphasised the 5 S’s of the SunSmart message - Slip, Slap, Slop, Slide and Seek Shade.

Results

1207 ULHG staff members responded, 857 completed part 1 and 704 completed part 2 with 177 matched surveys. 90% of respondents in each were female. Staff groups most predominant were nursing (40%) and administration (25%). 79% were aged 25-54 and 71% reported skin types I-III. Table 1 illustrates mean scores at baseline for SEPI questionnaire items (n=857).

SEPI Part 1: Sun-related habits <i>Higher scores reflect higher risk behaviour</i>	Survey 1 (n=857)	Survey 2 (n=704)	Change
How many times have you been sunburnt during the last 12 months?	0.7	0.7	0
When in the sun, how often do you use sunscreens ?	0.8	0.7	-0.1
How often do you sunbathe with the intention to get tanned?	1.1	1.1	0
How long do you usually stay in the sun between 11 am and 3 pm on a typical day off?	1.3	1.1	-0.2
How often do you take a holiday with the intention of spending more time in the sun ?	1.5	1.3	-0.2
When in the sun, how often do you use covering clothing for sun protection?	1.8	1.7	-0.1
How often do you stay indoors or in shade in order to protect yourself from the sun?	1.8	1.5	-0.3
When in the sun, how often do you use a sun hat or cap for sun protection?	1.9	1.8	-0.1
SEPI Part 2: Propensity to increase sun protection <i>Higher scores reflect lower readiness to improve behaviour</i>	Survey 1 Score	Survey 2 Score	Change
Using sunscreens	0.6	0.5	-0.1
Seeking shade	1.5	1.3	-0.2
Reduction in sunbathing	1.8	1.6	-0.2
Wearing covering clothes	1.8	1.6	-0.2
Wearing a sun hat or cap	1.8	1.7	-0.1

Table 1. SEPI questionnaire items and mean scores for surveys 1 and 2 for all (unmatched) participants. Each item has a maximum possible score of 4.

Barriers to sun protection were forgetting to protect skin (33%), dislike of covering clothing in warm weather (33%), preference to tan (25%), dislike of sunscreen sensation (19%) and inconvenience (15%).

At baseline, 33% reported awareness of SunSmart messaging and 80% described themselves as confident or very confident in protecting their skin. This increased to 55% and 84% respectively in part 2. 64% reported the campaign improved how they protect their skin. 79% reported raised awareness of skin cancer, and 65% said it influenced them to discuss sun protection with others.

177 matched survey participants were identified. No statistically significant difference between mean SEPI scores before and after the campaign was identified in this group (Table 2).

Score	Pre-campaign score mean (SD)	Post-campaign score mean (SD)	Change in mean score	P-value
SEPI-1	10.92 (4.77)	10.36 (4.68)	0.56	0.262
SEPI-2	7.60 (4.73)	6.78 (4.46)	0.82	0.092

Table 2. Comparison of mean SEPI scores for matched participants before and after campaign

Conclusion

Best sun protective habits at baseline included use of sunscreens and avoiding sun burn, while the wearing of hats, covering clothing and seeking shade were least adopted. There was slight improvement seen across the majority of domains of sun protection habits and readiness to improve safe sun behaviours following the campaign. While the changes in SEPI scores for matched survey participants were not statistically significant after the video campaign, the short duration of the campaign is a possible limitation, and may represent the challenge to change attitudes and beliefs surrounding sun exposure and protection.

References
1. National Cancer Registry Ireland. Skin cancer trends. 2019 Available at: <https://www.ncr.ie/sites/ncr/files/pubs/Trends%20report%20skin%20cancer%20final180717.pdf>
2. Widemar K, Falk M. Sun Exposure and Protection Index (SEPI) and Self-Estimated Sun Sensitivity. *J Prim Prev.* 2018;39(5):437-451