

Translation and Validation of the Dutch Version of the Sun Exposure and Protection Index

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Keywords

Skin cancer · Sun protection · Ultraviolet exposure · Prevention · Questionnaire

Abstract

Introduction: Skin cancer is currently the most common cancer type worldwide, and numbers are rapidly increasing. To improve primary prevention, individualised prevention strategies may be of interest as this enhances the chance of long-term behavioural change. The Sun Exposure and Protection Index (SEPI), previously validated in multiple languages, is a tool that could help identify individuals with risky behaviour and tailor interventions to the person's propensity to change. The aim of the present study was to investigate the reliability and validity of a Dutch version of the SEPI for both usage in daily clinical practice and research. **Methods:** Patients were included at primary care settings and dermatology outpatient settings in a 1:1 ratio. Participants were asked to fill out the SEPI together with some baseline characteristics and the previously

validated FACE-Q Skin Cancer – Sun Protection module. Construct validity was tested by comparing SEPI part I and the FACE-Q module using Spearman's Rho. Internal consistency was assessed with Cronbach's Alpha for both SEPI parts separately. To assess test-retest reliability, the SEPI was again filled out 3 weeks later, and scores were compared with Cohen's weighted Kappa. **Results:** Of the 171 participants completing the first questionnaire, 147 (86.0%) participants also completed the follow-up questionnaire. Comparison between the corresponding SEPI part I and FACE-Q module questions showed good correlations regarding sun exposure habits (correlation coefficients ranging from 0.61 to 0.85). Internal consistency of SEPI part I was 0.63 and SEPI part II was 0.65. The test-retest analysis indicated reproducibility over time (weighted Kappa ranging from 0.38 to 0.76). **Conclusion:** In conclusion, the Dutch version of the SEPI is shown to be a valid and reliable tool for both usages in daily clinical practice and research to evaluate individual ultraviolet exposure and measure a person's propensity to limit it.

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Introduction

Skin cancer is the most common cancer type worldwide, and numbers are rapidly increasing [1, 2]. Since exposure to ultraviolet (UV) radiation is the main causal risk factor of skin cancer, primary prevention focuses on limiting UV exposure and applying protective measures [3–7]. Multiple prevention strategies have been successful in increasing the knowledge of UV exposure [7, 8]. However, it is still a challenge to attain long-lasting behavioural changes concerning UV exposure and protection [9–11].

To improve primary skin cancer prevention, individualised strategies may be of interest as this enhances the chance of long-term behavioural change [12]. By measuring sun exposure and protection as well as a person's willingness to change their behaviour regarding these two topics, individuals with risky behaviour can be identified, and interventions can be tailored to the person [11, 12]. The Sun Exposure and Protection Index (SEPI) is a tool to score these two measures using a two-part questionnaire (part I; sun exposure habits, part II; propensity to diminish exposure) [13], based on the generally accepted transtheoretical model of behaviour change [14–17]. The SEPI results in two cumulative scores, ranging from 0 to 32 and 0–20 for part I and II, respectively. In part I, a high score indicates a high UV exposure [13]. In part II, a high score indicates a low propensity to increase UV protective measures.

The SEPI has already been validated in several languages, populations, and settings [13, 17–19]. The results of these studies showed that the SEPI is a stable instrument to measure an individual's sun exposure and protection habits with an overall acceptable validity and reliability for the versions that were being tested.

Hence, the SEPI could potentially assist in daily practice patient care as well as the evaluation of preventive strategies [13]. In addition, this tool could be used for standardised measurement of UV exposure in future research to limit the large extent of heterogeneity in the measures that currently exist and thereby improve the comparison and interpretation of obtained data [11, 20]. Therefore, our aim was to investigate the validity and reliability of a newly developed Dutch version of the SEPI for both usage in daily clinical practice and research.

Materials and Methods

Translation

The SEPI was translated to Dutch using the translation-back translation method [21, 22]. Multiple independent researchers (both medical doctors and linguistic experts) were involved, and

ambiguities and discrepancies were discussed in our multidisciplinary research team, including medical doctors, linguistic experts, a nurse, a health care psychologist, a methodologist, and the developer of the original instrument. More details on the translation process are provided in online supplement 1–3 (for all online suppl. material, see <https://doi.org/10.1159/000535510>).

Study Population

The Dutch version of the SEPI was assessed on psychometric properties in a broad patient population from both primary care settings (including two general practitioner's offices) and dermatology outpatient settings (including a general dermatology clinic and an academic dermatology clinic) in a 1:1 ratio. In both settings, only adult patients (18 years and over) were included. Patients who could not understand the SEPI (e.g., due to illiteracy or dementia) were excluded from the study. Patients were asked to participate and informed about the study in the waiting room, after which they were asked to provide written informed consent.

Clear guidelines about the needed sample size for validating questionnaires are not available [23]. With $N = 150$ and a typical Cronbach's Alpha of 0.8, the 95% confidence interval for Cronbach's Alpha is roughly ± 0.055 and for a test-retest correlation roughly ± 0.085 . This is considered to be of adequate precision for the first validation. A number of 250 participants was aimed at as a drop-out rate of 40% was taken into account due to nonresponders, incomplete questionnaires, and loss to follow-up (based on previous research) [13, 17].

Ethical approval was received by the Regional Medical Ethical Committee (Arnhem-Nijmegen; approval number 2021–8237). The study procedures were in accordance with the Helsinki Declaration [24].

Data Collection

Participants were included from October 2021 to January 2022 on-site at the following primary care settings: Health Centre Hazenkamp (Nijmegen) and Health Centre De Vuursteen (Molenhoek), and at the following dermatology outpatient settings: Radboud University Medical Centre (Nijmegen) and Canisius Wilhelmina Hospital (Nijmegen), all located in the Netherlands. Patients were asked to participate in the study, regardless of the reason for the visit. Both newly referred patients and patients in follow-up were included.

Participants were asked to fill out the SEPI questionnaire twice, at the moment of inclusion in the study and 3 weeks later, next to several baseline characteristics. Participants were able to choose between completing the questionnaires on paper or digital. One reminder was sent via mail, and two reminders were sent via e-mail.

In addition, participants were asked to fill out the five Likert scale questions of the previously validated Dutch version of the FACE-Q Skin Cancer – Sun Protection module at the moment of inclusion [7]. In the follow-up questionnaire, questions were included about recent personal skin cancer diagnoses, recent diagnosis of skin cancer in a person close by, and whether the participant received spoken or written sun protection advice since the first time the questionnaire was filled in.

Data were entered by one researcher (S.K.) in Castor Electronic Data Capture (EDC), a web-based data management system in compliance with Good Clinical Practice standards [25] (Castor Research Inc., USA), with a unique identification number for each participant. To ensure proper data entry, 10% of the data was manually checked by an independent researcher not involved in data entering (S.L.).

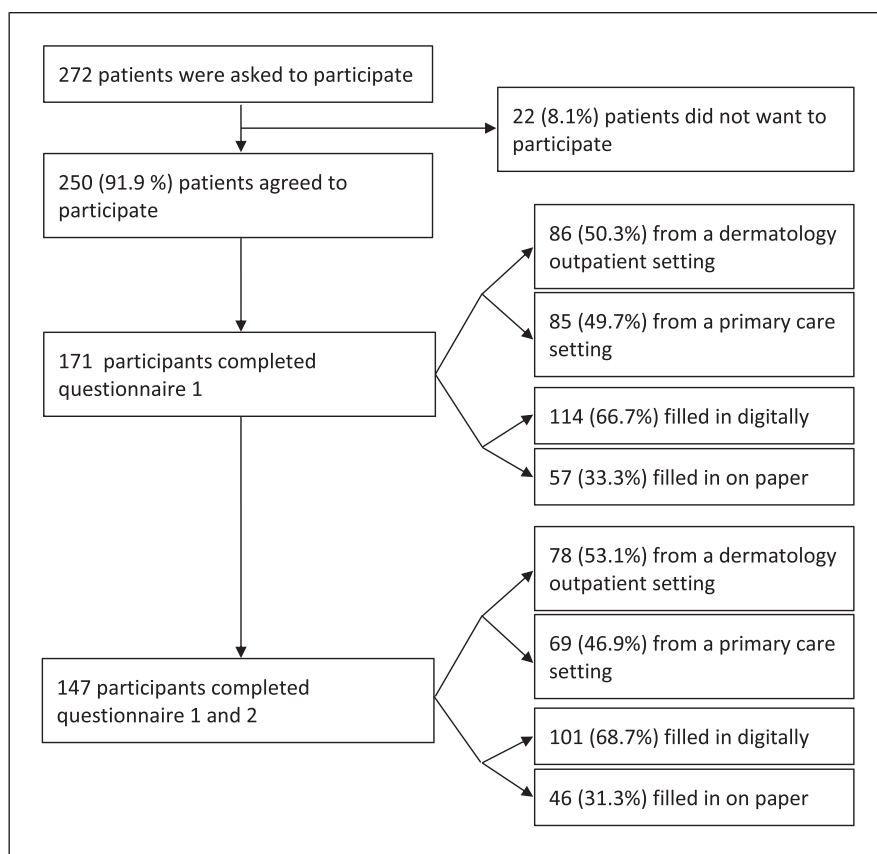


Fig. 1. A detailed flow chart on study participant inclusion with information on the inclusion site and the method of filling in the questionnaire(s).

Statistical Analyses

The collected data were analysed in SPSS 28.0 (SPSS Inc., Chicago, IL, USA). Psychometric analyses were based on the recommendations from the COSMIN initiative [26]. Differences between the baseline characteristics of responders who only filled in the first questionnaire and were lost-to-follow-up afterwards, and responders who filled in both questionnaires were analysed to see whether the lost-to-follow-up caused any selection bias regarding the available characteristics. Categorical variables were analysed using Fisher's exact test. Continuous variables were analysed using the Mann-Whitney U test.

Validity Testing

Content validity was previously assessed and found adequate in other languages [13, 17]. It was additionally discussed in our multidisciplinary research team and with five patients. Construct validity was measured by estimating the correlation between SEPI part I and the FACE-Q module using Spearman's Rho [26]. Further explanation of the validity testing is provided in online supplementary 4.

Reliability Testing

Reliability testing included internal consistency, reproducibility (test-retest reliability), and measurement error. Internal consistency was analysed using Cronbach's Alpha for both parts of the SEPI [26, 27]. Test-retest reliability was calculated by comparing the answers of the SEPI at inclusion and after 3 weeks using Cohen's weighted Kappa [26, 28, 29]. The same was calculated after excluding participants that had a

recent personal skin cancer diagnosis or a diagnosis in a person close by and/or received sun protection advice. Measurement error was analysed by performing a paired samples *t* test. Correlations between the two test moments were calculated using Spearman's Rho. Further explanation of the reliability testing is provided in online supplementary 4.

Results

The first questionnaire was completed by 171 of the 250 patients (68.4%) that agreed to participate in the study. There were 147 participants, 86.0% of all responders that also responded to the follow-up questionnaire. An overview of study participant inclusion and baseline responder characteristics are shown in Figure 1 and Table 1, respectively.

When comparing the participants who responded to both questionnaires with those who only responded to the first questionnaire, it was seen that respondents who were born outside the Netherlands ($p = 0.024$), respondents with a lower FACE-Q total score ($p = 0.030$), and respondents with a higher SEPI part I and/or II total score ($p = 0.022$ and $p = 0.046$, respectively) more often

Table 1. Overview and comparison of the available baseline responder characteristics

Characteristics	1. All responders (n = 171)	2. Responders questionnaire 1 only (n = 24)	3. Responders questionnaire 1 and 2 (n = 147)	p value (difference between 2 and 3)
Median age in years (min-max)	64 (21–87)	57.5 (25–81)	65 (21–87)	0.135
Gender, n (%)				0.271
Female	94 (55.0)	16 (66.7)	78 (53.1)	
Male	77 (45.0)	8 (33.3)	69 (46.9)	
Place of birth, n (%)				0.024
The Netherlands	162 (94.7)	20 (83.3)	142 (96.6)	
Other country	9 (5.3)	4 (16.7)	5 (3.4)	
Highest level of education, n (%)				0.594
Primary and lower vocational education	25 (14.6)	2 (8.3)	23 (15.6)	
Secondary education	43 (25.1)	8 (33.3)	35 (23.8)	
Higher education	66 (38.6)	8 (33.3)	58 (39.5)	
University and other	36 (21.1)	6 (25.0)	30 (20.4)	
Missing	1 (0.6)	0 (0.0)	1 (0.7)	
Employment status, n (%)				0.120
Employed	71 (41.5)	14 (58.3)	57 (38.8)	
Retired	75 (43.9)	6 (25.0)	69 (46.9)	
Unemployed*	25 (14.6)	4 (16.7)	21 (14.3)	
Fitzpatrick skin type, n (%)				0.132
Type 1	21 (12.3)	6 (25.0)	15 (10.2)	
Type 2	80 (46.8)	10 (41.7)	70 (47.6)	
Type 3	62 (36.3)	6 (25.0)	56 (38.1)	
Type 4, 5, and 6	8 (4.7)	2 (8.3)	6 (4.1)	
Skin cancer history, n (%)				0.417
Yes	36 (21.1)	3 (12.5)	33 (22.4)	
No	135 (78.9)	21 (87.5)	114 (77.6)	
Skin cancer in person close by, n (%)				0.561
Yes	73 (42.7)	9 (37.5)	64 (43.5)	
No	97 (56.7)	15 (62.5)	82 (55.8)	
Missing	1 (0.6)	0 (0.0)	1 (0.7)	
Reason of visit, n (%)				0.516
Not for a skin problem	68 (39.8)	7 (29.2)	61 (41.5)	
For skin cancer	13 (7.6)	2 (8.3)	11 (7.5)	
For another skin problem	90 (52.6)	15 (62.5)	75 (51.0)	
Median FACE-Q total score	12	10.5	12	0.030
Median SEPI part I total score	10	14	10	0.002
Median SEPI part II total score	6	7	6	0.046

Statistical tests: Fisher's exact test for categorical variables, Mann-Whitney U test for continuous variables. *Including incapacitated, student, housewife/househusband, and unemployed.

refrained from filling in the follow-up questionnaire, resulting in loss to follow-up (Table 1). All other characteristics were comparable between both groups.

Validity Testing

Construct validity for the questions of SEPI part I, as tested by comparison with the FACE-Q module, is shown in Table 2. The Spearman's Rho for the total scores was 0.71 and ranged between 0.61 and 0.85 for the individual

question comparisons. Only one value was below 0.7, which was found for the question concerning seeking shade.

Reliability Testing

Internal Consistency

Internal consistency of SEPI part I and II is presented in Table 3. The value of Cronbach's Alpha when one of the questions was to be excluded from the questionnaire is also

Table 2. Correlation between SEPI part I and the corresponding questions and total score from the FACE-Q module

Corresponding questions SEPI part I and FACE-Q module	Correlation coefficient	95% CI (two-tailed)
Total scores Total score of SEPI part I and of the FACE-Q module	0.71 (n = 164)	0.62–0.78
Sunscreen use SEPI: When in the sun, how often do you use sunscreen? FACE-Q: <i>Did you use sunscreen?</i>	0.71 (n = 168)	0.62–0.78
Clothes for sun protection SEPI: When in the sun, how often do you use covering clothes for sun protection? FACE-Q: <i>Did you wear clothes to cover your skin in sunny weather?</i>	0.72 (n = 170)	0.64–0.79
Hat or cap for sun protection SEPI: When in the sun, how often do you use a sun hat or cap for sun protection? FACE-Q: <i>Did you wear a hat in sunny weather?</i>	0.85 (n = 171)	0.80–0.89
Seeking the shade SEPI: How often do you stay indoors or in the shade in order to protect yourself from the sun? FACE-Q: <i>Did you stay in the shade?</i>	0.61 (n = 169)	0.51–0.70
Statistical tests: Spearman's Rho. 95% CI, 95% confidence interval.		

shown. For SEPI part I and part II, Cronbach's Alpha was 0.63 and 0.65, respectively. Cronbach's Alpha increased the most when the question about sunscreen use in SEPI part I was deleted, increasing to 0.66. Similarly, when the question about the attitude towards sunscreen use in SEPI part II was deleted, Cronbach's Alpha increased to 0.68. This indicates that these were the two items that were least consistent with the rest of the items.

Test-Retest Reliability

Test-retest reliability is shown in Table 4. Cohen's weighted Kappa was calculated for all questions individually and for the total score of SEPI part I and part II separately. Eight of all the outcomes had a value above 0.60. The lowest weighted Kappa (0.38) was seen for the question about seeking shade in SEPI part I.

Test-retest reliability, assessed after exclusion of the participants that had a recent personal skin cancer diagnosis, a recent diagnosis of skin cancer in a person close by, and/or that received sun protection advice recently, is shown in online supplementary 5. Analysis showed Cohen's weighted Kappa values comparable to the values of the analysis of all participants.

Measurement Error and Correlations

Measurement error and correlations between the two test moments are shown in online supplementary 6. Significant mean differences were seen for the total score of SEPI part I (0.78) and part II (0.51). Separate questions of SEPI part I

that showed a significant mean difference are about duration of stay in the sun (0.16), vacational sun exposure (0.12), hat or cap for sun protection (0.14), and seeking shade (0.24). One question of SEPI part II about attitude toward clothes for sun protection showed a significant mean difference of 0.28. Spearman's Rho for the SEPI total scores was 0.87 for part I and 0.85 for part II and ranged between 0.53 and 0.89 for the individual question comparisons.

Discussion

The SEPI is a promising multilingual tool to measure both sun exposure habits and propensity to diminish sun exposure [13, 17]. In this study, the SEPI was translated to Dutch and tested on validity and reliability. Overall, the results suggest the Dutch version of the SEPI to be both valid and reliable, indicating the opportunity for usage in both daily clinical practice and research.

Construct validity, as measured by the correlation between SEPI part I questions and the FACE-Q module questions, showed to be good with only one somewhat weaker correlation. This weaker correlation was between the questions "How often do you stay indoors or in the shade in order to protect yourself from the sun?" and "Did you stay in the shade?" A possible explanation for this finding is the small inequality in the construct to be measured, as the SEPI includes staying in the shade and

Table 3. Internal consistency of SEPI part I and II displayed for the total parts and with deletion of each of the individual questions

Question	Cronbach's Alpha	95% CI
<i>Value for SEPI part I</i>	0.63 (n = 166)	0.53–0.71
Value after deletion of single questions of SEPI part I as follows		
1. Intentional tanning	0.53 (n = 167)	0.41–0.63
2. Occasions with sunburn	0.63 (n = 166)	0.54–0.71
3. Duration of stay in the sun	0.60 (n = 167)	0.50–0.68
4. Vacational sun exposure	0.56 (n = 166)	0.45–0.65
5. Sunscreen use	0.66 (n = 168)	0.57–0.73
6. Clothes for sun protection	0.56 (n = 167)	0.45–0.65
7. Hat or cap for sun protection	0.64 (n = 166)	0.55–0.72
8. Seeking the shade	0.55 (n = 166)	0.44–0.65
<i>Value for SEPI part II</i>	0.65 (n = 169)	0.56–0.73
Value after deletion of single questions of SEPI part II as follows		
1. Attitude towards intentional tanning	0.63 (n = 169)	0.52–0.71
2. Attitude towards sunscreen use	0.68 (n = 169)	0.60–0.76
3. Attitude towards clothes for sun protection	0.49 (n = 169)	0.36–0.61
4. Attitude towards hat or cap for sun protection	0.58 (n = 169)	0.47–0.68
5. Attitude towards seeking the shade	0.59 (n = 169)	0.47–0.68

Statistical tests: Cronbach's Alpha reliability test. 95% CI, 95% confidence interval.

Table 4. Reproducibility over time, assessed between the SEPI questions at inclusion and at follow-up

Question	Cohen's weighted Kappa	95% CI
<i>Value for SEPI part I total score</i>	0.61 (n = 143)	0.56–0.66
1. Intentional tanning	0.62 (n = 145)	0.53–0.72
2. Occasions with sunburn	0.60 (n = 147)	0.47–0.72
3. Duration of stay in the sun	0.45 (n = 147)	0.34–0.57
4. Vacational sun exposure	0.68 (n = 147)	0.59–0.78
5. Sunscreen use	0.67 (n = 146)	0.58–0.76
6. Clothes for sun protection	0.49 (n = 146)	0.38–0.59
7. Hat or cap for sun protection	0.76 (n = 147)	0.70–0.82
8. Seeking the shade	0.38 (n = 147)	0.27–0.48
<i>Value for SEPI part II total score</i>	0.64 (n = 144)	0.58–0.71
1. Attitude towards intentional tanning	0.75 (n = 145)	0.64–0.86
2. Attitude towards sunscreen use	0.57 (n = 145)	0.46–0.69
3. Attitude towards clothes for sun protection	0.48 (n = 145)	0.37–0.59
4. Attitude towards hat or cap for sun protection	0.76 (n = 144)	0.70–0.82
5. Attitude towards seeking the shade	0.51 (n = 145)	0.37–0.64

Statistical tests: Cohen's weighted Kappa. 95% CI, 95% confidence interval.

staying indoors, while the FACE-Q module only includes staying in the shade.

Internal consistency, assessed with Cronbach's Alpha, was shown to be slightly lower than the desired $\alpha \geq 0.70$. However, this value was also lower than 0.70 in the original validation study of the English and Swedish versions of the SEPI [13]. In this study, the authors suggested that the limited amount of questions in the

SEPI and relatively small sample size could be the potential reason for this. Also, in consistency with this study was the considerably higher Cronbach's Alpha when the question about sunscreen use in both parts was deleted. This is probably caused by the sunscreen paradox, which entails that people who use sunscreen are more likely to stay in the sun for longer [30–32]. This makes these two answers operate in the opposite direction. However, the

questions about sunscreen use are important for identifying the highest risk individuals (high sun exposure and rarely using sunscreen), so it is beneficial to keep the questions in the SEPI [13]. Future research focusing on the potential sunscreen paradox and on further improvement of the internal consistency would be of interest.

The test-retest reliability showed fair agreement for 1 item, moderate agreement for 6 items, and substantial agreement for 8 items based on Cohen's weighted Kappa analysis. These outcomes were highly similar to the results of the validation of the German version [17]. When participants that had a recent personal skin cancer diagnosis, a recent diagnosis of skin cancer in a person close by, and/or received sun protection advice recently were excluded from analysis, results remained similar for both parts of the SEPI. These results indicate that the SEPI has an acceptable test-retest reliability.

Limitations of this study were the moderate sample size, a high proportion of nonresponders (31.6%), and a substantial number of lost-to-follow-up (24 participants, 14.0%). However, these numbers were also seen in the previous validation studies of the SEPI and were anticipated on in this study's sample size calculation [13, 17]. One of the studies suggested using a more active recruitment strategy, which was done in the present study, but this did not lead to a higher response rate. As we had no information about the nonresponders, it is possible that the study is biased due to self-selection of participants. On the contrary, we did analyse the baseline characteristics and questionnaire scores of the participants that were lost-to-follow-up compared to the responders to both questionnaires. Almost all baseline characteristics and scores did not significantly differ between the two groups, indicating the lost-to-follow-up did not cause any selection bias regarding the mentioned characteristics, except that there was a limited difference in FACE-Q total score, SEPI part I total score and SEPI part II total score, and participants born outside the Netherlands were less likely to respond to the second questionnaire. Although the number of participants born outside the Netherlands was very limited in this study, this highlights the importance of additional in depth-analyses and (cross-cultural) validation studies further exploring factors like ethnical and cultural background and health literacy in relation to the SEPI. Another potential limitation was that the study was performed only during fall and winter. Therefore, potential seasonal influence on the results could not be studied.

A limitation of the SEPI itself is the uncertainty and the possibility of recall bias in the measure of UV exposure as

it is based on self-reported data [33]. However, when compared with objectively measured UV exposure, self-reported exposure was unexpectedly valid [34]. Another limitation was the absence of responsiveness testing in the current study, which could give important information about whether the SEPI has the ability to detect change over time in the construct to be measured. Although a subanalysis was performed in the current study on patient (in)stability between both measurements regarding several factors (e.g., skin cancer diagnosis) potentially influencing SEPI outcomes, numbers and follow-up time were insufficient in our opinion to analyse responsiveness. It would be interesting to study this in future research since this could provide important additional information on the potential of the SEPI to evaluate intervention strategies.

The present study was carried out in a broad patient population that closely resembles the target population of the SEPI, which is one of the strengths of this study. Since the previous studies validating the SEPI included only students or students and primary health care patients, this study also gives new insights into the validity of the SEPI among primary health care patients and dermatologic patients [13, 17]. Moreover, the population in this study consists of a broad age range and diversity regarding educational level and work situation, which improves the generalizability of the results. Furthermore, more participant characteristics, such as ethnicity and Fitzpatrick skin type, were collected compared to the previous SEPI studies, which provide a clear overview of this study population.

When comparing SEPI part I to the FACE-Q module, the SEPI is a more extensive questionnaire as it also includes questions about intentional tanning, occasions with sunburn, duration of stay in the sun, and vacation sun exposure. This probably leads to a better representation of the actual UV exposure and also shows the behaviour of a patient towards UV exposure on more different assets, which together could improve the identification of high-risk individuals. In addition, SEPI part II explores the propensity of a patient to increase sun protective measures and lower their exposure to UV, while the FACE-Q module does not have any questions regarding this. Because of part II, the SEPI can be used to create tailored primary prevention strategies for individuals with a high risk of developing skin cancer. As the SEPI is a short and quick questionnaire, it seems suitable for daily clinical practice where time is often limited. The SEPI could be filled in before skin (cancer) related patient-doctor consultations and could be used to give targeted advice to patients in need of behavioural change.

When looking at a broader application of the SEPI, it could potentially be used in a population-based skin cancer prevention program focused on lifestyle medicine [35]. This focus would be directed to limiting a person's exposure to UV. Because of the increasing skin cancer incidence [36], there is an urgent need to improve the primary prevention strategies and lower UV exposure as much as possible [37]. The SEPI could potentially help with this.

Conclusion

In conclusion, the Dutch version of the SEPI is shown to be a valid and reliable tool to evaluate individual UV exposure and measure a person's propensity to limit it. It can be used as a risk assessment tool in daily clinical practice and as a measurement tool in research settings. Future research should focus on replicating the present study in a larger population with inclusion of responsiveness testing, translating the SEPI into additional languages, and cross-cultural validity testing.

Key Message

The Dutch SEPI is a valid tool for usage in daily clinical practice and research.

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Statement of Ethics

This study protocol was reviewed and approved by the Regional Medical Ethical Committee (Arnhem-Nijmegen), approval number 2021–8237. Written informed consent was obtained from participants for participation in the study.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

The authors confirm contribution to the paper as follows: study conception and design: E. ter Haar, E. Bronkhorst, M. Falk, S. Spillekom-van Koulik, and S. Lubeek; data collection: S. Knipping, H. Alkemade, K. Hueskes, C. Nij Bijvank; analysis and interpretation of results: S. Knipping, E. Bronkhorst, S. Lubeek; draft manuscript preparation: S. Knipping, S. Lubeek. All authors revised the work critically for important intellectual content and approved the final version of the manuscript.

Data Availability Statement

All data generated or analysed during this study are included in this article. Further enquiries can be directed to the corresponding author.

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