Cognitive Impairment screening in elderly patients during a Skin Cancer Prevention Campaign

Rastreamento de déficit cognitivo em idosos participantes da Campanha de Prevenção ao Câncer de Pele

ABSTRACT

Introduction and objective: The Campanha Nacional de Prevenção ao Câncer de Pele (National Skin Cancer Prevention Campaign), promoted by SBD, is an annual event to inform about the early diagnosis and prevention of skin cancer. Considering the participants’ profile, composed mostly of older adults, and the campaign educational goals, it's opportune to identify the proportion of people with cognitive impairment to improve communication.

Methods: We perform a cognitive screening of 2018 Campaign participants using a "10-point cognitive screener" score. The participants included were ≥ 60 years. We excluded those who were unable to communicate or denied consenting.

Results: The study interviewed 66 participants. The median age was 68 years (p25-p75:63-73), and 42 (64%) were women. Twenty-four participants (36%) had some elementary school, and 13 (20%) had a neurological or psychiatric disease. The crude and adjusted by schooling 10-CS scores had a median of 8 (6-9). Twenty-five of the interviewed patients (38%) had adjusted score below eight, indicating cognitive impairment, and six (9%) had a probable impairment. The cognitive deficit was associated with a history of neurological disease and low schooling.

Conclusions: Despite covering all ages, the campaign prioritizes the risk population, including older adults. Therefore, campaign volunteers should adapt the communication to participants’ profile.

Keywords: Dermatology; Skin Neoplasms; Disease Prevention; Mild Cognitive Impairment; Epidemiology; Early Detection of Cancer
### INTRODUCTION

The Brazilian Society of Dermatology has been promoting the National Skin Cancer Prevention Campaign for approximately 20 years. It is an annual event to raise the population’s awareness for early diagnosis and skin cancer prevention. In addition to disseminating information in mass media, the campaign also offers a dermatological examination focused on identifying lesions suspected of skin cancer and a visual presentation to guide the general population regarding prevention and early diagnosis.1

Most tumors identified in prevention campaigns occur in elderly patients, with an average of 68.5 years for basal cell carcinoma (BCC) diagnosis.2 The average age of participants ranges from 40 to 50 years, according to a study by the Brazilian Society of Dermatology (2006),3 suggesting that a significant proportion of participants in prevention campaigns is elderly.

Considering the participants’ profile and the campaign’s educational character, it is valid to identify the proportion of people with possible cognitive impairment to improve the campaign’s information, focusing on acquiring the desired knowledge for primary and secondary prevention of skin cancer.

### METHODS

The present study conducted a cognitive screening assessment in 66 elderly participants of the National Skin Cancer Prevention Campaign in 2018. It used the 10-CS (10-point cognitive screener) score and included individuals aged 60 years or more. We excluded patients with communication difficulties or who did not consent to participate in the study. Research participants signed an informed consent form (ICF) at the time of the interview. The institution’s ethics committee approved the study (Opinion: 3,748,844).

### RESULTS

We interviewed 66 participants, with a median age of 68 years (p25–p75: 63–73), 42 (64%) of whom were women, and 24 (36%) had only incomplete elementary education.

Another adult accompanied 37 (56%) of the interviewed elderly. The companions were younger than those accompanied (63 [50–68] x 68 [63–73] years; p<0.01 – Mann-Whitney). However, a significant part of them was also elderly. Also, 13 (20%) respondents presented some neurological or psychiatric illness.

The cognitive 10-CS score, crude and corrected for education, had a median of 8 (6–9). Table 1 illustrates the variables studied regarding the association with the cognitive score so that low education and the presence of neurological or psychiatric diseases were associated with lower values.

Twenty-five respondents (38%) had adjusted educational scores below eight, indicating possible cognitive impairment, and six (9%) had probable cognitive impairment.

### DISCUSSION

It is believed that dementia is a poorly recognized clinical situation. Up to 67% of carriers are not correctly identified, and up to 91% of patients with mild dementia are not recognized.4 The 10-CS test performs a standardized assessment. It is quick to apply (up to five minutes) for cognitive screening in the elderly, showing a better performance than the Mini-Mental state exam and the 6-item screening to identify cognitive impairment.5 In the study above, 58.3% of patients with a 10-CS score below eight had cognitive impairment, while 96.5% of patients with a score below six had this impairment.5

More than a third of respondents over 60 years had low scores in our study, and 10% had a high chance of dementia. As expected, the analysis associated cognitive impairment with the neurological history and low education, but it adjusted the scores for the latter characteristic.

### TABLE 1: Characteristics of respondents according to the 10-CS score

| Variable                        | Score < 8 n=30 (%) | Score ≥ 8 n=36 (%) | Relative risk | p     |
|---------------------------------|--------------------|--------------------|---------------|-------|
| Woman                           | 22 (73)            | 20 (56)            | 1.32 (0.92 a 1.90) | 0.13  |
| Man                             | 8 (27)             | 16 (44)            | -             | -     |
| Age (years)*                    | 68.40 (9.59)       | 66.86 (9.42)       | -             | 0.51  |
| Incomplete elementary school or less | 16 (53)         | 8 (22)             | 2.4 (1.20 a 4.82) | 0.01  |
| Neurological or psychiatric illness | 10 (33)          | 3 (8)              | 4 (1.21 a 13.22) | 0.01  |
| Came accompanied                | 17 (57)            | 20 (56)            | 1.02 (0.66 a 1.57) | 0.99  |

*Mean (standard-deviation)
Interestingly, adults did not accompany the participants with scores indicating deficit risk more often. Moreover, the adults who accompanied these participants were mostly elderly too, just a few years younger.

The present study has limitations related to the performance in a single center, and not having a control group. On the other hand, the study did not aim to verify risks associated with other groups but describe a cognitive characteristic of the studied population and possible implications in setting up educational strategies.

CONCLUSION

The National Skin Cancer Prevention Campaign aims at all age groups. However, there is a particular focus on at-risk populations, which include elderly individuals. Therefore, it is relevant that the information and the didactic structure of these campaigns are appropriate to the listeners’ profile, focusing on the most pertinent and objective aspects of prevention and early diagnosis of skin cancer.

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