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THE AWARENESS AND USAGE PATTERNS OF SUNSCREEN: BENEFITS, DRAWBACKS, AND PUBLIC KNOWLEDGE

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Relevance. Sunscreen is one of the major photoprotection tool, and it offers a wide variety of benefits such as the prevention from sunburn, photoaging, and risk of skin cancer. However, the rise in skin cancer prevalence, even with the elevated knowledge about sunscreen effects, has been a concern worldwide, indicating that there is a significant gap between knowledge and the effective usage. Furthermore, more discussion on the potential side effects, such as systemic absorption of chemicals, hormone imbalance, vitamin D deficiency, and environmental toxicity, might also play a key role in influencing behavior changes. Understanding benefits and drawbacks and how they influence behavior is necessary in developing effective educational strategies.

Aim: to assess the degree of public awareness regarding the advantages and disadvantages of the sunscreen usage to evaluate the patterns of sunscreen use, and to identify the factors correlating with the regular use of sunscreen.

Materials and methods. A comparative cross-sectional study was performed using a self-administered questionnaire distributed among the public. The questionnaire evaluated demographic characteristics, sunscreen use frequency, SPF preference, knowledge of reapplication guidelines, benefits and drawbacks, health and environmental concerns, and level of trust in information sources. Data were analyzed using descriptive statistics and chi-square tests for correlation analysis, with statistical significance set at $p \leq 0.05$.

Results and their discussion. There were 114 valid responses collected. In total, 93.0% of respondents indicated that they used sunscreen and 7.0% indicated non-use. An analysis of sunscreen uses by sex showed a strong statistically significant difference, with 97.0% of the female respondents and 61.5% of the male respondents reporting sunscreen use ($\chi^2 = 22.30$, $p < 0.001$). Use of sunscreen differed widely among different age groups. The highest usage was observed in the youngest age group (18–25) at 93.3%, and lowest in the oldest group (50+) at just 60.0% ($\chi^2 = 10.64$, $p = 0.0011$). A contradiction and statistically significant finding arose in relation to skin type. Respondents with the highest skin sensitivity, Type I and Type II had decreased sunscreen usage levels 69.1% and 50.1%, respectively ($\chi^2 = 18.94$, $p = 0.0007$). Preference for appropriate SPF were significant predictors of sunscreen use. SPF 50+ fared better among respondents, with a usage percentage of 98.1%, compared to only a 75.9% usage among those who were not aware of their SPF preference ($\chi^2 = 8.96$, $p = 0.0028$). Concerns regarding sunscreen safety had a substantial impact on usage behavior. The usage of sunscreen among respondents reporting that safety concerns did not affect their sunscreen use was 98.1%, while in those stating that safety concerns had reduced their sunscreen use, it was 77.4% ($\chi^2 = 9.72$, $p = 0.0018$).

Conclusions. The study established that sunscreen application does have many factors affecting it including gender, age, skin type, type of SPF and safety concerns. Females use sunscreen more than males. This difference indicates that females generally are more likely to use sun screen owing to strictly followed skin care routines. Reversely, the declining rate of sunscreen application in elders is an alarming issue that could lead to severe health hazards as this population segment has a higher risk for all forms of skin cancer and damage. Furthermore, the paradoxical findings, along with the observation that individuals most at-risk for UV induced morbidities are also less likely to employ sunscreen use indicates a significant knowledge gap in public health education. This study also underlines the fundamental importance of educating the population on sunscreen and its function among defense mechanisms against UV radiation, despite its limitations. In addition, the study offers some perspective on trusted healthcare professionals' participation on sunscreen application behaviors across demographic groups and in particular among men, older adults and those with sun-sensitive skin.