

## Skin cancer: how portuguese “sunbathers” perceive risk

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### Abstract:

Skin cancer has been on the rise among the Caucasian population and scientific literature suggests that the incidence of this type of cancer could be prevented if individuals adopted precautionary behaviours. Effectively, rates decrease if citizens avoid prolonged exposure to the sun and protect themselves when exposed. The current research paper aims to understand how a sample of Portuguese citizens perceive the risk of skin cancer during bathing season. **Method:** A sample of 318 participants, between 18 and 74 years of age, was gathered and both the Risk perception of Skin Cancer and the Socio-Demographic Questionnaire were employed. **Results:** It was found that the risk perception in the sample could be considered median, and is significantly higher than the average risk awareness in general. **Conclusions:** The study provides a boost towards identifying priorities in intervention programs in cancer and preventive behaviors. As recommendations for future research, we suggested comparative data, validations of the scale and qualitative methodology. Future research should examine the relations between risk perception in concomitance with other psychological concepts.

**Keywords:** Risk perception, Skin cancer, Sun exposure, Health Psychology.

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### INTRODUCTION

In Portugal, it is estimated that each year there are approximately 10,000 new diagnoses of non-melanoma skin cancer and about 1000 cases of melanoma ([www.apcancrocutaneo.pt](http://www.apcancrocutaneo.pt)), the most serious form of skin cancer (Pollock, 2006). Numbers are high not only for our overall population, but also for the European rates (Parente, Gomes, Viana, & Valley, 2012). The aforementioned research solidly establishes that, with regards to the various types of skin cancer, the foremost external cause is exposure to ultraviolet rays (Kasparian, McLoone, & Meiser, 2009). It is estimated that 4 in 5 cases of skin cancer could be prevented by reducing solar exposure, particularly avoiding sunburns and using sunscreen (Hawkes, Hamilton, White, & Young, 2012; Myers & Horswill, 2006). In this context, risk perception plays an important role in most cognitive models for predicting health-related behaviour (Brewer, Chapman, Gerrard, McCaul, & Weinstein, 2007; Camilo & Lima, 2010; Hay et al., 2011) and it appears that risk is a underlying component in exposure to sunlight (Craciun, Schüz, Lippke, & Schwarzer, 2010; Sjöberg, Holm, Ullén, & Brandberg, 2004). According to Janssen, Osch, Vries and Lechner (2011), risk perception can be measured along the dimensions of Perceived Likelihood and Perceived Severity.

### OBJECTIVE

Having established these facts, and taking into account the few existing studies on this subject, the following research

problem suggests itself: What is the risk perception of skin cancer among a sample of Portuguese sunbathers during the bathing season?

### METHODS

**Participants.** The participants were 318 sunbathers from different districts of Portugal; of these 64.2% were female and 35.8 % male. All were aged between 18 and 74 years ( $M=35.61$ ;  $SD=12.412$ ).

**Instruments.** Two instruments were employed, the “Risk Perception of Skin Cancer (Janssen et al., 2011), translated by ourselves and the “Sociodemographic Questionnaire”. The “Risk Perception of Skin Cancer” (Janssen et al., 2011), consists of two main operationalizations, one for Perceived Likelihood and the other for Perceived Severity.

**Procedure.** A trial run was carried out. We proceeded to collect the sample, which is restricted to subjects with minimum age of 18 years, of Portuguese nationality, Caucasians, with the additional criterion of being sunbathers. Treatment and statistical analysis of data was made using the *Statistical Package for the Social Sciences* (version 20.0 for Windows). The present study is one of a correlational and descriptive quantitative nature. It also has an exploratory nature (D’Oliveira, 2007).

### RESULTS

In order to answer the point of research, we performed a Student t-test for paired samples. The results (Table 1) indicate that the risk perception in skin cancer was median in this sample compared with the values of a population answer average of 3.00. Briefly, risk perception,  $t(317) = 15.040$ ,

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$p = 0.000$ , was significantly higher in the sample than average risk perception in an average population. The Perceived Likelihood,  $t(317) = -2.139$ ,  $p = 0.033$ , was significantly lower in the sample than the average Perceived Likelihood. Comparatively the Perceived Severity was significantly higher in the sample,  $t(317) = 18.5170$ ,  $p = 0.000$ , than the average Perceived Severity.

Table 1 – Student t test for Risk Perception

|                      | Medium | SD   | T      | Sig.     |
|----------------------|--------|------|--------|----------|
| Risk perception      | 3,36   | 0,42 | 15,040 | 0,000*** |
| Perceived likelihood | 2,92   | 0,58 | -2,139 | 0,033**  |
| Perceived severity   | 3,48   | 0,46 | 18,517 | 0,000*** |

\*\*  $p \leq 0,05$  \*\*\*  $p \leq 0,001$

#### DISCUSSION AND CONCLUSIONS

The risk perception in the sample of Portuguese citizens could be considered median, and is significantly higher than the average risk awareness in general. However, when comparing the two operationalizations of risk perception, we found that the participants reported being aware of the severity of skin cancer, but considered that they had a lower Perceived Likelihood of suffering from this disease. This could be supported by the research of Bränström, Kristjansson, and Ullén (2005). Taking into account these values, we may be before a case of “unrealistic optimism” (Radcliffe & Klein, 2002; Henriques & Lima, 2003). We should also consider the possibility of a denial mechanism as a strategy of minimizing risk perception (Thielen, Hartmann, & Soares, 2008). Focusing on generalist Health psychology, the data could be approached in light of the biomedical model (Ogden, 2004). Given the relevance of the topic and its exploratory nature, one can view this study as a stepping stone in the understanding of risk perception in individuals who attend the beach and that are facing the most important risk factor: sun exposure - a factor that is in turn conditioned by awareness and responsible behaviour of each individual (Cestari & Zago, 2005). In terms of implications, the study could provide a boost towards identifying priorities in intervention programs. It should be noted that there were some limitations, as the impact of social desirability, random responses and the absence of comparative data should be noted. As recommendations for future research, we suggested further validation of the scale for the population and gather/analyzing the data through a qualitative methodology (Pais-Ribeiro, 2008). Finally, it is suggested studying risk perception in concomitance with other psychological aspects.

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