

Risk perception and emotions as reactions to regional consequences of global climate change

K. Liebler, K. Reisse, & H. Spada

Institute of Psychology, University of Freiburg, Germany

Introduction

In recent years, risk perception and emotions have been of considerable interest for research in the field of global climate change (Bord, Fisher, & O'Connor, 1998; Leiserowitz, 2006). However, despite the expectation of regionally diverse manifestations of climate change (IPCC, 2007) only little attention has been paid to cognitive and affective processes considering these regional adverse impacts.

Accordingly, the central research question of the current study was which emotions and risk perception participants would show when reacting to information about global as opposed to regional climate change scenarios. The presented regional scenarios included the region of residence of the participants as well as distant regions in foreign countries. Compared were countries with high CO₂ emissions per person (USA), high total CO₂ emissions (China) and low CO₂ emissions (Tonga, Polynesia).

Method

The sample consisted of $N = 88$ students of the University of Freiburg (south-western Germany, domestic region). Each participant read five information brochures, one on global and four on regional (south-western Germany, Tonga, northern China, north-eastern USA) climate change scenarios. After the reading of each brochure, risk perception and basic negative emotions (guilt, fear, sadness, and anger) were assessed using a specifically designed questionnaire.

Results

Our results indicate that risk perception and emotions differ significantly depending on whether the impacts of global, domestic regional, or distant regional climate change are described.

Risk perception for the domestic region was significantly lower than for any other region. Furthermore, the perception of risk was medium for global impacts and highest for the distant region Tonga. Emotions also differed significantly regarding the described regions. For global impacts, feelings of guilt were highest, followed by consequences in Germany, Tonga, China, and the USA. Fear was highest concerning global and domestic consequences. In contrast, sadness was highest for Tonga. Anger regarding climate change consequences was highest for regional impacts in Tonga and global impacts and lowest for the USA.

Discussion

The present descriptive study showed that risk perception and emotions differ for global and regional consequences of climate change. Furthermore, the distinction between region of residence and distant regions proved to influence emotions and risk perception. Drawing upon these findings a follow-up study will include participants from China, India, Germany, and the USA. Thus, the influence of cultural models of risk perception and emotions concerning climate change will also be taken into account.

References

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