

RESEARCH ARTICLE

Hazard proximity and risk perception of tsunamis in coastal cities: Are people able to identify their risk?

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Abstract

Researchers have previously reported that hazard proximity can influence risk perception among individuals exposed to potential hazards. Understanding this relationship among coastline communities at risk of flood events caused by storms and/or tsunamis, is important because hazard proximity, should be recognized when planning and implementing preparation and mitigation actions against these events. Yet, we are not aware of studies that have examined this relationship among coastline inhabitants facing the risk of a tsunami. Consequently, the aim of this study was to examine the relationship between hazard proximity and perceived risk from tsunamis among coastline inhabitants. Participants were 487 residents of the coastal city of Iquique, Chile. They completed a survey during the spring of 2013 that assessed their perceived risk from several natural and non-natural hazards. We found that hazard proximity maintains a negative relationship with the perception of tsunami risk among coastline inhabitants. While this result confirms the general trend obtained in previous studies, this one is conclusive and significant. In contradiction with previous findings, we found that participants from the highest socioeconomic status reported the highest levels of risk perception. This finding can be explained by the fact that most participants from the highest socioeconomic status live closer to the coastline areas, so their risk perception reflects the place where they live, that is in a tsunami inundation zone. Once again, hazard proximity proved to be a determinant factor of risk perception. Our findings have important implications for the development of plans and programs for tsunami preparedness and mitigation. These indicate that individuals do use environmental cues to evaluate their own risk and can potentially make correct choices when having or not to evacuate. Also suggest that preparedness should incorporate how hazard proximity is recognized by individuals and communities at risk.

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