

Water Quality and Risk

A Cross-National Study on Perception

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ABSTRACT

Consumers and the lay public are often considered key stakeholders in integrated water management, but the processes underlying the perception of drinking water quality and risks are still poorly understood. This thesis intends to improve the knowledge of the factors involved in public perception of the quality and risks of drinking (tap) water. This purpose was addressed with a mixed-methods approach, based on quantitative and qualitative data collected in the UK and Portugal. Results suggest that perceptions of water quality and risk result from a complex interaction of diverse factors. The structure of the relationships involved was partially revealed using a structural equation model approach, corroborated by focus groups analyses. The estimation of water quality is mostly influenced by satisfaction with organoleptic properties (especially flavour), risk perception, contextual cues provided by the supply system, and perceptions of chemicals (lead, chlorine, and hardness). Risk perception is influenced by organoleptics, perceived water chemicals, interpersonal (family and friends) and impersonal (mass-media) information, past health problems attributed to drinking water, and trust in water suppliers, among other factors. The large role of direct experience makes perceptions relatively stable, and may challenge public communication strategies. The use of tap and bottled water to drink was relatively well explained by regression analysis, but other water uses were poorly explained. The potential role of several variables – e.g., homeownership, advice from medical doctors on tap water consumption, personal vulnerability, convenience of bottled water, water supply pressure and water price – is also analysed. Several cross-national differences were found and the implications are discussed. Suggestions for future research are provided.

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