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Articles

Hunter Perceptions of Similarity and Trust in Wildlife Agencies and Personal Risk Associated with Chronic Wasting Disease

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Abstract

Theory suggests that risk perceptions are influenced by trust in managing agencies. Shared goals and values (i.e., perceived similarity) are foundations of trust. This article examines the extent to which hunters perceive personal health risks associated with chronic wasting disease (CWD) (e.g., become ill from CWD) and the influence of perceived similarity and trust in state wildlife agencies as determinants of risk. Data were obtained from surveys (n = 9567) of resident and nonresident deer and elk hunters in eight states. Structural equation models showed that across all strata, hunters' perceptions of similarity with agencies positively influenced trust in agencies to manage CWD, explaining up to 49% of the variance in trust. Hunters who trusted agencies perceived less risk associated with CWD, but trust only explained up to 8% of

the variance in risk. Hunters perceived similarity with and trust in wildlife agencies, but still perceived risks associated with CWD.

Keywords:

chronic wasting disease | hunting | perceived risk | salient value similarity | social trust | structural equation modeling | wildlife management

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Notes

Note. Range represents lowest to highest means, factor loadings, and Cronbach alpha reliability coefficients among all 22 strata. Average represents the mean across all strata. Individual item statistics for each of the 22 strata are reported in Needham (2006).

[a] Confirmatory factor analyses based on Satorra-Bentler robust estimation for multivariate nonnormality. All loadings are standardized and significant at $p < .001$. Range of measurement model fit indices: NNFI∗ = .89 to .94, CFI∗ = .90 to .95, RMSEA∗ = .06 to .09.

[b] Variables coded on 7-point scale: 1 = strongly disagree, 2 = moderately disagree, 3 = slightly disagree, 4 = neither, 5 = slightly agree, 6 = moderately agree, 7 = strongly agree.

[c] Variables coded on 9-point scale: 1–2 = no risk, 3–4 = slight risk, 5–7 = moderate risk, 8–9 = extreme risk.

[d] Variable coded on 9-point scale: 1–2 = not concerned, 3–4 = slightly concerned, 5–7 = moderately concerned, 8–9 = extremely concerned.

Note. Based on Satorra–Bentler robust estimation for multivariate nonnormality; β = standardized path coefficients; ∗p < .05, ∗∗∗p < .001.

Most risk perception studies involve technologies or activities that have both benefits and negative consequences (e.g., nuclear power provides electricity, but accidents harm humans). Hazards have no obvious benefits (Slovic 1987; Sjöberg 2000a). Given that CWD is always fatal in animals and is similar to TSE diseases that can cause human death, few hunters would likely contend that CWD has benefits. CWD, therefore, is considered a hazard in this article.

The questionnaire was pretested in each state in 2003 with hunters who purchased a license to hunt in 2002 (n = 659). Details are reported in Needham et al. (2004). Potential overlap of strata (e.g., deer hunters who also hunted elk, hunted in more than one state) was minimized by deleting duplicate cases in samples across strata before questionnaire administration. This study was supported by the Western Association of Fish and Wildlife Agencies (WAFWA). Arizona and North Dakota belong to WAFWA and do not have CWD, but are surrounded by regions with CWD (e.g., New Mexico, Saskatchewan, South Dakota, Utah).

Ancillary analyses revealed no substantive differences in results presented in this article between data that were weighted and not weighted based on the nonresponse bias check.

In addition to tests of direct effects, mediation analyses were conducted (Baron and Kenny 1986). Mediation was not present in 21 of the 22 strata, as the predictor (similarity) was not related significantly to the criterion (risk). Social trust fully mediated the relationship between similarity and risk for Colorado nonresident elk hunters, but the significant initial relationship between the predictor and criterion was weak, $\beta = -.09$, $t = 2.07$, $p = .05$, $R^2 = .01$. Mediation, therefore, was generally not present in this study. For most strata, similarity had a direct effect on trust, which had a direct effect on risk. Similarity was not significantly related to risk.

Ancillary analyses revealed no bivariate differences between males and females in each stratum for variables measuring similarity, trust, and risk, $p > .05$, $r_{pb} < .11$ (Table 2).

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Source: Journal of Wildlife Diseases

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