

A Typology of Pork Misinformation-Susceptible Publics and Information Behaviors in the U.S.

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Introduction

Misinformation refers to false information and in food and agriculture, may appear as misleading labels or inaccurate claims about products and production (Woodside, 2024). Individuals' information-seeking processes are increasingly shaped by pre-existing attitudes and cognitive biases, heightening vulnerability to inaccurate claims (West & Bergstrom, 2021). Pork is one of the most widely consumed meats globally, yet misinformation about antibiotic use, health risks and animal welfare remains prevalent, complicating efforts to communicate accurate information to consumers (Font-i-Furnols et al., 2019; Penkert et al., 2021). Although consumer attitudes and concerns surrounding pork production are well-documented (Roesel et al., 2019), limited research has examined how consumers differ in their susceptibility to misinformation or in their information behaviors related to pork production.

Conceptual Framework

This study is grounded in the motivation-attitude-knowledge (MAK) framework which explains how individuals' motivation, attitudes and knowledge interact to shape susceptibility to misinformation. The framework categorizes individuals into four misinformation-susceptible publics: misinformation-immune, misinformation-vulnerable, misinformation-receptive and misinformation-amplifying (Krishna, 2021). By applying the MAK framework to pork production, this study extends its use to a food and agricultural context and offers insight into how misinformation susceptibility varies among consumers. Information behaviors were conceptualized using the communicative action framework which distinguishes between active information seeking, forwarding and forefending behaviors (Kim & Grunig, 2011) as well as the likelihood of information seeking and likelihood of information forwarding (Krishna, 2021).

Purpose and Objectives

The purpose of this study was to examine misinformation susceptibility related to pork production among U.S. consumers. Specifically, the objectives of this study were to:

1. Describe U.S. consumers' situational motivation, attitudes, knowledge level and information behaviors related to pork production.
2. Classify respondents into misinformation-susceptible publics using MAK.
3. Examine whether these misinformation-susceptible publics differ in their information behaviors.

Methods

Survey data were collected from a national sample of U.S. adults ($N = 1,030$) recruited through Qualtrics panels. Quotas were established to approximate U.S. Census distributions for adults aged 18 years and older. Data were analyzed using SPSS. Knowledge of pork production was measured using ten factual true/false statements (e.g., Antibiotics are used to promote fast growth in pigs in the U.S.). Knowledge deficiency was operationalized as the number of incorrect responses with higher scores indicating greater knowledge deficiency (Krishna, 2021). Situational motivation items were adapted from the situational theory of problem solving (Kim & Grunig, 2011), measuring respondents' cognitive engagement with pork production issues (e.g., "I am curious about pork production") ($\alpha = .77$). Attitudes toward pork production were

assessed using ten attitude statements designed to capture the extremity of respondents' issue-related positions (e.g., The pork industry gets too much negative attention in the media) ($\alpha = .89$). Five information behaviors were operationalized using the communicative action framework used by Krishna (2021). These items were measured on a five-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Respondents were classified into high and low categories for motivation, attitudes and knowledge deficiency, resulting in eight possible segments (e.g., LLL, LHL) which were then collapsed into four misinformation-susceptible publics. Descriptive statistics were conducted for all measures. To examine differences in information behaviors across the four misinformation-susceptible publics, one-way analyses of variance (ANOVA) was performed with the public typology as the independent variable.

Results

Descriptive analyses indicated that respondents reported moderate levels of situational motivation ($M = 3.17$) and generally neutral attitudes toward the U.S. pork industry ($M = 3.04$). On average, respondents answered more than half of the ten knowledge items incorrectly ($M = 5.40$), indicating moderate knowledge deficiency. Most respondents were classified as immune (43.0%) followed by vulnerable (33.9%) and receptive (20.1%) with a smaller proportion classified as amplifying (3.0%). Information behaviors and behavioral intentions were generally low to moderate. Results of one-way ANOVA indicated significant differences across all five information behaviors: information seeking, $F = 8.03, p < .001, \eta^2 = .023$; information forwarding, $F = 4.98, p = .002, \eta^2 = .014$; information forefending, $F = 8.14, p < .001, \eta^2 = .023$; likelihood of information seeking, $F = 17.64, p < .001, \eta^2 = .049$; and likelihood of information forwarding, $F = 12.44, p < .001, \eta^2 = .035$. Bonferroni post hoc tests showed amplifying publics reported significantly higher engagement than immune and vulnerable publics across most outcomes, though differences in information forwarding were not significant. They also exceeded receptive publics in information forefending and both behavioral intention measures. No significant differences in misinformation-susceptible public were found across demographic variables.

Conclusions/Implications

The findings show pork-related information behaviors differ systematically across misinformation-susceptible publics (Krishna, 2021). Importantly, the emergence of a small but highly active amplifying public suggests amplification dynamics may arise from individual-level motivational and cognitive structures, even without intentional or coordinated efforts. It underscores the importance of typological approaches for food communication. Rather than relying on one-size-fits-all messaging, communicators should develop targeted strategies that account for differences in audience susceptibility to misinformation. As amplifying publics are highly engaged information seekers who actively filter content, communication strategies targeting this group should focus on providing transparent, evidence-based explanations that allow them to evaluate and confidently share accurate information in the future. Future research should use longitudinal and experimental designs to examine how exposure to pork-related misinformation or corrective information influences changes in consumers' knowledge, attitudes, and information behaviors over time.

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