

Quantifying Agriculture Involvement

Development and testing of a one-factor model

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Introduction & Conceptual Framework

- Public mistrust in agriculture, from on-farm production to food suppliers, stems from removal from the agricultural industry and a wealth of conflicting messages (Kurtzo, 2016).
- As agricultural communicators work to deliver effective messages, it is vital to acknowledge the roles of issue involvement and personal relevancy in message saliency and effectiveness (Fischer et al., 2020).
- Given the importance of these variables, the Agricultural Involvement Scale (AIS) was adapted from Reysen and Branscombe's (2010) Fanship Scale to measure a participant's involvement in agriculture.

Methodology

- Survey created and administered through Qualtrics.
- 869 responses from U.S. adults were included in analysis.
- Instrument items adapted from unidimensional 11-item scale to measure degree of identification and interest.
- Exploratory Factor Analysis (EFA) was conducted and guided by protocol developed by Williams et al. (2010).

Results

Data Suitable for EFA

- Adequate sample confirmed (KMO = .94)
- Bartlett's test of sphericity was significant ($\chi^2(45) = 7978.60, p < .05$)

One Factor Emerged

- One construct emerged with good factor loading
- Nine items loaded on factor one
- One item loaded separately

Variance Explained

- 66.8% total variance explained via factor one
- 10.15% total variance explained via factor two

Table 1.

Factors and Items of Agricultural Involvement following Factor Rotation

	Factor 1	Factor 2
I strongly identify with agriculture.	.92	
I want everyone to know I am connected to agriculture.	.91	
I spend a considerable amount of money on my agriculture-related interest.	.90	
I am emotionally connected to agriculture.	.89	
When agriculture is popular, I feel great.	.89	
I would be devastated if I were told I could not pursue agriculture.	.86	
I want to be friends with people who like agriculture.	.85	
I have rescheduled my work to accommodate agriculture.	.83	
Agriculture is part of me.	.67	
I do not devote much energy to agriculture.*		.99

Note. *Negatively coded item was reverse coded. Extraction method was Principal Component Analysis. Rotation method was Oblimin with Kaiser Normalization.

Conclusions & Implications

- Knowing the audience's involvement in agriculture is key to effective message framing (Fischer et al., 2020).
- This instrument is a first step at an attempt to measure a key variable in agricultural communications research.
- When those in agricultural communications have insights to the relevancy of a topic for their audience members, more in-depth analysis can occur and lead to better message development.
- Knowing the audience's levels of involvement with agriculture may help agricultural communicators better target and market specific messages to certain audiences.

Recommendations

Investigate Potential Emerging Factor

- One item loaded separately from factor one and accounted for 10.15% of total variance.
- Future studies should create and test additional items that may contribute to explaining additional variance via this additional factor.

Use the Instrument to Better Understand Audience Involvement in Agriculture

- The instrument should be used when an understanding of audience involvement in agriculture is needed for crafting messages, creating communications campaigns, and to increase public and policy maker understandings of agriculture (Enns et al., 2016).

Refine and Update Instrument Over Time

- As factors associated with social, economic, environmental and political contexts shift, the addition of new items to this instrument should be considered.

References

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