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Title: Personal Values and Readiness to Support Pollinator-Friendly Roadsides

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Introduction

Worldwide, pollinator populations are declining significantly due to habitat destruction, pesticide use, and land-use patterns (Brunet & Fragoso, 2024). There is a pressing need to address threats to pollinators to ensure proper ecosystem functioning and agricultural productivity (Potts et al., 2016). Different field experts, such as policymakers, extension workers, and biodiversity advocates, promote pollinator-friendly practices by focusing on the ecological aspects of roadside areas (Hopwood et al., 2015; Warner et al., 2025). Despite increasing interest, public support for pollinator-friendly roadside management remains inconsistent (Warner et al., 2025). Insight into what drives individuals' willingness to support pollinator-friendly roadside approaches is crucial for developing effective communication and, ultimately, ensuring successful implementation.

Such insights may be gained with an understanding of personal values, which relate to individuals' environmental attitudes and behaviors, although few studies have explored their connection to the stage of behavioral readiness regarding support for pollinator conservation (Stern et al., 1999). In this research, we aim to fill this knowledge gap and explore personal value orientations as they relate to the stage of change regarding support for pollinator-friendly roadside management.

Conceptual or theoretical framework

This study uses Value Belief Norms (VBN) Theory and the Transtheoretical Model (TTM) of change to understand people's orientations towards pollinator-friendly roadside practices. VBN theory suggests that value orientations are stable and predict attitudes and behavioral intentions (Chen, 2015). In the environmental context, values have been found to include biospheric (value toward nature and ecosystems), altruistic (value toward people and society), egoistic (value toward oneself in terms of costs and benefits), and hedonic (value of pleasure and comfort) (Ojea & Loureiro, 2007; Steg et al., 2014).

The TTM of behavior change describes progression from precontemplation, contemplation, preparation, action, and maintenance (Prochaska & DiClemente, 1983). The application of TTM, especially in understanding environmental policy support, has helped in differentiating between individuals in the precontemplation stage and those in the action stage (Doran et al., 2022). This study conceptualizes personal values as key antecedents that, through the integration of the frameworks, would influence the stages of change for people moving through them, supporting the idea of pollinator-friendly roadside management.

Methodology

Survey data were collected in 2024 from a quota sample ($N = 1,051$) of adult residents living in Florida. The data included value items and a stage of change measure to assess respondents' behavioral orientation towards support of pollinator-friendly roadside management. Stage of change was measured on a five-category ordinal variable that represented increasing levels of readiness and engagement: not thinking about supporting, thinking about supporting, ready to be supportive, taking action, and regularly taking action.

Personal value items (Biospheric, Altruistic, Egoistic, and Hedonic values) were recorded on a 5-point Likert-type scale, and indices were computed by averaging item scores within each value

category. Reliability for internal consistency was measured using Cronbach's alpha. Descriptive statistical analyses of all the research variables were conducted. An ordinal logistic regression model was used to test the relationship between personal values and stages of change.

Results / Findings

Descriptive results indicated sample's strongest values (on a scale ranging from 1 to 5) were biospheric ($M = 3.02$, $SD = .84$), closely followed by altruistic ($M = 2.99$, $SD = .81$), and then hedonic ($M = 2.84$, $SD = .73$), and egoistic ($M = 1.87$, $SD = .88$). Most people are at the precontemplation (36.9%, $n = 388$) or contemplation (24.9%, $n = 262$) stages of change, while few have demonstrated active (6.2%, $n = 65$) or sustained (4.8%, $n = 50$) support for pollinator promotion on the roadside.

From the ordinal regression model, biospheric values were positively and significantly associated ($B = 0.72$, $p < .001$) with later stages of change, suggesting that individuals who value maintaining nature and ecosystems are likely ready to support, or actively support, pollinator-friendly roadside management. Egoistic values ($B = 0.53$, $p < .001$) were also positively related to stages of change, suggesting that self- and community-derived interests could drive support. Conversely, hedonic values were negatively related ($B = -.370$, $p < .001$) to stages of change, suggesting that hedonic values may act as a barrier to support. Altruistic values were not related to stages of change.

Conclusions

This study shows that value orientations are important factors in determining individuals' willingness to support pollinator-friendly roadside management. Biospheric values were the best predictors of progression to advanced stages of change, followed by egoistic values. There was a negative relationship between hedonic values and stages of change. Beyond strictly environmentally-oriented values, findings imply support for environmental policies may also be driven by self- or community-benefits.

Implications / Recommendations / Impact on the Profession

These findings have implications for Extension professionals, policymakers, and environmental communicators. An ecological benefits approach could be effective in reaching individuals high in biospheric values, whereas individuals with egoistic value orientations might be reached by communications emphasizing personal or community benefits of pollinator-friendly roadside practices. On the other hand, hedonic needs such as aesthetics, maintenance, or safety may be critical for overcoming barriers that concern groups that value comfort or beauty.

Matching communication messages to people's levels of comprehension through stage-based public outreach strategies may thus help enhance public engagement practices. The overall implications of the research lie in incorporating value-based, stage-specific communication approaches to promote the sustainability of pollinator-friendly infrastructure practices.

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