
CONSCIENTIOUS PERSONALITY AND RESIDENTIAL ENERGY CONSERVATION BEHAVIOR

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BEHAVIOR & ENERGY CONSERVATION

- Energy Conservation Behavior
 - Basic consumer behaviors could significantly reduce household energy consumption (Dietz, Gardner, Gilligan, Stern, & Vandenberg, 2009)
 - e.g. Weatherization
- Consumers underperform energy conserving behaviors
 - Using “nudges” to alter behavior (e.g. social norm feedback; OPOWER)

PERSONALITY AS A NUDGE

■ **Conscientiousness**

- Personality trait; generally regarded as one of the “Big 5”
- Organization, Planning, Self-Control, Persistence, & Socially Attentive
- Conscientiousness is associated with preventative health behaviors and predicts health and longevity (Bogg & Roberts, 2004; Kern & Friedman, 2008)

CONSCIENTIOUSNESS & ENERGY CONSERVATION

- Conscientiousness could account for some of the individual differences in energy conservation behavior
 - Socially Attentive, Planning-Oriented, Organized, Future-Oriented
- At the individual and national level, energy conservation is associated with conscientiousness (Milfont & Sibley, 2012).

PRESENT STUDY

- Iowa NSF EPSCoR Project
- **Green Community Campaign**
 - **Overall design:** Quasi-experimental study
 - 2 intervention communities
 - 1 control community
 - Communities generally matched on size, general age of housing stock, and education



METHOD

- Pre & Post Intervention Telephone Survey
 - **Wave 1:** 670 residents; 60% Female; 97% Caucasian; Mean age = 56
 - **Wave 2:** 952 residents; 55% Female; 97% Caucasian; Mean age = 57
- **Measures**
 - Attitudes toward energy conservation
 - Participation in home energy audits

MEASURES

- Adapted version of **Behavioral Indicators of Conscientiousness** scale (BIC; Jackson et al., 2010)
 - 6 items; $\alpha = .74$
 - *How frequently do you make lists?*

HYPOTHESES

- Conscientious behavior will be associated with attitudes toward energy conservation.
- Conscientious behavior will be associated with energy conserving behaviors.

RESULTS

■ Attitudes

- ***My life is too busy to worry about making energy related improvements to my home.***
 - Wave 1: ($\beta = .01$; $t = .37$, *ns*)
 - Wave 2: ($\beta = -.12$; $t = -2.96$, $p < .01$)*
- ***Scarce energy supplies will be a major problem in the future.***
 - Wave 1: ($\beta = .11$; $t = 2.55$, $p = .01$)*
 - Wave 2: ($\beta = .06$; $t = 1.55$, *ns*)

ATTITUDES CONT.

- **It is possible to be energy efficient without sacrificing comfort.**
 - Wave 1: ($\beta = .08; t = 1.77, p = .08$)
 - Wave 2: ($\beta = .07; t = 1.75, p = .09$)
- **It is worth it to me for my household to use less energy in order to help preserve the environment.**
 - Wave 1: ($\beta = .13; t = 3.31, p < .01$)*
 - Wave 2: ($\beta = .15; t = 3.60, p < .01$)*

ENERGY CONSERVING BEHAVIORS

- ***Have you ever had an in-home energy audit?***
 - Wave 1: ($\beta = .26$; $Wald = 7.42$; $OR = .78$, $p < .01$)*
 - Wave 2: Income x Conscientious Behavior ($\beta = 1.6$; $Wald = 4.02$; $OR = 4.95$, $p < .05$)*
- **Reading no other information on the utility statement aside from amount**
 - Wave 1: ($\beta = -.32$; $Wald = 8.38$; $OR = .73$, $p < .01$)*
 - Wave 2: ($\beta = -.24$; $Wald = 5.58$; $OR = .79$, $p = .02$)*

ENERGY CONSERVING BEHAVIORS

■ Do you use CFLs?

- Wave 1: ($\beta = .17$; $Wald = 2.32$; $OR = .84$, *ns*)
- Wave 2: ($\beta = .12$; $Wald = .70$; $OR = .89$, *ns*)

■ What % of bulbs in your home are CFL bulbs?

- Wave 1: ($\beta = .001$; $t = .02$, *ns*)
- Wave 2: ($\beta = .09$; $t = 2.41$, $p = .02$)*

■ Do you use LEDs?

- Wave 1: ($\beta = .15$; $Wald = 1.47$; $OR = .86$, *ns*)

LIMITATIONS & FUTURE DIRECTIONS

■ **Limitations**

- Data collection was not designed specifically to examine conscientiousness
- Limited number of BIC items
- Representativeness of sample

■ **Future Directions**

- Larger nationally representative sample with full BIC
- Develop tailored feedback based on consumer profiles



THANK YOU