Theory of Planned Behavior and Recycling Intentions and Youth Baseball: A Case Study

Brian P. McCullough, Texas A&M University  
George Cunningham (Advisor), Texas A&M University

Management/leadership  
Abstract 2010-115  
June 4, 2010 1:20 PM  
25-minute oral presentation (Audubon F)

As the green movement has gained more momentum, environmental impacts and carbon footprints of organizations and individuals are now being considered by more Americans. Attitudes of the American public towards environmental issues have changed from previous environmental movements of the 1970s. Nearly 79% of Americans consider themselves environmentalists and 82% say that they have recycled (Coddington, 1990). Despite these attitudes of the American public towards recycling, there seems to be a gap between attitudes towards recycling and actually recycling.

Municipal recycling programs and other civic movements have increased the ability to recycle into areas and locations not previously exposed to such programs. Despite these additional programs and opportunities to recycle, recovery rates of recyclable products fail to meet municipal expectations. As a result, recyclable products are being deposited in landfills. Aluminum cans have a rather high recover rate of 50% and even higher rate of 78% in states with redemption value (California Department of Conservation). Even though aluminum recovery rates have remained high, recovery rates for plastic beverage containers (e.g. water and carbonated drinks) remains low at 25% (Consumer Reports). Recovery rates of recyclable materials show recycling programs can be effective but also need improvement.

Plastics are most commonly used in consumer products, such as beverage containers and packaging. When these products are thrown away and deposited into landfills, they have a detrimental impact on the environment. Depending on the specific design of the plastic, some can take up to 1,000 years to fully biodegrade (California Department of Conservation, 1997). Even if these plastics are able to biodegrade, they still pose a considerable environmental threat to the local community, soil integrity and surrounding water tables (Hirshfeld, Vesilind & Pas, 1992; El-Fadel, Findikakis & Leckie, 1997). Considering the low recovery rates for plastic containers and miscellaneous materials, the negative environmental effects are exacerbated. From this, it is important to understand the influences that close the value-action gap (Blake, 1999). This gap explains the detachment between personal values or attitudes and performing a specific behavior like recycling.

The purpose of this study was to examine factors that influence recycling intentions. Specifically, we drew from the Theory of Planned Behavior (see Ajzen, 1985, 1991) to explain the value-action gap between individuals’ favorable attitudes towards the environment and the lack of action to protect it (i.e. recycling). This theory holds that one’s actions are influenced by attitudes toward a behavior (i.e., attitude), the degree to which others expect the behavior to occur (i.e., subjective norm), and the degree to which one has volitional control over completing the task (i.e., perceived behavioral control). These antecedents are then expected to influence intentions to engage in the activity and subsequent behaviors. Indeed, researchers have effectively applied the theory to understand water conservation (Lam, 2006), paper recycling (Cheung, Chan, Wong, 1999), household recycling (Tonglet, Phillips & Read, 2004; Knussen, 2008), and other environmentally friendly behaviors (Davies, Foxall, & Pallister, 2002).

The context of this study was a weekend-long youth baseball tournament. Consistent with the Theory of Planned Behavior (Ajzen, 1991), we expected that positive attitudes toward recycling, subjective norm, and perceived behavioral control would all positively influence intention to recycle. We also examined behavioral beliefs (i.e., recycling helps the environment, decreases landfill waste, and decreases one’s carbon footprint), normative beliefs (i.e., the influence of the host site, team families, and local community), and control beliefs (i.e., the possible constraints of time, awareness, and recycling container availability) that might influence these factors, respectively.

Data were collected from adults (N = 129) attending a youth baseball tournament in the Southwest United States. The sample consisted of mostly females (n = 85, 65.9%), was mostly White (n = 97, 75.2%) or Hispanic (n = 15, 11.6%). The participants’ ages were relatively evenly distributed: 18-30 years (n = 3, 2.3%), 31-40 years (n = 35, 27.1%), 41-50 years (n = 46, 35.7%), 51-60 years (n = 9, 7.0%), and 61 years or more (n = 10, 7.8%). We developed a questionnaire following Azjen’s (2006) guidelines. Specifically, attitudes were measured on a 5-item semantic
differential scale (alpha = .80), subjective norm on a 6-item Likert type scale (alpha = .78), and perceived behavioral control on a 4-item Likert type scale (alpha = .60). Intentions were measured with three items (alpha = .95). Belief composites for behavioral beliefs, normative beliefs, and control beliefs were all measured on 7-point scales.

Regression analyses indicated that the belief that recycling would help the environment (beta = .26, p < .01) and decrease landfill waste (beta = .22, p < .05) were both positively associated with positive attitudes toward recycling. With respect to subjective norms, the expectations of other team families to recycle was salient (beta = .27, p < .01), while the expectations of the host tournament and host community were not. Finally, none of the control beliefs affected perceived behavioral control.

We then control for the belief composites and examined the influence of attitudes, subjective norm, and perceived behavioral control on intentions to recycle. The controls accounted for 22% (p < .001) of the variance in intentions to recycle. After accounting for these effects, the main study variables accounted for a unique 11% of the variance (p < .001). Results indicate that subjective norm (beta = .27, p < .01) and perceived behavioral control (beta = .21, p < .05) were significant predictors of recycling intentions, while attitudes were not.

There are several implications from our study. Our study is the first that examines recycling behaviors within a sport context. Our findings suggest that social pressures in a social setting outside the home (i.e. attending a sporting event) can lead to stronger recycling intentions. Thus, if managers implement recycling programs, social pressures will likely result in higher recycling intentions. Additionally, perceived behavioral controls indicate that facilities should offer more opportunities for attendees to recycle. As more facilities implement recycling programs, our findings indicate that conveyed organizational messages should focus on promoting these programs as environmental beneficial by decreasing of landfill waste. Given these results, facility and sport managers should seriously consider the message when conveying recycling programs at their venues.