140 Investigating the outcomes of personal interpretation and extending the psychological factors of the Theory of Planned Behaviour

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Introduction

Environmental interpretation can help mitigate the negative impacts of recreation, tourism, and human use of parks and protected areas. Interpretation is a mission-based approach to communication aimed at provoking in audiences the discovery of personal meaning and the forging of personal connections with things, places, people, and concepts (Ham, 2016). Personal interpretation enhances enjoyment of visitor experiences (Stern et al., 2011), increase visitors' knowledge and understanding of natural and cultural resources (Ham, 2016), foster a sense of appreciation toward those resources (Powell et al., 2009), and promotes stewardship behaviors (Ham, 2016). Importantly, interpretation can be an effective management tool for parks to mitigate and influence visitor behaviours (Marion & Reid 2007). This study sought to determine, based on a case study of Alberta's Provincial Parks, the outcomes of personal interpretive programs and the factors influencing those outcomes.

As a major goal of interpretation is behavioural change, this study employed Ajzen's (1991; 2011) Theory of Planned Behaviour (TPB) which suggests that behaviour is best predicted by a person's intention to perform a specific behaviour, and this in turn is explained by attitudes, subjective norms, and perceived behavioural control associated with the behaviour in question. The TPB performs well in predicting a wide range of behaviours and behavioural intentions including environmental behaviours (Vagias et al., 2014).

This study not only investigated the efficacy of environmental interpretation on influencing pro-environmental behaviour intentions, but also expanded on the theoretical constructs making up TPB. As such, motivations, satisfaction of visit, knowledge, and environmental worldview were included. The additional psychological constructs were included in the proposed theoretical model based on previous studies focused on environmental interpretation and pro-environmental behaviours (Moghimehfar & Halpenny, 2016; Vagias et al., 2014).

This study examined the following hypotheses: (1) Attending in-person environmental interpretation programs increases park visitors' intentions to engage in pro-environmental behaviours; (2) The TPB variables (e.g., perceived behavioral control, attitudes, and social norms) help predict park visitors' pro-environmental behavioural intentions; and (3) Motivations, satisfaction of visit, environmental knowledge, and environmental worldview improve the prediction of pro-environmental behaviour intentions (proposed theoretical model, figure 1)

Methodology

Data were collected from overnight park visitors at eleven different parks across Alberta using on-site-self-administered surveys during the summers of 2018 and 2019 (June-September). Survey responses were collected during weekdays, weekend days, and holidays. Park visitors were approached at random at various locations throughout the parks, including trail heads, permit offices, visitor information centres, boat launch areas, and campsites. We randomized sampling by selecting the next available visitor as long as they were not visibly occupied by other pressing issues. This temporally stratified convenience-based sample strategy resulted in 1,672 completed surveys. Researchers used Android tablets, with the Qualtrics off line app and paper-based surveys, to collect all data on-site(s).

Results

The over-night park visitors were predominantly female (57%), had an average income of over $100,000 CAD, were highly educated, and more than 80% had completed some form of post-secondary education. High levels of income and well-educated park visitors are consistent with statistics found in Alberta (and across Canada). In addition, respondents were primarily under the age of 50. Ninety eight percent of participants camped with

family and friends in groups of 5 individuals or less (68.8%). The majority were also returning visitors of the respective parks, with only 34% of park visitors camping for the first time in to that particular park. Visitors' primary motivation was enjoying nature (90%) while learning about nature was the least important reason (62%). Not surprisingly, visitors scored high on the New Ecological Paradigm (M = 5.71) with visitors who attended personal interpretation programs slightly more in inline with ecocentric worldviews (M = 5.78). The current study used Mplus 8.4 (Muthen & Muthen, 2018) to analyze the data with maximum likelihood estimation. Early results include the phase 1 model of the current TPB variables which suggests good model fit ($\chi2$ = 360.299, df = 77, p = < 0.001, RMSEA = 0.04, CFI = 0.93 , TLI = 0.91, SRMR = 0.044). Phase 1 model accounted for 68% of the variation in park visitors' intentions to engage in PEB ($R2$ = .678). Data analysis for phase 2 (extended TPB proposed theoretical model) is ongoing.
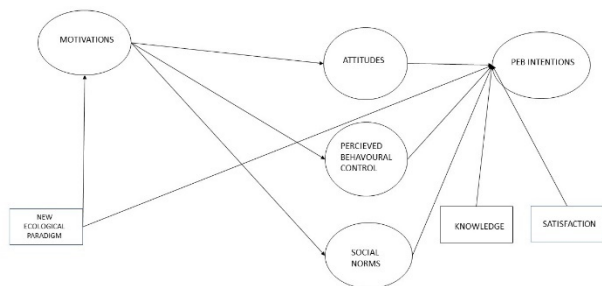

Figure 1

Discussion

One of the persistent requests of park managers is: what influences visitors to engage in pro-environmental behaviors? This research provides theoretical and practical insights regarding environmental interpretation. Validation and extension of the TPB contributes to the field by enhancing our understanding of the psychological factors that underpin behaviours and provides further insights on visitor satisfaction, learning, and motivations for park trips (and attending interpretive programming) may influence behaviours. Satisfaction is critical to achieving park goals of positive visitor experiences and discovery (Manning, 2011) as well as positively influencing pro-place behaviours such as return visitation and recommendations to others (Halpenny, 2006). While knowledge does not appear to directly translate into behaviour, studies have shown knowledge gain as a result of interpretation may promote nature protection and stewardship (Hughes et al. 2011; Tubb, 2003). Finally, understanding the motivations of diverse audiences is one way for managers to tailor key messages and is considered to be a promising strategy for fostering engagement and behaviour change (Falk, 2011).

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