Mindfulness and Water Conservation

1. INTRODUCTION

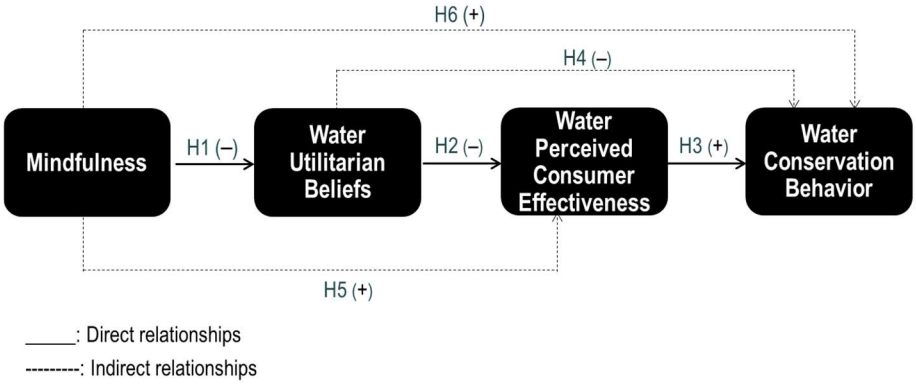
Given the importance of unravelling the process underlying the link between mindfulness and behaviors that preserve the environment, this study proposes novel mechanisms explaining why mindfulness should convert into a specific type of pro-environmental behavior, specifically water conservation behavior (WCB).

We propose that the relationship between dispositional mindfulness and the adoption of pro-environmental behaviors is indirect. The theoretical rationale for this is provided by the hierarchical model for the influence of psychological traits on human behavior. This model argues that basic psychological traits, by possessing a high degree of abstractedness, may have a small connection with the behavior to predict. Accordingly, mindfulness, being a general dispositional construct, might be too detached from specific contexts, namely concerning the adoption of environmentally friendly behaviors, to predict them well. Hence, the relationship between mindfulness and WCB is likely to be mediated.

Mindful individuals should be attentive and aware to their environment, in particular to what is happening in the natural realm. This suggests that mindfulness might relate to pro-environmental behaviors, and in particular to WCB, through an individual's beliefs about the relationship between humans and the natural setting. Accordingly, we propose that the relationship between mindfulness and WCB should be mediated by Water Utilitarian Beliefs (WUB), which is a worldview that looks at water as an unlimited resource for humans to use. However, past studies have shown that the relationship between such broad beliefs and the adoption of pro-environmental behaviors is tenuous. In fact, there appears to be a gap between environmental attitudes and pro-environmental behaviors, signaling that worldviews are the cause of specific antecedents that operate as proximal causes of specific actions. Therefore, we propose that Perceived Consumer Effectiveness (PCE) carries the effect of WUB into WCB. PCE concerns the extent to which individuals believe that they can make a difference regarding the preservation of the environment. Individuals are more likely to develop self-efficacy perceptions of how their actions can contribute to water conservation the more salient their beliefs regarding the need for WCB (the lower their WUB) are, as these motivate individuals to gather knowledge aimed at preserving water resources. Thus, if an individual

believes that water scarcity can be mitigated by his or her own actions, such a belief is likely to strongly influence the willingness to conserve water. The research model is presented in Figure 1.

Figure 1: Mindfulness and WCB



2. METHODOLOGY

Data were collected through a pre-tested self-report questionnaire, distributed in a Portuguese municipality with the collaboration of a group of schools. About 1600 printed questionnaires were handed out by form teachers, who asked students to deliver them to their parents. A cover letter informed parents about the overall purpose of our study, of the optional nature of their participation in it, and assured anonymity and confidentiality of responses. We retained 876 questionnaires for analysis, which corresponds to a net response rate of 54.8%. Mindfulness, WUB, PCE and WCB were assessed using previously validated scales.

3. RESULTS AND IMPLICATIONS

We estimated the structural model with AMOS, controlling for gender, age, education, and income. The fit statistics are adequate: $\chi 2=552.46$, df=107, $p<.01$; IFI=.92; CFI=.92; TLI=.90; RMSEA=.07. We have also run an alternative model to test direct effects from mindfulness to PCE and WCB, and from WUB to WCB. A chi square difference test indicates no significant improvement ($\Delta\chi 2=2.8$, Δdf=3, $p> .05$).

Our research model received broad support. H1 is supported, indicating that mindfulness drives individuals to acknowledge that water resources are endangered. We also find that WUB are negatively related to PCE, which is in line with H2, and that PCE relates to WCB in a positive way, which is supportive of H3. In addition to these direct relationships, our results

support: H4, indicating that PCE mediates the negative relationship between WUB and WCB; H5, meaning that WUB mediates the positive relationship between mindfulness and PCE; H6, evidencing that the relationship between mindfulness and WCB is mediated by WUB and PCE.

Table 1: Results of the Structural Model

Path	***Hyp.***	***Stand. Coef.***	***Stand. Error***
Direct effects			
Mindfulness → WUB	H_1(-)	-.11**	.031
WUB → PCE	H_2(-)	-.30**	.029
PCE → WCB	H_3(+)	.29**	.079
Age → WCB		.14**	.005
Gender → WCB		.01	.087
Income → WCB		-.14**	.039
Education → WCB		.02	.029
Indirect effects			
WUB → WCB	H4(-)	-.09**	.017
Mindfulness → PCE	H5(+)	.03**	.014
Mindfulness → WCB	H6(+)	.01**	.004

*p<.05; **p<.01 (one tail tests)

A number of managerial implications follow from our results. Considering that mindfulness interventions are effective in promoting and maintaining high levels of mindfulness, the results of this study suggest that interventions designed to promote mindfulness would impact positively on WCB. Accordingly, mindfulness training can be implemented in organizational, and educational settings. Mindfulness could enter the curricula of schools, and particular attention should be paid to shaping mindfulness-based interventions to education for environmental sustainability.

Acting upon WUB and PCE is also important. As to the former, the results suggest that public and private institutions interested in the promotion of water sustainable behaviors should raise awareness over environmental problems, namely by implementing environmental campaigns among the public at large, communicating key negative developments concerning the scarcity of water. In order to deal with individuals who are skeptical about anthropogenic climate change, it is important to capitalize on science. Finally, the promotion of PCE can be induced by a continual communication informing people that their efforts have paid off.

In summary, this study contributes to the emerging research that focus on mindfulness as a driver of pro-environmental behaviors. We accomplish this by relying on a hierarchical

approach to the influence of psychological traits on human behaviors, which led to a model in which WUB and PCE were proposed to mediate the mindfulness-WCB relationship. The results supported the prediction that the relationship between mindfulness and the adoption of environmentally friendly behaviors, specifically, water conservation, is indirect. Our research model received broad support, as the research hypotheses were supported.