A Thoughtful Journey Toward Sustainable Choices: Can Mindfulness Enhance Behavior Intent?

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Research Support By
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Presentation Overview

Introduction

Review of Literature

Conceptual Model

Methods

Methods Cont.

Results

Discussion
Introduction
Tourism Context

- Tourism industry is far-reaching and shows little signs of slowing down \(^1\)
  - Driven by wants and needs of consumers

- Positive and negative aspects to the industry \(^2\)
  - Social benefits of the tourist dollar to communities
  - Increased stress on local residents, local economy, and environment

- Need to implement sustainable development within the tourism industry
  - Brundtland definition \(^3\)
    - “Progress that meets the needs of the present without compromising the ability of future generations to meet their own needs”
  - Do consumers have intentions to behave sustainably?

\(^1\) Bowman, 2011; World Travel and Tourism Council, 2010
\(^2\) Bricker et al., 2012, Martinez-Perez et al., 2014
\(^3\) Brundtland, 1987.
Destination Rational ~ Sedona

Outdoor Adventure

Wellness

Natural Beauty
Sedona and sustainability

- Global Sustainable Tourism Certification (GSTC)
  - Currently undergoing certification process
  - Sustainability measurements derived from analysis of their review

http://darksky.org/idsp/communities/sedona/, https://lnt.org/learn/7-principles
Review of Literature
**Introduction of Mindfulness Construct**

Defined as: A cognitive trait, recognized by actively processing information through an acute sensitivity to an individual’s environment and openness to new information.

**Mindfulness as a concept**
- Stems from Eastern psychological traditions
- Has been used in several contexts
  - Education, psychological, medical, business, social science
  - Compartmentalized into 3 main psychological categories
    - State, trait, and learned
- Studied as a Western concept for the past 30 years

**Mindfulness as a construct**
- Ellen Langer, Mindfulness-Mindfulness construct
  - Stemmed from research on mindlessness \(^1\)
  - Conceptual studies; Langer (1992)
  - Empirical studies; Bodner and Langer (2001)
    - Mindfulness-Mindlessness Scale (MMS)
- Tourism context – Gianna Moscardo (1992)
  - Mindfulness Measure (MM)
    - Learning, satisfaction, and interpretation

\(^1\) Langer & Newman, 1979; Fauman & Norman, 2004; Langer & Moldoveanu, 2000
Theoretical Context Cont.

Theory of Planned Behavior

1 Ajzen, 2006 (model); 2 Han et al., 2010; Chen & Tung (2014); 3 Jalivand & Samiei, 2012; 4 March & Woodside, 2005

Behavioral Beliefs

Attitude Toward the Behavior

Normative Beliefs

Subjective Norm

Control Beliefs

Perceived Behavioral Control

Behavior Intent

Behavior

Theory Application

• Green hotel choice
• Destination choice
• Tourist behavior
Conceptual Model
Conceptual Model

Extended Theory of Planned Behavior

- Attitude Toward Behaving Sustainably
- Subjective Norms
- Perceived Behavioral Control
- Mindfulness

Intention to Behave Sustainably

H₁, H₂, H₃, H₄

Research Question

• Does mindfulness add to a traveler’s likelihood to behave sustainably in a visited destination with active sustainable initiatives?
Methods
Quantitative Approach

- Large population to obtain generalizable set of findings \(^1\)
- Previously utilized in other mindfulness and TPB studies
- Survey rationale
  - Examine relationships between variables
  - Allows the study to reach out to a large number of individuals

\(^1\) Creswell, 2009
Instrumentation

- Questions adopted or adapted from literature \(^1\)
  - Previously confirmed for acceptable reliability
  - Validity measures employed throughout the instrument
- Likert & semantic differential 7 point scales
- 6 page online survey
- 27 main questions

Sections

- Cover letter & instructions
- Information requested from Sedona Chamber
- Mindfulness and green value questions about the traveler and their intended experience(s) in a visited destination
- Attitudes, perceptions, & constraints regarding sustainable travel
- Intentions toward visiting sustainable destinations
- Attitudes and intentions specific to Sedona trip
- Demographics

\(^1\) Ajzen, 2002; Fauman & Norman, 2004, Van Winkle & Bachman, 2006
Population Profile

Table 1. Population Profile of Sedona Chamber of Tourism’s Inquirers of Destination Information

<table>
<thead>
<tr>
<th>Demographics on Population</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>40996</td>
<td>96%</td>
</tr>
<tr>
<td>Canada</td>
<td>1074</td>
<td>2%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>161</td>
<td>1%</td>
</tr>
<tr>
<td>Other&lt;sup&gt;a&lt;/sup&gt;</td>
<td>367</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>42598</td>
<td>100%</td>
</tr>
<tr>
<td><strong>State</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>5261</td>
<td>13%</td>
</tr>
<tr>
<td>Arizona</td>
<td>2850</td>
<td>7%</td>
</tr>
<tr>
<td>Texas</td>
<td>2503</td>
<td>6%</td>
</tr>
<tr>
<td>Other&lt;sup&gt;c&lt;/sup&gt;</td>
<td>31364</td>
<td>74%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>41978</td>
<td>100%</td>
</tr>
</tbody>
</table>

| Date of First Inquiry      | January 1, 2015 |
| Date of Last Inquiry       | June 28, 2016 |

<sup>a</sup> “Other” accounts for 63 countries which 160 inquirers or less originated.

<sup>b</sup> There were 663 missing responses.

<sup>c</sup> “Other” accounts for 65 states from which 2500 inquirers or less originated. The term “states” included the United States, Canadian provinces, and cities of other countries.

Respondents

- Individuals who requested destination info from SCCTB
  - 1/1/15 – 6/28/16
- USA residents only

Sampling

- SPSS
  - 6,500
  - Subsample
    - 1/1/16 – 6/28/2016
### Data Collection

#### Table 2

<table>
<thead>
<tr>
<th></th>
<th>Wave 1&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Wave 2&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Surveys Distributed</td>
<td>3950</td>
<td>2212</td>
<td>6162</td>
</tr>
<tr>
<td>Number of Surveys Submitted to Qualtrics</td>
<td>551</td>
<td>326</td>
<td>877</td>
</tr>
<tr>
<td>Response Rate</td>
<td>14%</td>
<td>15%</td>
<td>14%</td>
</tr>
<tr>
<td>Number of Surveys Dropped from Data Analysis&lt;sup&gt;d&lt;/sup&gt;</td>
<td>162</td>
<td>165</td>
<td>321</td>
</tr>
<tr>
<td>Total Surveys Analyzed (n)</td>
<td>389</td>
<td>161</td>
<td>550</td>
</tr>
</tbody>
</table>

<sup>a</sup> Sent on January 18, 2017 from the initial list of 4,000, which was randomly generated.

<sup>b</sup> Sent on January 24, 2017 from the initial list of 2,500, which was randomly generated.

<sup>c</sup> There were 246 bounce back emails.

<sup>d</sup> These were incomplete data and cases with not enough data to fulfill measurement of the primary constructs were dropped.
Results
Demographics

**Age**
- 19 to 24 years old: 27%
- 25 to 34 years old: 3%
- 35 to 49 years old: 20%
- 50 to 64 years old: 49%
- 65 years old and over: 65%

**Gender**
- Female: 65%
- Male: 35%

**Country of Origin**
- United States: 99%
- Other*: 1%

**State of Origin**
- Arizona: 92%
- Other: 8%
**Results**

**Travelers Who Received Visitor Guide After Requesting Information**
- 89% Received
- 6% Did Not Receive
- 5% Not Sure

**Sedona Perceived as an Eco-Friendly Destination**
- 98% Eco-Friendly
- 2% Not Eco-Friendly

**When Travelers Used Guide for Planning Trip to Sedona**
- 48% Prior
- 19% During
- 6% En route
- 27% Immediately

**Visited Sedona After Requesting the Guide**
- 40% Visited Sedona*
- 60% Did Not Visit Sedona
## Travelers' Rate Their Participation in Sustainable Practices During Trip to Sedona

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Slightly disagree</th>
<th>Neutral</th>
<th>Slightly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I chose businesses where I think my spending is retained locally in Sedona.</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>37</td>
<td>11</td>
<td>23</td>
<td>20</td>
<td>4.9</td>
<td>1.6</td>
</tr>
<tr>
<td>I selected lodging based on environmental practices in Sedona.</td>
<td>10</td>
<td>8</td>
<td>5</td>
<td>51</td>
<td>10</td>
<td>10</td>
<td>6</td>
<td>3.9</td>
<td>1.5</td>
</tr>
<tr>
<td>I chose to visit Sedona because it is a recognized International Dark Sky City</td>
<td>14</td>
<td>9</td>
<td>5</td>
<td>41</td>
<td>11</td>
<td>11</td>
<td>9</td>
<td>3.9</td>
<td>1.7</td>
</tr>
<tr>
<td>I followed the &quot;Leave No Trace&quot; principles displayed around the parks in Sedona.</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>12</td>
<td>73</td>
<td>6.4</td>
<td>1.4</td>
</tr>
</tbody>
</table>

*1 = strongly disagree and 7 = strongly agree
### Results

**Travelers' Response for General Travel Behavior to Mindfulness Measurement (MM).**

*(Moscardo, 1992; Frauman & Norman, 2004)*

<table>
<thead>
<tr>
<th>When visiting a destination...</th>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Slightly disagree</th>
<th>Neutral</th>
<th>Slightly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
<th>Mean a</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I want to have my interest captured.</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>60</td>
<td>6.2</td>
<td>1.3</td>
</tr>
<tr>
<td>I search for answers to questions I may have.</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>15</td>
<td>33</td>
<td>38</td>
<td>5.9</td>
<td>1.3</td>
</tr>
<tr>
<td>I want to have my curiosity aroused.</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>14</td>
<td>33</td>
<td>45</td>
<td>6.1</td>
<td>1.2</td>
</tr>
<tr>
<td>I inquire further about aspects of the destination.</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>35</td>
<td>49</td>
<td>6.2</td>
<td>1.2</td>
</tr>
<tr>
<td>I want to explore and discover new things.</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>20</td>
<td>74</td>
<td>6.6</td>
<td>1.1</td>
</tr>
<tr>
<td>I feel involved in what is going on around me.</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>10</td>
<td>15</td>
<td>34</td>
<td>37</td>
<td>5.8</td>
<td>1.3</td>
</tr>
<tr>
<td>I feel in control of what is going on around me.</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>15</td>
<td>21</td>
<td>31</td>
<td>27</td>
<td>5.5</td>
<td>1.4</td>
</tr>
</tbody>
</table>

*1 = strongly disagree and 7 = strongly agree*
Travelers' Response to Mindfulness/Green Value Measurement (Amel, Manning, & Scott, 2009)

<table>
<thead>
<tr>
<th>I choose the most sustainable option available to me, even if it is more costly in terms of time, money, convenience, or personal preference.</th>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Slightly disagree</th>
<th>Neutral</th>
<th>Slightly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
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<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>6</td>
<td>12</td>
<td>14</td>
<td>28</td>
<td>31</td>
<td>7</td>
<td>4.8</td>
<td>1.4</td>
</tr>
</tbody>
</table>

\*1 = strongly disagree and 7 = strongly agree
### Results

#### Theory of Planned Behavior Intention Questions

**Travelers' Intentions of Sustainable Behavior When Visiting a Destination in the Near Future (Aizen, 2006)**

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Slightly disagree</th>
<th>Neutral</th>
<th>Slightly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose businesses where I think my spending is retained locally in any destination I visit.</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>15</td>
<td>16</td>
<td>35</td>
<td>29</td>
<td>5.6</td>
<td>1.3</td>
</tr>
<tr>
<td>Select lodging based on environmental practices in any destination I visit.</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>20</td>
<td>30</td>
<td>29</td>
<td>13</td>
<td>5.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Choose a low impact transportation option, such as public transportation, bike share, or group bus trips, in any destination I visit.</td>
<td>7</td>
<td>12</td>
<td>11</td>
<td>21</td>
<td>23</td>
<td>18</td>
<td>9</td>
<td>4.3</td>
<td>1.7</td>
</tr>
<tr>
<td>Select locally owned and operated tours or attractions that do not put stress on the surrounding environment in any destination I visit.</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td>20</td>
<td>33</td>
<td>32</td>
<td>5.7</td>
<td>1.3</td>
</tr>
<tr>
<td>Choose cities that are recognized by the International Dark Sky Association, in any destination I visit.</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>41</td>
<td>12</td>
<td>21</td>
<td>13</td>
<td>4.7</td>
<td>1.5</td>
</tr>
<tr>
<td>Choose parks that promote the &quot;Leave No Trace&quot; principles, in any destination I visit.</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>14</td>
<td>12</td>
<td>27</td>
<td>43</td>
<td>5.9</td>
<td>1.4</td>
</tr>
</tbody>
</table>

*Note: 1 = strongly disagree and 7 = strongly agree*
### Results

#### Summary of Regression Analysis for Theory of Planned Behavior (TPB) Variables Affecting Behavior Intention

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstand. Coef.</th>
<th>Stand. Coef</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.157</td>
<td>.042</td>
<td>.149</td>
<td>3.768</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>.182</td>
<td>.040</td>
<td>.208</td>
<td>4.492</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>.213</td>
<td>.039</td>
<td>.249</td>
<td>5.449</td>
</tr>
</tbody>
</table>

* R = .57  
* R² = .22

#### Summary of Regression Analysis for Mindfulness Variable Enhancing TPB Variables Affect on Behavior Intention

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstand. Coef.</th>
<th>Stand. Coef</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Mindfulness Measure (MM)</td>
<td>.090</td>
<td>.039</td>
<td>.090</td>
<td>2.328</td>
</tr>
<tr>
<td>Attitude</td>
<td>.153</td>
<td>.042</td>
<td>.148</td>
<td>3.657</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>.168</td>
<td>.040</td>
<td>.192</td>
<td>4.149</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>.199</td>
<td>.039</td>
<td>.233</td>
<td>5.114</td>
</tr>
</tbody>
</table>

* R = .57  
* R² = .22
## Summary of Regression Analysis for Theory of Planned Behavior (TPB) Variables Affecting Actual Behavior

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstand. Coef.</th>
<th>Stand. Coef</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.149</td>
<td>.062</td>
<td>.149</td>
<td>2.409</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>.099</td>
<td>.061</td>
<td>.105</td>
<td>1.614</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>.213</td>
<td>.058</td>
<td>.155</td>
<td>2.404</td>
</tr>
</tbody>
</table>

*R = .30
*R² = .19

## Summary of Regression Analysis for Mindfulness Variable Enhancing TPB Variables Affecting Actual Behavior

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstand. Coef.</th>
<th>Stand. Coef</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Mindfulness Measure (MM)</td>
<td>.426</td>
<td>.061</td>
<td>.362</td>
<td>7.035</td>
</tr>
<tr>
<td>Attitude</td>
<td>.089</td>
<td>.058</td>
<td>.079</td>
<td>1.519</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>.043</td>
<td>.058</td>
<td>.046</td>
<td>.750</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>.127</td>
<td>.054</td>
<td>.142</td>
<td>2.359</td>
</tr>
</tbody>
</table>

*R = .56
*R² = .21
Discussion
Practical Implications

- Traveler’s are more likely to be sustainable when they understand their sustainability options better
  - PBC variable
  - Past studies on mindfulness paired with this study
    - Visual cues
    - Interpretation
      - Provide feedback about impact
      - Statistics about resource consumption
- Mindfulness must be curated based on the destination
  - Destination specifics are important to actual behaviors
- Promote uniqueness of a destination
  - Local businesses are favored

Creswell, 2009
Future Studies

1. Replicate this study with a broader probabilistic sample

2. Consider using a different data collection method for mindfulness and behavior intention

3. Study behavior in-situ

4. Extend this model by incorporating other possible factors that may influence mindfulness, attitude, social norms, perceived behavioral control, and intention
Thank you