

An exploratory study of community awareness of impacts and agreement to sustainable tourism development principles

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Abstract

Before informed, active, full, or meaningful participation can be achieved, tourism planners need to evaluate stakeholder level of awareness and perception of tourism, the tourism process, impacts, and principles of sustainability. Framed with stakeholder theory, this study developed and piloted the Stakeholder Understanding of Sustainable Tourism Development Index (SUSTDI), a tool that assesses awareness of tourism impacts and agreement to principles of sustainable tourism development. The results produced a six-factor solution ($\alpha = .93$); resource preservation, environmental education, stakeholder inclusion, economic planning, cultural awareness, and community resource identification. Differences between community groups were also examined. Though continued validation of the SUSTDI is needed, this is an initial step in providing a tool for tourism planners to assess a community's level of awareness and agreement as a precursor to developing education and training programs to increase understanding and knowledge of sustainable tourism development.

Keywords

Sustainable tourism planning, stakeholder theory, informed community participation, community awareness, tourism education

Introduction

Much work has been conducted under the conceptual umbrella of sustainable tourism since its emergence in the tourism field over three decades ago. However, the sustainable tourism agenda has come to a pivotal intersection of theory and action, where the philosophical and theoretical underpinnings need to be translated into practice. In this regard, those who have attempted to implement sustainable tourism principles are having

varying levels of success. The United Nation World Tourism Organization (UNWTO, 2004) offered some help in operationalizing the notion by identifying

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six main principles that sustainable tourism development projects should follow:

1. high level of tourist satisfaction,
2. make optimal use of environmental resources,
3. respect the sociocultural authenticity of host communities,
4. provide socioeconomic benefits to all stakeholders,
5. constant monitoring of impacts, and
6. informed participation of all relevant stakeholders, as well as strong political leadership (as presented in Byrd et al., 2008: 193).

One of the principles that is critical to the success of sustainable tourism development, yet often unsatisfactorily attended to, is the *informed participation of all relevant stakeholders*. In 1994, Simmons contended that with regard to the inclusion of stakeholders in the tourism development process, “[t]he public’s knowledge of tourism appears, at best, to be barely adequate to instill confidence in the soundness of their contribution” (p. 106), which is a sentiment that could also extend to their knowledge of sustainability and sustainable development. Still, while the need for informed stakeholder participation has been echoed by others in the tourism literature (Byrd and Gustke, 2007; Byrd et al., 2008; Chand and Vivek, 2012; Ellis and Sheridan, 2014; Hardy and Beeton, 2001; Krutwaysho and Bramwell, 2010; Wilson et al., 2001), there remains limited research exploring a priori knowledge and awareness of sustainable tourism at the start of a tourism project. Therefore, this study expands on the notion that before stakeholders can fully participate in a sustainable tourism project, they need to have a basic understanding of conceptual ideas guiding the development paradigm. Specifically, this exploratory study pilots an assessment tool, the *Stakeholder Understanding of Sustainable Tourism Development Index* (SUSTDI), to gather baseline data about community awareness, and their agreement to sustainable tourism principles. In doing so, it also examines differences between stakeholder groups based on demographic and psychographic variables.

Literature review

For sustainable tourism to be successful, development must acknowledge that all three aspects—the environmental, sociocultural, and economic aspects—are interdependent (Hitchcock and Willard, 2009; Stoddard et al., 2012; Swarbrook, 1999). Hitchcock and Willard (2009: 9) stated that, “[w]hen we don’t understand these interdependencies we often make poor decisions.” Previously, sustainable development frameworks had suggested a “balance” of the three

aspects was necessary, but more recently the approach has leaned toward a context-specific framework that takes into account the particular needs of a community. Nonetheless, the goal of sustainable development continues to focus on minimizing the negative impacts while optimizing the positive impacts of the environmental, sociocultural, and economic elements (Hitchcock and Willard, 2009; Wirtenberg et al., 2009). Informed participation of stakeholders is an integral step in better understanding how to minimize the negative impacts while maximizing the positive impacts (Byrd et al., 2008). As such, stakeholder theory has been applied across the travel and tourism field as it relates to community participation (e.g., Byrd, 2007; Byrd et al., 2008; Waligo et al., 2013; Wray, 2011).

Stakeholder theory

The concept of stakeholder participation has its roots in business management and public administration literatures and is associated with the basic ideas of community participation and public involvement that are central to democratic beliefs. There is a substantial literature on stakeholders and stakeholder involvement in business management that focuses on the management and power of the stakeholder (Clarkson, 1995; Donaldson and Preston, 1995; Freeman, 1984; Johnson and Scholes, 1999; Mainardes et al., 2011; Stoney and Winstanley, 2002) and public administration, which focuses on the right a stakeholder has to be involved, regardless of their level of power (Ansari and Phillips, 2001; Arnstein, 1969; Beierle, 1998; Carmin et al., 2003; Carter and Darlow, 1997; Crosby et al., 1986; Curry, 2001; King et al., 1998; Steelman, 2001; Styliadis et al., 2014), though it can be argued that “the right to participate does not equal the capacity to participate” (Aas et al., 2005: 44; also see Jamal and Getz, 1995).

Freeman (1984: 46) defined a stakeholder as “any group or individual who can affect or is affected by the achievement of the organizations objectives.” Donaldson and Preston (1995) refined this definition, stating that to be identified as a stakeholder, the group or individual must have a legitimate interest in the organization. In this regard, according to Crosby et al. (1986: 171), the notion of stakeholder participation refers to the, “effort to put a representative group of the public in dialogue with public officials so that the officials get the reactions of the public themselves on a particular subject.” Stakeholder participation can be facilitated or implemented in different forms, both informal and formal. Forms of participation include public hearings, advisory committees, surveys, focus groups, public deliberation, citizen review panels,

collaboration, civic review boards, work groups, implementation studies, and written comments (Beierle, 1998; Buzinde et al., 2014; Carter and Darlow, 1997; Nanz and Steffek, 2004). All methods of attaining community involvement, however, do not incorporate the same level of participation. Cohen and Uphoff (1980: 218) argued that participation is a,

descriptive term, including numerous different activities and situations, there is much more room for confusion about its causes and effects, and its amounts and distribution. It is necessary to be quite specific about what is meant in any particular situation if we are to speak usefully about it in regard to any particular kind of rural development effort.

Similarly, to better define the types of citizen participation, Arnstein (1969) developed a typology of citizen participation: “Ladder of Citizen Participation.” Participation is divided into three categories: *nonparticipation*, *degrees of tokenism*, and *degrees of citizen power*. Nonparticipation describes types of participation that seem to be a form of public participation, but in reality, it is the planners who explain their autonomous decisions to the stakeholders who had no input. Degrees of tokenism are initiatives where stakeholders are allowed to express their ideas and thoughts, but there is no power to influence the decisions. Finally under degrees of citizen power, the involvement of the stakeholders includes the ability to voice their ideas and thought and to also influence directly the decisions being made (Arnstein, 1969).

Byrd (2007), Nicodemus (2004), and Susskind and Cruikshank (1987) have indicated that for stakeholder participation activity to be successful, the involvement must possess the following elements: fairness, efficiency, knowledge, wisdom, and stability. Fairness is based on the perception that stakeholders’ interests were incorporated in and during the decision-making process. Along with fairness stakeholder participation, activity must be efficient. If the final decision takes longer or costs (financial and resource) more than what could have been achieved through nonstakeholder participation and is not considered better, then the entire process will be unsuccessful (Susskind and Cruikshank, 1987).

Likewise, all relevant stakeholders need to have the same level of knowledge–understanding of the issues. Nicodemus (2004: 161) explains that it requires that stakeholders “develop and exercise skills that allow them to deliberate mindfully, think publicly, and collaborate democratically.” This may necessitate that stakeholders have opportunities for education about the issues that are to be discussed in the

decision-making process. Based on this knowledge and understanding, the decisions made can utilize the shared wisdom of all the stakeholders (Byrd, 2007). A wise decision is based on this shared knowledge and the relevant experience of the stakeholders being applied to the issue. Finally, a decision needs to be stable and able to endure. Stability depends on the relationships among the stakeholders and that the lines of communication remain open (Susskind and Cruikshank, 1987). In many development processes, local residents are often excluded and/or not encouraged to participate in the tourism planning process, though they could provide keen insight into values, customs, and belief system of the community. Residents’ knowledge of their community combined with informed participation in the tourism planning process could be a catalysis that can help the tourism industry provide a more sustainable product (Robinson and O’Connor, 2013).

Awareness, understanding, and knowledge

Stakeholder involvement, or community participation, involves more than simply asking individuals what they want and then providing it. The terms informed, active, and/or meaningful participation have subsequently emerged to imply that stakeholders must have an understanding of the concepts and issues being discussed in order to effectively participate (Cole, 2006; Dabphet et al., 2012; Farrell and Twining-Ward, 2004; Faulkner, 1998; Marzuki and Hay, 2013; Miller et al., 2010). Connell (1997: 250) explained that it is not,

enough to engage people in the development process if the conceptual orientation and the language of that process do not relate to their experience, and if they lack the tools to access their needs effectively and to know what options are available to them to bring about constructive change.

Likewise, Chand and Vivek (2012: 160) stated that “tourism activities can only be sustainable if implemented with a common understanding and consensus-based approach to development.” Based on these ideals, stakeholder involvement should begin with identifying a diverse group of people in the community and educating them of the related issues and topics (Carmin et al., 2003; Crosby et al., 1986). Dabphet et al. (2012: 1109) further explain that “each stakeholder group approaches sustainable tourism development from a different perspective and, therefore, focuses its effort on different aspects of sustainable tourism development.” Essentially, all stakeholders need to have knowledge and understanding about

tourism, tourism processes, the impacts of tourism, differing stakeholder perspectives, etc. in order to make informed decisions; it cannot be assumed that stakeholders understand or know enough about tourism to make informed decisions (Byrd and Gustke, 2007; Byrd et al., 2008; Connell, 1997; Marien and Pizam, 1997; Simmons, 1994; Sofield, 2003). It is more likely that stakeholders have little knowledge of tourism and/or do not understand how it impacts and evolves in a community, which can be a barrier to participation (Marien and Pizam, 1997; Simmons, 1994; Sofield, 2003). If tourism is new to a community, there may also be misunderstanding and misinformation that can lead stakeholders to make decisions based on illogical fallacies that could lead to desertification or disillusionment with the outcomes (Connell, 1997; Sofield, 2003).

Simmons (1994: 106) was one of the first to not only suggest that the “public’s knowledge of tourism appears to be barely adequate. . .” but also to argue the need for public education of tourism. The literature shows some attempts at incorporating a planning step that focuses on assessing awareness of stakeholders as part of a planning process. For example, Reid et al. (1993) developed a community tourism development planning model that included a step that focused on “community awareness raising and value identification,” in which they suggested that overlooking this step could lead to tension throughout the planning process (Reid et al., 2004). Reid et al. (2000) also suggested the importance of this step is because of how difficult it is for many people to imagine the consequences of unplanned, uncontrolled tourism development if they have not actually experienced those conditions. In their study, they found that there was a lack of awareness of critical issues and that community did not have a full understanding of the possible negative impacts of tourism development. The lack of awareness also led to limited buy-in and appreciation of the planning process by their participants (Reid et al., 2000).

Reid et al. (2004) subsequently developed the Community Tourism Self-Assessment Instrument (CTAI) to assess a community’s ability to initiate a tourism plan because the researchers had experienced difficulties in early stages of the planning process to even start a community-wide dialogue about tourism development. The CTAI not only provided the researchers data to better understand barriers to action, itself acted as a mechanism for increasing awareness by being administered in a group and allowing participants to reflect on how each other performed. Through this process, they helped residents understand themselves and the critical nature of development-related decisions. From the information that

the stakeholders are given, they should be able to make the informed recommendations that they believe to be the most appropriate for their community (Crosby et al., 1986). While informed participation requires that stakeholders commit time and resources to be a part of the process, it could be an empowering process and lead to further buy-in and community capacity (Byrd, 2007; Cole, 2006).

Collaboration and knowledge sharing between stakeholder groups

There is also a need for stakeholders to be able and allowed to share their knowledge and experience with each other (Byrd and Gustke, 2007; Connell, 1997; Ellis and Sheridan, 2014; Jackson and Barber, 2014; Simmons, 1994). Informing, educating, and knowledge sharing is not a one-time occurrence, but it should be continuous, ongoing, and when new stakeholders are identified they should be brought into the process (Simmons, 1994). Furthermore, not only should stakeholders continuously share information, but differences within stakeholder groups must be examined and assessed (Ong and Smith, 2013). Examining demographic (i.e., gender, age, level of education, and ethnicity) and psychographic (i.e., activity patterns, values, and motivations) differences within stakeholder groups may also provide insight that could help tourism planners maximize the positive impacts of tourism (i.e., empowerment, strengthening community identity, etc.) while minimizing negative tourism impacts (i.e., resentment, gender inequality, etc.; Jackson and Inbakaran, 2006). Other studies have examined the influence of a stakeholder’s participation in specific recreational–leisure activities on their support for sustainable tourism and participation in local tourism projects (Byrd and Gustke, 2007, 2011; McFarlane and Boxall, 2000). Byrd and Gustke (2007, 2011) found that activities such as bird-watching, gardening, hiking, and attending festivals have positive influences on a stakeholder’s level of support for sustainable tourism and participation in local tourism projects.

Another study that addressed public’s understanding of sustainable tourism was Byrd et al. (2008), which conducted an exploratory factor analysis with 41 item scale and which produced a five-factor solution that explained 57.85% of the variance. Those factors were labeled natural resources, planning, economic concerns, educational needs, and awareness of tourism. The authors concluded that it was important to understand how stakeholders view and understand the concept of sustainable tourism not only because the success of a tourism development plan is often based on the support of the stakeholders in the

community but also stakeholder participation is one of the key principles to sustainable development. In addition, the study concluded that each of these factors can be lumped into one of the three dimensions, but based on this research it is apparent that the manner community residents view sustainability is complicated. However, a limitation of the study was the low variance, which indicated key data and factors missing from the scale.

The need for stakeholder education is apparent if active participation of all stakeholder groups will be achieved in the tourism planning process. However in order to provide stakeholder education, there must be assessment of awareness, knowledge, and understanding. In implementing a tool such as this allows for opportunities to potentially equalize different voice throughout the development process where knowledge of sustainability may have previously only benefited certain privileged stakeholder groups. As this literature review has noted, there has been some examination of differences across business owners and community resident stakeholder groups with respect to support for and understanding of tourism development; however, there has been limited research that has explored differences across demographic and psychographic variables specifically with regard to their awareness of sustainable tourism development. The assessment proposed in this study moves beyond Reid et al.'s (2004) CTAI by focusing not only on knowledge of tourism planning but also evaluates awareness of sustainability principles and sustainable development paradigm that are necessary for sustainable tourism projects. There is literature in the fields of environmental education paying particular attention to the nuances of sustainability education, but there has been little focus on the education of sustainability within a tourism development process. Thus, there is a need to explore community awareness of tourism impacts and agreement to sustainable tourism development as a precursor to developing tourism education and training programs for stakeholders.

Methods

During the February and March of 2005, 2000 questionnaires were mailed to a random sample of residents in five North Carolina counties. The questionnaires were distributed equally to each county. Three of the five counties included in this study were classified as rural, while the remaining two are classified as urban (North Carolina Rural Center, 2015). An initial cover letter and questionnaire, which took approximately 15–20 minutes to complete, were mailed out followed by a reminder postcard two weeks later, and a second questionnaire two weeks after the postcard (Dillman,

2007). The potential participants for the study were selected randomly from list of addresses acquired from a commercial mailing list company. Of the 2000 questionnaires that were mailed, 198 were returned immediately as undeliverable due to incorrect addresses or were individuals who requested not to be included in the study. A total of 295 questionnaires were returned, in which 6 were unusable due to lack of responses, resulting in 289 usable questionnaires and a response rate of 14%. The response rate is considered low, but based on research of unsolicited mail questionnaires, it is not unexpected to have a low response rate (Leeworthy et al., 2001; Sellitto, 2006). Possible reasons for a low response rate could include a lack of interest in the topic by the sample and the length of the questionnaire (Sellitto, 2006). Sellitto (2006) stated “a good response rate associated with traditional postal survey is circa 10–15 percent (p. 150)”. Because of the low response rate, much caution should be taken toward any generalizations of the findings due to possible issues of nonresponse bias. However, the information from the respondents can give insight on the stakeholders understanding of sustainable tourism.

The SUSTDI was developed based on the study conducted by Byrd et al. (2008), but because of the low variance in the scale found in their study, it was significantly refined and modified. Changes to the original scale were developed based on previous research in stakeholder theory (Freeman, 1984; Johnson and Scholes, 1999; Jones, 1995; Stoney and Winstanley, 2002), sustainable tourism development principles (Murphy, 1985; Swarbrook, 1999; UNWTO, 2004), resident perception, and attitude toward tourism development (Ap, 1992; Choi and Sirakaya, 2005; Harrill, 2004; Long et al., 1990; McGehee and Andereck, 2004; Sirakaya et al., 2002), and input and suggestions from educators in sustainable tourism. Once revisions were made to the scale, researchers and practitioners involved in tourism development reviewed the items and made recommendations to revise the scale. These revisions were done and a final version of the SUSTDI was developed.

The SUSTDI initially contained 42 items that are measured using a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree. An exploratory principle component analysis (PCA) was conducted without any restriction and produced a correlation matrix, communalities, eigenvalue, scree plot, and factor loadings. Additionally, a reliability analysis was conducted and produced a reliability statistic, inter-item correlation matrix, and item-total statistic. The purpose for this initial analysis was to help reduce the number of items in the SUSTDI for a more parsimonious scale. Three main criteria were used to reduce items at this stage: factor score, goodness of fit,

and corrected item-total correlation. Based on this initial PCA data, 11 items were deleted producing a 31-item scale.

The second part of the analysis consisted of conducting a principle component factor analysis with Varimax rotation to determine the underlying dimensions of the SUSTDI. The Kaiser-Meyer Olkin (KMO) statistic for sampling adequacy was .91 and the Bartlett's test of sphericity was significant (.000), which is suitable for a factor analysis (Hair et al., 2006). The analysis produced six factors with eigenvalue of 1 or greater with a total variance explained of 61.99%. The Cronbach's alpha was .93. The factor scores ranged between .79 and .40 and the reliability coefficient values (Cronbach alpha) of each factor ranged between .95 and .72. The factors were labeled as (1) resource preservation, (2) environmental education, (3) stakeholder inclusion, (4) economic planning, (5) cultural awareness, and (6) community resource identification (Table 1). To examine if differences existed between community stakeholders and factors, *t*-tests and analysis of variance were conducted with each of the six factors.

Results

Fifty-two percent of the respondents were women and 48% were men. Approximately 60% of the respondents live in the three rural counties. The mean age was 51 (standard deviation [*SD*] 13.8) ranging from 20 to 90 years. Almost 15% indicated they were business owners, while 4% indicated they were employed as a government official. Half of the respondents had earned at least a two or four-year college degree, while 17% had earned a postbaccalaureate degree. The top five recreational-leisure activities included reading (66.4%), driving-sightseeing (65.7%), watching television (65.7%), walking (63.3%), and shopping (59.4%) (Table 2).

The results of the *t*-test indicated there were some statistical differences between groups of stakeholders and the six-factor solution of the SUSTDI. A statistically significant difference was found between the men ($M=3.81$, $SD=.67$) and the women ($M=4.03$, $SD=.56$) participants with women having higher environmental education (Factor #2) scores ($t=-2.984$, $p=.003$). No other differences were found based on gender with any of the other five factors. In addition, no statistical differences were found between age, level education, urban/rural, and the six factors of the SUSTDI.

Further, three recreational-leisure activity variables were found to be statistically significant with respect to the six-factor solution. Those activities included bird-watching, attending festivals and events, and

visiting museums. Bird-watching and those that attended festivals and events reflected statistically significant differences in all six factors. Respondents who indicated they participated in bird-watching and attended festivals had a higher mean score for all six factors compared to those respondents who said they do not participate in these types of recreational activities (Tables 2, 3 and 4, respectively). In addition, there were statistically significant differences between those respondents who indicated they visited museums and those who did not visit museums with four of the six factors (Table 5).

Discussion

This exploratory study suggests that the SUSTDI may be a useful tourism planning tool for exploring community awareness of tourism impacts and community agreement to sustainable tourism principles. The data also indicated that differences may exist between different stakeholders and their understanding of sustainable tourism development. This study revealed that similar to previous research, demographic and psychographic variables can be used to differentiate residents' awareness. These differences may provide a link to resident involvement and engagement in the tourism planning process.

Usefulness of the SUSTDI

This study has shown that the SUSTDI found certain variables that may indicate an individual's level of understanding of sustainable tourism development. The use of the SUSTDI is still in initial phases of testing, but could be considered a first step in gauging stakeholder's understanding of sustainable principles. The factor analysis showed that the instrument had an acceptable overall variance score (61.99%) and Cronbach's alpha (0.93). In addition, the six-factor solution captured five of the six sustainable tourism development principles identified by Byrd et al. (2008) in the World Tourism Organization (WTO) conceptual definition, with the exception of "high level of tourist satisfaction" as the only principle not adequately assessed by the SUSTDI. Further use of the SUSTDI should focus on the 31 items that were found to be relevant to the six factors identified. Additional items that are more community specific could be added to determine if there is a sense of place factor that could be associated with support.

It is critical to determine the level of understanding of sustainable tourism development so that targeted educational programs can be developed. The educational programs should address and focus on less familiar and misunderstood sustainable tourism

Table 1. Stakeholder Understanding of Sustainable Tourism Development Index (SUSTDI) factors as perceived by local community members.^a

Factor/item	<i>N</i>	<i>M*</i>	<i>SD</i>	Factor loading
Factor 1. Resource preservation ($\alpha = .83$)				
Tourism development should include the protection of the natural environment	292	4.31	0.68	.649
Environmental impact studies should be conducted for both existing and proposed tourism development	292	4.11	0.69	.632
Tourism activities should be integrated with a regions conservation programs	292	4.03	0.71	.617
Tourism development should be discouraged when it harms the environment	292	3.86	0.86	.590
Tourism should improve the environment for future generations	292	4.07	0.71	.582
Tourism should not be allowed to damage the cultural resources	292	4.22	0.65	.515
The natural environment must be protected for use by future generations	292	4.48	0.70	.512
The community should be actively involved in the conservation of the region's environment	292	4.37	0.72	.402
Factor 2. Environmental education ($\alpha = .85$)				
Opportunities are needed to learn more about environment	292	4.08	0.76	.762
Environmental education programs lead to improvement in natural resources	292	4.02	0.77	.688
Plants and animals have as much right as humans do to the natural resources in the community	292	3.66	1.08	.645
Education of local residents about proper land use practices is important to the success of tourism development	292	3.95	0.73	.586
Education of local business owners about proper land use practices is important to the success of tourism development	292	3.99	0.79	.575
Education of visitors about proper land use practices is important to the success of tourism development	292	3.88	0.78	.569
Factor 3. Stakeholder inclusion ($\alpha = .83$)				
Tourism leaders must monitor business satisfaction with tourism in order for tourism to be successful	292	3.95	0.69	.770
Tourism leaders must monitor citizens satisfaction with tourism in order for tourism to be successful	292	4.01	0.64	.721
Community involvement increases support for tourism	292	4.01	0.55	.679
Tourism leaders must monitor tourist satisfaction with tourism in order for tourism to be successful	292	4.06	0.59	.670
Visitor participation in tourism development is essential to the success of the tourism development	292	3.81	0.70	.593
Community participation in tourism development is essential to the success of the tourism development	292	3.97	0.65	.562
Factor 4. Economic planning ($\alpha = .84$)				
Tourism diversifies the local economy	292	3.84	0.80	.722
Tourism is good for community's economy	292	4.13	0.64	.709
Economic development funds should be used to promote tourism	292	3.56	0.86	.678
A long-term goal is needed when planning for tourism development	292	4.25	0.66	.621

(continued)

Table 1. Continued.

Factor/item	N	M*	SD	Factor loading
I believe tourism development needs well-coordinated planning	291	4.22	0.61	.615
Education of local governmental officials about proper land use practices is important to the success of tourism development	292	4.17	0.70	.519
Factor 5. Cultural awareness ($\alpha = .95$)				
Opportunities are needed to learn more about the local history	292	4.06	0.61	.799
Opportunities are needed to learn more about the local culture	292	4.02	0.69	.798
Factor 6. Community resource identification ($\alpha = .72$)				
The culture of the community is a tourist attraction	292	3.80	0.80	.792
Restoration of historical sites would promote tourism	292	4.06	0.69	.758
The natural environment is a tourism attraction	292	4.15	0.71	.527

^aBased on 5-point Likert-type scale with 1 = strongly disagree and 5 = strongly agree.

Table 2. Level of community participation in leisure activities.

Activity	Respondents who participated (%)	Activity	Respondents who participated (%)
Reading	66.4	Photography	21.9
Driving/sightseeing	65.7	Hiking	21.9
Watching TV	65.7	Camping	20.8
Walking	63.3	Golf	18.4
Shopping	59.4	Biking	17.3
Attend a festival	55.5	Hunting	16.3
Gardening	54.4	Basketball	15.5
Visit a museum	45.9	Softball/baseball	13.4
Attend a sports event	42.4	Motor sports	12.4
Fishing	36.6	Video games	9.5
Crafts	36.4	Running	7.8
Bird-watching	24.7	Tennis	7.4
Swimming	23.3	Snow sports	6.0
Boating	22.6	Soccer	3.5

principles and also address any misconceptions of the impacts of tourism development. Programming developed with the use of the SUSTDI could significantly strengthen the tourism industry by allowing all stakeholders to make more informed decisions about the type of tourism development and activities that take place in their community. In addition understanding

will, in turn, lead to the development of a stronger sustainable tourism product and experience for all involved.

Residents understanding of sustainable tourism

Based on this study, the resource preservation factor score for women was higher than men, indicating that women identify the importance of resource preservation in their community more than men. This difference could also indicate women value or understand the importance of maintaining the community resources for future use. Therefore, if planners discuss tourism development to a group that is predominately men, they may need to focus more on the ideas and concepts of resource preservation to increase the group's overall understanding of sustainable tourism.

This study found that participation in the following three recreational activities: bird-watching, respondents who visited a museum, and respondents who attend festival event, has a statistically significant increase on the score (understanding) of at least four of the six factors. For example, those who indicated they participated in bird-watching had a higher mean score than those who did not participate in those activities. Respondents who visited a museum scored higher than those who did not on four of the six factors: resource preservation, economic planning, cultural awareness, and community resource identification. There was no statistical difference between those who did or did not visit a museum in regard to the environmental education factor and the stakeholder inclusion factor. The data indicates that information targeted toward museum attendees about the

Table 3. Bird-watching and SUSTDI.^a

Factor/item	Yes <i>M</i> (<i>SD</i>)	No <i>M</i> (<i>SD</i>)	<i>t</i>	<i>df</i>	<i>p</i>
Resource preservation	4.41 (.50)	4.11 (.41)	4.56	281	.000
Environmental education	4.19 (.61)	3.85 (.61)	4.01	281	.000
Stakeholder inclusion	4.16 (.54)	3.91 (.43)	4.01	281	.000
Economic planning	4.24 (.52)	3.97 (.53)	3.87	281	.000
Cultural awareness	4.28 (.51)	3.97 (.62)	3.78	281	.000
Community resource identification	4.20 (.59)	3.93 (.59)	3.24	281	.001

Note: SUSTDI, Stakeholder Understanding of Sustainable Tourism Development Index; *SD*, standard deviation.

^aBased on 5-point Likert-type scale with 1 = strongly disagree and 5 = strongly agree.

Table 4. Attend festivals and SUSTDI.^a

Factor/item	Yes <i>M</i> (<i>SD</i>)	No <i>M</i> (<i>SD</i>)	<i>t</i>	<i>df</i>	<i>p</i>
Resource preservation	4.24 (.45)	4.12 (.53)	2.06	281	.039
Environmental education	4.05 (.55)	3.78 (.68)	3.72	281	.000
Stakeholder inclusion	4.06 (.48)	3.86 (.44)	3.55	281	.000
Economic planning	4.14 (.47)	3.88 (.59)	4.04	280	.000
Cultural awareness	4.17 (.61)	3.90 (.56)	3.78	281	.000
Community resource identification	4.11 (.58)	3.86 (.59)	3.55	281	.000

Note: SUSTDI, Stakeholder Understanding of Sustainable Tourism Development Index; *SD*, standard deviation.

^aBased on 5-point Likert-type scale with 1 = strongly disagree and 5 = strongly agree.

Table 5. Visit museums and SUSTDI.^a

Factor/item	Yes <i>M</i> (<i>SD</i>)	No <i>M</i> (<i>SD</i>)	<i>t</i>	<i>df</i>	<i>p</i>
Resource preservation	4.25 (.48)	4.12 (.49)	2.23	281	.026
Economic planning	4.13 (.52)	3.94 (.55)	3.01	280	.003
Cultural awareness	4.16 (.57)	3.95 (.62)	2.92	281	.004
Community resource identification	4.14 (.55)	3.88 (.62)	3.78	281	.001

Note: SUSTDI, Stakeholder Understanding of Sustainable Tourism Development Index; *SD*, standard deviation.

^aBased on 5-point Likert-type scale with 1 = strongly disagree and 5 = strongly agree.

concept of sustainable tourism focuses on other factors such as environmental education and the stakeholder inclusion. Respondents who attended a festival or were bird-watchers scored higher than their counterparts in all six factors: resource preservation, environmental education, stakeholder inclusion, economic planning, cultural awareness, and community resource identification. This indicates that an individual who participated in one or both of these activities has a better understanding of sustainable tourism development than those who do not participate in one of these activities.

The data indicated that an individual's recreation–leisure activity may indicate level of sustainable tourism development understanding. However, it is likely there are common characteristics, such as level of

education and/or income, among these activity groups that could likely provide further explanation for these statistically significant differences. Utilizing visitor profiles of bird-watchers, museum visitors, etc. may show shared demographics and psychographics. Individuals in these activity groups would still benefit from information about sustainable tourism development, but may be ambassadors–leaders that planners can use in increasing the overall understanding of sustainable tourism in the community.

Many of the variables commonly used to group stakeholders such as age, level education, and geographic area that the individual lives in, urban or rural, did not show a statistically significant difference in their understanding of sustainable tourism concepts. Regional and state tourism planners in North Carolina

can therefore assume that no matter the age, level of education, or area they live in (urban or rural), in general, stakeholders will have a similar understanding of sustainable tourism. The variables where a statistical difference between stakeholders was found were, gender and participation in bird-watching; gardening; photography; hiking; biking; visiting a museum; and attending festivals, indicate that there are groups that can be targeted for specific messages about sustainable tourism, but in some communities, these groups may be small or it may be cost prohibitive to develop an information campaign targeting them.

Conclusion

The SUSTDI can be used as a tool that will assist planners in measuring a community's knowledge base for sustainable tourism development in their communities and could also become a barometer of stakeholder understanding for sustainable tourism development in a community. The education of all stakeholders with respect to sustainable tourism and sustainable tourism principles is becoming more critical each day. As more communities rely on tourism as a strategy for economic generation, and as our natural and cultural resources are becoming more scarce and fragile, it is important that the concepts of sustainable tourism education reach a broad base. There is evidence of a need for greater public awareness about the costs and benefits of tourism development and the actual contribution tourism development can make to a community's welfare. Further, a genuine need exists for information sharing between the principle actors in planning, business sector, and the various resident stakeholder groups, in order to provide the basis for informed decision making. Because much of tourism planning is local, sustainable tourism education should go beyond just teaching students and future professional the concept of sustainability. Efforts should be made to educate local residents about the impacts of tourism development on their community. They should be provided with the knowledge and tools needed to make well-educated decision about their communities' future and to empower them in the tourism planning process. Educating local stakeholders should also be a required component of all tourism planning processes. The SUSTDI can be employed for assessment of knowledge of a community, and subsequently the results could be used to develop education programs for residents to not only train, but educate them on positive and negative impacts of tourism development in their community.

Theoretically, this study and the SUSTDI provide initial insight into a new set of variables, resident knowledge and understanding, in the sustainable

tourism planning process. Informed participation is critical in the sustainable tourism planning process (Byrd and Gustke, 2007; Hardy and Beeton, 2001). Yet, most tourism research conducted has focused on "participation" aspect of the planning process, but limited research has focus on the "informed" component. This study assists in expanding the appreciation of the multiple elements that comprise a stakeholder's understanding of sustainable tourism development in their community. This is the first step in the process of the development of a set of tools for identifying the factors that comprise stakeholder understanding for sustainable tourism development in a community. Additional research needs to be conducted with a larger randomized sample to validate and refine the factors. Furthermore, questions must be developed to measure items—concepts that represent the principle, "high level of visitor satisfaction," that were not found in this iteration of the use of the SUSTDI. Additionally, future analyses should use statistical techniques that will account for shared variables among these groups (e.g., analysis of covariance). Moreover, a follow-up study should be conducted to compare the results of this study and to examine the effectiveness and importance of the SUSTDI on the tourism planning process. Finally, qualitative methods could be used to capture richer data in regard to understanding and knowledge of sustainable tourism that may not be readily uncovered with cursory quantitative data. Qualitative data could be used, then, to strengthen SUSTDI concepts through a mixed-methods approach, such as sequential explanatory design. Likewise, the Western context of this study should be considered with regard to awareness and knowledge levels, as well as overall favorability for democratic and participatory aspects of tourism planning; in other words, this tool may not translate to countries with higher power distance.

This research has shown that community planners and destination management organizations need to be concerned with educating stakeholders in the community. Including informed stakeholders in the planning process calls for a new approach in sustainable tourism development. Traditionally tourism professional training has centered on resource management, marketing, and planning. Based on this study as well as many others reviewed in the literature, training and educating all stakeholders on the sustainable tourism principles need to be expanded. Tourism professionals must not only learn how to incorporate the interests and perceptions of multiple stakeholder groups but also provide them with the knowledge to make informed decisions. They must also begin inventorying not only the physical resources but also the educational resources of the stakeholders.

The indication that stakeholders' perception of impact influences their support for sustainable tourism development has been verified by many previous studies and much has been written about this line of research (Nunkoo and Ramkissoon, 2011). This line of research is critical and should still be conducted: what if stakeholder perceptions toward their support for and attitude of tourism development are *uninformed*? How can tourism truly be sustainable if those who are responsible for its development and management are uninformed participants in the planning process? Based on these results, it is imperative to measure stakeholders understanding of sustainable tourism principles in order to fully understand their level of support for sustainable tourism development.

Tourism scholars need to investigate how other disciplines, such as education, health care, and sociology, measure stakeholder and community understanding. Future studies should also assess understanding of sustainable tourism among other stakeholder groups, such as business owners, government officials, tourists, residents, etc., to look at differences among these groups. This study is a preliminary step in the process of developing a tool for identifying the elements that comprise a stakeholder's understanding of sustainable tourism development. Additionally, research needs to be conducted to validate and refine the factors including conducting the study on a broader scale (i.e., regional, national, or international scales) or difference geographic regions (i.e., developed and developing countries).

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