

MEASUREMENT OF DIRECT-USE WILDERNESS VALUES: A QUALITATIVE STUDY

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1.0 Abstract

Our purpose was to investigate the interpretation of National Survey on Recreation and the Environment wilderness value questions. Qualitative methods were used to assess validity of the questions used in quantitative research. This paper addressed questions relating to developmental, therapeutic, and social wilderness values. Four themes emerged during the interviews and were labeled: wilderness as a solo or group experience, wilderness as a facilitated or non-facilitated experience, receptivity to wilderness experiences, and restorative environments. The receipt of a value was dependent on whether the wilderness visit was structured as a solo or group experience and/or if the experience was facilitated. The issue of personal receptivity was important; respondents indicated that society as a whole might not easily recognize these values. An interesting outcome was the concept of a personal receptivity continuum for receipt of wilderness values. Results indicated the need to make minor changes to question wording and instructions to clarify meanings.

2.0 Introduction

The National Survey on Recreation and the Environment (NSRE) is conducted periodically by the United States Department of Agriculture Forest Service as an attempt to understand and track recreation and public attitude trends toward the environment and public lands (Cordell et al. 2003). The NSRE is a random digit dial telephone survey of U.S. residents. As a part of the questioning about public lands, a sub-sample of

respondents is asked a set of questions specifically about wilderness values. The purpose of the study reported in this paper was to investigate how respondents interpret the NSRE wilderness value questions. Qualitative methods were used to provide a deeper understanding of responses to NSRE questions. Results indicating a divergence between the intended meaning and the interpreted meaning of each question can be viewed as an opportunity to expand and explore theoretical underpinnings of the wilderness value construct or modify and improve the existing NSRE measurement instrument. Emerging themes led to content analysis for convergence or divergence with the intended meanings and underlying theory of the NSRE questions.

3.0 Background

The NSRE has, in its various forms and over the course of its administration, asked questions relating to at least 24 wilderness values. This paper focuses on three of these 24 values in particular—developmental, therapeutic, and social values. Descriptions and analysis of these three values are provided below.

Developmental value refers to personal growth benefits presumed to follow from on-site wilderness experiences, specifically, desirable changes in a wilderness user's self-concept or skills. This was tested in the NSRE by the following statement: *spending time in wilderness helps people learn skills beneficial in everyday life such as leadership, overcoming challenges, and self-confidence*. There is support in the literature for the position that wilderness experiences can promote such personal development. Pohl and Borrie (2000) found that participants in all-woman wilderness experiences achieved several transferable outcomes including self-sufficiency through self-reliance. Scherl (1989) argued that wilderness experiences require individuals to respond to unfamiliar environments and situations which elevate self-confidence through an increased awareness of their own coping abilities. Burton (1981), in a review of 72 studies of personal development programs in wilderness settings, found convincing evidence that such programs have positive effects on self-perception. White

and Hendee (2000) called it the primal hypothesis, the idea that a natural setting free of diversions and social pressures could enable one to connect with their deeper self, realizing self-control, self-actualization, and other personal growth benefits. Their study found positive relationships between the naturalness and opportunities for solitude in wilderness areas and achievement of these personal benefits.

Therapeutic value refers to the healing and stress reduction benefits of wilderness use. This on-site, direct-use value was measured by the following two statements: *spending time in wilderness helps one recover from tragic life events or illness, such as death of a loved one, divorce, or depression and spending time in wilderness helps people escape the stresses of every-day life*. Stress reduction has long been identified as an important motivator for wilderness use. John Muir (1901), speaking in the transcendentalist tradition, saw the use of natural areas by city people as the cure to their “tired, nerve-shaken, overcivilized, [and] . . . half-insane” lives. Contemporary motivations research has identified stress reduction as a primary motivator for recreation generally (Driver et al. 1987) and wilderness recreation specifically (Hammit 1982). Kaplan (1995) described wilderness and wilderness-like settings as restorative environments which renew one’s capability for directed attention through immersion in interesting and inviting experiences. Such environments offer opportunities for fascination or involuntary attention. For example, birders experience process fascination when they follow the unpredictable interactions and appearances of birds. Visitors to Yellowstone National Park experience content fascination when they see a geyser for the first time. In addition to fascination, restorative environments require a sense of “being away”, extent (a rich and coherent world), and compatibility (the desired activity is carried out naturally in the setting). Alternatively, Ulrich et al. (1991) found natural environments to be restorative by reducing stressful stimuli. In this view, the relative absence of stimuli in a natural setting reduces arousal and the stress response that follows. Finally, the emerging field of ecopsychology is exploring the healing benefits of wilderness and wilderness-like settings for physical ailments (Beringer 2000).

Social value refers to the family bonding and friendship benefits sought when one enters a wilderness with a group. Formality and role barriers are reduced in wilderness settings, leading to higher group interdependence, trust, and communication (Driver 1987). The nature of a wilderness trip may predispose participants to behave in socially cohesive ways. For example, Arnould and Price (1993) found that wilderness river trip participants came to the experience in a communitarian fashion, ready to share in collective responsibilities and problem-solving. Such experiences among family members may contribute to long-term family stability, improved interactions, and increased family and marital satisfaction (Mannell and Kleiber 1997). Social values were measured by responses to this NSRE statement: *spending time in wilderness strengthens family bonds, values, and friendships*.

4.0 Methods

This research employed a qualitative approach to data collection and analysis (Taylor & Bogdan 1998). A qualitative in-depth interviewing methodology was useful because it allowed data to emerge throughout the interviewing process (Rubin & Rubin 1995). Interview questions were based on the 1994, 2000, and 2003 NSRE survey questions. The interview guide was created to reflect the original wording of the NSRE questions. Each participant was read the introduction to the wilderness module used on the NSRE and the individual value statements from the NSRE. Respondents were then asked to express their level of agreement using the same five-point scale used on the NSRE (1=strongly agree to 5=strongly disagree) to each individual value statement. Finally, interviewees were asked to elaborate on their answers. Interviews were conducted in the spring of 2004 and ran approximately from 30 to 60 minutes in length. Results discussed herein focus exclusively on the qualitative results and not on the quantitative responses. Fifteen total interviews were conducted. Interviews took place in libraries, workplaces, and in the homes of interviewees, depending on the interviewee’s preferences.

The NSRE sampling methods are designed to obtain a random sample of the American population. Specifically, NSRE methods do not target individuals who have

self-selected to participate in any specific recreation activities. The methods used for this qualitative study also attempted to focus on a diversity of people whether or not they were recreation participants. The pool of participants was generated through posting calls for subjects on internet chat rooms of local interest, in newsletters of volunteer organizations, and at local libraries. To ensure confidentiality, each participant was assigned a pseudonym. With the permission of the interviewees, each interview was digitally recorded and transcribed verbatim. From the transcribed interviews, content analysis uncovered themes relating to perceptions of wilderness value. Emerging themes led to the development of a coding system based on these themes and sub-themes.

5.0 Results

The results in this section summarize the four emerging themes that concern developmental, therapeutic, and social values. The remaining values were not discussed herein due to space constraints. The four themes that emerged during the interviews were labeled as follows: wilderness as a solo or group experience, wilderness as a facilitated or non-facilitated experience, receptivity to wilderness experiences, and restorative environments.

Study participants represented most phases of adult life and ranged from age 22 to age 77. Seven of the participants were female and eight were male. They included three professionals, three homemakers, two students, two retirees, and one self-employed merchant. The remaining four interviewees were employed in retail or service industries.

5.1 Wilderness as a solo or group experience

Whether one viewed the wilderness experience as a solo or group experience had an impact on their answers to the NSRE questions. For example, the statement dealing with the development of leadership skills and self-confidence elicited different responses according to whether the interviewee perceived the experience as solitary or social. Derick perceived wilderness as a solo experience when responding to the statement *spending time in wilderness helps people learn skills beneficial in everyday life such as leadership, overcoming challenges, and self-confidence*.

Those sound more like group things. And when I think of nature, I mean wilderness, I think of like myself and one other person, or small groups, you know. It's more like figuring stuff out for yourself rather than being ... it sounds more like the Boy Scouts or something, like you go out with your troop and you demonstrate leadership.

In response to probe questions, Derek, along with most respondents, made a distinction between the development of leadership skills and skills related to overcoming challenges and self-confidence. The development of the former was predicated on the group experience, while the latter could be accomplished in the solo context. As Barbara stated,

Well, the one thing I took an issue with is it's not necessarily leadership if you're there by yourself . . . the rest of it I agree with. The kids [referring to a summer camp where she once worked], I mean, definitely those traits were developed as they were in groups and tried to live in a wilderness . . . They develop all those skills. They have to be self-reliant.

Derek seemed to embrace the component of the statement that referred to self-confidence, but was unable to reconcile leadership development with his conception of the wilderness experience. As he stated,

At first I thought you were going to ask a question that was about how wilderness leads to a better sense of being, . . . I didn't really associate it with like the leadership end.

Mike also separated leadership development from self-confidence,

. . . wilderness does not teach you the skills, you have to learn those skills on your own. What wilderness can teach you though is a self-reliance that you wouldn't get otherwise. It can teach you some things that you can't learn outside of wilderness. But it doesn't teach you the basic skills to be a leader per se. I mean I have been in the wilderness a lot alone, OK, and that's not teaching me to lead anyone else. But it's teaching me how to

deal with myself and my self-confidence and those kinds of issues.

Many respondents perceived the separate issues of leadership development, overcoming challenges, and self-confidence as creating a double-barreled statement. That is, in one question there seemed to be measurement of two or more constructs. Which construct was addressed hinged on which term was heard and understood first, as well as the respondent's perception as to whether the wilderness experience was solo or not.

Similar issues also influenced responses to the therapeutic value statements. When read the statement *spending time in wilderness helps one recover from tragic life events or illness, such as death of a loved one, divorce, or depression*, Ted disagreed, stating,

I just think the feelings of isolation that you experience in wilderness don't do much to heal a damaged psyche which has been harmed by some sort of emotional trauma. Being alone is not a good thing for a real long time when you're hurt.

Because Ted perceived the wilderness experience as solitary, he neglected to consider the possibility that social interactions in wilderness could contribute to healing. Mary, however, while also viewing the experience as solitary, rated this NSRE statement as important because she saw a benefit to being alone,

I would think being out in the wilderness you'd have time to be alone and time to reflect on life and what your future would be.

Susan was the only respondent to expressly discount the therapeutic possibilities of a group experience,

Again, especially if you're alone, you're forced to look inside yourself, you don't have any distractions. You need to learn to cope with whatever's inside you or you need to learn to channel that energy into something productive or else you won't be able to survive ... If you're with other people you have other people to kind of take your mind away from whatever you're trying to cope with. If you're by

yourself, you don't. So it's like you're forced to deal with whatever's getting at you. If you don't have someone else to occupy your attention, you can focus on things.

Thus, each participant answered the questions according to their perceptions of the solitude or camaraderie of a wilderness experience. These perceptions, in turn, greatly influenced their initial attitude toward the wilderness value statements.

5.2 Wilderness as a facilitated or non-facilitated experience

A closely related theme dealt with the respondents' perceptions of the wilderness experience as facilitated or not. A facilitated experience includes The National Outdoor Leadership School, Boy Scouts, church groups, commercially guided trips, and summer camp programs. A non-facilitated experience includes solo trips and excursions with family or friends. The respondents in this study answered the NSRE questions according to whether the wilderness experience was interpreted as facilitated or not.

Laurie and Jennifer both felt that wilderness itself did not provide developmental benefits. They felt that acquisition of this benefit was a result of the group and that these groups may be found in wilderness. Lorie stated, "They have to want to learn those skills ... like Boy Scout or Girl Scout groups, but not just individuals."

Jennifer agreed,

If you just went to visit [wilderness areas] ... you wouldn't necessarily build those skills. To build those skills it would need to be more of an organized program.

When read the NSRE statement concerning developmental benefits, Heather put it this way,

That's hard, cause it can go either way. Depends on if there's – if there's a group of Boy Scouts there, then yeah, it could do that. If there's a bunch of tourists hanging out, having a beer party, I think it's not possible. Because they're only there to have fun.

A total of six of the interviewees responded in this fashion. While each of these eventually expressed support for at least one of the components of the statement (leadership, overcoming challenges, and self-confidence), their initial reactions to the statement were influenced by whether they viewed the experience as facilitated or not.

5.3 Receptivity to wilderness experiences

All of the respondents, when probed, agreed that they could personally realize developmental, therapeutic, and social benefits from direct wilderness experiences. Most, however, expressed doubt that such benefits were automatic. Twelve respondents mentioned that one's experience or predisposition to wilderness determined whether such values would be realized. Ten responses to these four NSRE statements included a hesitation to label wilderness experiences as important for all persons. Thus, although the respondents felt such values were personally important, they indicated that society as a whole might not easily realize these values.

When read the statement *spending time in wilderness helps people escape the stresses of everyday life*, Susan responded with a neutral attitude,

. . . I think it really depends. Some people might find it more stressful. Like if they're allergic to bees, or they're, you know, prone to get poison ivy or they don't know much about it.

Further probing resulted in Susan indicating that,

[stress] disappears in a wilderness cause the only thing you have to worry about is yourself, you don't worry about what other people are feeling, or what they're doing.

Susan made her initial response according to the values others might place on wilderness, rather than making her own value judgment. This was typical of most responses in the study. Likewise, Adam tempered his responses with an acknowledgement of alternative perspectives. On the subject of therapeutic values, he stated,

I wouldn't say that being in that environment would necessarily help all individuals. It may help certain

individuals, according to their lifestyle, if that's something they're used to doing or they believe in it, but not necessarily everyone. Especially if it doesn't mean anything to them or they haven't been exposed to it in the past. I don't think it's going to help them . . . If someone believes that getting back to nature and being secluded from your cell phone and your everyday way of life, that could be very relaxing for somebody, but it could also do the opposite. It could stress someone out being away in the wilderness, not knowing what to expect and not being able to rely on the amenities.

The issue of personal receptivity was especially important when discussing social values. Respondents were read this statement: *spending time in wilderness strengthens family bonds, values, and friendships*. Mike's response was typical,

I think it depends on what kind of person you are, cause some people get freaked out by nature. So like bringing them to the wilderness would build animosity. But I think if you have a family that can connect in that way it's definitely a positive thing and I like to think that people who spend time together in nature are happier as a family and get along better and have to communicate better just because they're out of their comfort zone and in a new environment.

Susan put it this way,

It depends on your family and the type of people you're friends with. The kind of families that do that often and have fun doing it, it would certainly make them stronger because they have to work with each other. If you have a family or friends where everyone is just out for themselves, it'll make everything worse. It's just going to heat up those problems even more.

Thus, NSRE statements were often judged as statements concerning the general public rather than personal values. Respondents felt their personal values more aligned with the intended meaning than the values of the general public. In general, respondents felt that wilderness can provide benefits; however, the individual must be receptive or even seeking the benefits in order to acquire them.

5.4 Restorative Environments

Two NSRE statements dealt with therapeutic value, one with recovery from tragic events or illness and one with escaping the stresses of everyday life. Responses to both were analyzed for their fit with restorative environments and stress reduction theories.

At first glance, the responses seemed to most closely align with Ulrich's (1991) conception of stress reduction in natural environments. This view holds that such environments are restorative because stressful stimuli are reduced. Nearly all respondents spoke of stress reduction through escape from urban and workplace stimuli. As Jim stated,

For me it's a place of serenity. It gives you a chance to get away from all the stress and pressure of the ongoing world, in the city. You get a chance to just really think. You can't think in the city.

Susan referred to the sensory overload of modern life,

You know, people having to meet deadlines or get up to go to work at a certain time. Sometimes when you're working, like in my job, you just have to deal with so many people, and fluorescent lighting and everything, it's just sensory overload.

Closer inspection of the data, however, also lends support to Kaplan's (1995) theory of restorative environments. The four components of restorative environments (fascination, being away, extent, and compatibility) are present in the responses. Both process and content fascination are found in responses such as Mary's,

You're so busy doing for yourself that you don't have time to reflect on what happened back home. Just surviving and taking in everything and not knowing what's going to happen next, dealing with the unfamiliar,

and Derek's,

I think the definition of wilderness is that it's so far away from everything that we find it comfortable, so in that case I guess it could be a cause of stress if

you get stuck or something, but if you're just sort of out for the afternoon, it can really take your mind off whatever living situation or work situation you're in right now and you're confronted with things you don't normally see in your everyday life . . . I'm most fascinated by when I go out in nature that this all happens on its own regardless of human intervention. Wilderness happens somewhat independent of us and it often vastly exceeds what we are capable of.

Extent is found in comments such as Laurie's,

When I see all the trees, it puts me at ease . . . I don't know, just the way the landscape is laid out in a natural way, it's aesthetically pleasing.

Derek referred to the consuming experience of wilderness recreation,

People go to find out about the world outside themselves and they tend to wander around and like discover new things and forget about themselves and look at other things. It's like they are totally immersed in another world.

The final component of restorative environments, compatibility, is expressed best by Nathan,

Going camping and hiking in wilderness is the most natural thing in the world. We've been doing it for thousands of years. You go there to relax and better yourself. You like it because it's almost effortless. I mean, it's work, but it's work you want to do and it's easy to do. It's what we're designed to do.

Support for wilderness as a restorative environment was found not only in comments regarding escape from urban pressures, but also in comments recognizing the complexities and uncertainties of the wilderness experience. While some people see the wilderness experience as an exercise in simplicity and escape, others find the experience restorative because they are exposed to complex, interesting, and uncertain stimuli. Thus, respondents concurred that therapeutic, developmental, and social values can be obtained through the restorative environment provided in wilderness.

6.0 Discussion

The purpose of this study was to investigate how respondents interpreted the three NSRE questions that referred to developmental, therapeutic, and social values of wilderness. Four themes emerged during the interviews. The themes were labeled wilderness as a solo or group experience, wilderness as a facilitated or non-facilitated experience, receptivity to wilderness experiences, and restorative environments. The primary findings are discussed below.

The respondents' perceptions of the structure of the wilderness experience influenced how questions were answered and subsequently the belief that a specific value could be received from wilderness experiences. Specifically, receipt of a value was dependent on whether the wilderness visit was structured as a solo or group experience and/or if the experience was facilitated. Respondents indicated that some values such as leadership skills were dependent upon leading a group in the wilderness or being part of a facilitated group such as the Boy Scouts or National Outdoor Leadership School. They felt that acquisition of this benefit was a result of the group and that wilderness provides a context for these groups.

Other values such as therapeutic values were more divided. Some respondents felt that social interaction was necessary to recover from tragic events and others thought that solitude was necessary. However, all agreed that wilderness provided the context for this value to be received.

Some respondents felt that the social value question, *spending time in wilderness helps people learn skills beneficial in everyday life such as leadership, overcoming challenges, and self-confidence*, may be double-barreled. The examples used in the question seemed to be measuring two or more constructs. Which construct was addressed hinged on which term was heard and understood first in addition to the perception of how the wilderness experience was structured.

Researchers should be aware of these distinctions when using the therapeutic and social value questions. If

the objective of the research is to understand global values relating to wilderness the questions can be used as they are stated. If the research design allows, more detailed questions can be designed to measure multiple dimensions of constructs associated with each value. Research questions might address the difference between solo and group trips or facilitated and non-facilitated trips in providing benefits.

Most respondents expressed doubt that benefits were automatically received from entering a wilderness. Twelve respondents mentioned that one's predisposition to wilderness determined whether such values would be realized; this was labeled personal receptivity to wilderness values. The issue of personal receptivity was especially important when discussing social values such as strengthening family bonds, values, and friendships. Although the respondents felt such values were personally important, they indicated that society as a whole might not easily recognize these values. This finding in-and-of itself is not surprising. Variation is to be expected in attitude and value surveys. The interesting outcome is the concept of a personal receptivity continuum for receipt of wilderness values. Does personal receptivity exist within the individual as a personality trait? Or, is it dependent on an understanding of and experience with wilderness? Can someone who has never been to a wilderness receive benefits on their first experience? This is a question that should be addressed in future research.

Respondents felt that wilderness environments are restorative because stressful stimuli are reduced. Nearly all respondents spoke of stress reduction through escape from urban and workplace stimuli. Support for wilderness as a restorative environment was found not only in comments regarding escape from urban pressures, but also in comments recognizing the complexities and uncertainties of the wilderness experience. The concept of restorative environments (Kaplan 1995; Ulrich 1991) provides a framework for understanding the process through which therapeutic and social values are received.

One objective of social survey research is to ask questions of individual people with a representative sample and generalize to a larger population. An assumption of validity is that the individual respondents are answering

the questions without bias. NSRE statements were often judged by individuals as statements concerning the general public rather than personal values. Respondents felt their personal values more aligned with the intended meaning than the values of other people. In general, respondents felt that wilderness can provide benefits; however, the individual must be receptive or even seeking the benefits in order to acquire them. These results suggest rephrasing the questions or instructions to help the respondent associate answers with their own values and not the perception of an external value or the other peoples' values of which the individual might not have an accurate understanding.

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