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A MIXED-METHOD INVESTIGATION OF THE SOLO IN A WILDERNESS EXPERIENCE PROGRAM

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Background

There have been numerous studies that have investigated the outcomes of extended wilderness programs. Recently, an attempt has been made to provide meta-analyses of past research and the state of knowledge related to this programming (Ewert & McAvoy, 2000; Hattie, Marsh, Neill & Richards, 1997; McKenzie, 2000). However, the findings of many studies in the field of adventure education, and more specifically the area of "Wilderness Experience Programs" (WEP), indicate that we do not know much about what happens during specific components of the program or how these components contribute to the overall outcomes of the experience (Ewert & McAvoy, 2000; McKenzie, 2000).

Many programs, including the one investigated in this study, have adopted the solo as an integral part of a typical wilderness experience program. Students are intentionally separated from their small group for 24 to 72 hours with the purpose of reflecting on their lives, the lessons learned in the wilderness and the quality of their relationships. Within the context of an organized wilderness experience program, researchers have confirmed the solo experience to be one of the most influential program components (Daniel, 2003; Fredrickson & Anderson, 1999; McAvoy, 2000; McFee, 1993; McKenzie, 2003; Meier, 2000; Price, 1999; Roberts & Galloway, 2000; Sibthorp, 2000; Stringer & McAvoy, 1992; Williams & Kalisch, 1995). Yet, little research has addressed the outcomes of the solo experience or other components in organized wilderness experience programs (Ewert & McAvoy, 2000; McKenzie, 2000).

The purpose of this study was to investigate the participants' perceptions of an organized solo within a wilderness experience program and the influence that the participants themselves and the environment have on their perception. The literature suggests that many factors influence one's ability to experience wilderness solitude and to engage in meaningful reflection that may lead to personal growth (Daniel, 2003; Fredrickson & Anderson, 1999; Hammitt, 1982; Hendee & Brown, 1988; Koch, 1994; McIntosh, 1989; Norris, 2001; Richley, 1992; Stringer & McAvoy, 1992). Two of these factors can be categorized as the participant(s) and the environment; both are considered key program characteristics within the adventure education literature (McKenzie, 2000).

This study was guided by two major theoretical frames: Csikszentmihalyi's FLOW Theory (1991) and the Hendee-Brown Model (1988). Both have been used in this study as a lens through which to further understand the participants' perceptions of the solo experience. Csikszentmihalyi's FLOW Theory states that the challenge of an activity must be appropriately matched with the skills of the participant lest the participant fall into anxiety (high challenge: low skills) or boredom (low challenge: high skills). The FLOW Theory, while often attached to

the study of physical activities, has also been used to explain the experience of avid readers of literature and participants of other non-active, reflective pursuits (Csikszentmihalyi, 1991). The Hendee-Brown Model has been used to describe the personal growth that is facilitated through programmed wilderness experiences. The model consists of four postulates: (a) personal growth depends on receptivity, (b) personal growth depends on optimum stress from the experience, (c) wilderness experiences provide change and attunement and (d) wilderness provides metaphors. Both the FLOW Theory and the Hendee-Brown Model informed the questions asked of the participants regarding their solo experience, but the intent of this study was not to empirically test either model.

More than 700 wilderness experience programs operate in the United States, of which over 200 have adopted the Outward Bound educational model that includes the use of the solo experience for personal growth (Friese, Hendee, & Kinziger, 1998). The increase in American participation in wilderness experience programs establishes a clear need for research investigating specific program components. We need to understand how specific components, such as the solo, contribute to the overall program and more specifically the development of the participant. A better understanding of the participants' perceptions of the solo experience is a first step in this direction.

Methods

This study is part of a larger multiple-phase study that investigated the solo experience. The phases included: (1) pre-trip questionnaire (2) post-solo questionnaire, (3) focus group interviews at the completion of the wilderness experience program and (4) one-on-one interviews conducted three and a half months after the experience. This study focused on a portion of the data from the pre-post questionnaires. This investigation utilized a "dominant-less dominant" design (Creswell, 1994) as a means of combining quantitative and qualitative methods for exploring the solo experience. The qualitative features of the study remained as the "dominant" and the quantitative features as the "less dominant" method. Qualitative measures were used in order to provide a richer, more complete understanding of what the participants were actually experiencing (Manning, 1992) while alone in the wilderness.

Program

High Road, the program under study, is a wilderness orientation program offered to freshmen and transfer students entering Wheaton College and is modeled after a classic Outward Bound course. High Road is an extended 18-day wilderness experience program that uses the wilderness setting for a self-discovery experience that is intended to prepare students for college. High Road utilizes the small-group environment (8-10 participants per group) and the wilderness setting to provide participants with opportunities to stretch themselves physically, mentally, and spiritually. The explicit spiritual focus of the program supports the mission of Wheaton College and is the only aspect that differentiates it from the traditional Outward Bound model. Students are given the opportunity to participate in some of the following activities: backpacking, canoeing, climbing and rappelling, ropes course, group initiatives, Scripture studies, mountain biking, running, map and compass navigation, outdoor cooking and camping, solo experience, journal keeping, and leadership training (High Road Brochure, 2002). The High Road program includes a one to three day solo experience with the option for participants to fast (choose to take little or no food) while on the solo. Most of the participants in this study (86.5%) experienced a

two night solo and all participants (100%) were located on the south shore of Lake Superior in the Upper Peninsula of Michigan.

Participants

The participants in the study included 126 of the 145 (87% response rate) first-year students who chose to enroll in the High Road program through Wheaton College. Nearly half (46.8%) of the participants were male and 80.2% were eighteen years old (age range = 17-21 years). The participants, mainly from the U.S.A., represented thirty-three states in the U.S., Brazil, Spain, the Czech Republic and Thailand. Participants were selected for the initial pre-post questionnaires (Phase 1 and 2) based on simple criterion sampling (Patton, 2002). In particular, the participants had to be a first-year student at Wheaton College, either as an entering freshman or a transfer student. They also had to be voluntarily enrolled in and complete the High Road program, including the solo, during August 2003.

Data Collection

The first phase of the study, a pre-trip questionnaire, provided the researchers with basic demographic information on the participants as well as insight into what their perceptions of the solo were prior to participating in the program. The participants completed the questionnaire during the program orientation, prior to being transported to the course locale. The questions asked during Phase One included: 1) What do you think will be the most difficult part of the solo experience?; and 2) What do you think will be the most enjoyable part of the solo experience?

The participants were then asked why they responded as they did. The questions for both phases of the study were informed by the postulates put forth in the Hendee-Brown Model (1988) and the FLOW Theory (Csikszentmihalyi, 1991). Participants were asked specific questions that allowed them to comment on their receptivity to the experience, attunement to others, nature and themselves, and their state of mind.

The second phase of the investigation, a post-solo questionnaire attempted to capture the students' perceptions of their *actual* solo experience while they were still alone in the wilderness, prior to returning to their expedition group. The instructors walked to each student's solo site and asked them to take an hour to reflect on their experience and complete the questionnaire prior to returning to the group's base camp. Questions asked of the participants during Phase Two included: 1) How did you feel entering the solo experience?; 2) How would you describe your state of mind during most of your solo experience?; 3) What was the most enjoyable part of the solo?; 4) What was the most difficult part of the solo?; and 5) Did the environment play a role in your experience? Both questionnaires were designed by the researchers based on the format for questionnaire research as outlined in Patten (2001). Each questionnaire was reviewed by an expert panel and pilot tested with the participants during the 2002 High Road program (n = 134) before being administered in August of 2003.

Data Analysis

Both phases of data collection were completed by August 22, 2003. The quantitative-based questionnaire data were analyzed in order to assess the students' demographic information, their expectations and their experience of particular aspects of the solo. The data were coded and entered into a statistical analysis program (SPSS-PC) and frequency tables were produced. The

frequency tables were primarily used to assist in managing the survey data and providing comprehensive reports of participants' frequency of response to various questions.

The qualitative text from the pre- and post-questionnaires were first entered into SPSS to organize the data and guarantee that the responses were linked with the appropriate questionnaire. The data were then imported into a word processing program in order to perform a thematic analysis. This allowed the researchers to be able to categorize the data by research question. Throughout the qualitative data analysis, elements of the Constant Comparative Method (Glasser & Strauss, 1967) and naturalistic inquiry (Lincoln & Guba, 1985) served as a guide, whereby emerging themes were constantly compared with new data being analyzed. Specifically, the data analysis process followed the steps outlined in part by Tesch (1990) and Vaughn, Shay & Sinagub (1996), which assisted the researchers in the "reduction" and "interpretation" of the text (Marshall & Rossman, 1989).

During Step one, the "big ideas" (Vaughn et al., 1996) that emerged from each piece of text were summarized by the researchers. These ideas were in the form of broad impressions or themes that provided a "sense of the whole" (Tesch, 1990) and served as hypotheses to return to after the remaining steps of the data analysis were completed.

In the second step, the data were read again, individual data units were identified and the underlying meanings of the text were recorded in the margins. Each unit of data consisted of the smallest piece of information that was informative by itself. While many interesting themes came forth, units that did not meet the criteria of better informing the research questions were not relevant.

Step three required that similar topics were grouped together and reduced to codes that were descriptive of the data. These codes were then taken back to the data and each individual data unit or appropriate section of text was coded.

Step four required the researcher to request an independent rater to check 20% of the data. A 93% agreement in the coding was reached. The rater was selected based on his knowledge of the research topic and previous experience working with similar coding processes. The data were then coded and checked by the rater and organized into similar categories under themes that had emerged.

Finally, the researchers revisited the "big ideas" identified in step one of the analysis process and compared the initial impressions with the thematic categories identified in step four. This assisted in the process of interpreting the categories and refining the themes. Participant comments were then selected as direct quotations to serve as examples in support of each theme.

Peer debriefing and member checks (Lincoln & Guba, 1994) were also used throughout the data analysis and theme identification process to confirm the findings. Throughout each of these steps, the text of each phase of the study were analyzed independently and completely prior to moving on to the next set of data so as not to confuse the data or results. The triangulation of methods, analysts, and theories were used to establish trustworthiness of the results as suggested and outlined by Patton (2002).

Results

The results of this study assist in understanding the participants' perceptions of the solo both prior to and after the experience and the influence of the participant themselves and the environment on their perceptions. The results are presented according to the questions asked of the participants' regarding their *expectation* and actual *experience* of the solo. The themes that emerged from the qualitative data are indicated under the program aspect that they describe (see Tables 2 and 3) with supporting quotes highlighted in the text.

Participants' States of Mind

Participants were asked to comment on their states of mind (excited, peaceful or anxious) entering the solo (see Table 1) and their state of mind during most of their solo experience. Some participants indicated that they felt a combination of two of the qualities listed, which resulted in higher response percentages.

TABLE 1
Participants' states of mind entering solo

Excited (64.8%)	Peaceful (31.2%)	Anxious (30.4%)
Expectations for Spiritual Growth and Reflection	Focused Opportunity for Spiritual Growth	Uncertainty of the Experience
Solitude / Autonomy	Beauty of Wilderness Setting	Unfulfilled Expectations
Physical Rest		Fear of Loneliness

Those participants who expressed excitement about beginning the solo indicated that they looked forward to the time dedicated for reflection and spiritual growth. They anticipated the opportunity to reflect on lessons that they were learning during the program and to draw meaning from them related to their spiritual lives. One participant mentioned:

It was a new thing to me, and it was rest from all our travels. But most importantly, I was going to meet God and learn things I had always wanted to learn.

This comment highlights the emphasis that many of the participants put on their expectations of the experience. Some participants stated that their high expectations for spiritual growth and self-improvement set them up for disappointment when the solo experience did not meet their expectations. One student mentioned:

Just a lot of it [the anxiety] was thinking ahead to, you know, was I getting what I needed out of it [solo]?

In contrast, other participants were unsure of what to expect because of the newness of the experience:

I didn't know what I would think of it. I had never been alone that long by myself and I had never fasted that long. I was anxious because I was completely clueless as to if I would like it or not.

The contrasting nature of the experience was also highlighted in the participants' comments regarding their feeling of excitement entering the solo. One individual stated:

Every day is always so scheduled and fast paced. Time becomes the enemy. It will be nice just to rest and relax and not worry about anything.

The expectation of personal time away from the intense community of which they had been a part, a change from the physical demands of the expedition, and the autonomy provided during a time alone were all contributing factors to their sense of excitement.

When asked what their state of mind was *during* most of their solo, 87% indicated that they were peaceful, 15.3% were anxious and 8.8% were bored. Some participants could not decide between two of the qualities and decided to pick both. A sizeable increase was observed in the participants who commented that they were at peace *entering* the solo and those students who described their state of mind *during* the experience as peaceful. The peaceful state experienced by some participants was due in part to the beauty of their surroundings, the opportunity to structure their time and to devote uninterrupted time to self-reflection, spiritual development and physical rest. In contrast, those students who commented that they were anxious or bored experienced difficulty due to the unstructured time, the natural environment, and self-imposed expectations for personal growth.

Participants' Expectation and Experience of Difficulty

Prior to beginning the program, participants were asked to indicate the aspect of the solo that they expected to be the most difficult and why. The participants were presented with the following aspects and also provided the opportunity to state something not mentioned: (a) solitude/absence of others; (b) unstructured time; (c) wilderness setting; (d) journaling; (e) weather; (f) lack of activity/rest; (g) fasting; and (h) setting up a shelter.

Of the aspects listed, fasting and solitude ranked the highest among participants' *expectation* of difficulty (see Table 2). Conversely, when asked about their *actual experience* during the solo, fasting increased in its perceived difficulty and unstructured time and solitude both continued to rank high. The aspects listed in Table 2 reflect those perceptions that ranked the highest based on percentage of responses (other aspects were not listed because of low frequency of response). The major themes that emerged from the qualitative data are indicated under each aspect of the solo experience (see Table 2).

Expectation of difficulty. When asked what they expected to be the most difficult aspect of the solo, items ranking the highest were: fasting, solitude, journaling and unstructured time. Many participants indicated their enjoyment of food and were concerned about going without eating. Also, the perceived impact of fasting on their physical stamina and ability to focus was a concern. Journaling appeared as an *expected* difficulty, but was not an *experience* that was actually difficult for many participants. Some participants commented that they had limited or no experience journaling and were concerned that this type of reflective writing would be unenjoyable or that they would not "succeed" at the task. A student commented:

I am not really good at expressing myself through writing and it is not something that I really enjoy doing.

TABLE 2

Comparison of participants' expectation and experience of difficulty during the solo

<u>Expectation of Difficulty</u>	<u>Experience of Difficulty</u>
Fasting (24.4%)	Fasting (31.2%)
Physical Weakness	Physical Weakness
Inability to Focus	Inability to Focus
No Food	
Solitude (17.9%)	Solitude (21.6%)
Social Nature	Intense Introspection
Loneliness	Loneliness
Introspection	
Journaling (13.8%)	Unstructured Time (21.6%)
Perceived Inability	Boredom
Not Enjoyable	Lack of Order and Schedule
Unstructured Time (13.0%)	Wilderness (14.4%)
Lack of Order and Schedule	Distracting Insects
Contrast to Busy Life	Uncomfortable
Fear of Failure	

Furthermore, some participants commented that a fear of failure caused them concern regarding the large period of unstructured time. Participants stated that they were afraid of not "doing what they were supposed to" during their time alone and that the lack of order and schedule caused some concern. One participant commented:

I like to have a schedule and an anticipated order in which things will happen or in what I'll get done.

Finally, the experience of solitude brought forth concerns about the participant's ability to handle the loneliness and bear the outcome of introspection:

I depend on others a lot. Also sometimes I hate to be trapped in my own head – all my doubts and fears are uncovered.

Some participants indicated that solitude was in contrast to their naturally social nature, and they expected the time away from their expedition group to be difficult. The students' expectations of difficulty on the solo were largely focused on aspects that were not a part of their "typical" daily life at home (solitude, fasting, journaling and unstructured time).

Experience of difficulty. When asked about their actual experience, participants commented that their concerns about fasting were substantiated. This finding was corroborated by the increase in respondents who indicated fasting as being difficult when compared with those who had *expected* going without food to be difficult (see Table 2). As one participant stated:

Sometimes when I would try to be productive, the tiredness from fasting would kick in and it would be hard to focus.

The responses also indicated that the unstructured time presented during the solo was a significant source of difficulty for some participants, and unexpected boredom was a particular struggle. One participant commented:

I felt like there were definitely times during the day that I just didn't know what to do with myself which made me become bored at times.

Interestingly, the participants indicated concern about journaling *prior* to the solo; however, journaling did not appear as a significant difficulty *during* the experience. In addition, while participants did not expect the wilderness to be difficult, the setting was an aspect of the solo that actually caused some participants' difficulty.

Participants' Expectation and Experience of Enjoyment

The participants were asked to indicate, prior to beginning the program, which aspect of the solo they *expected* to be the most enjoyable. Following the solo they were asked to reflect on their experience and comment on what aspect was *actually* the most enjoyable. The participants were presented with the same eight aspects as in the questions about their perceived difficulty. The responses that ranked the highest are represented in Table 3 followed by the themes that emerged from the qualitative data. Other aspects were mentioned, but only those with the highest frequency of responses are listed. Some participants could not decide between two aspects which resulted in higher response frequencies. The responses indicated that solitude, unstructured time and the wilderness setting were the aspects most expected to provide enjoyment for the participants. After the experience, solitude still ranked as the most significant aspect contributing to the participants' sense of enjoyment. However, we discovered that journaling and rest – both of which did not rank very high on *expected* enjoyment – were important as individuals reflected on their *actual* experience (see Table 3).

Expectation of enjoyment. When asked what they expected to enjoy the most about the solo, participants selected solitude twice as often over the other aspects listed (see Table 3). Their statements indicated a deep desire for time alone to spend with God in prayer, scripture study and reflection on their recent life experiences. Participants perceived the solo as offering an opportunity for spiritual development distinctly different from the other components of the program. Students also indicated that they expected the solo to afford them time to tend to their "introverted nature" and to be in control of their daily routine. One participant commented:

I am a very introverted person that likes time to reflect on life. I often have a hard time being around others constantly.

TABLE 3

Comparison of participants' expectation and experience of enjoyment during the solo

<u>Expectation of Enjoyment</u>	<u>Experience of Enjoyment</u>
Solitude (43.2%)	Solitude (34.1%)
Spiritual Development	Increased Ability to Focus
Introverted Nature	Respite from Community
Reflection	
Unstructured Time (17.6%)	Journaling (25.3%)
Contrast to a Busy Schedule	Tool for Spiritual Growth
Lack of Agenda	Self Evaluations and Goal Setting
Spontaneity	
Wilderness (16.0%)	Rest (24.3%)
Prior Positive Experiences	Physical Rest
Fewer Distractions	No Pressure to be Busy
Sense God	
Journaling (8.8%)	Unstructured Time (21.5%)
Personal Reflection	Autonomy
Document Experiences	Lack of Agenda

Many students indicated that they anticipated the enjoyment of the solo experience in contrast to their "typical" schedule and that they perceived the personal time to be a critical element of their preparation for entering college. In addition, they anticipated a busy schedule during the wilderness program and they thought the solo would provide a much needed opportunity for self-reflection. A student commented:

This will give me time to really stop and reflect beyond my normal surface level. I have had a hectic summer – working two jobs and finding time to balance with friends and family. It will be nice not to have to be anywhere.

Another said:

So much of life is passed in busy time, with so little to contemplate.

The participants' responses indicate those aspects of the solo that they participants mentioned prior to beginning the program that they expected to enjoy the most during their solo (solitude, unstructured time, wilderness setting and journaling).

Experience of enjoyment. The enjoyment afforded participants through the experience of solitude actually decreased in responses from their expectation. However, solitude was still the aspect identified the most as contributing to a sense of enjoyment on solo. The aspects that ranked the highest (solitude, journaling, rest and unstructured time) were all close in percentage of responses (see Table 3). Both journaling and rest moved from approximately 8% of responses in the pre-survey to nearly 25% after the experience as contributing factors of enjoyment. When asked what they *expected* to be the most difficult, journaling was a concern for 13.8%. After the

solo journaling ranked as the second highest aspect contributing to an enjoyable experience. Although the wilderness setting was still an influence in many participants' experience, the natural environment was not as significant as they had expected when compared with the other aspects that contributed to their enjoyment. The lack of enjoyment attributed to the wilderness setting also supports the theme that many students were unprepared for the disturbance caused by the difficulty of their solo environment.

Students commented that the solo provided a much needed break from the intense community of their expedition group with whom they had been traveling. The solo provided a chance to focus on themselves instead of the needs of the group. Most students also did not anticipate the relief that they would find in experiencing a period of time without any physical demands. When asked what they enjoyed the most, the simple change of pace and opportunity for physical rest were frequent responses. One participant stated:

I felt that more than anything I needed the rest; I had never been physically pushed that hard, and I needed to just sit.

In contrast to some students' expectations, journaling ranked high among enjoyable aspects of the solo. After having experienced a few weeks of the expedition, many students appreciated the uninterrupted time to record their thoughts on paper. One student stated:

I particularly enjoyed being able to set my own pace for the day, taking all the time I wanted/needed to accomplish different activities. I enjoyed the lack of time restraint especially when I was journaling and writing to friends and family.

Journaling also provided a tool for future goal setting, reflection on their life and their journey in the wilderness. Many students commented that the journal contributed to their spiritual growth as they recorded their thoughts and reflected on growth they had observed in their life. For example:

I have never really written my thoughts down before, but I think by journaling, my thoughts became more concrete and I can look back at them.

The participants' responses indicate that those aspects that contributed most to their enjoyment while on solo included: (a) solitude; (b) journaling; (c) rest; and (d) unstructured time. The most notable changes from the students' *expectations* to their actual *experience* were in the themes of rest and journaling – neither of which ranked as high in their *expectation* of enjoyment.

Role of the Environment

The participants were asked at the end of their solo if the environment played a role in their experience. Ninety-six percent of the participants indicated that the environment *did* play a role in their solo experience. When asked how the environment impacted their experience the following themes emerged: (a) grandeur of nature; (b) remoteness of setting; and (c) distracting environment. While participants did not rank the wilderness setting as high as other aspects on contribution to enjoyment on solo, they clearly indicated that the natural environment had an impact on their experience.

Grandeur of nature. Many participants commented that the beauty of Lake Superior and the scenic contrast to the weeks that they had spent hiking in the forest left them with a sense of awe. One participant commented:

The sheer magnitude of Lake Superior and the overwhelming aspect of being alone in nature did add to the experience.

The lake also contributed to a sense of peace as the students spent their waking hours listening to the waves crash on the shore, fell asleep to the same soothing sounds, and had an opportunity to view the sun rising and setting across the lake. Some participants commented that the expanse of the lake promoted inner reflection as they contemplated their place in the universe. For example:

Seeing the lake and all its vastness made me think about the beauty and vastness of God.

The solo was the first time many participants closely observed the rising or setting of the sun and they mentioned that this experience contributed to their sense of awe and peace. One student commented:

Morning was amazing, I got to go out before the sun came up and watch the sky turn pink and orange, watch the clouds move and watch the sun peek over the horizon and see a whole new day begin.

Remoteness of setting. Some students stated that in addition to being on the lakeshore, the remoteness of the setting assisted them in their reflection and rest. The absence of human distractions enhanced the participants' ability to become more attuned to themselves, the natural world, God and others. The participants were able to recognize the influence of the distractions in their life at home and embrace the benefits of a simpler lifestyle, as evidenced by the following quote:

The natural environment has few of the distractions that other environments create. The only noises that I heard were that of nature. There were no clocks, only the sun. This all helped me focus on what I was doing.

Distracting environment. In contrast, the natural environment was not always seen as a positive influence on some participants' solo experience. Many participants commented that the natural environment, in particular the insects, provided an unexpected difficulty. This inhibited their ability to utilize the solo as a time for reflection and learning. These participants found most of their energy directed toward managing their own comfort, including keeping the insects away.

The bugs during the night drove me crazy and kept me awake for a while. The hot sun felt oppressive and the waves made me fear a storm was coming.

Participants also commented that the uncontrollable nature of the environment kept them from being able to focus because they were always worried about the weather, an intruding animal or whether the lake would rise during their sleep.

Discussion and Implications

This investigation provided insight into the *expectations* and *experience* of participants who engaged in a solo as a part of an eighteen-day, wilderness experience program. The participants' comments are helpful as program managers, instructors and researchers seek to better understand the influence of the participant themselves and the environment on their perception of the solo experience. Past research has already confirmed the potential of the solo for promoting positive development and learning within program participants (Daniel, 2003; McAvoy, 2000; McFee, 1993; McKenzie, 2003; Price, 1999; Sibthorp, 2000; Williams & Kalisch, 1995). These findings documented the perceptions of the individuals who engaged in the solo experience. As with any study focused on one program, one must use caution in applying results to other programs and other educational uses of solitude.

Discussion of the Relationship Between the Results and the Theoretical Framework

The questions asked of participants in this study were informed by the Hendee-Brown (1988) Model and the FLOW Theory (Csikszentmihalyi, 1991). The intent of the study was not to empirically test either theory, however the results do provide insight into the use of these frameworks to better understand the participants' perception of an organized solo experience.

Hendee-Brown Model. The results from this study indicated that the model is useful for better understanding how wilderness experience programs, in particular the solo experience, facilitate personal growth. The first postulate of the model states, "Personal growth from a wilderness experience depends on the participants' receptivity" (Hendee & Brown, 1988, p. 10). The participants in this study self-selected to go on the High Road program. Therefore, these participants may have demonstrated some "readiness" for change simply by electing to participate in the program. When asked about their receptivity to the solo, many students indicated that by this time in the program they were ready for some personal time and a change of pace. Furthermore, since the participants were in a state of transition in their lives they may also have been "more receptive" to change. This supports Hendee and Brown's (1987) assertion that these types of participants may experience more personal growth because of their place in life.

Secondly, the model stated, "Personal growth depends on optimum stress from the experience" (Hendee & Brown, 1988, p. 11). These results indicated that some participants who had difficulty with the solo reached a threshold of stress associated with a lack of preparation regarding the natural environment and a lack of daily structure. Most of their stress was focused on an inability to overcome the effects of boredom or the challenges accompanying taking care of their physical comfort in the wilderness. Hendee and Brown stated, "There are limits, and each person has his or her own unique threshold of tolerance for intensity of contact with the natural environment. This limit cannot be exceeded if the experience is to be positive and productive" (p. 11).

The third postulate stated that the "wilderness experience provides change and attunement" (Hendee & Brown, 1988, p.11). The solo experience is possibly one of the most fitting components of the wilderness program with regard to the contrasting environment and attunement found in wilderness solitude. These participants indicated that they enjoyed the

opportunity for reflection which led to an increased attunement to themselves, others, nature and God. Hendee and Brown did not include attunement to others and God in their model.

The last postulate stated, "Wilderness experiences and activities can create metaphors which heighten our awareness of desirable qualities we might apply back home in our daily lives" (Hendee & Brown, 1988, p. 12). The results of this study did not address this last postulate, however, analysis of subsequent data from the larger study may provide further insight (including post-course focus group and one on one interviews).

The Hendee-Brown Model has been helpful as a framework through which to view the solo experience. The model was originally designed to look at wilderness experience programs in general and this study extends this use to the investigation of a specific program component.

The FLOW Theory. As indicated earlier, the FLOW Theory has not previously been used to study reflective experiences like the solo. However, this study indicates that FLOW is helpful as a lens through which to frame specific questions related to participants' experience of the solo or other wilderness program components. The questions asked of participants regarding their state of mind during the solo allowed for a deeper understanding of the experience and helped clarify some of their other responses. These results indicate that using FLOW as a lens for investigating particular course components (including non-active pursuits like the solo) is beneficial. The participants were able to comment in detail about the aspects that contributed to their state of mind which further enhanced our understanding of their solo experience.

Discussion of the Results

The participants in this study indicated that they expected positive opportunities for spiritual growth, reflection, autonomy and physical rest coupled with concerns of loneliness, uncertainty, physical weakness, inability to focus, difficulty journaling and a lack of structure. Participants also indicated that they held high expectations for the outcomes they would experience while on the solo. For many, these expectations raised anxiety as to whether or not they would "experience what they were supposed to" while alone in the wilderness.

A critical concern highlighted in this study is that instructors must understand the expectations that their students bring with them to the solo experience. Instructors need to assist students by helping them to modify their expectations and reach their goals as well as to alleviate any unnecessary difficulties. The instructor's role prior to the participant's solo may be even more critical than other course components where they are able to monitor the student's ability to move through an activity. The solo is one of few course components where the student may not have contact with their instructor and their learning can be inhibited by a lack of outside influence that assists them in processing their experience.

These results indicated that the physical environment does play a significant role in the participants' perception of the solo experience. The careful choice of a locale for the solo may have a direct effect on the participants' ability to utilize the time effectively. For many participants, the physical location of their solo site on the shore of Lake Superior contributed much to their sense of peace and awe as they considered the intricacy and beauty of nature that surrounded them. This heightened sense of well-being and sheer amazement seemed to result

from living in an environment that, according to Unsoeld (n.d.), has characteristics of mystery (*mysterium*) and power (*tremendum*). These findings support what McKenzie (2003) and others have indicated regarding the effect of the wilderness setting on wilderness program outcomes.

Some participants commented that while the location of the site was beautiful, their time alone was affected by their concern about the weather, their ability to manage the insects, and the discomfort they experienced from their surroundings. When discussing students' ability to utilize the solo experience, McIntosh (1989) stated, "Some students low outdoor skill level results in them being physically uncomfortable, others do not feel safe on their own. . . . If these needs are not met, students definitely are going to have trouble getting on to higher level thinking" (p. 28). The location of the solo must be evaluated in light of the participants and their abilities, the goals of the program, the weather and other human and environmental conditions. The solo within this program was intentionally programmed on the shore of a large lake to provide a setting conducive to reflection and self evaluation.

The opportunity for reflection and self-evaluation was realized by many participants. Yet, those who found the setting difficult were not able to move beyond their need for physical and emotional comfort. This finding highlights the importance of the preparation that instructors provide to their students prior to sending them for a time alone in the wilderness. Instructors should only ask their students to perform skills while on solo that they have had an opportunity to practice previously. While instructors cannot prepare their students for everything, an opportunity to practice the necessary skills prior to being isolated by oneself may increase the participants' learning. Similarly, if a participant is expected to write in a journal during the solo, prior practice with journal writing will serve to enhance their experience (McIntosh, 1988). The participants in this study had not previously camped in areas where the insects were as distracting and therefore many struggled with how to deal with the newfound discomfort during their solo time.

The participants' solo is affected by the experiences that precede and follow it and should not be considered an isolated course component. Enjoyment of the solo was enhanced due to the contrasting nature of the experience. Participants commented that they enjoyed the respite from community, the ability to focus, opportunity for self-evaluation, physical rest, autonomy and lack of agenda. At the end of the solo, the participants recognized how much they had needed the physical rest and time to reflect. This finding highlighted the impact that participants have on their own experience and the importance of careful attention given to program design and sequencing of events within the program. Instructors should carefully consider how the group dynamics and prior program elements may affect the experience of the participants while alone, and conversely, how the solo may affect the group dynamics and program elements to follow.

The solo demands careful attention because of its distinct contrast to other components utilized during the wilderness experience program. Instructors often provide in-depth, careful attention when instructing participants in the skills necessary to perform a multi-pitch climb. The same attention should be given to course components like the solo that have the potential to shape participants' lives with minimal instructor feedback during the experience.

The data in this study indicated that the solo not only impacts the participants physically and mentally, but spiritually. This finding confirms previous research that has investigated spiritual development through wilderness programs and found that both intentional and unplanned moments of solitude in the wilderness contribute to one's spiritual development (Price, 1999; Stringer & McAvoy, 1992). These participants have commented in their own words that the solo was an intense time of personal evaluation, goal setting, and a time for spiritual growth. These findings further support the need for instructors to consider the impact of solo experience beyond the physical effects of removing oneself from the group.

These results also indicate the impact of an outcome-based program design whereby program managers and instructors intentionally facilitate an experience with a particular goal in mind. The solo is used for a variety of purposes throughout wilderness programs around the world. However, the participants from this particular program have indicated the extent to which spiritual development was both *expected* and *experienced*, which supports the intentionality of the instructional team for this particular program.

Implications for Research

This study highlights the need for further investigation of specific course components within the wilderness experience program model. A better understanding of participants' *expectations* and actual *experiences* during specific course components will help uncover the contribution each component makes to the overall program experience. In particular, a better understanding of the solo within the wilderness experience program will begin to articulate the meaning behind one of the most influential components of the overall program.

The findings of this study also indicate that the FLOW Theory (Csikszentmihalyi, 1991) and the Hendee-Brown Model (1988) are helpful as theoretical frames through which to better understand participants' perceptions of wilderness program components, specifically the solo. Further research is warranted to not only investigate the solo experience in other program settings, but also to understand what participants' perceptions are of other program components. Research is also needed to clarify effective sequencing of course components and the outcomes that are linked with particular program designs.

Replication of this study with a program that does not have an overt spiritual emphasis in its programming may further enhance our understanding of the spiritual benefits of the wilderness solo. These participants were "receptive" to spiritual development and many commented that they grew in that domain. Can we attribute part of their spiritual development to the "mountains speaking for themselves?" This question can only be answered through the replication of this research with other programs of similar type, but without the intentional programming for spiritual development.

The solo experience in this study was primarily one of tremendous growth and learning accompanied by a sense of peace. However, this personal growth was not characteristic of all participants. Further research needs to investigate those participants who struggle with the use of their solo time and who cannot wait for its conclusion.

Conclusion

The students in this study have highlighted the extent to which both the participants themselves and the environment have influenced their perceptions of the solo. Furthermore, it is clear that these two domains do not operate independently of each other regarding their influence on the participants' perception of their solo experience.

The solo is one of few times during a wilderness experience program where the student is truly alone without an opportunity for peer or instructor feedback or the support that comes from their community. Therefore, the importance of how participants are prepared for the solo calls for increased understanding of what their perception of the experience is. This study begins to assist researchers, program managers and instructors in understanding what participants' perceptions are of the solo and the influence that the participants and the environment have on their experience.

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