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RELATIONSHIP OF CHILDHOOD ACTIVITY TO LEISURE TIME ACTIVITIES AND RECREATION SPECIALIZATION AMONG COLLEGE STUDENTS

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by

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Leisure time and outdoor recreation are participated in during childhood, which allows for children to being able to learn about different recreation activities, whether they may be indoor or outdoor oriented. Children begin to learn about the world around them, having significant life experiences and beginning to understand the concept of recreation specialization. As a child moves into adulthood, specifically as college students, their leisure time activities being to change; this may be due to the fact that their time is limited for both indoor and outdoor recreation, but could also be due to the fact that technological advances have had an impact on how college-aged students tend to spend their time.

This thesis aims to find relationships in activities participated in during both childhood and adulthood. The significance of indoor and outdoor recreation was also included, in order to further understand if location of activity choices in childhood had an impact on the recreation participated in during adulthood. Specific activities which were most and least frequently chosen were observed, along with basic demographics of the population.

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CHAPTER 1: INTRODUCTION

Relationship of Childhood Activity to Leisure Time Activities and Recreation Specialization among College Students

Outdoor leisure in natural settings has enduring effects, not only on childhood development, but also throughout a person's entire life (Chawla, 2006). The importance of leisure activities has been documented as far back as ancient historical times, as a way for children to better understand the world around them, while still gaining knowledge about the environment in which they live (Bixler, James & Vadala, 2010; Mainella, Agate, & Clark, 2011). Lack of time spent in natural settings has morphed the generation of children today; not only do they understand less about outdoor species from first hand outdoor experiences, but they choose to spend their time locked up indoors surrounded by technologies such as television and air conditioning (Louv, 2005). To a certain extent, parents are responsible for this phenomenon. Many parents tend to over-schedule children with activities like piano lessons and tee ball leagues, reflecting a certain level of paternal fear which has resulted in more parental control over childhood play areas. A "culture of fear" has taken over for the youth of today, which has influenced the recreation and free time of youth throughout the past decade. (Kimbro & Schachter, 2011; Louv, 2005; Mainella, Agate, & Clark 2011). Parks have been constructed to allow for outdoor play areas for a child that will give more of an experiential perspective, but it has been shown that an unstructured outdoor experience can be equally if not more beneficial to a child when they are learning about the world around them (Vadala, Bixler, & James, 2007). Senses are stimulated and a child's imagination is at work when creating a relationship with nature in terms that are

understandable to children. Outdoor experiences do not need to always be organized in order to have these lasting effects; visiting a state or national park can be just as beneficial as exploring a creek bed in the back yard (Louv, 2005). Trapping animals, creating potions, and climbing trees can allow children to learn about the world around them, as well as to create a sense of belonging to the outdoor world as they become accustomed to what it has to offer (James, Bixler & Vadala, 2011).

Recreation specialization occurs as a child enters adulthood and inevitably makes a choice about the leisure activities in which he or she would like to participate. As a child moves into adolescence, skills and knowledge about a certain activity become more pertinent to mastering the activity, and he takes steps to gain this level of expertise (Scott & Schaffer, 2001a, 2001b). The goal of self-efficacy in an activity is achieved and the young adult becomes more comfortable participating in the activity when he or she participates more frequently and gains mastery of the skills involved (Scott & Schaffer, 2001b, Tsuar & Liang, 2008). At this stage, the equipment necessary to participate in the activity is purchased, and time and money spent on the activity becomes less important than actually participating in the activity itself (Tsuar & Liang, 2008). For many outdoor leisure activities, this recreation specialization is necessary for a person to become fully integrated into the activity, and is also commonly a condition for being accepted into the subculture of this activity's participants, such as what occurs in whitewater kayaking (Scott & Schaffer, 2001b; Bixler & Morris, 2000).

Influences of child play on environmental concern in childhood have been determined, but little research has been done on childhood activity preferences in nature, specifically relating childhood preferences to activities selected for participation

during adulthood (Arnold, Cohen, & Warner, 2009; Chawla, Flanders & Cushing, 2007). Chawla (2006, 2007) initiated the research toward understanding why children choose to participate in nature while the works of Bixler, James, and Vadala (2011) have been instrumental in investigating the specific activities. Bixler has been on the forefront of research regarding environmental socialization, and has worked on various studies to further understand the relationship between unstructured outdoor activities participated in childhood and later environmental interests (Bixler, James & Vadala, 2011). An area that is lacking research is the linking of childhood indoor and outdoor activities with later participation in indoor and outdoor recreation. By focusing this thesis on a comparison of childhood activity experiences with that of adults who prefer indoor vs. outdoor recreation activities, the research can contribute to an understanding of what early life activities lead college students to spend time outdoors versus in an indoor setting, and to the influences that these preferences may have on a person's recreation specialization.

By linking childhood activity with adult recreation preferences, this research also contributes to the emerging literature on environmental socialization. Research allows for more of an understanding into how people are socialized into particular leisure time environments during childhood, and whether or not this type of environmental socialization has an effect on recreation activity choices later in the lifespan. By creating a study instrument which allows respondents to report which activities they participated in during both their childhood and current adulthood years, the researcher can have a better understanding of the activities that are most frequently participated in and those

that are not as commonly participated in during both childhood and young adulthood, and the association between the choices made at these two life stages.

Goal of the Study

The purpose of this study is to determine how differences in exposure to/experience of leisure time activities relate to the type of recreational activities selected by college students who are physically active. The researcher will explore involvement in exposure to outdoor activities during childhood, engagement in indoor and outdoor recreation activities among young adults, and the potential relationship among the two sets of leisure time activities.

Research Questions

1. The concept of environmental socialization suggests that recreational experiences during childhood contribute to lifespan decision-making regarding leisure time use. In this study, the question of environmental socialization toward outdoor activities is operationalized in this empirical question: Does childhood exposure to outdoor recreation activities relate to the decision to participate in outdoor recreation later in life?

2. The concept of recreational specialization suggests that over the life course, individuals become more selective regarding their use of leisure time, and that there may be a relationship between childhood participation in particular activities and the recreational choices of young adults. In this study, the question of recreational specialization is operationalized in questions regarding childhood antecedents of specific recreational choices among college students: Are indoor or outdoor activities more likely to be selected in both childhood and adulthood? For example, are people

more likely to play soccer as children and adults, than they are to play basketball in both childhood and adulthood?

CHAPTER 2: LITERATURE REVIEW

Nature-deficit disorder

In his book, Last Child in the Woods, Louv (2008) discussed how the generations of children today are not getting sufficient outdoor experiences; this minimization of desires to explore the outdoor world is the foundation of the theory of nature-deficit disorder. Louv defines nature-deficit disorder as "the human costs of alienation from nature, among them: diminished use of the sense, attention difficulties, and higher rates of emotional and physical illness" (p. 24). Lack of outdoor play has negative consequences: children miss nature and its restorative effects, which results in a weakened development of cognitive skills, physical fitness and sensitivity to the world around them (Mainelle, Agate, & Clark, 2011; Louv, 2005). Throughout the text, Louv's recurring theme is that children today are not spending enough time outdoors, and that adults who are considered their caretakers are partially responsible for this behavior. The lack of outdoor play, or play deprivation, is not due to a lack of space, but rather to a child's unwillingness to choose free and spontaneous outdoor play, which can occur in various parks and outdoor settings (Mainella, Agate, & Clark, 2011). There are multiple reasons for this lack of motivation to engage in outdoor play; Louv explains that it may be due to the great advancements in technology within the past decade that have led to this perceived need to stay indoors. Also, the idea that parents and adults have given children too many structured activities, such as dance classes and organized sport leagues, could play a role in a child's lack of participation in outdoor activities. By over-scheduling their children in an attempt to have them be well-rounded individuals, parents have actually kept their children from having significant life experiences as

individuals. This lack will in turn affect their participation in the outdoors not only as children, but also in the adult years (Louv, 2008; Mainella, Agate, & Clark, 2011). Since children will not have an opportunity to have these outdoor experiences, they will not understand what kind of outdoor activities can be participated in and the means to do so, which will eliminate and outdoor recreation participation altogether. Parental fears increase the time that children spend indoors. There is an unrealistic fear among some parents that children will be kidnapped or abducted, when in reality there are very few such incidents (Kimbro & Schachter, 2011). Researchers have determined that a household's economic status, mother's education and employment, and her physical and mental health all had an influence on their fear for their children to spend time outside. These findings suggest that there is not just one characteristic leading to this fear of allowing children to play outdoors but rather a plethora of combined reasons leading to an unrealistic fear a parent may have for outdoor exploration during childhood (Kimbro & Schachter, 2011).

Significant Life Experiences and outdoor play

Despite the factors that increasingly limit outdoor play, there are many children who participate in and benefit from recreation which is unstructured and outdoors. In order to foster increased outdoor play orientation, it is important to examine, among children who are participating in outdoor activities, what activities are most frequently participated in and the factors that may affect these patterns.

Significant life experiences (SLE) are a major factor in determining participation in recreational activities, both from a child's and an adult's perspective (Chawla, 1998; James, Bixler, & Vadala, 2010; Tanner, 1980; Vadala, Bixler & James, 2007).

Significant life experiences are defined as those experiences that a person has throughout his life that are both experiential and memorable. Significant life experiences that are nature-oriented have been shown to have a direct correlation with activities participated in during adulthood (Bixler, Floyd & Hammitt, 2002; Bixler, James & Vadala, 2010; Chawla, 1998, 2002; Vadala, Bixler, & James, 2007). More than half of the respondents in these previous studies described outdoor or natural experiences to be significant life experiences. Some of these types of experiences included free play, hiking, camping, or berry picking (Vadala, James & Bixler, 2007). These significant life experiences are also influenced by the presence of a family member or role model (Sivek, 2002; Bogeholz, 1999). These SLEs create a recollection and remembrance from childhood to adulthood, which will further enhance the adult's perspective of nature. By doing this, parents can encourage their children to spend more time outdoors, and to have similar experiences to those they enjoyed when they were children (Chawla, 2007).

Within the research literature compiled for this study, similar findings are recorded as to why children participate in outdoor experiences. Along with the theory of significant life experiences, other influences affect the participation of outdoor childhood play. The influence of a parent or role model is vital in the participation of children in outdoor play. The presence of an adult during outdoor play, or the encouragement given by the adult to the child to participate in outdoor activities, can increase this type of activity among children of all ages (Bixler, James, & Vadala, 2012; Bixler & Morris, 2000; Chawla, 2007; Vadala, Bixler &James, 2007). Along with the influence of parents and role models, the influence of peers is vital in the further understanding of nature for

a child. (Bixler, James, & Vadala, 2007; Chawla, 2007; Bixler & Morris, 2000). Having a peer included in the exploration of the outdoor world increases the child's perception of the positive aspects of outdoor exploration by associating these activities with games and activities shared with friends. Through individual and shared experiences of outdoor exploration, children can better understand their environment first hand. Other memorable experiences include participation in organizations such as Boy Scouts or Girl Scouts, as well as witnessing the destruction of a natural place, or reading books about nature or the environment (Bixler & Morris, 2000; Chawla, 2007).

Childhood play among outdoor enthusiasts

Bixler, James, and Vadala (2007, 2010, 2011) explain that the activities participated in during childhood are highlighted as significant experiences among adults in their study sample. The sample consists of 51 outdoor enthusiasts who are considered field naturalists, environmental educators, or persons working in conservation. The participants are in some way involved in natural history, ecology, and ethnology either as a serious leisure activity or in a professional setting. Frequency of outdoor recreation participation has been recorded, and then the respondents were asked to describe how their interests in outdoor activities developed from childhood to adulthood. In the study completed by Vadala, James, & Bixler (2007), nature history-oriented environmental professionals were interviewed to determine what types of outdoor participation has led them to their interests in nature history. Five themes of outdoor participation have been identified, with social facilitation by peers and parents shown to be the most important factor in the availability of play. Access to play places, which consisted mostly of interstitial space, made outdoor play choices more achievable

in the constraints of suburban and urban areas and also had an influence on outdoor play. Interstitial spaces included but were not limited to wooded areas and ponds near golf courses, construction sites, and watershed areas in urban neighborhoods. Spatial play, or the idea of interacting and exploring in a certain area, was also included within this study, which is responsible for distinguishing exploration of large-scale environments from stationary play in one area. Common descriptions of this type of play included vacations and visiting relatives away from home, exploration such as in creeks or ditches, and near distant stationary play including activities such as building forts and tree houses.

In these studies, play content refers in detail to the activities in which the subject participated during childhood. Fantasy play, playing in the mud, and outdoor games are a few of the categories coded, with searching, catching, and trapping animals being the most common response within the play content domain. Lastly, intermittent play through chores is discussed, including categories such as picking berries, feeding pets or farm animals, and gardening (Vadala, Bixer & James, 2007). The childhood activities of these nature history-oriented environmental professionals helps us understand which activities are meaningful in children's lives, such as basic time spent outdoors in an unstructured setting. Importantly, how these activities become a part of a child's life and remain important into adulthood, relates to the theory of recreation specialization and environmental socialization.

Recreation Specialization

Recreation specialization is defined by Bryan (1977) as a "continuum of behavior from the general to the particular, reflected by equipment and skills used in the sport

and activity setting preference" (pg.175). This specialization of a recreational activity spans from the idea that the behaviors and orientations displayed by the person participating in the activity, and the processes by which people become skilled and committed to the leisure activity, will affect activity participation and how much time will be allotted to the activity throughout their lives. Bryan's (1977) continuum is thought to encompass a wide spectrum of participation: beginners and newcomers do not yet define the activity as important, and have not spent the adequate time and money for this to be achieved; experts are willing to devote the time and spend the money in order to continue to have the opportunities to participate in this serious leisure (Scott & Schaffer, 2001b). This specialization is first thought of as a developmental process: as individuals participate in a specialized activity for a longer period of time, they will become more intrigued and involved in the activity, leading to repeated participation, and in turn specialization of the leisure activity. Otherwise, they will lose interest in the activity and will inevitably drop out and stop participation completely. Scott & Schaffer (2001a, 2001b) and Stebbins (1982) describe six distinct qualities of serious leisure and recreation specialization, beginning with perseverance.

Although participants typically have positive and memorable accounts of their related activity, they could be held back from participation due to factors such as fear, anxiety, or fatigue. Positive feelings towards the activity can be achieved by learning more skills in order to conquer potential adversity. Careers in the person's endeavors can also reflect one's choices in recreation specialization. If a person observes that a possible occupation or career can be made out of their serious leisure, they will be more inclined to further their knowledge and experiences. Significant personal efforts create

a separation between the people who are less involved in the activity and those who are considered experts in the field. The fourth quality, durable individual benefits, recognizes that participation in the activity can lead to a more holistic approach of mind, body, and spirit, including ideas of self-actualization, self-expression, and enhancement of self-image in order for this to be achieved. Stebbins' (1982) fifth quality, the unique ethos that exists within the activity, addresses the idea that leisure participants tend to create subcultures and advanced skill groups in their serious leisure. An example is a group of whitewater kayakers spending time with only other whitewater kayakers, since they have similar interests and hobbies. The last quality described is identifying strongly with the activity, whereby participants are inclined to speak positively and frequently about their leisure experiences, and there is a feeling of self-belonging within the activity.

In the study by Tsaur and Laing (2008), an analysis of these six qualities is tested by means of a confirmatory factor analysis using a population of birdwatchers in Taiwan. The findings suggest that past experience and especially centrality-to-lifestyle were powerful indicators for birding specialization. The development of skills, along with the knowledge attained through participation in these activities results in these birdwatchers choosing to spend increasing amounts of time participating in birding. Researchers also have found that a higher level of participation or serious leisure traits lead to a higher level of recreation specialization. Participants were willing to put more time and money into their recreation in order to increase their recreation specialization, which led to a higher level of participation in general (Tsuar & Liang, 2008).

Environmental Socialization

The theory of environmental socialization is closely related to Chawla's research on significant life experiences and a child's choices of outdoor recreation activities, and also is related to the theory of recreation specialization. Bixler and Morris (2000) explained that environmental socialization involves

"the repeated experiences resulting in practical knowledge of the physical environment, conceptualization of self in terms of the environment in which rewarding actions take place, and the development of primary and ancillary skills and competencies that allow rewarding activities to be carried out effectively" (p. 57).

A repeated experience allows a person to learn more about a set of interests--in this case, outdoor activities--and further enhance their learning on the subject (Bixler & Morris, 2000; Bixler, James, & Vadala, 2007). This finding indicated that when children find interests and hobbies in an outdoor setting, they are in turn left with a sense of belonging, and will carry these interests into adulthood. In Bixler and Morris's (2000) research, two studies using a population of adolescent youth were used to further investigate the relationship between childhood play experiences and later environmental preferences in both recreational activities and work. Similar to the Environmental Socialization scale which holds the basis for this research, various questions were asked in the two studies to categorize the outdoor activities participated in during childhood. Children were organized into three distinct groups: wildland adventurers, urban adventurers, and yard adventurers. Values of both parents and peers are highlighted within the study; the influence of both parents and peers have a direct correlation with one's beliefs and attitudes towards nature and the outdoors since they are the most influential people in a child's life (Bixler & Morris, 2000). Home range is

also discussed briefly, explaining that the parents or guardians have the authority to limit their children to a certain area, but once this out boundary is explored more experiences can be attained (Bixler & Morris, 2000). Children have the ability to explore these areas if they gain parental approval and parental assistance in facilitation (Torell & Biel, 1985). For example, by supplying children with bikes, parents are providing a means to explore their area, which will allow for more unsupervised exploration as a whole. It has been noted in various studies (Bixler, James & Vadala, 2010; Kaplan & Herbert, 1987; Medina, 1983) that adults who find themselves working in outdoor fields have found that these outdoor wildland environments are directly related to the interests that led them into careers in the outdoors. The authors Bixler and Morris explain that "play and exploration in natural environments provide for novelty, challenge, control, self-determination, and positive social interactions" (Bixler & Morris, 2000). Environmentalism in children can span from the idea that the outdoor wildland area offers an enjoyable experience and also a sense of competency. These researchers found that childhood play indeed affects interests in wildlands, environmental preferences, outdoor recreation activities, and occupations in outdoor environments.

Measuring Environmental Socialization

Various scales of measurement have been created to further analyze the field of outdoor recreation. The Environmental Motives Scale has been used to quantify the motivation behind a person's environmental concern, but does not relate directly to the activities participated in during childhood. The Environmental Motives Scale was based in the Value-Belief-Norm model, created by Stern and Dietz (1994; Stern, 2000) which states that the concerns a person may have about the environment span from his own

basic beliefs and value system (Bruni, Chance, & Schultz, 2012). In this research, authors used the Environmental Motives Scale to further research on environmental concerns in children, and also how this environmental concern spans from child to adulthood. The New Ecological Paradigm for Children and the Children's Environmental Attitudes Towards the Environment scale have also been utilized in previous research, assisting in explaining a more worldwide view for environmental attitudes and concerns. (Bruni, Chance, & Shultz, 2012). Validity of the Environmental Socialization scale is demonstrated in previous research conducted by Rabinowitz and James (unpublished manuscript). One aim of this is to contribute to the validation of the qualitative analysis of James, Bixler, and Vadala (2010).

CHAPTER 3: METHODS

The purpose of this study was to explore connections between the experiences and/or exposure to leisure time activities as a child and the recreational activities participated in during adulthood. The following discussion describes the study methodology included through the following steps: (a) sample; (b) design; (c) procedure; (d) instrumentation; and (e) analysis.

Sample

The convenience sample for this study consisted of 100 undergraduate students at Southern Illinois University Carbondale who were enrolled in general education courses during the spring 2013 semester. Professors and graduate assistants affiliated with department of Health Education and Recreation were approached and asked permission to survey students from their classes on a designated day during the spring semester. After obtaining approval from the IRB, students were given the option of participating in the study, by completing a survey questionnaire administered in the classroom. Southern Illinois University Carbondale has 19, 217 students total as of 2011, with 45.9% women and 54.1% men. (SIU.org) From this larger sampling frame, Health Education professors and graduate assistants were approached, rather than Recreation or Forestry professors, because students who have chosen to take recreation or forestry classes could already have a bias toward the outdoors and outdoor play activities. This preference bias could influence the validity of the analyses, as the sample would not be representative of the target population of active young adults.

Design

In order to collect the data necessary for this project, it was necessary to secure assistance from the Health Education and Recreation department at Southern Illinois University. The researcher gained permission from professors and graduate assistants teaching entry-level courses in this department, and spent approximately one day collecting the data in five separate classes. The researcher attended these classes for about 20 minutes, and explained the purpose of the survey: to better understand active young adults' interests in outdoor and indoor activities during both childhood and adulthood. Students had the option of participating in a 7 minute paper and pencil response survey. Once respondents completed the survey, the researcher then collected responses and input them into a SPSS file for statistical analysis of the hypothesized relationships among childhood and adult recreation activities.

Procedure

The researcher went to each of the 5 classes during April 17, 2013. A cover letter was handed out and read to all students in the class explaining what the study was for and that answers would be kept confidential. Students then had the option to opt out of the survey. Surveys and pencils were then handed out to students, which were completed and collected by the researcher within 10 minutes for each class that participated. Completed surveys were organized by class and later numbered 1-88. All data was imputed into a Microsoft Excel File (Excel, 2010), part of the Microsoft Office family and later transferred to an SPSS version 19 file (SPSS, 2010) for further analysis. Output files were created, and used to compile the tables and figures included in this study.

Instrumentation

In order to gain a deeper understanding of participation in recreation activities during both childhood and adulthood, it was necessary to develop a new survey instrument that taps into both child and adult aspects of outdoor recreation participation. The challenge was to create a simple survey that would provide sufficient information to allow analysis of relationships among types of leisure activities. The survey instrument includes activities taken from the American Time Use Survey (ATUS), administered to a nationally representative sample and used to create a database that allows researchers and government agencies to understand how people spend their leisure time. By using the activity categories created for the ATUS, the researcher was able to tap into scientifically verified response items that are appropriate for inquiring, with specific details, how students at Southern Illinois University currently spend their leisure time. The same activity categories are used to investigate how these students spent their time as children. The age range for "childhood" is defined as ages 5 through 11, and respondents were asked to recollect their activity choices during that period of their lives. For both the "childhood" and "adulthood" activity lists, respondents have a five-choice frequency occurrence response, ranging from "rarely" to "often." This structure provides another layer of detail for the researcher to gain a better understanding of the intensity of respondents' participation in each activity.

Analysis

Two main types of comparisons guide the analyses in this thesis. First, the researcher would like to know the range of recreational activities historically participated in by respondents. Second, comparisons are made within and across respondents,

focusing on potential relationships of indoor and outdoor activity participation in childhood to adulthood.

The first section of the analysis focuses on general aspects of participation in recreation activities, and then explores relationships between participation in an activity during childhood and participation in the same activity as a young adult. For each respondent, the frequency occurrence responses to the survey questions are aggregated to create a numerical score representing total participation. These scores are used for both the descriptive analysis of the general distribution of activities across groups of students, and for comparisons of participation in indoor and outdoor recreational activities. In order to show this comparison, a pairwise correlation is calculated, and the results depicted graphically. The graphs provide a useful illustration of a correlation between activity participation in childhood and a later participation in the same activity during adulthood. Pearson's R values generated by this analysis are indicative of whether there is statistical significance in the estimated relationship between activities in childhood and adulthood activity. A similar graph depicts both outdoor activities and indoor activities to further illustrate whether a relationship exists between participation first in childhood and then in adulthood. Again, a Pearson's R is used to show the extent to which relationships between participation in these indoor and outdoor activities are statistically significant.

CHAPTER 4: RESULTS

Data were collected on April 17, 2013, with the collaboration of the Health Education department at Southern Illinois University-Carbondale. The researcher attended 5 different undergraduate classes, in which she first distributed a cover letter explaining the survey and what was required of participants. Students were then given the option to participate. All students present in the 5 classes that day elected to participate in the survey. On the survey, respondents were asked to rate 34 activities in terms of their participation throughout childhood; the same questions were used to rate participation during adulthood. Respondents were directed to choose an option on a frequency occurrence scale for how often they participated in the activities, with 1 representing “never” and ranging to 5 representing “very often.” In total, there were 88 respondents (N=88) with 41.9% female and 50.5% male. The last 7.6% did not respond to this question.

31.2% of respondents classified themselves as freshman, 22.6% classified themselves as sophomores, 26.9% classified themselves as juniors, and 10.8% classified themselves as seniors. There were no graduate or professional degree students in the survey population. 7.5% of respondents reported that they were Hispanic, while 77.4% responded that they were non-Hispanic, with 14 missing cases. For the racial breakdown, 31% of respondents were black, 57% were white, 2.2% were Asian/Pacific Islander, and 3.2% responded other (See Tables 1 and 2).

Although students in the study were all registered and attending a course offered through the Health Education department, students were not all Health Education majors. 2.2% of students were Agricultural Science majors, 10.8% were Applied

Sciences and Arts majors, 17.2% were Business majors, and 25.1 % were Education and Human Services majors, which included Health Education. 1.1% of respondents were Engineering majors, 18.3% were Liberal Arts majors, 6.5% were Mass Communications and Media Arts majors, 7.5% were Science majors, and 2.2% were registered in the School of Medicine. 8.6% of respondents did not answer this question.

Tabulations split responses into indoor and outdoor activities, along with a distinction between childhood and adulthood. An activities index was created by adding the values for all 17 outdoor and indoor individual activities, for both childhood and adulthood. The mean of childhood outdoor activities was reported as 51.58 with a standard deviation of 10.69. The mean of adulthood outdoor activities was considerably lower than that of childhood, but with greater variation: 41.70 with a standard deviation of 12.17. The mean of childhood indoor activities was reported as 47.31 with a standard deviation of 8.17. The mean of adulthood indoor activities was slightly lower, 46.19 with a standard deviation of 8.43. The total of outdoor activities during both childhood and adulthood was reported as 92.98 with a standard deviation of 15.86 and the total mean score of indoor activities for both childhood and adulthood was reported as 92.81 with a standard deviation of 21.43. Reliability tests were carried out for all four indices, and the Chronbach's Alpha results were as follows: childhood outdoor activities .796, childhood indoor activities .694, adulthood outdoor activities .868, adulthood indoor activities .718. The Chronbach's Alpha scores are appropriate for a sample size of 88, and when the Chronbach's Alpha is above .7, it can be considered acceptable (George & Mallery, 2003; Kline, 1999).

Figure 1 was created to show the amount of times respondents chose an activity, which allowed the researcher to see which activities were more frequently chosen with a higher rating and which activities were given lower ratings. The activities with the highest ratings during childhood were “watched TV/movies,” “structured outdoor play,” and “playing with animals” (See Tables 4a, 4b, and 4c). The lowest-rated activities during childhood were “participating in non-traditional summer camp”, “hunted”, and “aerobics/yoga” (See Tables 5a, 5b, and 5c). In correlations of childhood and adulthood participation in single activities, the activity “watched TV/movies” had a Pearson’s correlation of .63; “structured outdoor play” had a Pearson’s correlation of -.11, and “playing with animals” had a Pearson’s correlation of .52. It is interesting to note that watching TV/movies shows a high correlation between both childhood and adulthood, while a reverse trend is noticeable in participating in structured outdoor play. For the latter, although the small negative Pearson’s correlation coefficient is weak, it indicates that structured outdoor play activity was much more prevalent in childhood than adulthood. For the activity of playing with animals, the larger Pearson’s correlation coefficient indicates that although respondents reported that they participated in this activity as both children and adults, the participation in adulthood was much less than as a child. “Participating in non-traditional summer camp” had a Pearson’s correlation of .207, “hunted” had a Pearson’s correlation of .569, and “aerobics/yoga” had a Pearson’s correlation of .393. For the three activities chosen least frequently, the Pearson’s correlations indicate that all activities were participated in during childhood and adulthood, but the participation during adulthood was much less than in earlier life. The strongest correlation between childhood and adult activities corresponds to hunting.

Respondents who reported that they enjoyed hunting as a child were more inclined to continue to participate in hunting later in life. In one of the few recreation participation studies that can be directly compared to these findings, Sofranko and Nolan (1972) found a similar pattern of association of youth and adult participation in hunting through their retrospective study conducted over forty years ago.

Comparing frequency of participation, different activities were ranked as the highest and lowest frequency chosen in childhood and as adults. This indicates that students currently participate in different activities than those they had participated in during childhood. The highest frequency activities that were chosen during adulthood included “using the computer/internet,” “listening to/playing music,” and “watching TV/movies” (See Tables 6a, 6b, and 6c). The lowest frequency activities that were chosen during adulthood included “participating in non-traditional summer camp,” “participating in Boy Scouts/Girl Scouts,” and “collecting insects” (See Tables 7a, 7b, and 7c). “Using the computer/internet” had a Pearson’s correlation of .042, while “listening to/playing music” and “watching TV/movies” had Pearson’s correlations of .344 and .627, respectively. For both activities “using the computer/Internet” and “listening to/playing music”, responses indicate that the activities were participated in during adulthood but not during childhood. For the activity “watching TV/movies”, participation occurred during both childhood and adulthood, as discussed previously. For the lower ranked activities, “participating in a non-traditional summer camp” reported a Pearson’s correlation of .207, “participating in Boy Scouts/Girl Scouts” had a Pearson’s correlation of .129, and “collecting insects” had a Pearson’s correlation of .291. For all three activities, the various Pearson’s correlations indicated that

participation was low in childhood, and continued to be low in adulthood. Because of the slightly higher reported Pearson's correlation in "collecting insects," the researcher can infer that although respondents did collect insects as children, they did not participate in this activity as much during adulthood.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study was designed to evaluate how differences in childhood exposure to outdoor and indoor activities may influence choices of recreational activity participation in adulthood. The research questions guiding the analyses draw from the literature on development of recreational choices through three mechanisms: recreation specialization, significant life experiences, and environmental socialization. The findings from this study can make a useful contribution toward understanding the patterns of influence of childhood activity on choices made during adulthood, as well as some of the sources of variation in these relationships.

The first research question, “does childhood exposure to outdoor recreation activities relate to the decision to participate in outdoor recreation later in life,”

is addressed through analyses of the correlations between childhood exposures to outdoor participation in later life and through the correlation of individual and total outdoor and indoor activities in the two life stages. The findings indicate that respondents who experienced more outdoor recreational activities as children were likely to spend more time outdoors as adults, whereas respondents who reported that they spent more time participating in indoor activities during childhood were more likely to continue these predominately indoor activities throughout adulthood as well.

This also directly related to the research done on significant life experiences. As stated previously in the research, significant life experiences are both experiential and memorable, and activities that were outdoor-oriented had an effect on activity preference as an adult (Bixler, Floyd & Hammitt, 2002; Bixler, James & Vadala, 2010;

Chawla, 1998, 2002; Vadala, Bixler, & James, 2007). Significant life experiences influence people on how to spend their leisure time, and as with previous research, this study showed that there was indeed a relationship between spending time outdoors as a child and spending time outdoors as an adult. This correlation provides indirect evidence of the significance of outdoor experiences during childhood, suggesting that spending time outside as a child will make a difference later in life. An activity such as swimming with other kids at the neighborhood pool can have a major influence on one's recreation activity choices throughout their life. One can speculate regarding the mechanisms through which early life experience can translate to leisure choices in young adulthood. By remembering how fun it was to play with other kids, making up games to play in the water, and exploring the buoyancy of the pool firsthand gives a person a clear and valuable memory of a part of their childhood. This memory can in turn lead to getting a pool membership at a neighborhood pool as an adult and wishing to give their children the same experience they had as a child. As found by Vadala, James and Bixler (2007) activities such as hiking, camping, and berry picking had an impact on what adults chose as recreation later in life, and encouraged more outdoor recreation. Although this research does not specify on which activities were participated in the outdoors, the findings suggest a relationship between structured and unstructured outdoor recreation participated in during child and adulthood. The significant life experiences that the study respondents had during childhood showed a relationship between their leisure time as adults and in turn created a desire for more outdoor recreation.

These findings also lead researchers to have a better understanding of environmental socialization and how childhood experience may be related to adult leisure time choices. The findings from this research support those of previous studies regarding the positive relationship of between spending time outside as an adult and spending time outside as a child (Bixler & Morris, 2000; Bixler, James, & Vadala, 2007). As with the influence of other significant life experiences, exposure during childhood makes a difference--the more time a person spends outside, the more they will know about the world around them, which will make them more comfortable in the environment. Bixler and Morris (2000) explain that environmental socialization involves the repetition of an activity gives a person a better understanding of the world around them and what skills are needed to enjoy the activity to its fullest. Study respondents who had more opportunity to spend time outside during childhood, were more likely to spend more time outdoors as college students. Since the respondents had been "socialized" as children to the outdoors, they were more likely to use their leisure time outdoors as adults, once they had acquired the necessary competencies for engaging in these activities. For example, if a person spent time exploring their back yard as a child, they were then able to understand what kind of bugs can fly, that grass stains clothes, and have a basic understanding of the weather, as well as possible dangers associated with stormy weather. By going outside in the back yard regularly, a child is able to have these repeated experiences that will lead them to a deeper understanding of the outside world. Children are able to learn about themselves as well in this setting, such as with the grass stains or getting wet or scared during a thunderstorm. This basic

environmental socialization allows children to pursue their curiosity about nature and can lead them to a long-term attraction of the outside world.

The second research question asks “Are indoor or outdoor activities more likely to be selected in both childhood and adulthood?” Findings from the correlational analyses indicate that although some respondents do enjoy spending time outdoors in both child and adulthood, there were systematically different recreational choices made during both of these times. During childhood, the most frequently chosen activities included “watching TV/movies,” “structured outdoor play,” and “playing with animals.” Structured outdoor play and playing with animals are both considered outdoor activities. However, considering that watching TV/movies was the most frequently chosen childhood activity, it can be inferred that a large amount of the respondents’ childhood was spent indoors in front of the television. In addition, many respondents enjoyed participating in unstructured outdoor play, structured outdoor play, and organized outdoor sports as children, along with the other most frequently chosen activities.

For adulthood activity participation, the most frequently chosen activities were reported as “using the computer/Internet,” “listening to/playing music,” and “watching TV/movies.” Since these are considered to be indoor activities, it can be inferred that outdoor recreation participation does drop substantially from what is was during childhood. Both structured outdoor play and playing organized outdoor sports during college years had low mean ratings (2.9 and 1.75, respectively). This shows that interest in spending time outdoors lessened during adulthood, and outdoor activities that respondents enjoyed participating in during childhood were not as predominant during adulthood. This may be due to the fact that these types of activities are offered more to

youth rather than older adults, which could explain why participation was predominant in childhood rather than adulthood.

Discussion

Although previous research does not directly investigate the relationship between activity participation in both childhood and adulthood, studies of recreation specialization and environmental socialization suggest the need for a deeper understanding of this set of relationships. This present study contributes evidence of these developmental processes, with the findings indicating that there is indeed a relationship between the activities in which people participate in during their childhood and involvement in similar activities during adulthood. Recreation specialization is not as clearly established as in previous research that focuses on this process more directly, but the findings of the current study suggest that the specific activities that respondents participated in during childhood had a lasting effect throughout their lives. Activities that have a low participation rate in childhood may, nonetheless, carry over into adult participation. For example, the activity “hunting” did not have a lot of participation during childhood, yet participation increased throughout the lifespan and had a much higher participation rate during adulthood. This finding is consistent with those of studies on hunting and fishing: although participation rates are low during childhood, introduction to these activities in youth is an important factor for continued interest and a higher level of recreation specialization in adulthood (Bryan, 1977; Sofranko and Nolan, 1972). The results indicated from this study also are consistent with research findings by Tsuar and Liang (2008) regarding recreation specialization. As people begin to pursue a deeper involvement into their recreation activity, a larger

appreciation for the activity is discovered, leading a person into a serious leisure situation in which they continue to participate in their choice activity throughout their lifespan.

This study finds that outdoor recreation participation is minimal after childhood, specifically for students who are currently studying in a college or university setting. Constraints for this population could include lack of accessibility and lack of appropriate time to participate in the activities. College students may spend more time on school work and less time on recreational activities, although the evidence for this trend is only anecdotal. (LaCaille, Dauner, Krambeer, & Pedersen, 2011) However, the analyses presented here suggest that even those students who spent time outdoors as children are not spending the same amount of time outside as adults. This could be due to the fact that they are busy with classes and homework, but it could also be a result of technological advances over the past ten to fifteen years that tend to discourage outdoor recreation (Jones, 2002). Outdoor recreation also may not be as important in these respondent's lives because of lack of availability, along with the pull toward different, less physically active, recreational choices. This trend can be viewed as a change, for the worse, in the quality of life for young adults. As Chawla (2007) notes, looking at computer screens and pictures in books will never compare to the actual experience of being outside and seeing the outside world firsthand.

Among the study sample, there has been a transition from recreational activities that did not involve technology, into more technology-driven activity choices, which involve much less outdoor experiences and physical activity. The role of technology in recreation specialization deserves attention. When the respondents in this study were

young children, technology and its applications to leisure were far less developed than they are today. The US Bureau of the Census reported in 2010 that the percentage of households with internet use at home increased from 18% in 1997 to 69% in 2009 (US Census Bureau, 2012). Home computers were not as common when the respondents were children, in the late 1990s and early 2000s whereas now not only do computers exist at home, but 85% of students also had their own computers or laptops in 2002 (Jones 2002). 20 % of college students in 2002 began using computers between ages 5 and 8, and by the time they were 16 through 18 all students were using computers and the Internet had become extremely prevalent in daily life (Jones, 2002). Although ostensibly the main function of these computers is for school, music websites such as Pandora.com and social media websites such as Facebook.com and Twitter.com have become a huge influence on what college students do during their free time. A study surveying undergraduate student from Michigan State University, found that 94% of respondents were Facebook users, illustrating both time use and the strong influence of this particular type of social media on college-aged students (Ellison, Stienfield, & Lampe 2007). Also, a large majority of students now have media players and cell phones, which advances technology even more quickly. With the current trend in smart phones, media are available at a touch of a button and can be accessed more frequently than ever before.

The study findings suggest that during childhood, outdoor recreation was more common in participation than it may currently be during adulthood. As a child, the outdoor world may have seemed much bigger and broader, with many different elements to fruitfully explore, even in one's own backyard (Chawla 2007). Unstructured

outdoor play was a more regular and expected experience among children, as they develop an awareness of the world around them. As a child grows through adolescence and into adulthood, the world may not seem as large and simple things such as playing in the mud and exploring a creek do not have the same attractiveness as they had during their younger years. The responses to the survey in this study suggest that while respondents may not participate in this type of unstructured play anymore, many are still involved in activities that allow them to spend time outdoors. This may involve going on a hike or playing outdoor organized sports, through programs such as intramural sports which are offered by the university. Along with intramural sports, outdoor recreation programming is offered through the university, allowing students to participate in structured outdoor recreation activities with other college students and faculty members. Both the intramural sports and outdoor programs are well-frequented by students, allowing participants to pursue their love for the outdoors and the sporting world in a structured way.

Recommendations

For children, it is developmentally important to have an understanding of the world around them. In order for this to be possible, children should have access to outdoor activities and programs that will allow them to explore the outdoor world and their surroundings in an experiential way. Parents are a main influence on this, because it is the child's parents who inevitably make their activity choices for them (Bixler, Floyd, & Hammitt, 2002, Bixler, James & Vadala 2011). If parents encourage their children to spend one hour outside rather than on the computer or watching television, they will have 365 hours a year where they were given a chance to explore the world around

them, and move away from the 53 average hours a week spent in front of some television, computers, video games, etc. (Rideout, Foehr, & Roberts, 2010). Parents can also sign up their children for summer camps and outdoor adventure programs which would give them the structured experience of outdoor play, and possibly unstructured as well. Park and Recreation departments usually have available team sports for children, which gives them the important opportunity to recreate with other children their age, along with the experience of playing on a team and engaging in some physical exercise. For the children of today's college students, parental socialization toward an attraction of the outdoors can make an important difference toward taking advantage of outdoor recreation opportunities.

Along with the importance of park and recreation departments offering necessary programming, researchers and practitioners should also work together to identify and implement means of responding to the media blitz to help people, particularly college-aged young adults, to reconnect with nature and continue to experience the benefits of such experiences. Currently, television commercials encourage people to use their technological devices out in nature, rather than enjoying the outdoor world for what it has to offer. Companies such as Nature Valley have attempted to take some of the media influence and focus it on outdoor recreation, but more companies and corporations must follow suit to continue to promote outdoor recreation.

For adolescents and early adults, the desire to engage in recreational activities persists, even when actual participation changes or declines. These findings provide support for the theoretical tenets of recreation specialization, with a narrowing of activities from childhood to adulthood, but that the changes do not necessarily preclude

a healthy orientation toward the outdoors. Whether the recreation may be through a university setting or on their own, having an opportunity to recreate and stay active will keep a college student's lifestyle balanced and manageable (Ragheb & McKinney, 1993). It is important that programming is available through college and university recreation centers, but many park and recreation districts create programming for adults as well. The study findings provide evidence in support of continuing to promote this particular type of programming and should continue to be promoted and expanded across settings. Activities such as adult softball league or group bicycling can help to satisfy the developmental urge to seek recreation, and thus can promote a healthy lifestyle. Furthermore, as is the case with children, these experiences can give adults a chance to socialize with other people who have similar interests. Bixler, James, and Vadala (2011) concluded that having a connection with the outdoor world has many positive ramifications, leading a person into a deeper appreciation for their environment at large. Serious leisure or professional experiences in the outdoor world can, in turn, lead to other positive social experiences.

Study Limitations and Delimitations

Generalizability of the findings from this study is limited by the sample configuration. The survey was administered to a small sample of university undergraduate students, so we can only discuss implications for leisure time choices among this population. Undergraduate leisure decisions may not be representative of all young adults, demographically and socioeconomically. Furthermore, both time constraints and leisure opportunities in college differ from those of other life stages and environments. The findings also may reflect selection of students who are more likely to

engage in active leisure. Since students in this study were all enrolled in a Health Education course, the sample could lead to bias in favor of outdoor activities; students not enrolled in these courses may have different interests which may include less participation in outdoor activities.

The study findings provide support for the concepts of environmental socialization through childhood exposure to outdoor experience, and for recreation socialization through association of childhood young adult participation in particular outdoor and indoor activities. The study does not, however, provide empirical evidence of the mechanisms through which childhood experience influences adult leisure choices. It is the hope of the researcher that the evidence from the study will provide guidance for future research, described below, that will be aimed at gaining a deeper understanding of these mechanisms.

Other recommendations emerge for researchers studying recreation activity choices throughout childhood and adulthood. These suggestions are geared toward improving the reliability of the results and allow for generalization to other settings and other areas of inquiry within the field of recreation studies. In order for the study to be considered more reliable, the sample size should be larger. This will allow the researcher to have a better understanding of a full range of activities that students have participated in during their childhood, along with those in which they are participating currently. This will also allow for analysis of demographic characteristics such as whether or not there is an influence on race, gender, and socioeconomic status. Updating the survey section for current participation would also allow for a better understanding of what activities are participated in during adulthood. Since activity

interests and technology has changed since respondents were children, the activities in which they currently participate may not have been listed on the survey. Making changes to the second portion of the survey will allow respondents to give more precise answers to the questions, which will in turn lead to more reliable data. By doing so, a more accurate understanding of what students are currently participating in would be available. For example, “texting” was not an option for adulthood activity participation, but texting is known to be a popular activity for college students.

It would be useful to obtain more complete information for the analyses of environmental socialization. It would also be useful to explore questions involving differences among demographic groups in the association between outdoor and indoor activity choices at different life stages. If demographic characteristics are used, additional indicators of socioeconomic status should be added, such as parents’ total income or measures of wealth. Additionally, there would be an advantage to adding a question about the location of childhood home. This would allow the researcher to evaluate relationships between outdoor and indoor recreation activities participated in during childhood and the location of the childhood home. Urban/suburban/rural settings may influence the types of activities chosen, along with the frequency of participation of each activity.

In order to fully understand what kinds of recreation activities are chosen throughout the lifetime and the mechanisms of influence from childhood activities to adult choices, it would be beneficial to create a mixed method study with both qualitative and quantitative components. By adding a portion of interviews with students who may respond to the survey only, the interview only, or both, the researcher may gather more

detailed information about the recreational activity, how frequently participation occurs, and why these decisions are made. Qualitative data would provide more depth in the understanding of outdoor and indoor participation and why participants have made the decision to take part or not. Richer data provide the opportunity for more distinct and direct comparisons across groups, as well as providing valuable information on the mechanisms underlying the patterns of carry-over and change between child and adult recreational practices.

Future Research

Although this study allows researchers to have a better understanding of activity participation throughout the lifespan from child to young adulthood, there are still important gaps in our understanding of childhood antecedents to adult recreational choices. The study could be somewhat replicated with different undergraduate populations, to determine whether there are differences between activity choices and specialization in different majors throughout one university. The same study could also be performed at a completely separate university, in order to investigate the relationship between location and outdoor/indoor activity choices. Toward this end, this researcher intends to complete a similar study at the University of Southern Mississippi which will include a mixed methods version rather than only quantitative data.

In order to fully understand how the recreation participation choices change throughout one's life, conducting a longitudinal study beginning with children and conducting follow-up interviews over a period of several years would be optimal. A study conducted in this way would allow research participants to give the most accurate answers possible and give researchers a full understanding of mechanisms through

which recreation participation choices evolve as a person moves from childhood to adulthood.

Table 1: School Classification of Respondents

class

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	29	31.2	34.1	34.1
	2	21	22.6	24.7	58.8
	3	25	26.9	29.4	88.2
	4	10	10.8	11.8	100.0
	Total	85	91.4	100.0	
Missing	System	8	8.6		
Total		93	100.0		

1=Freshman

2=Sophomore

3=Junior

4=Senior

5=Graduate or higher

Table 2: Racial Breakdown of Respondents

race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	26	28.0	31.0	31.0
	2	53	57.0	63.1	94.0
	4	2	2.2	2.4	96.4
	5	3	3.2	3.6	100.0
	Total	84	90.3	100.0	
Missing	System	9	9.7		
Total		93	100.0		

1= Black
2=White
3=Native American Indian
4=Asian/Pacific Islander
5=Other

Table 3: Pearson's Correlations from SPSS Output Regarding Total Indoor and Outdoor Recreation for Both Childhood and Adulthood

Correlations

		A_indoor_ total	C_indoor_ total	A_outdoor_ total	C_outdoor_ total
A_indoor_total	Pearson Correlation	1	.705**	.456**	.319**
	Sig. (2-tailed)		.000	.000	.003
	N	87	87	87	87
C_indoor_total	Pearson Correlation	.705**	1	.165	.219*
	Sig. (2-tailed)	.000		.127	.041
	N	87	88	87	88
A_outdoor_total	Pearson Correlation	.456**	.165	1	.642**
	Sig. (2-tailed)	.000	.127		.000
	N	87	87	87	87
C_outdoor_total	Pearson Correlation	.319**	.219*	.642**	1
	Sig. (2-tailed)	.003	.041	.000	
	N	87	88	87	88

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4a, 4b, 4c: Descriptive Statistics of Most Frequently Chosen Childhood Activities

Table 4a: “Watched TV/Movies”

Correlations

		C_Watched tv_movies	A_Watched_ tv_movies
C_Watched tv_movies	Pearson Correlation	1	.627**
	Sig. (2-tailed)		.000
	N	88	87
A_Watched_tv_movies	Pearson Correlation	.627**	1
	Sig. (2-tailed)	.000	
	N	87	87

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4b: “Structured outdoor play”

Correlations

		C_structured_ outdoor_play	A_structured_ outdoor_play
C_structured_outdoor_ play	Pearson Correlation	1	-.105
	Sig. (2-tailed)		.335
	N	88	87
A_structured_outdoor_ play	Pearson Correlation	-.105	1
	Sig. (2-tailed)	.335	
	N	87	87

Table 4c: “Playing with animals”

Correlations

		C_animals	A_animals
C_animals	Pearson Correlation	1	.516**
	Sig. (2-tailed)		.000
	N	88	87
A_animals	Pearson Correlation	.516**	1
	Sig. (2-tailed)	.000	
	N	87	87

**. Correlation is significant at the 0.01 level (2-tailed).

Tables 5a, 5b, 5c: Descriptive Statistics of Least Frequently Chosen Childhood Activities

Table 5a: “Participated in nontraditional summer camp”

Correlations

		C_ nontraditional_summer_ camp	A_ nontraditional_summer_ camp
C_nontraditional_ summer_camp	Pearson Correlation	1	.207
	Sig. (2-tailed)		.054
	N	88	87
A_nontraditional_ summer_camp	Pearson Correlation	.207	1
	Sig. (2-tailed)	.054	
	N	87	87

Table 5b: “Hunted”

Correlations

		C_hunted	A_hunted
C_hunted	Pearson Correlation	1	.569**
	Sig. (2-tailed)		.000
	N	88	87
A_hunted	Pearson Correlation	.569**	1
	Sig. (2-tailed)	.000	
	N	87	87

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5c: “aerobics/yoga”

Correlations

		C_aerobics_ yoga	A_aerobics_ yoga
C_aerobics_yoga	Pearson Correlation	1	.393**
	Sig. (2-tailed)		.000
	N	88	87
A_aerobics_yoga	Pearson Correlation	.393**	1
	Sig. (2-tailed)	.000	
	N	87	87

**. Correlation is significant at the 0.01 level (2-tailed).

Table 6a, 6b, 6c: Descriptive Statistics of Most Frequently Chosen Adulthood Activities

Table 6a: “Using the computer/Internet”

Correlations

		A_computer_internet	C_computer_internet
A_computer_internet	Pearson Correlation	1	.042
	Sig. (2-tailed)		.703
	N	87	87
C_computer_internet	Pearson Correlation	.042	1
	Sig. (2-tailed)	.703	
	N	87	88

Table 6b: “Listening to/playing music”

Correlations

		A_music	C_music
A_music	Pearson Correlation	1	.344**
	Sig. (2-tailed)		.001
	N	87	87
C_music	Pearson Correlation	.344**	1
	Sig. (2-tailed)	.001	
	N	87	88

**. Correlation is significant at the 0.01 level (2-tailed).

Table 6c: “Watching TV/movies”

Correlations

		A_Watched_tv_movies	C_Watched tv_movies
A_Watched_tv_movies	Pearson Correlation	1	.627**
	Sig. (2-tailed)		.000
	N	87	87
C_Watched tv_movies	Pearson Correlation	.627**	1
	Sig. (2-tailed)	.000	
	N	87	88

**. Correlation is significant at the 0.01 level (2-tailed).

Tables 7a, 7b, 7c: Descriptive Statistics of Least Frequently Chosen Adulthood Activities

Table 7a: “Participating in a nontraditional summer camp”

Correlations

		A_ nontraditional_summer_ camp	C_ nontraditional_summer_ camp
A_nontraditional_ summer_camp	Pearson Correlation	1	.207
	Sig. (2-tailed)		.054
	N	87	87
C_nontraditional_ summer_camp	Pearson Correlation	.207	1
	Sig. (2-tailed)	.054	
	N	87	88

Table 7b: “Participating in Boy/Girl Scouts”

Correlations

		A_boy girl_ scouts	C_boy girl_ scouts
A_boy girl_scouts	Pearson Correlation	1	.129
	Sig. (2-tailed)		.240
	N	87	85
C_boy girl_scouts	Pearson Correlation	.129	1
	Sig. (2-tailed)	.240	
	N	85	86

Table 7c: “Collected insects”

Correlations

		A_collected_ insects	C_collected insects
A_collected_insects	Pearson Correlation	1	.291**
	Sig. (2-tailed)		.006
	N	87	87
C_collected insects	Pearson Correlation	.291**	1
	Sig. (2-tailed)	.006	
	N	87	88

**. Correlation is significant at the 0.01 level (2-tailed).

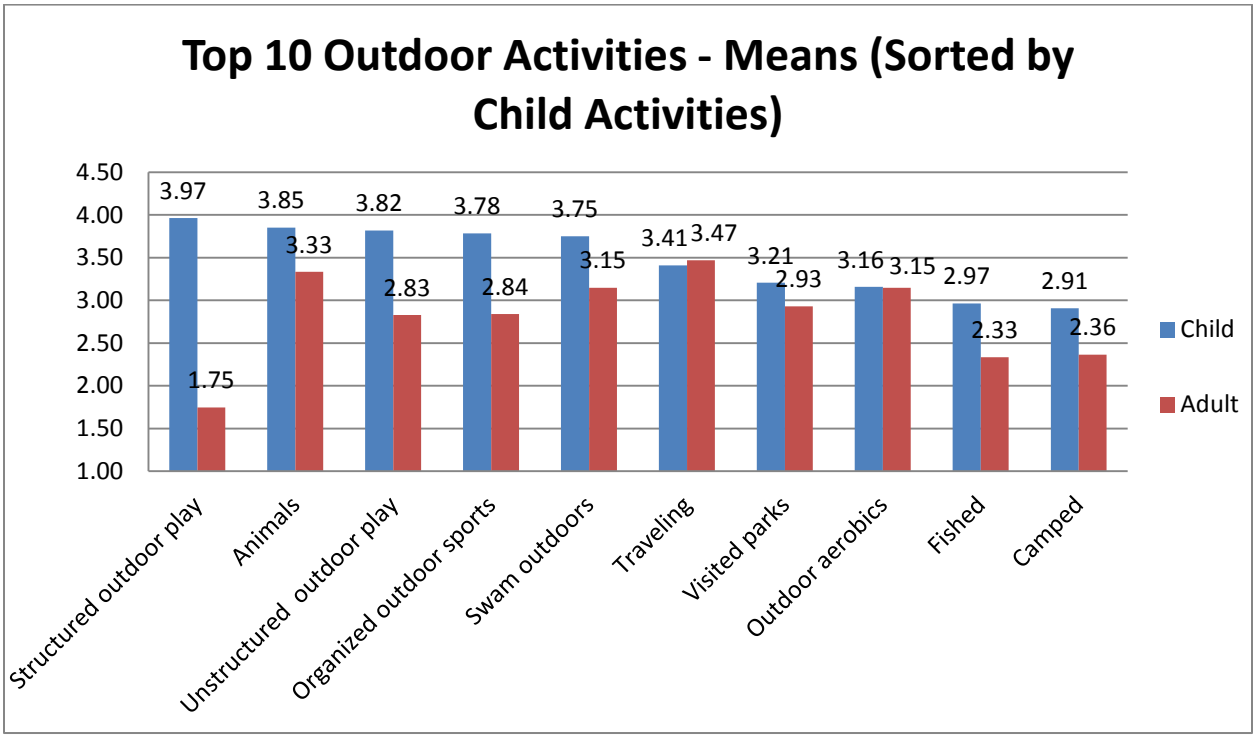

Figure 1: Most Frequently Chosen Outdoor Activities Sorted by Childhood Activities

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APPENDICES

DEFINITIONS

Recreation Specialization: Going from general participation in an activity to the particular; Moving from novice to expert. Equipment, time, and money are spent to allow for the specialization of the activity to occur. (Tsuar & Liang, 2007)

Environmental Socialization: The relationship a person creates with nature, usually during childhood. Repeated experiences result in practical knowledge, a conceptualization of self is achieved, and primary and ancillary skills are developed. A scale has been developed to determine if participation in certain outdoor activities affects this socialization with the environment. (Bixler & Morris, 2000)

Significant Life Experiences: Experiences a person has in their lifetime, whether it may be during child or adulthood that is memorable. The person will recollect this experience throughout their life, which can have either positive or negative outcomes. (Chawla, 2006)

Environmental Motives Scale: Method of measurement created by Stern and Dietz. The Environmental Motives Scale is used to measure the motivation behind a person's environmental concern. (Stern & Dietz, 1994)

Childhood: defined as the time from 5-11 years of age during one's lifetime. This is the time before early adolescence, which is defined as years 11-13 in one's life. (US Department of Health and Human Services, 2012)

Adulthood: For the purposes of this study, young adulthood refers to ages corresponding to enrollment in undergraduate education (approximately ages 19-24 during the Spring semester). (US Department of Health and Human Services, 2012)

SURVEY QUESTIONNAIRE

1. Please circle the best answer for each activity.

When I was ages 5-11, I participated in:

	Never		Sometimes		Very Often
A. Unstructured play outdoors: exploring nature, creeks, getting dirty, etc.	1	2	3	4	5
B. Structured play outdoors: fort building, playing “house,” etc.	1	2	3	4	5
C. Played organized outdoor sports: baseball, tennis, soccer, etc.	1	2	3	4	5
D. Played organized indoor sports: basketball, bowling, billiards, etc.	1	2	3	4	5
E. Participated in Boy Scouts/Girl Scouts	1	2	3	4	5
F. Traveling to new places	1	2	3	4	5
G. Outdoor aerobics: running, jogging, etc.	1	2	3	4	5
H. Went to traditional summer camp	1	2	3	4	5
I. Went to a non-traditional summer camp: math camp, writing camp, etc.	1	2	3	4	5
J. Hiked	1	2	3	4	5
K. Hunted	1	2	3	4	5

	Never		Sometimes		Very Often
L. Fished	1	2	3	4	5
M. Boated	1	2	3	4	5
N. Visited national, state or local parks	1	2	3	4	5
O. Camped with family/friends	1	2	3	4	5
P. Swam in outdoor areas: lakes, oceans, outdoor pools	1	2	3	4	5
Q. Swam in indoor areas: indoor pools/ saunas	1	2	3	4	5
R. Played with animals	1	2	3	4	5
S. Collected insects	1	2	3	4	5
T. Aerobics/yoga	1	2	3	4	5
U. Gymnastics	1	2	3	4	5

	Never		Sometimes		Very Often
V. Watched TV/movies	1	2	3	4	5
W. Played video games	1	2	3	4	5
X. Used the computer/Internet	1	2	3	4	5
Y. Played with toys inside	1	2	3	4	5
Z. Indoor aerobics: group classes, using fitness equipment, etc.	1	2	3	4	5
AA. Made arts and crafts	1	2	3	4	5
AB. Reading	1	2	3	4	5
AC. Writing: journals, etc.	1	2	3	4	5
AD. Listened to/playing music	1	2	3	4	5
AE. Talked on the phone	1	2	3	4	5
AF. Watched sports live	1	2	3	4	5
AG. Watched sports on TV	1	2	3	4	5
AH. Attended religious services/bible studies	1	2	3	4	5

2. Please circle the best answer for each activity:

CURRENTLY, I participate in:

	Never		Sometimes		Very Often
A. Unstructured play outdoors: exploring nature, creeks, getting dirty, etc.	1	2	3	4	5
B. Structured play outdoors: fort building, playing "house," etc.	1	2	3	4	5
C. Playing organized outdoor sports: baseball, tennis, soccer, etc.	1	2	3	4	5
D. Playing organized indoor sports: basketball, bowling, billiards, etc.	1	2	3	4	5
E. Participating in Boy Scouts/Girl Scouts	1	2	3	4	5
F. Traveling to new places	1	2	3	4	5
G. Outdoor aerobics: running, jogging, etc.	1	2	3	4	5
H. Working with a traditional summer camp	1	2	3	4	5
I. Working with a non-traditional summer camp: math camp, writing camp	1	2	3	4	5
J. Hiking	1	2	3	4	5
K. Hunting	1	2	3	4	5

	Never		Sometimes		Very Often
L. Fishing	1	2	3	4	5
M. Boating	1	2	3	4	5
N. Visiting national, state or local parks	1	2	3	4	5
O. Camping with family/friends	1	2	3	4	5
P. Swimming in outdoor areas: lakes, oceans, outdoor pools	1	2	3	4	5
Q. Swimming in indoor areas: indoor pools/ saunas	1	2	3	4	5
R. Playing with animals	1	2	3	4	5
S. Collecting insects	1	2	3	4	5
T. Aerobics/yoga	1	2	3	4	5
U. Gymnastics	1	2	3	4	5

	Never		Sometimes		Very Often
V. Watching TV/movies	1	2	3	4	5
W. Playing video games	1	2	3	4	5
X. Using the computer/Internet	1	2	3	4	5
Y. Playing with toys inside	1	2	3	4	5
Z. Indoor aerobics: group classes, using fitness equipment, etc.	1	2	3	4	5
AA. Making arts and crafts	1	2	3	4	5
AB. Reading	1	2	3	4	5
AC. Writing	1	2	3	4	5
AD. Listening to/playing music	1	2	3	4	5
AE. Talking on the phone	1	2	3	4	5
AF. Watching sports live	1	2	3	4	5
AG. Watching sports on TV	1	2	3	4	5
AH. Attending religious services/bible studies	1	2	3	4	5

3. Please fill out the following demographic questions:

List your school classification:
____ Freshman _____ Sophomore _____ Junior _____ Senior _____ Graduate or higher

Check your appropriate college:
_____ Agricultural Sciences
_____ Applied Sciences and Arts
_____ Business
_____ Education and Human Services
_____ Engineering
_____ Liberal Arts
_____ Mass Communication and Media Arts
_____ Science
_____ School of Law
_____ School of Medicine

Please state your gender:
_____ Male _____ Female

Please state your ethnicity:
_____ Hispanic

_____ Not Hispanic

Please state your race:

_____ Black
_____ White
_____ Native American Indian
_____ Asian/Pacific Islander
_____ Other

Please mark your parent's highest level of education:

_____Below high school

_____ High school degree

_____ Bachelor's degree

_____ Graduate degree, professional degree or higher

Thank you for your completion and participation in this survey!

VITA

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Appalachian State University
Bachelor of Science, Recreation Management, December 2010

Special Honors and Awards:
J. Michael Dunn Leadership Award

Thesis Title:
Relationship of Childhood Activity to Leisure Time Activities and Recreation Specialization among College Students

Major Professor: Dr. Joel Agate