# OKLAHOMA 4-H ROUNDUP: EFFECT ON PLACE BONDING OF YOUTH VISITING THE OKLAHOMA STATE UNIVERSITY CAMPUS

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OKLAHOMA 4-H ROUNDUP: EFFECT ON PLACE BONDING OF YOUTH VISITING THE OKLAHOMA STATE UNIVERSITY CAMPUS

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Abstract: The purpose of this study is to investigate if there is an effect and if so, to what level of effect that repeated trips to the Oklahoma State University (OSU) campus to attend Oklahoma State 4-H Roundup (Roundup) had on the participants' level of place bonding to the OSU campus. Additionally, the study investigates the level of effect that trips to campus other than Roundup had on place bonding. 4-H youth (ages 12-19) that attended Roundup ($n$ = 648) were provided a self-reported survey (response rate = 70%) to determine their frequency of Roundup attendance and other campus visits. A 22-item scale was used to provide respondents scores for the five dimensions of place bonding: familiarity, belongingness, identity, dependence, and rootedness. A cross-sectional analysis was conducted using nonparametric statistics. Results indicated that increased trips to Roundup had an effect on the respondents place bonding to campus. As the frequency of trips to Roundup increased there was a significant increase in the scores for all five dimensions of place bonding ($p < .017$). Visits to OSU for reasons other than Roundup were also shown to have similar effects on place bonding. As the frequency of other visits to OSU increased there was a significant increase in the respondents' scores for all five dimensions of place bonding ($p < .001$). In order to compare the varying combinations of Roundup visits and other visits to campus, four classifications (Beginners, Site Specific, Activity Specific, and Veterans) of experience use history (EUH) were formed. The EUH groups were significantly different for all five place bonding dimensions ($p < .001$). These findings conclude that Roundup, and other activities held on the OSU campus contribute to 4-H youth developing significant place bonds to the campus.

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# CHAPTER I

## INTRODUCTION

As part of the land grant university, Oklahoma 4-H has been a part of the Oklahoma State University (OSU) campus for over 100 years. Oklahoma 4-H has strived to develop life skills in Oklahoma youth through a variety of research based methods. Annually, for the past 94 years, Oklahoma 4-H has brought 4-H members from across the state onto the OSU campus for State 4-H Roundup (Roundup). At Roundup, delegates, are immersed into campus life. They stay in the residence halls for several nights, dine in the cafeteria, attend workshops in numerous buildings across campus, attend social events such as dances in the Student Union Ballroom, picnics at Theta Pond and movies in the Student Union Theatre, and attend conference sessions in Gallagher-Iba Arena.

Through this campus immersion, delegates are exposed to many spaces across campus and the local community. These spaces provide the physical boundaries of campus but they also have the potential to become places that hold special meaning to the Roundup delegates. As delegates join together in an event with nearly 100 years of history, they have the opportunity to develop lasting memories of the campus. Through interactions with other delegates supporting a common theme, they can develop a sense

of belonging as though they are members of the OSU family. By becoming familiar with various locations across campus they may begin to feel safe and develop a sense of home.

Positive experiences that occur through achievement, caring relationships, and engagement in learning may create an environment that can lead to campus itself becoming part of their identity.

## Statement of the Problem

Place related theories and research have existed for over fifty years with a large portion of the early interest focused on residential and neighborhood studies. During the past fifteen years, there has been a strong increase in publications evaluating person-place bonds and a large portion of these have focused on recreational places (Lewicka, 2011). However, there is limited research determining if and to what extent recreational experiences on campus form people-place bonds between pre-college age youth and the campus.

## Purpose of the Study

The purpose of this study was to determine if and the level of effect that repeated trips to OSU by Oklahoma 4-H youth who attend Roundup and other campus based events had on the participants' level of place bonding to the OSU campus. Place bonding describes the strength of the human-place bond and has had limited to no data collected for either adolescents or a person's bond to a university campus. For 94 years, Oklahoma 4-H youth have been coming to the OSU campus to participate in Roundup, a multi-day youth leadership conference. This study was designed to provide university faculty, university recruiters, parents of potential college recruits, and 4-H educators information

to determine if and to what extent adolescents bond to a university campus by repeated visits with overnight stays.

## Research Questions

The following research questions were investigated:

1. Did the frequency of visits to Roundup serve as a significant factor in explaining the level of place bonding youth have for the OSU Campus?
2. Did the frequency of trips to OSU in the past year serve as a significant factor in explaining the level of place bonding youth have for the OSU Campus?
3. Does the combined effects of frequency of trips to Roundup and frequency of other trips to campus, expressed as experience use history, serve as a significant factor in explaining the level of place bonding youth have for the OSU campus?
4. Does gender relate to these place bonding values?

## Justifications

Oklahoma 4-H Youth have attended Roundup on the OSU campus for the past 94 years. Many delegates return each summer and may attend six or more years. While at Roundup they have the opportunity to familiarize themselves with the campus. During Roundup, delegates stay in the residential halls, eat in the cafeterias, and walk to numerous locations across campus. As a result of repeated exposure to the OSU campus and a long standing tradition of Roundup being held on campus, there is a potential impact that Roundup delegates are place bonding to the OSU campus.

Geographers have developed many definitions of place but most define it as a meaningful location (Cresswell, 2004). “What begins as undifferentiated space becomes a

place as we get to know it better and endow it with value" (Tuan, 1977, p. 6). The attachment to a place occurs when an individual develops an emotional bond for a special place. The bond individuals form is dependent on many factors associated with both the places themselves and the people that inhabit the place (Lewicka, 2011). People develop affective bonds with places based on their satisfaction of how a place allows them to express creativity, and their perceptions of how well the environment provides them safety, privacy, and opportunities for reflection (Chow & Healey, 2008). Place bonding also includes issues related to personal identities that are discovered through meaningful experiences that often involve relationships with other people (Low & Altman, 1992; J. Moore, 2000). Roundup offers many activities for youth to learn and build friendships with other 4-H members which may possibly lead delegates to develop an emotional bond to the campus through these personal and group processes (Low & Altman, 1992; Oklahoma Cooperative Extension Service, 2015f).

## Definition of Terms

4-H Roundup – A youth conference for 4-H members to provide them opportunities for participation in leadership training, life skill development, career preparation, 4-H promotion, award recognition, making new friends, and establishing individual goals (Oklahoma Cooperative Extension Service, 2015f).

Oklahoma 4-H – A youth development organization that is part of the Oklahoma Cooperative Extension Service of Oklahoma State and Langston universities where youth learn through opportunities that provide them hands-on experiences (Stewart & Scheihing, 2010).

Place attachment – The emotional link formed by an individual to a physical place through people-place interactions which originated from the fields of environmental psychology/geography (Hammitt, Kyle, & Oh, 2009; Milligan, 1998).

Place belongingness – A social bond that a person develops for a place in which they feel a sense of belonging as though they hold a membership with the place (Hammitt et al., 2009; R. Moore & Graefe, 1994).

Place bonding – The emotional bond that occurs during people-place interactions which originated in the field of social psychology (Hammitt et al., 2009).

Place dependence – The bond that is formed between a person and place based on the functional aspects of the place in terms of the quality of opportunities it affords and the relative quality of alternative places (Hammitt et al., 2009; Williams & Roggenbuck, 1989).

Place familiarity – The bond that a person forms with a place due to development of pleasant memories, cognitive meanings, and images that result from memories associated with a recreational place (Hammitt et al., 2009; Roberts, 1996).

Place identity – The relationship a person has for a place that is part of their own self-identity developed through a complex pattern of conscious and unconscious ideals, feelings, and goals that are important to the person based on what the setting symbolizes (Hammitt et al., 2009; Proshansky, Fabian, & Kaminoff, 1983; Williams & Roggenbuck, 1989).

Place rootedness – A strong bond a person develops for a place in which they feel completely at home with the assurance of nurture and security (Hammitt et al., 2009; Tuan, 1977).

Roundup delegate – 4-H youth representing their county 4-H program who are at least 13 years old by January 1, 2015 or have completed the 7th grade and not older than 19 before January 1, 2015 and still in high school or just graduated high school for 2015 (Oklahoma Cooperative Extension Service, 2015e, 2015f).

## Limitations

First, this study was dependent on voluntary participation; therefore, the results of the study might not be generalizable to other Roundups, other universities programs, nor other universities. Second, the cross-sectional data collection may describe significant patterns of association but not causality. Third, the gender differences identified in this study may not be generalizable to differences in sex. Lastly, the results are based on self-reported data which is subject to bias of individuals who consciously or unconsciously alter their responses to provide socially desirable responses.

# CHAPTER II

## REVIEW OF LITERATURE

### Development of the Cooperative Extension Service

On July 2, 1862 Abraham Lincoln signed the Morrill Act in order to promote "the liberal and practical education of the industrial classes in the several pursuits and professions in life" (James, 1910). Rather than federally funding the state universities, the federal government opted to provide federal land to encourage the states to accept the charter, thus the term "land-grant" is used to describe these universities and the historically black universities that were established by the Second Morrill Act of 1890 (Martin, 2001). The addition of the Hatch Act of 1887 charged the land-grant universities to conduct research for the public interest and further established the Agriculture Experiment Station system. In 1914, Congress approved the Smith-Lever Act which directed the land-grant universities to take the university to the people by establishing the Cooperative Extension Service. Through the establishment of these acts the land-grant university system attained its three-fold mission of teaching, research, and extension (Schuh, 2004).

Over 100 years later, the Cooperative Extension Service still functions as part of the land-grant universities bringing research based education directly to the people

(United States Department of Agriculture, 2015). Extension program offerings include agriculture, family and consumer sciences, community and economic development, environmental stewardship, natural resource management, local government education, and 4-H youth development. These programs are funded cooperatively between the federal, state, and county governments bringing local programs to nearly all the 3,150 counties in the nation (United States Department of Agriculture, 2007).

## Background of National 4-H

The development of the 4-H program has many origins and cannot be attributed to a single person or congressional charge. However, the beginnings of 4-H can easily be traced back to the formation of organized youth experimental clubs and the development of corn contests (Wessel & Wessel, 1982). In 1901, Superintendent Graham of the Springfield Township, OH developed experimental clubs for his township in which students would conduct experiments such as growing new varieties of corn to compare to their family crop (Reck, 1951). Within a year, the experimental clubs expanded to 13 townships and a membership of over 3,000. Around the same time, Will Otwell, President of the Farm Institute, offered a one dollar premium for the best yield of corn produced from his seed. His contest grew rapidly from 500 boys participating in 1898 to 50,000 boys by 1904. Between the successful implementation of the experimental clubs and the high visibility of the corn contests, corn clubs for boys began showing up all over the nation. In a similar fashion, tomato clubs for girls were established in 1910 to teach girls how to preserve produce from their family gardens.

The establishment of the Cooperative Extension Service provided the financial support to nationally develop the local boys clubs and girl demonstration clubs into a

National 4-H program (Wessel & Wessel, 1982). Now the National 4-H program boasts that it is the largest youth development organization in the nation, empowering 6,000,000 young people. It is operated through the 109 land-grant universities and Cooperative Extension in over 3,000 local offices serving every county and parish in the country (National 4-H Council, 2015).

## Background of Oklahoma 4-H

During the early 1900's corn clubs were established in Oklahoma so that young boys could learn crop improvement methods by testing new ideas to determine who could grow the biggest ears of corn (Oklahoma Cooperative Extension Service, 2015c). In 1909, W.D. Bentley opened up the first extension office in Oklahoma located in Tishomingo and organized the local corn clubs into the first organized 4-H club in Oklahoma (Stewart & Scheihing, 2010). Young girls also joined the Oklahoma 4-H program by starting a tomato canning club in 1912 in which they grew, harvested, and preserved tomatoes from their families' vegetable gardens. After congress passed the Smith-Lever Act of 1914, Oklahoma 4-H clubs were established in every county under the guidance of their local agriculture and home demonstration agents (Stewart & Scheihing, 2010).

Today, Oklahoma 4-H provides over 60 project areas that members can enroll in ranging from traditional programs of food production and food preparation to very modern programs such as robotics and videography (Oklahoma Cooperative Extension Service, 2015a). Participation in Oklahoma 4-H consists of over 100,000 youth involved in clubs, camps, school enrichment, and special interest programs (Oklahoma Cooperative Extension Service, 2015d). Membership of organized 4-H clubs in

Oklahoma is 28,148 and is open to all Oklahoma youth ages 9 – 19 or until the completion of the state fairs following their high school graduation (Oklahoma Cooperative Extension Service, 2015e).

## Background of Oklahoma 4-H Roundup

Roundup is long-standing tradition for Oklahoma 4-H and has been conducted on the OSU campus for 94 years. Up until the early 1930's, a large tent would be set up on the OSU campus for assemblies. In 1932, some 4-H members were injured during a tent collapse thus prompting efforts to attain a permanent facility that could house Roundup. Henry Bennet, the president of Oklahoma A&M at the time, included 4-H in his lobbying efforts to attain funds for an activity center on campus that could serve as a multipurpose facility for students and could also house Roundup (Oklahoma State University. Division of Agricultural Sciences and Natural Resources, 2000). On June 1, 1939, the "4-H and Student Activities Building" was dedicated at the 1939 Annual State 4-H Roundup "for the stimulation of all purposeful activities, for affording new and improved opportunities for learning by doing" (Oklahoma Cooperative Extension Service, 1939). Today, the building is known as Gallagher-Iba Arena and seats over 13,000 OSU fans for athletic events but it is still the central location for Roundup assemblies.

According to the *2015 Roundup Guidelines,* the objectives of Roundup are to: provide youth opportunities to participate in leadership training, include youth in learning experiences to teach life skills, offer career exploration and preparation, promote 4-H, recognize member achievement, and share experiences while making new friends (Oklahoma Cooperative Extension Service, 2015f). As part of the Roundup experience, delegates participate in many recreational activities while receiving a wide range of

exposure to the OSU campus. All delegates stay in residence halls on campus for at least two nights while some county groups stay an additional night to participate in *Counties Night Out.* During Roundup, delegates travel across campus to participate in general assemblies at Gallagher-Iba Arena, to dances and entertainment at the Student Union, and to more than 100 workshops and contests that are offered in 28 different locations across campus (Oklahoma Cooperative Extension Service, 2015b).

## Overview of Place Bonding

Due to the connection that 4-H has with OSU and the long-standing tradition of 4-H youth returning to OSU to participate in Roundup, there is a possibility that youth may bond with the campus itself. (Tuan, 1974) defined the word topophilia as "the affective bond between people and place or setting" (p. 4). Place familiarity is the initial phase in the place bonding process (Hammitt, Backlund, & Bixler, 2004). Through repeated exposures and experiences undifferentiated space often develops meaning for individuals and these spaces become special places (Tuan, 1977). Often, places begin to develop their own identity as people become familiar with them and refer the places as their own place or favorite place for specific types of pursuits (Hammitt et al., 2004). In recreational studies, the bond to these places has been conceptualized as place attachment (Williams & Roggenbuck, 1989), sense of place (Jorgensen & Stedman, 2006), and place bonding (Hammitt, Backlund, & Bixler, 2006). Of these, the most commonly used term for recreational person-place bonds is place attachment (Lewicka, 2011). Place attachment for recreational purposes has widely been measured with the two dimensions of place identity and place dependence (Kyle, Graefe, & Manning, 2005; Williams & Vaske, 2003).

## Place Identity

Place attachment developed in environmental psychology as a positive bond or connection that occurs between a person and a place (Giuliani & Feldman, 1993; Williams & Vaske, 2003). Giuliani and Feldman (1993) described this bond to a place as a, "state of psychological well-being experienced by the subject as a result of the mere presence, vicinity or accessibility of the object" (p. 134). People experience spaces of various size, shapes, and materials and view these spaces from their own perspective and experiences (Tuan, 1977).

Studies of place attachment in recreational settings typically focus on two dimensions, place dependence and place identity (Williams & Vaske, 2003). These dimensions are intended to measure both the functional attributes of a setting as well as the emotional/symbolic meanings (Williams & Roggenbuck, 1989). People develop affective bonds with places as they provide security and provide opportunities (Chow & Healey, 2008). They develop their self-identity through place as they spend time and develop social networks and become involved in these places (J. Moore, 2000).

Place identity describes the way in which a place helps form a person's self-identity (J. Moore, 2000). It is perceived as a strong emotional attachment to a place that is forged around deep-seated familiarity, and social insideness (Proshansky et al., 1983; Rowles, 1983). Proshansky (1978) defined place identity as:

> The dimensions of self that define the individual's personal identity in relation to the physical environment by means of a complex pattern of conscious and

> unconscious ideals, beliefs, preferences, feelings, values, goals, and behavioral tendencies and skills relevant to the environment. (p.155)

As individuals have social experiences, these experiences occur within a specific place. These common experiences with specific groups within common settings become part of the individual's self-identity. Proshansky goes on to explain that place identities are developed from the individual's cognition, affect, and role. Cognition plays an important part of place identity as people understand and recall spatial aspects of the places that they are familiar. This includes memories, images, and beliefs about size, shape, and color of a place. Often these cognitive characteristics are taken for granted and not even realized until there is a change in the environment. Place identity has a strong emotional aspect as places are often viewed as an essential part of an individual's identity and this results in strong emotional attachment. Roles are also influential in recreational settings as certain types of recreationalist develop bonds to a place based on the type of recreation it can provide (Williams, Patterson, Roggenbuck, & Watson, 1992).

These bonds can be both conscious and unconscious ideals, beliefs, and feelings. Tuan (1977), expresses the importance of intimate experiences in developing emotional attachments and how these attachments are not something consciously determined by the individual but are still meaningful attachments. He uses Tobert Pirsig's description of Crater Lake in Oregon to discuss how intimate experiences with a place are difficult to express cognitively but are often those most deeply felt:

> At the lake we stop and mingle affably with the small crowd of tourists holding cameras and children yelling, "Don't go too close!" and see cars and campers with all different license plates, and see the Crater Lake with a feeling of "Well,

there it is," just as the pictures show. I watch the other tourists, all of whom seem to have out-of-place looks too. I have no resentment at all this, just a feeling that it's all unreal and that the quality of the lake is smothered by the fact that it's so pointed to. You point to something as having Quality and the Quality tends to go away. Quality is what you see out of the corner of your eye, and so I look at the lake below but feel the peculiar quality from the chill, almost frigid sunlight behind me, and the almost motionless wind. (as cited in Tuan, 1977, p.146-147)

These experiences are often difficult to explain or verbally express but are often some of the most meaningful. Through cognition, pointing to the lake, the experience is devalued but the unconscious feelings still lead to a significant emotional bond to a place. Tuan (1977) goes on to state that "thought creates distance…yet it is by thoughtful reflection that the elusive moments of the past ….gain measure of permanence" (p.178). It may be through this elusive permanence that bonds become a part of an individual's identity.

## Place Dependence

An individual's place dependence is a result of the value he or she places on a setting due to either the settings unique ability to facilitate an activity or due to the emotional and symbolic value of the setting (Kyle et al., 2005; R. Moore & Graefe, 1994). It involves the functional aspects of a setting including both the individual's perceptions of quality and choice of alternate locations (Hammitt et al., 2004, 2006; Stokols & Shumaker, 1981). Individuals become dependent on a place based on the settings ability to satisfy their needs and goals. These goals might be based on the quality of a setting such as a hikers who are dependent on the White Mountains of New England because they provide the steep terrain the hikers prefer (R. Moore & Graefe, 1994) or the

setting may meet functional needs in relation to alternative locations such as, salmon anglers in New Zealand that are dependent on their settings because it is too difficult or expensive to travel to higher quality alternative locations (Shelby, 1985).

The complexities of the many physical, affective, mental, social, and behavioral contexts that are involved in the person-place bond have led researchers to create modifications to the two-dimensional model of place attachment (Lewicka, 2011). Jorgensen and Stedman (2001) developed a three dimensional model, sense of place that included the dimensions of attachment, identity, and dependence. They viewed sense of place as a general attitude concept of spatial settings that is composed of affect, cognition, and conative elements. In their model, place attachment represented the emotional feelings an individual feels, place identity is a measure of how a place defines the individuals self-identity, and place dependence represents the behavioral commitments (advantage), that the place has in relation to other settings.

Kyle et al. (2005) modified the place attachment instrument to add a third dimension of social bonding. Social bonding expresses the idea that if meaningful social relationships take place in specific settings then these settings can take on special meaning for the individuals.

Hammitt et al. (2004) further modified the place attachment research and used the term place bonding to distinguish their model. They utilized the traditional scales for place identity and place dependence and then added three new concepts to their scale of place bonding; place familiarity, place rootedness, and place belongingness. These additional dimensions were added based on Shumaker and Taylor's (1983) explanation that place bonding involves expectations of stability, feelings of positive affect, and

greater knowledge of the locale. These dimensions have characteristics that fit the type of person-place bond that was suspected to occur for the delegates at Roundup. Roundup can provide youth a place to develop pleasant memories, social connections, communal relationships, in an environment that is rich in traditions, and symbolism.

## Place Familiarity

People develop memories, knowledge, and environmental images of places and as their familiarity grows so does the amount of detail in their memory referents (Goksenin & Finch, 2004; Roberts, 1996). It is derived from a multitude of factors including the amount of exposure to the environment, the quality of the exposure, the observer, the nature of the environment and affective factors (Acredolo, 1982).

### Amount of Exposure

The amount of exposure has been well established as a contributing factor to familiarity as well as contributing factor to the overall concept of place attachment. Numerous studies show that length of residence fosters both attachment to permanent residence as well as attachments to recreational areas (Brehm, Eisenhauer, & Krannich, 2006; Lewicka, 2010; Tuan, 1974). Length of residence has been shown to increase attachment (Shamai & Ilatov, 2005) and stimulate increased familiarity in both spatial knowledge (Kozlowski & Bryant, 1977) and the significance of the place (Appleyard, 1969; Hammitt et al., 2006).

### Quality and Type of Exposure

The way in which an individual interacts with their environment affects their familiarity of the places they visit. Studies show that individuals whom choose to drive will be more familiar with the area than people that ride public transportation (Appleyard,

1970). Active effort to orient and recognize an area has been shown to aid in the spatial familiarity of an environment. In a study by Kozlowski and Bryant (1977), participants familiarity improved significantly when participants were aware that they were going to be tested on their spatial knowledge of a maze of tunnels compared to when they thought they were being led through the maze to perform an unrelated task.

The vantage points in which a person experiences their environment is also an important aspect effecting the type of exposure to place. This is supported in a study by Evans and Pezdek (1980) in which undergraduate students that were familiar with a campus through actual experience where able to make faster judgements about the locations of building than students who had not been on campus but had learned the locations of all the buildings from a campus map. Experiences at Roundup may provide delegates active exploration as they are responsible for walking to multiple locations across campus throughout the event.

**The Observer**

Individuals respond differently to their environments based on their own characteristics. Acredolo (1982) points out that developmental research supports the assumption that the age of the individual effects the way in which they react to an environment. Acredolo also points out that people who claim to have a good sense-of-direction are better at familiarizing themselves with an environment and providing an accurate representation of the test area (Kozlowski & Bryant, 1977). Beck and Wood (1976) further support that the characteristics of the observer effect the individual's ability to familiarize themselves with places. They supported this with studies showing

that individuals that have better short-term memory are more accurate when creating maps as well as travelers that were more likely to explore areas away from their hotels.

**Nature of the Environment**

The effect that the environment plays in an individual's ability to familiarize themselves with a place is well documented and a campus such as OSU may lend itself towards familiarity. OSU has visible and distinct landmarks around campus such as Boone Pickens Stadium, Theta Pond, and the Edmond Low Library. The visibility and distinction of landmarks is important in helping an individual to become familiar with an environment (Appleyard, 1969) as well as its legibility, and ease at which coherent patterns can be recognized (Lynch, 1960).

**Affective Factors**

Familiarity is often viewed as a spatial element, the ability to draw maps and locate reference points, but it also consists of an affective component. Tuan (1974) states, "familiarity breeds affection when it does not breed contempt" (p. 99). Familiarity and knowledge of surroundings creates a sense of security, and stability. Acredolo (1982) uses a quotation from Lynch's 1960 classic, *The Image of the City* to illustrate this point:

> To become completely lost is perhaps a rather rare experience for most people…But let the mishap of disorientation once occur, and the sense of anxiety and even terror that accompanies it reveals to us how closely it is linked to our sense of balance and well-being. (Lynch, 1960, p.4)

Acredolo (1982) states that this quote illustrates how familiarity with a place creates a sense of emotional security. She then adds that this sense of security lends itself to the individual becoming more familiar with the environment.

This sense of security and the effect on familiarity was tested in infants in which 73% of infants were able to objectively choose the location of a hidden toy in their own home while those infants tested in a laboratory were only able to objectively choose 20% of the time (Acredolo, 1979). Further support of this sense of security leading to increased familiarity is a study indicating that infants in the presence of older siblings were more independent and likely to explore further away from their mother (Samuels, 1980). As a person feels familiar and safe within an environment, that person is more likely to explore and pay attention to the spatial information that will make the place more familiar. As delegates make increased trips to Roundup, they should become more familiar with campus which may lead to a higher sense of security and likelihood that they will explore the campus environment even more (Acredolo, 1982).

## Place Rootedness

Place rootedness is the bond a person develops for a place in which they feel completely at home with the assurance of nurture and security (Hammitt et al., 2009; Tuan, 1977). Rootedness is one of the deepest attachments that an individual has towards a place. It is a bond that is so strong that individuals have very little longing for alternative locations (Hammitt et al., 2004). Rootedness is often referred to as the expectation to stay at the same residence (Shumaker & Taylor, 1983) and is stronger when individuals feel as though they are insiders to a place or have ancestral roots (Hay, 1998).

Part of the place rootedness measure is based on how a place makes a person feel at home. Home is a place where people can be their selves (Cresswell, 2004). It is a

familiar world and often considered the center of one's life (Tuan, 2002, p.60). In a study of migrant families in Cape Cod, Massachusetts, the most frequently mentioned reasons for feeling at home were interpersonal attachments, knowing other community residents, their physical dwelling and "self-related" reasons such as feelings of happiness, contentment, and comfort (Cuba & Hummon, 1993). The younger migrants did not place as much emphasis on the physical dwelling as they were more likely to emphasize friend or self-related reasons. Roundup provides many opportunities for friendships, contentment, and happiness and could possibly be related to delegates developing place rootedness bonds.

The depth of bonding that rootedness conveys may be more difficult to fully realize in a recreational setting but researchers support that rootedness can and does happen in recreational areas. Shumaker and Taylor (1983) state that some researchers believe that rootedness does occur in everyday work and recreational settings. Cuba and Hummon's (1993) work with migrant workers did not indicate a significant difference in sense of home based on the number of years living at a residence. Hammitt et al. (2006) described a hunter returning to a deer hunting camp that his ancestors hunted for generations and told stories of past trips. The place creates a sense-of-home, the hunter feels like an insider at the camp, and has no desire to hunt anywhere else. This description is similar to the explanation of rootedness that Hay (1998) described developing by living in a place where your ancestors lived and may be similar to delegates that attend Roundup in the tradition of their parents and grandparents.

## Place Belongingness

Beyond simple familiarity with a place and its surroundings, people tend to acquire a social bond with a place (Hammitt et al., 2006) that provides a sense of belonging and meaning to their lives (R. Moore & Graefe, 1994). Place belongingness is often developed through social and communal events that are shared by a common group (Mesch & Manor, 1998) and often entails a spiritual connection to the environment. Roundup provides delegates the opportunity to develop social connections through involvement in shared meaningful experiences. As individuals have meaningful social experiences they often develop a bond to those places (Low & Altman, 1992) and begin to feel like they are part of a community (Hay, 1998; Milligan, 1998).

According to Milligan (1998) these bonds of belongingness that occur to places are based on both past social experiences as well as their interactional potential for future social experiences. The bond to a place increases as the degree of perceived meaningfulness of past social interactions increase. These past experiences then may translate into another kind of bond based on the interactional potential of the place which refers to the individual's expectations for future interactions at that place.

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# CHAPTER III

## METHODOLOGY

This study collected data during the 94th Annual Oklahoma 4-H Roundup and compared measurements of experience use history (EUH) to place bonding scores of Roundup delegates. Quantitative data was taken from Roundup delegates with the use of self-reported questionnaires. Through these methods, the study examined place bonding through a five dimensional model and the differences that occurred due to varying levels of attendance at State 4-H Roundup, frequency of visits to the OSU campus, and levels of interaction between State 4-H Roundup attendance and visits to the OSU campus.

### Experience Use History

EUH refers to the amount of past experience that a participant has with a specific site and/or an activity and may be measured in terms of frequency per year of participation, and total years of use (Hammitt et al., 2004; Schreyer, Lime, & Williams, 1984). Past use and frequency of use have both been shown to be significant predictors of place attachment to recreational settings (R. Moore & Graefe, 1994).

The use of categorical classifications have shown to be useful in determining how EUH relates to multiple variables (Hammitt et al., 2004; Schreyer et al., 1984). Schreyer et al. (1984) and Hammitt et al. (2004) both used three dimensions of EUH: frequency of visits, number of visits, and resource substitution to categorize recreational users of

rivers. By using EUH classifications, the researchers were able to account for various levels and combinations of EUH in relationship to place bonding.

## Measuring Place Bonding

Scales that measure people-place relations have been developed and used in research for measuring attachments to neighborhoods, home, city, national regions, continents, and more recently recreational areas (Lewicka, 2011). To provide researchers better information about why people attach to a place, scales have been developed to measure the dimensions of both the physical aspects and social reasons for the attachment (Brehm et al., 2006). One of the most popular quantitative measurement tools of the person-place bond used in recreational settings is the concept of place attachment which provides measures of both place identity and place dependence to recreational places (Kyle et al., 2005; R. Moore & Graefe, 1994; Williams et al., 1992; Williams & Roggenbuck, 1989; Williams & Vaske, 2003).

## Place Attachment Scale

In a psychometric study of place attachment, Williams and Vaske (2003) used factor analysis to support the use of a two-dimensional model over a single place attachment score ($\chi^2 \geq 43.69$, $P < .001$). The convergent validity of both place identity and dependence were tested against the variables of (1) prior visits during the past 12 months, (2) perceived familiarity, and (3) whether they considered the location as a special place. As the frequency of visits increased so did the level place identity ($F \geq 5.67$, $P \leq 0.006$ for each of the four studied locations). There was also a consistent increase in place dependence as the frequency of visits increased but only two of the locations reported significant differences ($F \geq 3.71$, $P \leq 0.03$ for the two significant

locations). As perceived familiarity with each place increased so did measures of both place identity and place dependence across all four locations ($F \geq 3.57$, $P \leq 0.034$ in all cases). As the respondents increased their rating of the location as a special place so did the measures of place identity and place dependence ($F \geq 6.69$, $P \leq 0.012$ in seven of the eight cases). Overall, these findings indicate that the tests for both place identity and place dependence are valid (Williams & Vaske, 2003).

Factor analysis further supported the use of both place identity and place dependence as 22.6% of the total variance is accounted for by the dimension facet. This suggests that the dimensions of place identity and place dependence do not generalize across each other. However, variance within dimensions only accounts for 3.8% of the variance. This indicates that the scores for place identity cannot be generalized to place dependence dimension but within each dimension the scores can be generalized across items (Williams & Vaske, 2003).

Reliability of place attachment measures have been examined and upheld in previous studies (Williams & Roggenbuck, 1989). The psychometric study by Williams and Vaske (2003) supported these results and indicated that good reliability can be upheld with as few as four items for place identity and place dependence calculated by Cronbach's alpha (0.89 & 0.82, respectively).

Since the development of the place attachment scale, there have been numerous modifications. Many researchers have made efforts to explore dimensions beyond place identity and place dependence. Williams and colleagues have been developing an instrument that includes four subscales to the dimension of place identity including identity/importance, identity expression, centrality, and satisfaction (Lewicka, 2011).

Other dimensions that have been added to place attachment scales include social bonding (Kyle et al., 2005), the three dimension sense of place scale which includes place attachment, place identity, and place dependence (Jorgensen & Stedman, 2001, 2006). More recently Hammitt et al. (2004) developed a five dimensional model called place bonding.

## Place Bonding

The place bonding scale constructed by Hammitt et al. (2006) was chosen for this study as it provides measurements for the dimensions of place familiarity, belongingness, identity, dependence, and rootedness. By using the place bonding scale with its five dimensions, researchers were able to attain information about which dimensions contribute to delegates bonding with campus. The place bonding scale (Hammitt et al., 2004) includes the dimensions of place attachment (Williams & Vaske, 2003) place identity and place dependence but adds three additional dimensions: place familiarity; belongingness; and rootedness.

The internal consistency reliability, confirmatory factored dimensions, and predictive validities of place bonding were examined in an empirical study by Hammitt et al. (2006). A priori dimensions of the place bonding scale achieved acceptable internal consistency reliabilities ($\alpha \geq 0.78$ for all five dimensions). Additionally, confirmatory factor analysis supported the five-dimensional model and had reliabilities in acceptable levels for place familiarity ($\alpha = 0.91$), place belongingness ($\alpha = 0.86$), place identity ($\alpha = 0.90$), place dependence ($\alpha = 0.89$), and place rootedness ($\alpha = 0.79$). All five dimensions were regressed on the measure of overall place bonding and each were found to be significant predictors of place bonding in the model ($R^2 = 0.758$, df = 5,180, $F = 116.95$,

$P = 0.001$). However, the dimensions of belongingness and identity were highly correlated ($r = 0.919$) indicating a possible problem with multi-collinearity. Therefore, the researchers chose to run the multiple regression without belongingness and the new model also maintained predictive validity ($R^2 = 0.750$, df = 4,181, $F = 139.70$, $P = 0.001$) but rootedness was not a significant contributor in the new regression model.

Both the exploratory factor analysis and the confirmatory factor analysis support the five dimensional model. All dimensions showed to be both reliable and valid with Cronbach alphas above 0.70. The predictive validity of the model also supported the five dimensions. There are some concerns about multi-collinearity due to the high correlations between belongingness and identity. Due to the acceptable reliability, validity, and support of the five dimensions, this study used all five dimensions as Hammitt et al. (2006) support further tests to determine if the dimension of belongingness is distinct enough from identity.

## Instrument

### Experience Use History

The delegates' EUH on campus was measured with the use of two questions. The first question, "counting this year, I have attended 4-H Roundup _____ times." was asked to determine the number of times they had attended Oklahoma 4-H Roundup. The second question was used to determine the number of times the delegates had visited the OSU campus in the past 12 months, "Not counting 4-H Roundup, in the past 12 months, I have been to campus ____ times." Each question provided the respondents a blank line to fill in their responses. Frequency of campus visits and years at Roundup were both used for place bonding comparisons.

In order to account for varying combinations of EUH, delegates' responses were then grouped into four EUH classifications. The means of the responses to the frequency of visits to the OSU campus were used as a cutoff to group delegates in either a HIGH or LOW frequency categories. Then, the means to the responses to how many times they had attended Roundup were used to create High and LOW activity participation categories for each response. Four combinations of delegates' campus experience (Figure 1) were created to compare the relationship of attending. These classifications are similar to the EUH systems used by Hammitt et al. (2004) and Schreyer et al. (1984) but do not account for resource substitution as delegates do not have the ability to choose an alternative location.

| Experience Use History for 4-H Roundup Attendance | Experience Use History Frequency of Campus Visits: Low | Experience Use History Frequency of Campus Visits: High |
|---|---|---|
| Low | Beginners (L,L) | Site Specific (L, H) |
| High | Activity Specific (H,L) | Veterans (H, H) |

*Figure 1.* Classification of Roundup delegates based on EUH of the OSU campus.

*Beginners* – delegates with low EUH for both frequency and Roundup specific activity

*Activity Specific* – delegates with low EUH for frequency but high EUH for Roundup attendance

*Site Specific* – delegates with high EUH for frequency but low EUH for Roundup attendance

*Veterans* – delegates with high EUH for both frequency and Roundup specific activity

**Place Bonding**

To measure place bonding, Hammitt's five-dimensional place bonding instrument was chosen and modified to be specific for the OSU campus and 4-H events. The final instrument utilized a 22-item multi-dimensional scale (Appendix A) measuring the five concepts of place belongingness (familiarity, belongingness, identity, dependence, rootedness). Items were rated on a five point Likert type scale where 1 = strongly disagree, 5 = strongly agree, and 3 indicated neither agree nor disagree.

A pilot study was conducted at Roundup in 2014 utilizing a similar instrument (Appendix B) with 30 youth delegates. The internal consistency of each dimension was

evaluated using Statistical Package for Social Sciences (SPSS), Version 21 (IBM Corp., 2012). Cronbach's alpha (Table 1) indicated a high level of internal consistencies for all of the dimensions except for place dependence. According to data analysis if question 17, "The 4-H events that I do at the OSU campus, I would enjoy just as much at a similar site," had been deleted, Cronbach's alpha for place dependence would have been 0.812.

Table 1

*Pilot Study Measure of Internal Consistency*

| Dimension | Questions | Cronbach's Alpha |
|---|---|---|
| Place Familiarity | 1-4 | 0.823 |
| Place Belongingness | 5-9 | 0.880 |
| Place Identity | 10-15 | 0.951 |
| Place Dependence | 16-19 | .586 |
| Place Rootedness | 20-23 | .906 |

Williams and Vaske (2003) noted similar problems using the question "The things I do at 'X' I would enjoy doing just as much at a similar site" during a psychometric analysis of surveys from six sites that had used the item. After running confirmatory factor analysis, they found that the item was not statistically related to place dependence at three of the sites (range 0.02 to 0.13) and was low for the other three sites (range 0.28 to 0.45). Taking into account both the study by Williams and Vaske and the pilot study from Roundup 2014, the question "The things I do at 'X' I would enjoy doing just as much at a similar site" was removed from this study.

Following data collection, the internal consistencies for place bonding dimensions were evaluated using SPSS, Version 21 (IBM Corp., 2012). Results indicated a high level of internal consistencies for all dimensions (Table 2).

Table 2

*Measure of Internal Consistency*

| Dimension | Questions | Cronbach's Alpha |
|---|---|---|
| Place Familiarity | 1-4 | 0.802 |
| Place Belongingness | 5-9 | 0.913 |
| Place Identity | 10-14 | 0.915 |
| Place Dependence | 15-18 | 0.867 |
| Place Rootedness | 19-22 | 0.890 |

## Study Areas

Roundup Delegates were surveyed at the 2015 State 4-H Roundup for their EUH and place bonding in reference to the campus at OSU. The OSU campus is located in Stillwater, Oklahoma and has been the location for Roundup for 94 years.

## Research Participants

The entire delegation of the 94th Annual Oklahoma State 4-H Roundup was asked to participate in the study. The delegation consisted of 648 youth participants (Agriculture Conferences, 2015) who are Oklahoma 4-H members in good standing, ages 12-19. Due to the difficulty in removing a randomly selected group of delegates during the assembly, the entire delegation was surveyed.

Surveys were distributed during the final assembly which was held on the last morning of Roundup. The assembly was momentarily paused as delegates were asked to complete the questionnaires and return them to educators who were assigned to collect the completed surveys.

The survey was conducted after approval was received from the Institutional Review Board of Oklahoma State University (Appendix C), and was prefaced with a consent statement informing the potential respondents of the purpose of the study, the volunteer nature of the survey as well as guaranteeing respondent confidentiality and

anonymity. All delegates received a letter (Appendix D) prior to coming to Roundup that informed them of the opportunity to participate in research, the purpose, the voluntary nature, the risks and benefits as well as the confidentiality and anonymity of the study. As most of the delegates are minors, a parental information letter (Appendix E) was provided to parents to inform them that their children were invited to participate in research. The parental information sheet informed them of the purpose of the study, the risks and benefits, and the voluntary nature of the study as well as guaranteeing confidentiality and anonymity. The parental information letter also provided parents with information on how to have their children opt out of the study.

## Data Analysis

Likert scores for each individual were established using the average scores of each dimension (place identity, place belongingness, place dependence, place rootedness, and place familiarity) for the individual. The Kruskal-Wallis *H*-test was used to determine the systematic difference between the number of years delegates attended Roundup and the place bonding scores for each dimension. The data consisted of four independent groups using a self-reported survey which reported Likert scores of five dimensions. The level of risk was set at $\alpha = 0.05$ level. Upon completing the Kruskal-Wallis *H*-test and coming up with a significant omnibus result, post-hoc tests were run using a Dunn-Bonferroni test to compare ranked data (Dunn, 1964) and determine which groups contributed to the significance.

The Kruskal-Wallis *H*-test was used to determine the systematic difference between the frequency of campus visits and the place bonding scores for each dimension. The data consisted of four independent groups using a self-reported survey which

reported Likert scores of five dimensions. The level of risk was set at $\alpha = 0.05$ level. Upon completing the Kruskal-Wallis *H*-test and coming up with a significant omnibus result, post-hoc tests were run using a Dunn-Bonferroni test to compare ranked data (Dunn, 1964) and determine which groups contributed to the significance.

Kruskal-Wallis *H*-test was used to determine the systematic difference between the EUH categories and the place bonding scores for each dimension. The data consisted of four independent groups using a self-reported survey which reported Likert scores of five dimensions. The level of risk was set at $\alpha = 0.05$ level. Upon completing the Kruskal-Wallis *H*-test and coming up with a significant omnibus result, post-hoc tests were run using a Dunn-Bonferroni test to compare ranked data (Dunn, 1964) and determine which groups contributed to the significance.

A Mann-Whitney *U*-test was used to determine if there was a significant difference between genders for place bonding. Gender differences were tested for all five dimensions of place bonding. The level of risk for type-1 error was set at $\alpha = .05$ level.

## Research Hypotheses

### Hypothesis 1

$H_0$ = There is no tendency for place bonding to rank systematically higher for increased number of years that delegates attend State 4-H Roundup. Increase in place bonding will be determined by a significant increase in at least three of the five place bonding dimensions.

$$H_0: \Sigma ranks_1 \geq \Sigma ranks_2 \geq \Sigma ranks_3 \geq \Sigma ranks_4 \geq \Sigma ranks_5 \geq \Sigma ranks_6$$

$$H_1: \Sigma ranks_1 < \Sigma ranks_2 < \Sigma ranks_3 < \Sigma ranks_4 < \Sigma ranks_5 < \Sigma ranks_6$$

**Hypothesis 2**

$H_0$ = There is no tendency for place bonding to rank systematically higher for increased frequency of visits made to campus in the past year. Increase in place bonding will be determined by a significant increase in at least three of the five place bonding dimensions.

$H_0$: $\Sigma ranks_1 \geq \Sigma ranks_2 \geq \Sigma ranks_3 \geq \Sigma ranks_4 \geq \Sigma ranks_5 \geq \Sigma ranks_6$

$H_1$: $\Sigma ranks_1 < \Sigma ranks_2 < \Sigma ranks_3 < \Sigma ranks_4 < \Sigma ranks_5 < \Sigma ranks_6$

**Hypothesis 3**

$H_0$ = When delegates are grouped according to their experience use history of campus visits, there is no difference in ranks between groups. Differences in place bonding will be determined by a significant differences in at least three of the five place bonding dimensions.

$H_0$: $\Sigma ranks_1 = \Sigma ranks_2 = \Sigma ranks_3 = \Sigma ranks_4$

$H_1$: $\Sigma ranks_1 \neq \Sigma ranks_2 \neq \Sigma ranks_3 \neq \Sigma ranks_4$

**Hypothesis 4**

$H_0$ = There is no difference in the ranks of place bonding to the OSU campus for one gender over another. Differences in place bonding will be determined by a significant differences in at least three of the five place bonding dimensions.

$H_0$: $\Sigma ranks_1 = \Sigma ranks_2$

$H_1$: $\Sigma ranks_1 \neq \Sigma ranks_2$

# CHAPTER IV

## FINDINGS

The population of this study was the entire delegation that attended the 2015 Roundup. According to registration numbers (Agriculture Conferences, 2015) delegate numbers totaled 648 youth consisting of 236 males (36.4%) and 412 females (63.5%) 12 to 19 years of age. The surveys were administered as a convenience sample to everyone (including adults) in attendance during the final assembly. Initially, there were 549 surveys that were turned in by respondents. The instrument was two-sided and 37 respondents completed only one side or less so those were not included in the results. From the remaining surveys, 48 had been completed by adults and four instruments did not indicate their age nor their status as an adult or youth so those were also removed from the results. Three of the surveys were missing data from both the question asking the number times the respondent has attended Roundup and the number of times the respondent visited campus this past year, so those surveys were removed. Three of the remaining 457 surveys had more than one missing answer for any given dimension. These three surveys were considered incomplete and removed from the study. Another 44 surveys had only one answer missing for any given dimension and were used to compute the summated scales for each dimension. This resulted in 454 valid surveys (70.06% total delegates) consisting of 147 males (32.3%), 295 females (65.0%), and 12

surveys of unknown gender (2.6%, Table 3). From the valid surveys, 439 indicated that their ages ranged from 12 to 19 years with a mean of 15.13 (Table 4) and 15 youth delegates did not submit their age.

Table 3

*Gender of Survey Respondents*

| | Frequency | Percent |
|---|---|---|
| Male | 147 | 32.4 |
| Female | 295 | 65.0 |
| Total | 442 | 97.4 |
| Missing | 12 | 2.6 |
| Total | 454 | 100.0 |

Table 4

*Ages of Survey Respondents*

| Age | Frequency | Percent |
|---|---|---|
| 12 | 2 | 0.4 |
| 13 | 74 | 16.3 |
| 14 | 97 | 21.4 |
| 15 | 92 | 20.3 |
| 16 | 87 | 19.2 |
| 17 | 46 | 10.1 |
| 18 | 36 | 7.9 |
| 19 | 5 | 1.1 |
| Total | 439 | 96.7 |
| Missing | 15 | 3.3 |
| Total | 454 | 100.0 |

## HYPOTHESES FINDINGS

### Research Hypothesis 1

$H_0$ = There is no tendency for place bonding to rank systematically higher for increased number of years that delegates attend State 4-H Roundup. Increase in place bonding will be determined by a significant increase in at least three of the five place bonding dimensions.

$H_0$: $\Sigma ranks_1 \geq \Sigma ranks_2 \geq \Sigma ranks_3 \geq \Sigma ranks_4 \geq \Sigma ranks_5 \geq \Sigma ranks_6$

$H_1$: $\Sigma ranks_1 < \Sigma ranks_2 < \Sigma ranks_3 < \Sigma ranks_4 < \Sigma ranks_5 < \Sigma ranks_6$

Male (N = 146), female (N = 293), and respondents of unknown gender (N = 12) completed the place bonding scale and provided a valid response to the number of times they attended Roundup. The mean Likert score of each dimension was calculated for each respondent. Respondents were placed into four groups based on their reported number of times that they had attended Roundup including Roundup 2015 (Table 5). Groups were divided to provide equivalence of responses.

Table 5

*Roundup Attendance Groups, Frequency and Percentage of Usable Responses*

| Group | Years of Attendance | Frequency | Percentage |
|---|---|---|---|
| 1 | 1 | 169 | 37.5 |
| 2 | 2 | 106 | 23.5 |
| 3 | 3 | 81 | 18.0 |
| 4 | 4 - 8 | 95 | 21.1 |
| Total | | 451 | 100.1 |

In order to determine if the increased number of years attending Roundup had a significant effect on increasing place bonding scores, all five place bonding indexes were compared to the four groups of attendance. Data was analyzed using a Kruskal-Wallis *H*-test on SPSS, Version 21 (IBM Corp., 2012). Mean ranks for each dimension are shown in Table 6.

Table 6

*Mean Ranks for Comparisons of Place Bonding and Roundup Attendance*

| Roundup Attendance | Place Familiarity | Place Belonging | Place Identity | Place Dependence | Place Rootedness |
|---|---|---|---|---|---|
| 1 Time (N = 169) | 139.97 | 196.50 | 200.24 | 188.63 | 203.36 |
| 2 Times (N = 106) | 237.72 | 220.98 | 225.41 | 228.42 | 225.47 |
| 3 Times (N = 81) | 286.07 | 250.21 | 240.77 | 257.09 | 249.30 |
| 4 – 8 Times (N = 95) | 314.75 | 263.44 | 259.90 | 263.26 | 247.01 |

Post-hoc analysis was performed on significant omnibus results to evaluate pairwise differences using a Dunn-Bonferroni (Dunn, 1964) procedure on SPSS, Version 21. For the pairwise comparisons, type-1 error rates are adjusted by multiplying them by the number of comparisons to control for inflated type-1 errors. Adjusted type-1 values of greater than one are set to one.

**Place familiarity.** Results indicated that place familiarity was significantly influenced by the number of times a delegate attended Roundup [$\chi^2$ (3, N = 451) = 136.50, $p < .001$]. The mean increases from 2.49 for the reported place familiarity score for those attending Roundup for the first time to 3.77 for those who have attended Roundup 4 or more times (Figure 2). Post-hoc analysis using Dunn-Bonferroni procedure showed significant increases in rank scores for increased Roundup attendance of comparison groups 1-2, 1-3, 1-4, and 2-4 (Table 7).

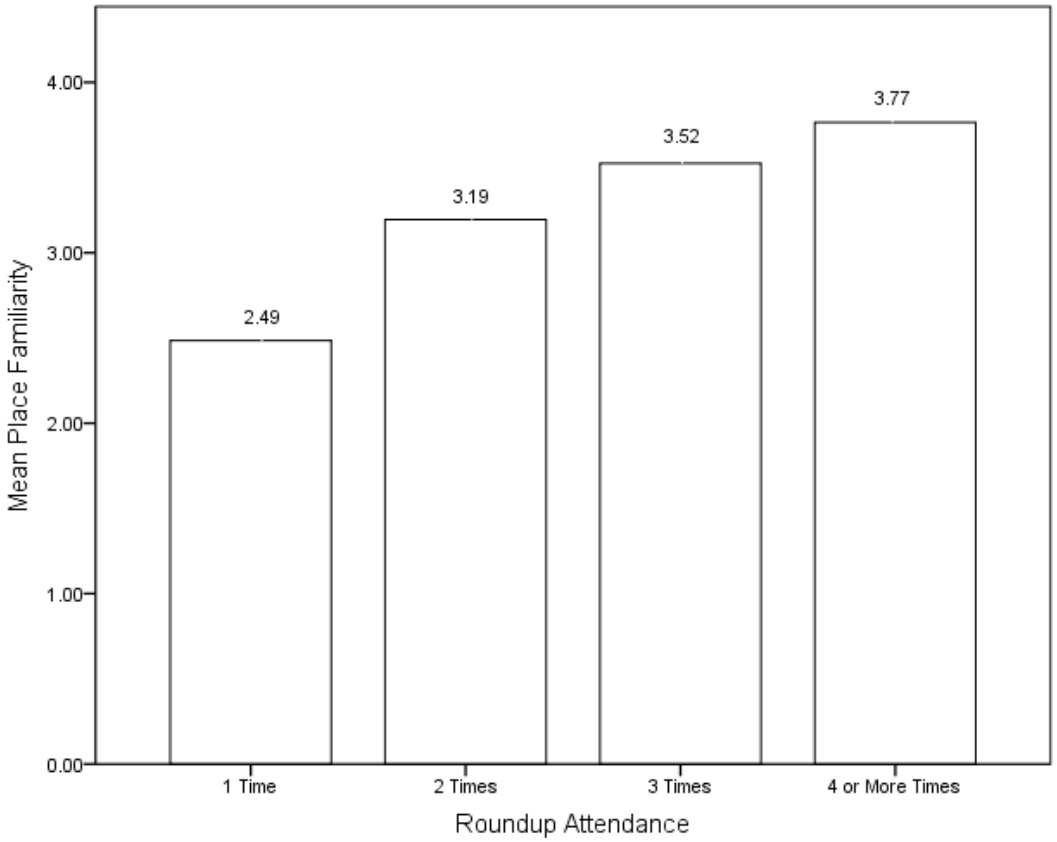


*Figure 2.* Mean of place familiarity for each Roundup attendance group.

Table 7

*Pairwise Comparisons of Roundup Attendance for Place Familiarity*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| 1-2 | -97.754 | 16.104 | -6.070 | <.001 | <.001* |
| 1-3 | -146.100 | 17.565 | -8.318 | <.001 | <.001* |
| 1-4 | -174.785 | 16.667 | -10.487 | <.001 | <.001* |
| 2-3 | -48.346 | 19.182 | -2.520 | .012 | .070 |
| 2-4 | -77.031 | 18.363 | -4.195 | <.001 | <.001* |
| 3-4 | -28.685 | 19.657 | -1.459 | .144 | .867 |

* Adjusted significance $\alpha \leq .05$

**Place belonging.** Kruskal-Wallis *H*-test analysis indicates that place belonging was significantly influenced by delegates Roundup attendance [$\chi^2$ (3, N = 451) = 19.56, p < .001]. The mean increases from 3.40 for the reported place belonging score for those attending Roundup for the first time to 3.84 for those who have attended Roundup 4 or

more times (Figure 3). Post-hoc analysis using Dunn-Bonferroni procedure showed significant increases in rank scores for increased Roundup attendance of comparison groups 1-3, and groups 1-4 (Table 8).

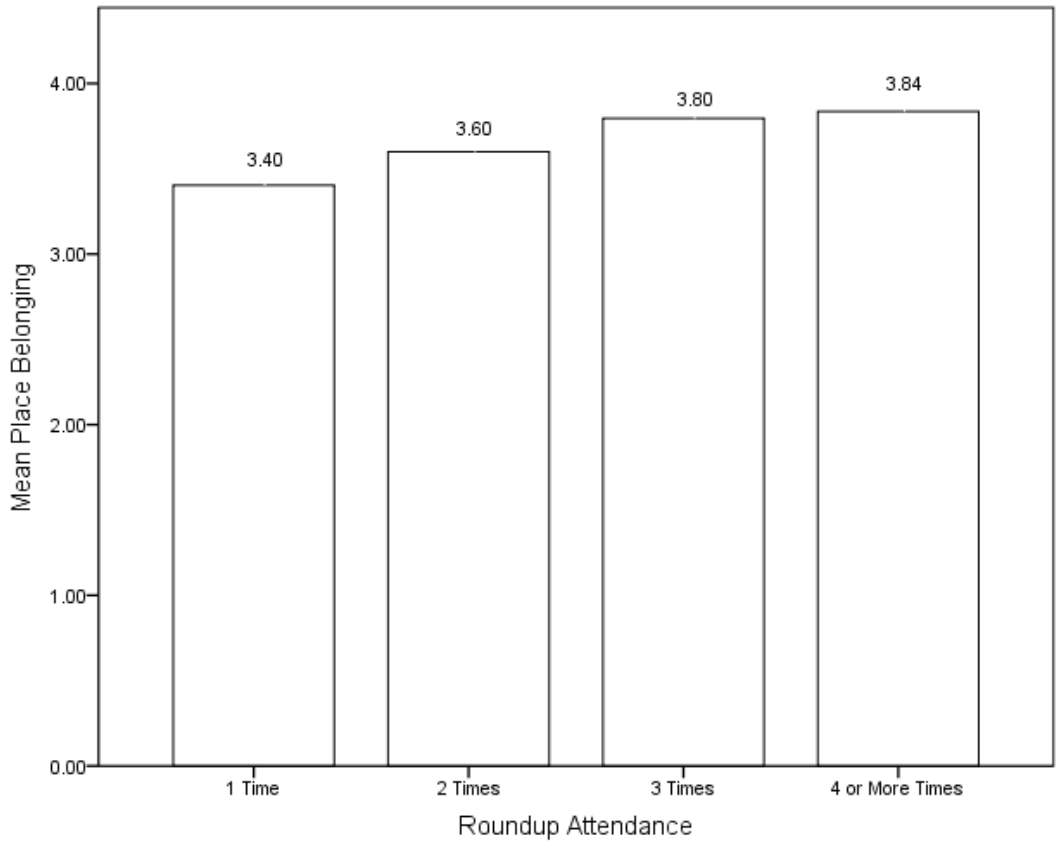


*Figure 3.* Mean of place belonging for each Roundup attendance group.

Table 8

*Pairwise Comparisons of Roundup Attendance for Place Belonging*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| 1-2 | -24.476 | 16.104 | -1.520 | .129 | .771 |
| 1-3 | -53.710 | 17.565 | -3.058 | .002 | .013* |
| 1-4 | -66.942 | 16.667 | -4.017 | <.001 | <.001* |
| 2-3 | -29.233 | 19.181 | -1.524 | .127 | .765 |
| 2-4 | -42.466 | 18.363 | -2.313 | .021 | .124 |
| 3-4 | -13.232 | 19.656 | -.673 | .501 | 1.000 |

* Adjusted significance $\alpha \leq .05$

**Place identity.** Kruskal-Wallis *H*-test analysis indicates that place identity was significantly influenced by delegates Roundup attendance [$\chi^2$ (3, N = 451) = 14.17, p = .003]. The mean increases from 3.25 for the reported place identity score for those attending Roundup for the first time to 3.67 for those who have attended Roundup 4 or more times (Figure 4). Post-hoc analysis using Dunn-Bonferroni procedure showed a significant increase in rank scores for increased Roundup attendance of comparison group 1-4. (Table 9).

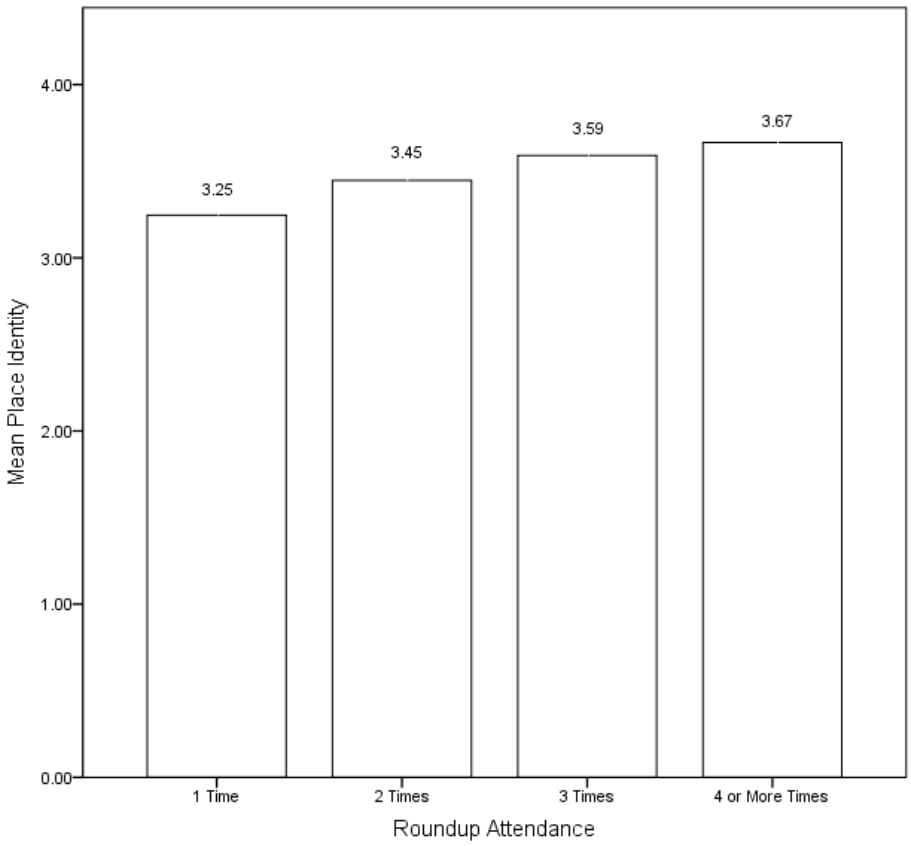


*Figure 4.* Mean of place identity for each Roundup attendance group.

Table 9

*Pairwise Comparisons of Roundup Attendance for Place Identity*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| 1-2 | -25.174 | 16.091 | -1.564 | .118 | .706 |
| 1-3 | -40.529 | 17.551 | -2.309 | .021 | .126 |
| 1-4 | -59.663 | 16.654 | -3.583 | <.001 | .002* |
| 2-3 | -15.355 | 19.166 | -.801 | .423 | 1.000 |
| 2-4 | -34.490 | 18.348 | -1.880 | .060 | .361 |
| 3-4 | -19.135 | 19.641 | -.974 | .330 | 1.000 |

* Adjusted significance $\alpha \leq .05$

**Place dependence.** Kruskal-Wallis *H*-test analysis indicates that place dependence was significantly influenced by delegates Roundup attendance [$\chi^2$ (3, N = 451) = 26.61, $p < .001$]. The mean increases from 3.72 for the reported place dependence score for those attending Roundup for the first time to 4.17 for those who have attended Roundup 4 or more times (Figure 5). Post-hoc analysis using Dunn-Bonferroni procedure showed significant increases in rank scores for increased Roundup attendance of comparison groups 1-3 and groups 1-4 (Table 10).

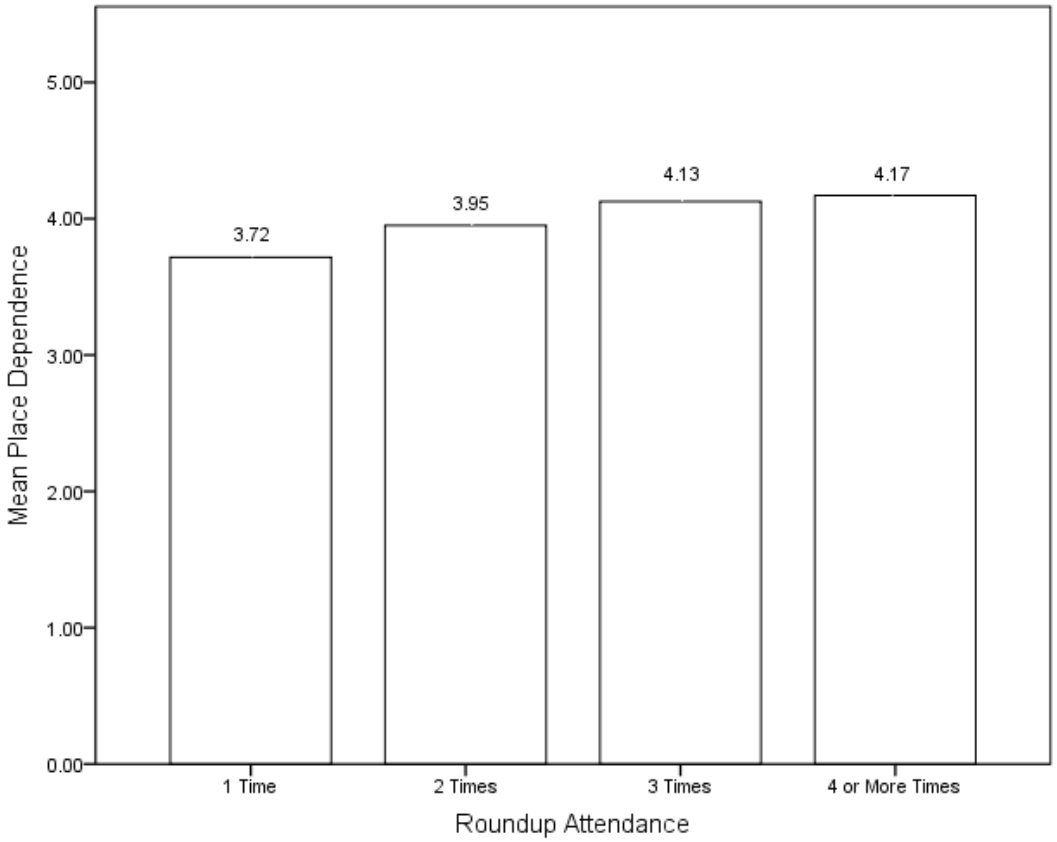


*Figure 5.* Mean of place dependence for each Roundup attendance group.

Table 10

*Pairwise Comparisons of Roundup Attendance for Place Dependence*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| 1-2 | -39.791 | 16.055 | -2.478 | .013 | .079 |
| 1-3 | -68.459 | 17.511 | -3.909 | <.001 | .001* |
| 1-4 | -74.625 | 16.616 | -4.491 | <.001 | <.001* |
| 2-3 | -28.668 | 19.123 | -1.499 | .134 | .803 |
| 2-4 | -34.833 | 18.307 | -1.903 | .057 | .342 |
| 3-4 | -6.165 | 19.597 | -.315 | .753 | 1.000 |

* Adjusted significance $\alpha \leq .05$

**Place rootedness.** The omnibus Kruskal-Wallis *H*-test analysis indicates that place rootedness was significantly influenced by delegates Roundup attendance [$\chi^2$ (3, N = 451) = 10.24, p = .017]. The mean increases from 3.35 for the reported place rootedness score for those attending Roundup for the first time to 3.72 for those who have

attended Roundup 4 or more times (Figure 6). To determine if there was a significant difference between groups, pairwise comparisons were run using the Dunn-Bonferroni procedure. There was no significant differences measured in any of the pairwise comparisons for place rootedness (Table 11).

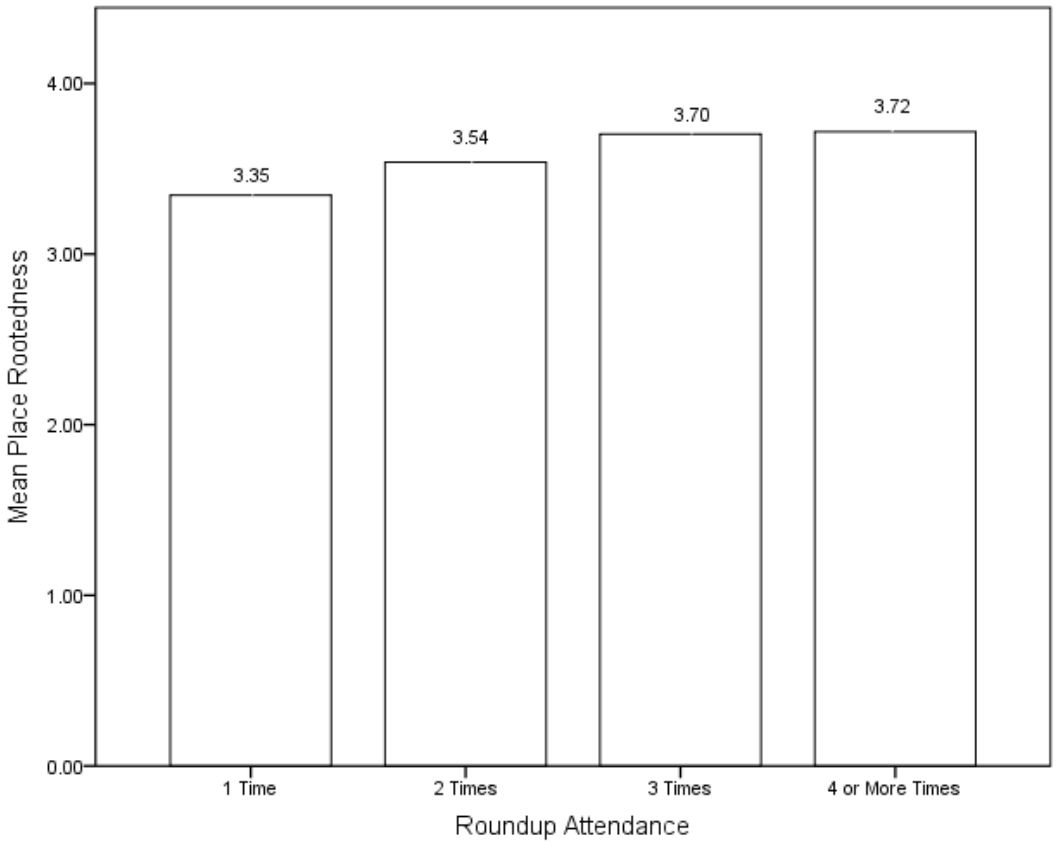


*Figure 6.* Mean of place rootedness for each Roundup attendance group.

Table 11

*Pairwise Comparisons of Roundup Attendance for Place Rootedness*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| 1-2 | -22.109 | 16.087 | -1.374 | .169 | 1.000 |
| 1-3 | -43.653 | 16.650 | -2.622 | .009 | .052 |
| 1-4 | -45.938 | 17.547 | -2.618 | .009 | .053 |
| 2-3 | -21.544 | 18.344 | -1.174 | .240 | 1.000 |
| 2-4 | -23.829 | 19.162 | -1.244 | .214 | 1.000 |
| 3-4 | 2.286 | 19.636 | .116 | .907 | 1.000 |

The decision to reject the null hypothesis in favor of the alternative hypothesis was determined as all five place bonding dimensions were significantly influenced by increased Roundup attendance. Additionally, post-hoc analysis showed significant increases in multiple pairwise comparisons for place familiarity, place belonging, place identity, and place dependence.

**Research Hypothesis 2**

$H_0$ = There is no tendency for place bonding to rank systematically higher for increased frequency of visits made to campus in the past year. Increase in place bonding will be determined by a significant increase in at least three of the five place bonding dimensions.

$$H_0: \Sigma ranks_1 \geq \Sigma ranks_2 \geq \Sigma ranks_3 \geq \Sigma ranks_4 \geq \Sigma ranks_5 \geq \Sigma ranks_6$$

$$H_1: \Sigma ranks_1 < \Sigma ranks_2 < \Sigma ranks_3 < \Sigma ranks_4 < \Sigma ranks_5 < \Sigma ranks_6$$

Male (N = 135), female (N = 263), and respondents of unknown gender (N = 9) completed the place bonding scales and provided a valid responses to the number of times they visited the OSU campus in the past year. The mean Likert score of each dimension was calculated for each respondent. Respondents were placed into four groups based on their self-reported number of times that they had visited the OSU campus in the past year (Table 12). Groups were formed in order to provide equivalence with the exception of group 4. Due to the large range of responses, group 4 had only 11.3% of the responses ranging from 6 to 276 visits.

Table 12

*Campus Visits Groups, Frequency and Percentage of Usable Responses*

| Group | Number of Visits | Frequency | Percentage |
|---|---|---|---|
| 1 | 0 | 127 | 31.2 |
| 2 | 1-2 | 134 | 32.9 |
| 3 | 3-5 | 100 | 24.6 |
| 4 | 6-276 | 46 | 11.3 |
| Total | | 407 | 100.0 |

In order to determine if the increased visits to campus in the past year had a significant effect on increasing place bonding scores, all five place bonding indexes were compared to the four groups of attendance. Data was analyzed using a Kruskal-Wallis *H*-test on SPSS, Version 21 (IBM Corp., 2012). Mean ranks for each dimension can be found in Table 13.

Table 13

*Mean Ranks for Comparisons of Place Bonding and Campus Visits*

| Campus Visits | Place Familiarity | Place Belonging | Place Identity | Place Dependence | Place Rootedness |
|---|---|---|---|---|---|
| 0 Times (N = 127) | 146.16 | 157.41 | 158.97 | 167.63 | 166.79 |
| 1-2 Times (N = 134) | 213.27 | 199.84 | 207.13 | 211.90 | 212.65 |
| 3-5 Times (N = 100) | 222.04 | 232.83 | 224.79 | 214.93 | 221.94 |
| 6-276 Times (N = 46) | 297.47 | 282.10 | 274.02 | 257.67 | 242.57 |

Post-hoc analysis was performed on significant omnibus results to evaluate pairwise differences using a Dunn-Bonferroni (Dunn, 1964) procedure on SPSS, Version 21. For the pairwise comparisons, type-1 error rates are adjusted by multiplying them by the number of comparisons to control for inflated type-1 errors. Adjusted type-1 values of greater than one were set to one.

**Place familiarity.** Results indicated that place familiarity was significantly influenced by the number of times a delegate visited campus during the past year [$\chi^2$ (3, N = 407) = 63.27, p < .001]. The mean increases from 2.63 for the reported place familiarity score for those with zero additional campus visits to 3.55 for those who have made six or more additional campus visits in the past year (Figure 7). Post-hoc analysis using Dunn-Bonferroni procedure showed significant increases in rank scores for increased campus visits for all of the comparison groups except 2-3 (Table 14).

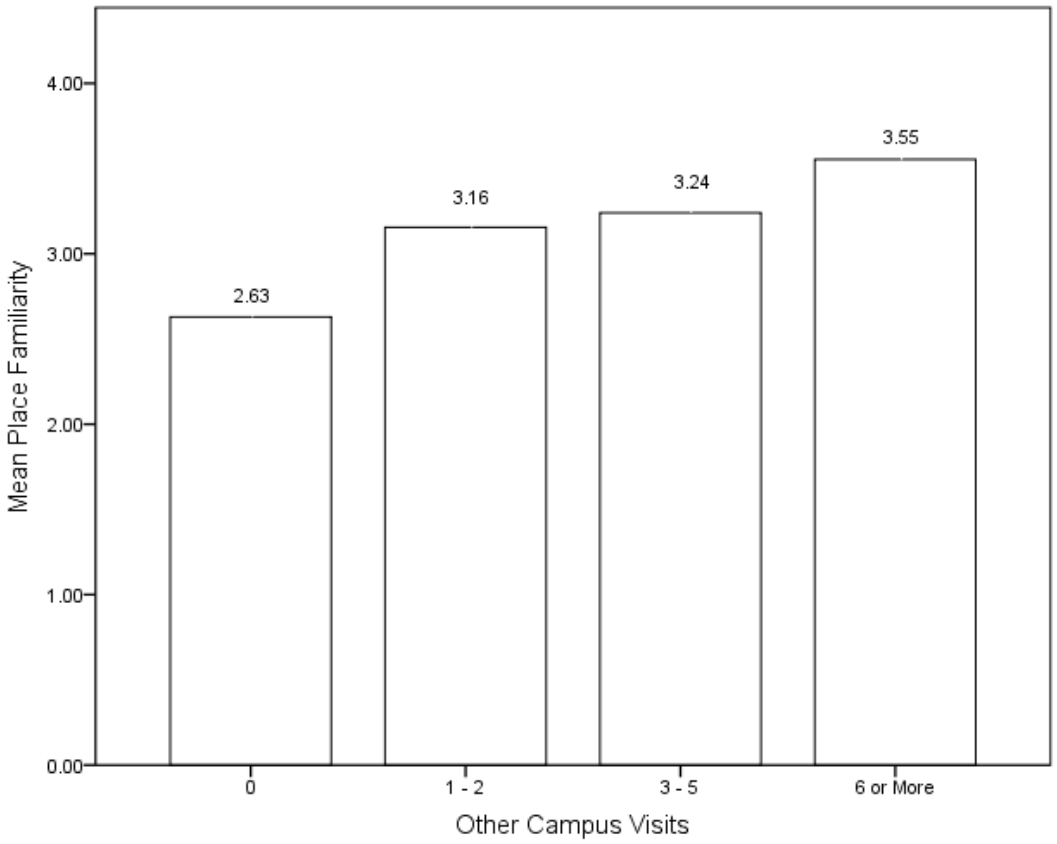


*Figure 7.* Mean of place familiarity for other campus visits.

Table 14

*Pairwise Comparisons of Campus Visits for Place Familiarity*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| 1-2 | -67.107 | 14.528 | -4.619 | <.001 | <.001* |
| 1-3 | -75.879 | 15.684 | -4.838 | <.001 | <.001* |
| 1-4 | -151.306 | 20.188 | -7.495 | <.001 | <.001* |
| 2-3 | -8.771 | 15.502 | -.566 | .572 | 1.000 |
| 2-4 | -84.199 | 20.047 | -4.200 | <.001 | <.001* |
| 3-4 | -75.427 | 20.900 | -3.609 | <.001 | .002* |

* Adjusted significance $\alpha \leq .05$

**Place belonging.** Analysis using a Kruskal-Wallis *H*-test indicates that place belonging was significantly influenced by delegates visits to campus during the past year [$\chi^2$ (3, N = 407) = 46.63, p < .001]. The mean increases from 3.22 for the reported place belonging score for those with zero additional campus visits to 4.05 for those who have made six or more additional campus visits in the past year (Figure 8). Post-hoc analysis using Dunn-Bonferroni procedure showed significant increases in rank scores for increased campus visits for comparison groups 1-2, 1-3, 1-4, and groups 2-4 (Table 15).

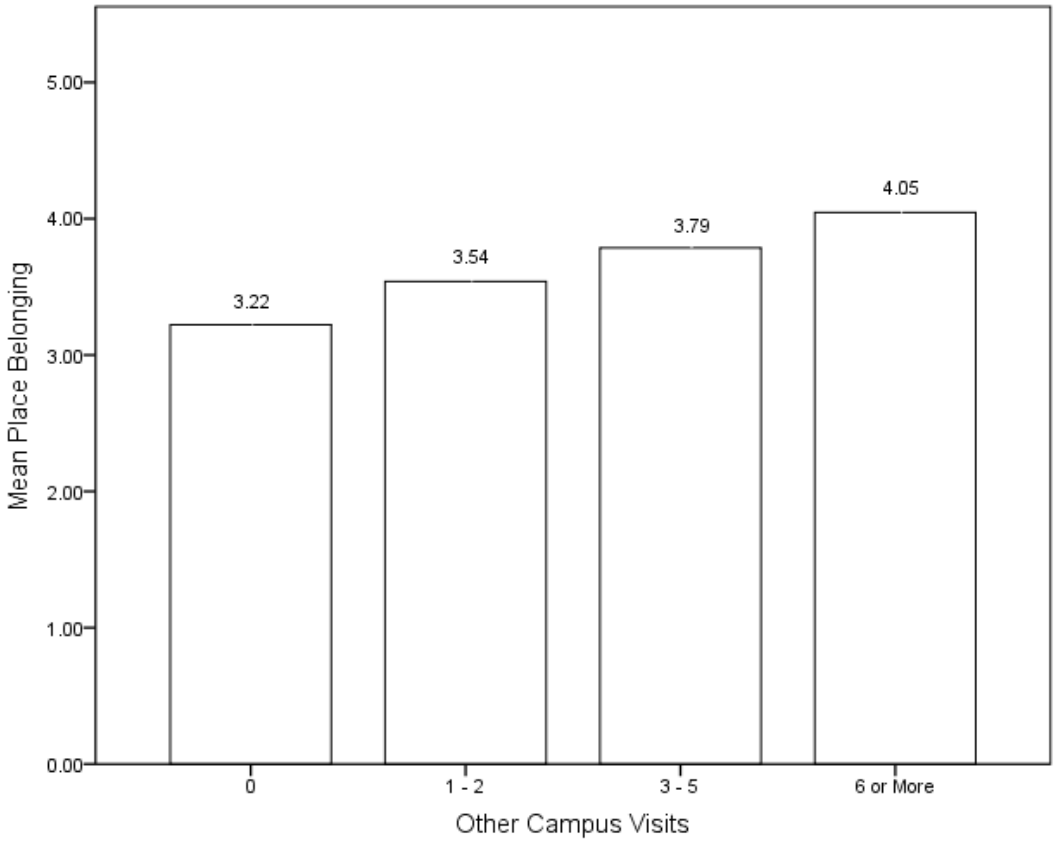


*Figure 8.* Mean of place belonging for other campus visits.

Table 15

*Pairwise Comparisons of Campus Visits for Place Belonging*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| 1-2 | -42.434 | 14.528 | -2.921 | .003 | .021* |
| 1-3 | -75.419 | 15.684 | -4.809 | <.001 | <.001* |
| 1-4 | -124.692 | 20.188 | -6.177 | <.001 | <.001* |
| 2-3 | -32.985 | 15.503 | -2.128 | .033 | .200 |
| 2-4 | -82.258 | 20.047 | -4.103 | <.001 | <.001* |
| 3-4 | -49.273 | 20.900 | -2.358 | .018 | .110 |

* Adjusted significance $\alpha \leq .05$

**Place identity.** Kruskal-Wallis *H*-test analysis indicates that place identity was significantly influenced by delegates visits to campus during the past year [$\chi^2$ (3, N = 407) = 38.38, p < .001]. The mean increases from 3.02 for the reported place identity score for those with zero additional campus visits to 3.88 for those who have made six or

more additional campus visits in the past year (Figure 9). Post-hoc analysis using Dunn-Bonferroni procedure showed a significant increase in rank scores for increased campus visit for comparison groups 1-2, 1-3, 1-4, and 2-4 (Table 16).

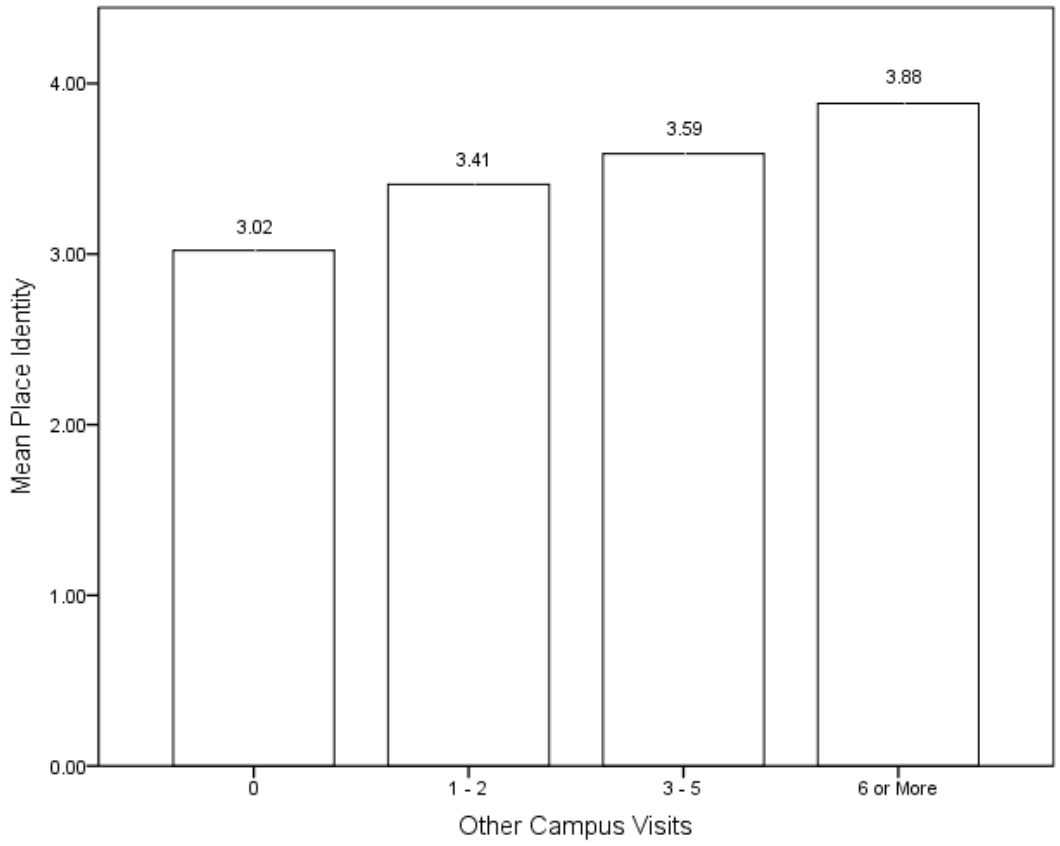


*Figure 9.* Mean of place identity for other campus visits.

Table 16

*Pairwise Comparisons of Campus Visits for Place Identity*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| 1-2 | -48.154 | 14.519 | -3.317 | .001 | .005* |
| 1-3 | -65.813 | 15.674 | -4.199 | <.001 | <.001* |
| 1-4 | -115.049 | 20.175 | -5.703 | <.001 | <.001* |
| 2-3 | -17.658 | 15.493 | -1.140 | .254 | 1.000 |
| 2-4 | -66.895 | 20.034 | -3.339 | .001 | .005* |
| 3-4 | -49.237 | 20.887 | -2.357 | .018 | .110 |

* Corrected significance $\alpha \leq .05$

**Place dependence.** Analysis using Kruskal-Wallis *H*-test indicates that place dependence was significantly influenced by increased campus visits of delegates during the past year [$\chi^2$ (3, N = 407) = 23.44, p < .001]. The mean increases from 3.65 for the reported place dependence score for those with zero additional campus visits to 4.25 for those who have made six or more additional campus visits in the past year (Figure 10). Post-hoc analysis using Dunn-Bonferroni procedure showed significant increases in rank scores for increased campus visits for comparison groups 1-2, 1-3, and 1-4 (Table 17).

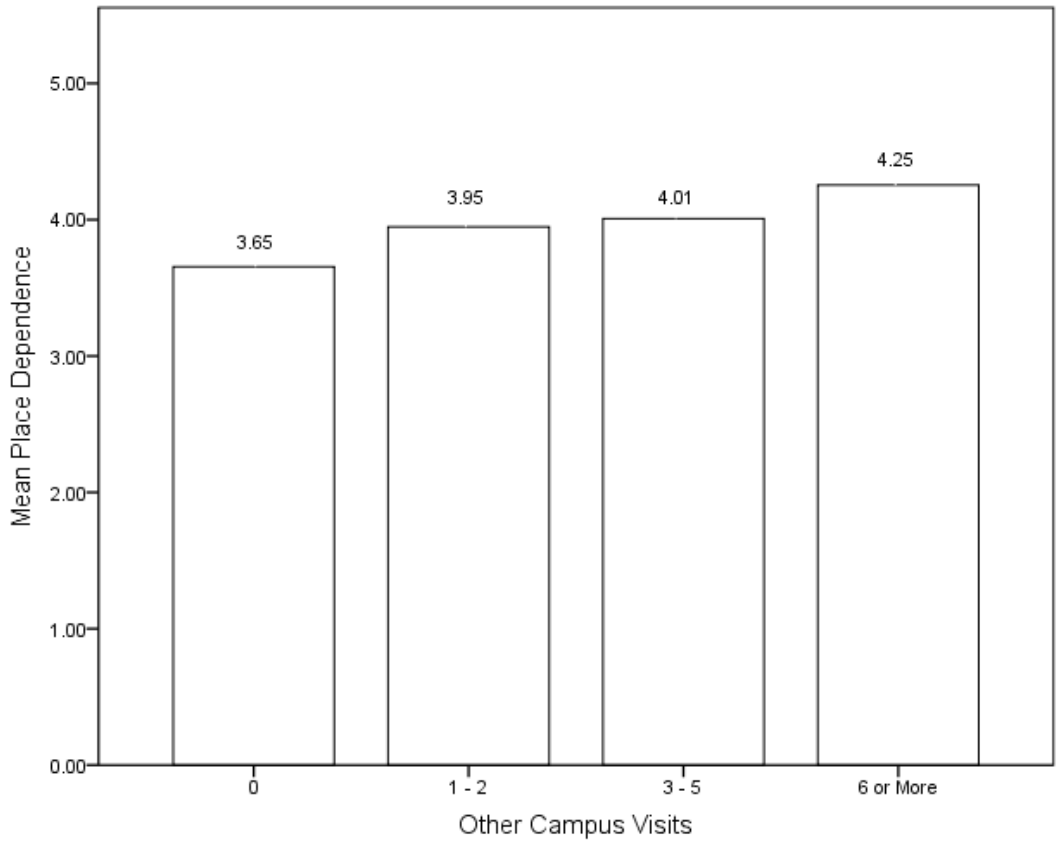


*Figure 10.* Mean of place dependence for other campus visits.

Table 17

*Pairwise Comparisons of Campus Visits for Place Dependence*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| 1-2 | -44.270 | 14.489 | -3.055 | .002 | .013* |
| 1-3 | -47.299 | 15.642 | -3.024 | .002 | .015* |
| 1-4 | -90.048 | 20.133 | -4.473 | <.001 | <.001* |
| 2-3 | -3.029 | 15.461 | -.196 | .845 | 1.000 |
| 2-4 | -45.778 | 19.993 | -2.290 | .022 | .132 |
| 3-4 | -42.749 | 20.843 | -2.051 | .040 | .242 |

* Corrected significance $\alpha \leq .05$

**Place rootedness.** The omnibus Kruskal-Wallis *H*-test analysis indicates that place rootedness was significantly influenced by increased visits to campus during the past year [$\chi^2$ (3, N = 407) = 20.85, p <.001]. The mean increases from 3.20 for the reported place rootedness score for those with zero additional campus visits to 3.76 for those who have made six or more additional campus visits in the past year (Figure 11). To determine if there was a significant difference between groups, pairwise comparisons were run using the Dunn-Bonferroni procedure. Post-hoc analysis showed significant increases in rank scores for increased campus visits in comparison groups 1-2, 1-3, and 1-4 (Table 18).

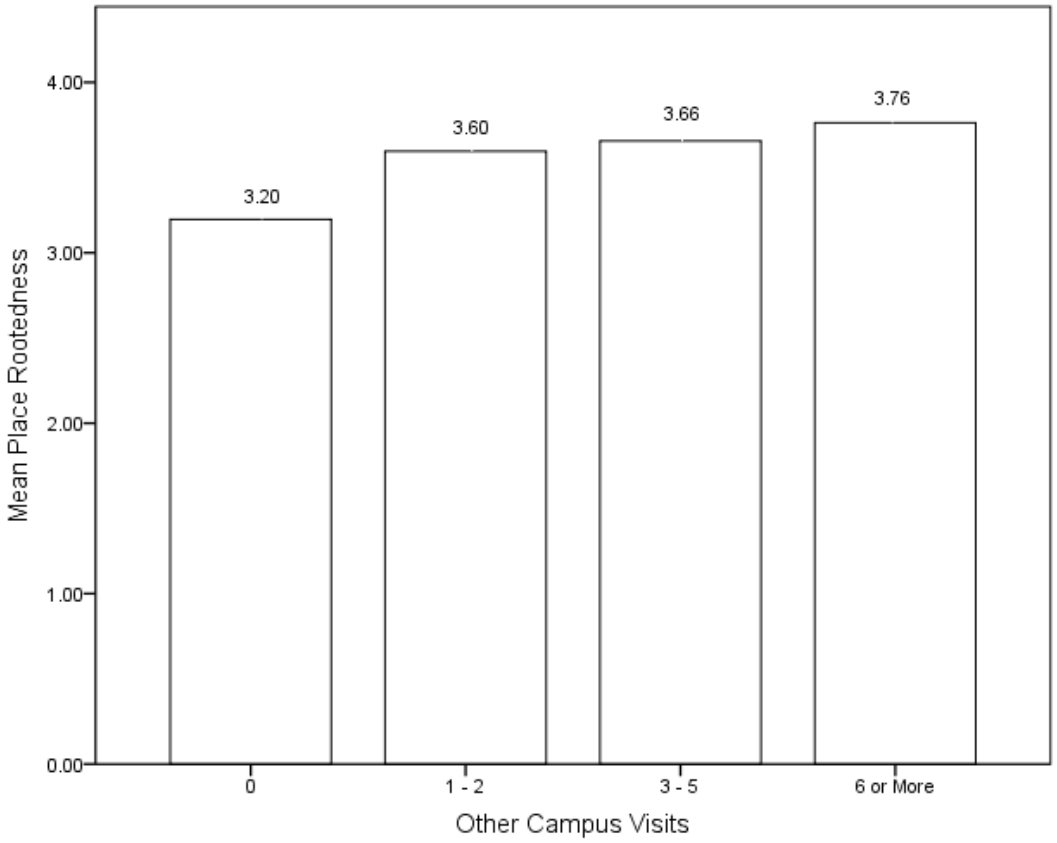


*Figure 11.* Mean of place rootedness for other campus visits.

Table 18

*Pairwise Comparisons of Campus Visits for Place Rootedness*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| 1-2 | -45.858 | 14.515 | -3.159 | .002 | .009* |
| 1-3 | -55.148 | 15.670 | -3.519 | <.001 | .003* |
| 1-4 | -75.778 | 20.170 | -3.757 | <.001 | .001* |
| 2-3 | -9.289 | 15.489 | -.600 | .549 | 1.000 |
| 2-4 | -29.920 | 20.029 | -1.494 | .135 | .811 |
| 3-4 | -20.630 | 20.881 | -.988 | .323 | 1.000 |

* Corrected significance $\alpha \leq .05$

The decision to reject the null hypothesis in favor of the alternative hypothesis was determined as all five place bonding dimensions were significantly influenced by the delegates increased visits to campus during the past year. Additionally, post-hoc analysis showed significant increases in multiple pairwise comparisons for all five dimensions.

**Research Hypothesis 3**

$H_0$ = When delegates are grouped according to their experience use history of campus visits, there is no difference in ranks between groups. Differences in place bonding will be determined by a significant differences in at least three of the five place bonding dimensions.

$H_0$: $\Sigma ranks_1 = \Sigma ranks_2 = \Sigma ranks_3 = \Sigma ranks_4$

$H_1$: $\Sigma ranks_1 \neq \Sigma ranks_2 \neq \Sigma ranks_3 \neq \Sigma ranks_4$

A total of 134 males, 261 females, and 9 respondents of unknown gender completed the place bonding scales and provided a valid response to both the number of times that they have attended Roundup and the number of times they visited the OSU campus in the past year. A Likert score for each dimension was calculated for each respondent. The means to the frequency of visits to the OSU campus (M = 3.98) and the responses to the number of times a delegate attended Roundup (M = 2.35) were used to group responses into high and low categories (Table19).

Table 19

*EUH High/Low Groups, Frequency and Percentage of Usable Responses*

| Group | Number of Times | Frequency | Percentage |
|---|---|---|---|
| Low Roundup Attendance | 1-2 | 275 | 61.0 |
| High Roundup Attendance | 3-8 | 176 | 39.0 |
| Low Campus Visits | 0-3 | 310 | 76.2 |
| High Campus Visits | 4-276 | 97 | 23.8 |

In order to compare the varying combinations of campus visits and Roundup attendance, the high and low groupings from each were combined into four EUH classifications (Figure 12). Respondents that had both low frequency of campus visits and low Roundup attendance were grouped to create the *Beginner* group. The *Site Specific*

group was formed by grouping respondents with high campus visits and low Roundup attendance. Respondents with low campus visits and high Roundup attendance were labeled *Activity Specific.* The *Veterans* group was formed by grouping respondents with both high campus visits and high Roundup attendance.

| Experience Use History Roundup Attendance | Experience Use History Campus Visits: LOW | Experience Use History Campus Visits: HIGH |
|---|---|---|
| LOW | Beginners (L,L) n = 204 | Site Specific (L,H) n = 43 |
| HIGH | Activity Specific (H,L) n = 104 | Veterans (H,H) n = 53 |

Figure 12. *EUH Comparison Groups*

In order to determine if the EUH comparison groups had a significant effect on place bonding scores, all five place bonding indexes were compared to the four EUH groups. Data was analyzed using a Kruskal-Wallis-*H* test on SPSS, Version 21 (IBM Corp., 2012). Mean ranks for each dimension can be found in Table 20.

Table 20

*Mean Ranks for Comparisons of Place Bonding and EUH Comparison Groups*

| EUH Group | Place Familiarity | Place Belonging | Place Identity | Place Dependence | Place Rootedness |
|---|---|---|---|---|---|
| Beginner (N = 204) | 145.32 | 170.26 | 177.10 | 173.67 | 181.42 |
| Site Specific (N = 43) | 228.12 | 241.95 | 231.77 | 220.60 | 226.93 |
| Activity Specific (N = 104) | 254.22 | 199.32 | 193.17 | 220.13 | 207.07 |
| Veteran (N = 53) | 300.33 | 300.81 | 294.81 | 264.19 | 254.85 |

Post-hoc analysis was performed on significant omnibus results to evaluate pairwise differences using a Dunn-Bonferroni (Dunn, 1964) procedure with SPSS, Version 21. In order to control for inflated type-1 error rates, type-1 error rates were adjusted for the pairwise comparisons by multiplying the p value by the number of comparisons. Adjusted type-1 values of greater than one were set to one.

**Place familiarity.** Results indicated that place familiarity was significantly different between EUH groups [$\chi^2$ (3, N = 404) = 109.20, p<.001]. The mean increases from 2.63 for the reported place familiarity score for those in the beginner category to 3.92 for those in the veteran category (Figure 13). Post-hoc analysis using Dunn-Bonferroni procedure showed significant differences in rank scores for all of the comparison groups except Site-Activity, and Specific-Veteran (Table 21).

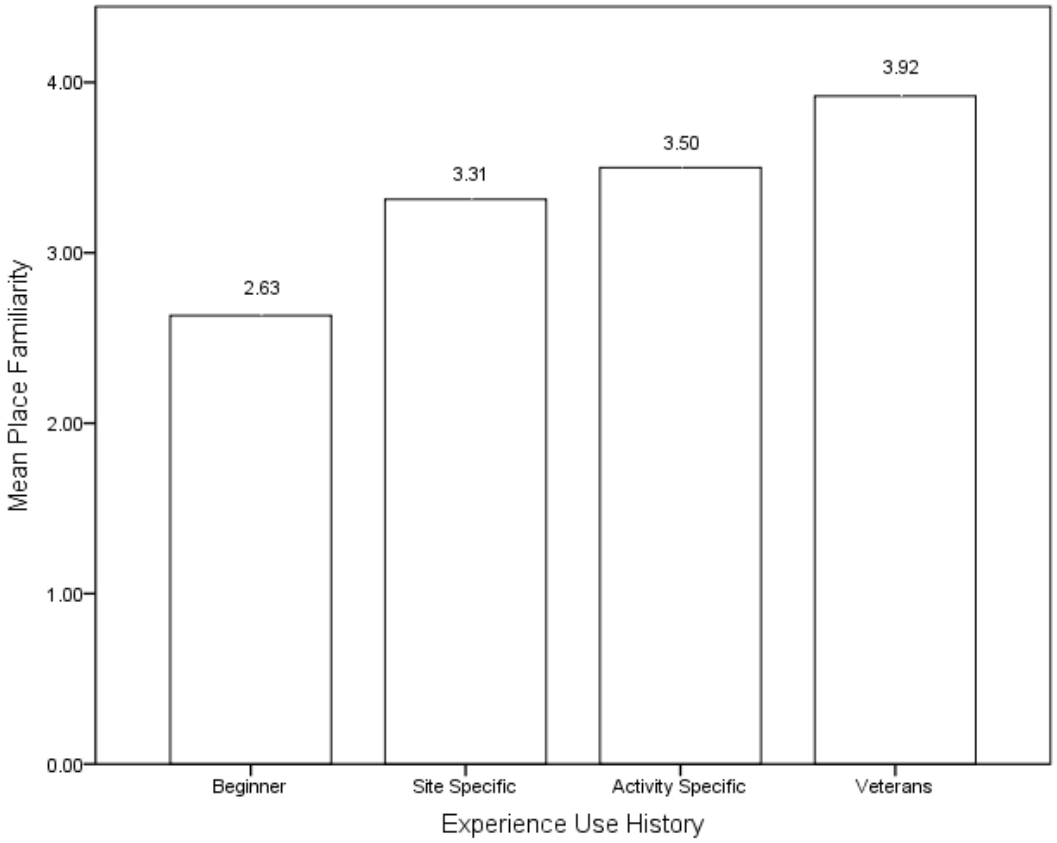


*Figure 13.* Mean of place familiarity for experience use history.

Table 21

*Pairwise Comparisons of EUH Groups for Place Familiarity*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| Beginner-Site | -82.800 | 19.540 | -4.237 | <.001 | <.001* |
| Beginner-Activity | -109.905 | 14.031 | -7.762 | <.001 | <.001* |
| Beginner-Veteran | -155.014 | 17.954 | -8.634 | <.001 | <.001* |
| Site-Activity | -26.105 | 21.113 | -1.236 | .216 | 1.000 |
| Site-Veteran | -72.214 | 23.900 | -3.021 | .003 | .015* |
| Activity-Veteran | -46.109 | 19.653 | -2.346 | .019 | .114 |

* Adjusted significance $\alpha \leq .05$

**Place belonging.** Analysis using Kruskal-Wallis-*H* test indicates that place belonging is significantly different between EUH groups [$\chi^2$ (3, N = 404) = 58.42, p<.001]. The mean increases from 3.34 for the reported place belonging score for those in

the beginner category to 4.33 for those in the veteran category (Figure 14). Post-hoc analysis using Dunn-Bonferroni procedure showed significant differences in rank scores for comparison groups Beginner-Site, Beginner-Veteran, and Activity-Veteran (Table 22).

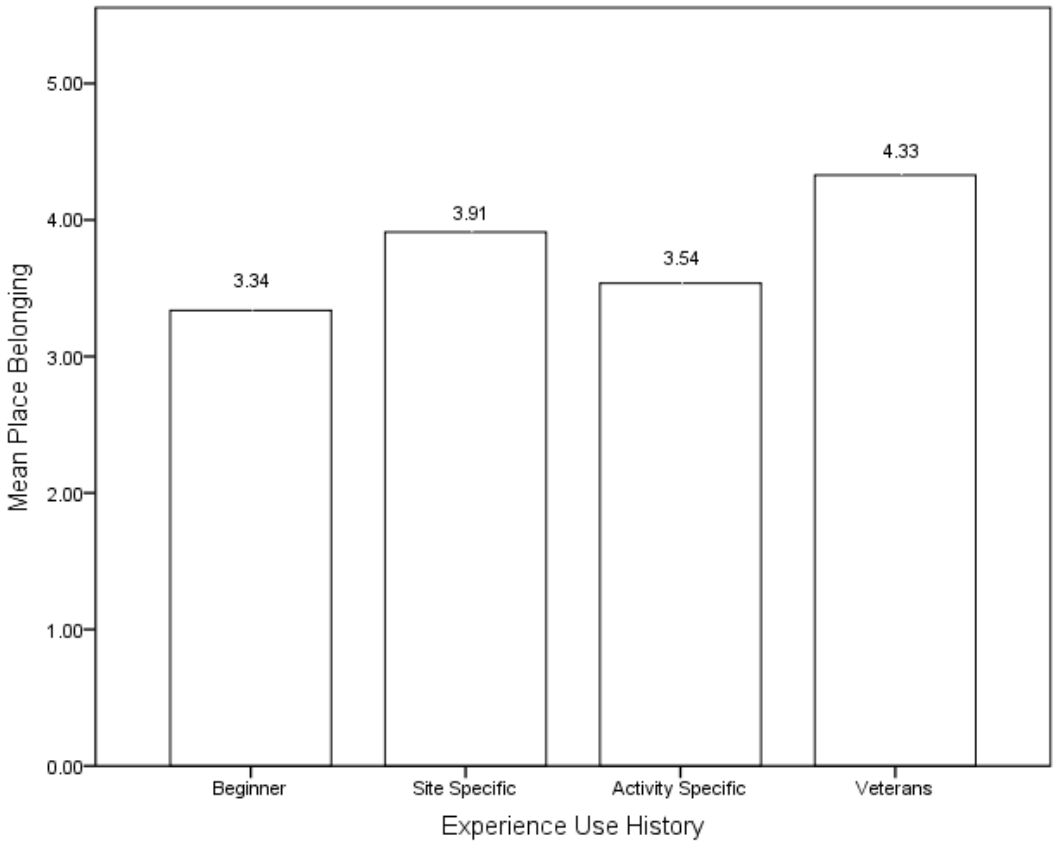


*Figure 14.* Mean of place belonging for experience use history.

Table 22

*Pairwise Comparisons of EUH Groups for Place Belonging*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| Beginner-Site | -29.053 | 14.031 | -2.071 | .038 | .230 |
| Beginner-Activity | -71.689 | 19.541 | -3.669 | <.001 | .001* |
| Beginner-Veteran | -130.547 | 17.954 | -7.271 | <.001 | <.001* |
| Activity-Site | 42.636 | 21.113 | 2.019 | .043 | .261 |
| Activity-Veteran | -101.494 | 19.654 | -5.164 | <.001 | <.001* |
| Site-Veteran | -58.858 | 23.901 | -2.463 | .014 | .083 |

* Adjusted significance $\alpha \leq .05$

**Place identity.** Analysis using Kruskal-Wallis *H*-test indicates that place identity is significantly different between EUH groups [$\chi^2$ (3, N = 404) = 46.45, p<.001]. The mean increases from 3.19 for the reported place identity score for those in the beginner category to 4.18 for those in the veteran category (Figure 15). Post-hoc analysis using Dunn-Bonferroni procedure showed significant differences in rank scores for comparison groups Beginner-Site, Beginner-Veteran, Activity-Veteran, and Site-Veteran (Table 23).

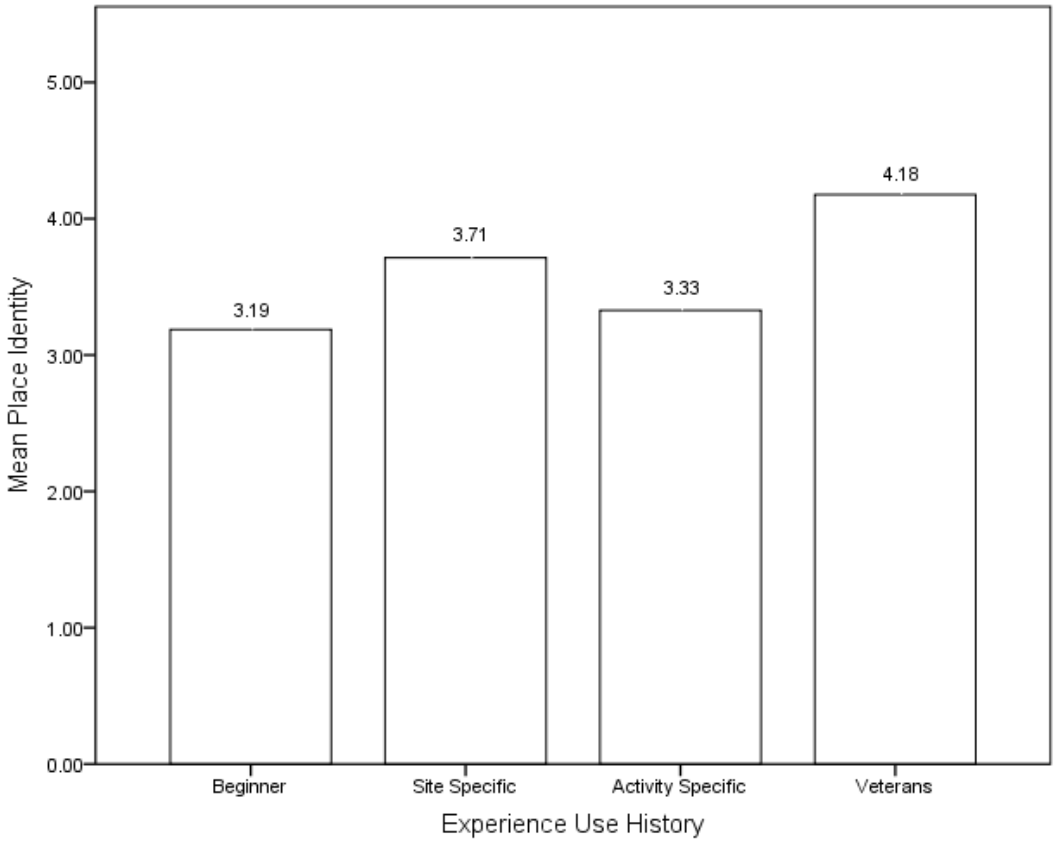


*Figure 15.* Mean of place identity for experience use history.

Table 23

*Pairwise Comparisons of EUH Groups for Place Identity*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| Beginner-Activity | -16.070 | 14.021 | -1.146 | .252 | 1.000 |
| Beginner-Site | -54.665 | 19.527 | -2.799 | .005 | .031* |
| Beginner-Veteran | -117.708 | 17.942 | -6.561 | <.001 | <.001* |
| Activity-Site | 38.594 | 21.009 | 1.829 | .067 | .404 |
| Activity-Veteran | -101.638 | 19.640 | -5.175 | <.001 | <.001* |
| Site-Veteran | -63.044 | 23.884 | -2.640 | .008 | .050* |

* Adjusted significance $\alpha \leq .05$

**Place dependence.** Analysis using a Kruskal-Wallis *H*-test indicates that place dependence is significantly different between EUH groups [$\chi^2$ (3, N = 404) = 30.97, p<.001]. The mean increases from 3.71 for the reported place dependence score for those

in the beginner category to 4.35 for those in the veteran category (Figure 16). Post-hoc analysis using Dunn-Bonferroni procedure showed significant differences in rank scores for comparison groups Beginner-Activity and Beginner-Veteran (Table 24).

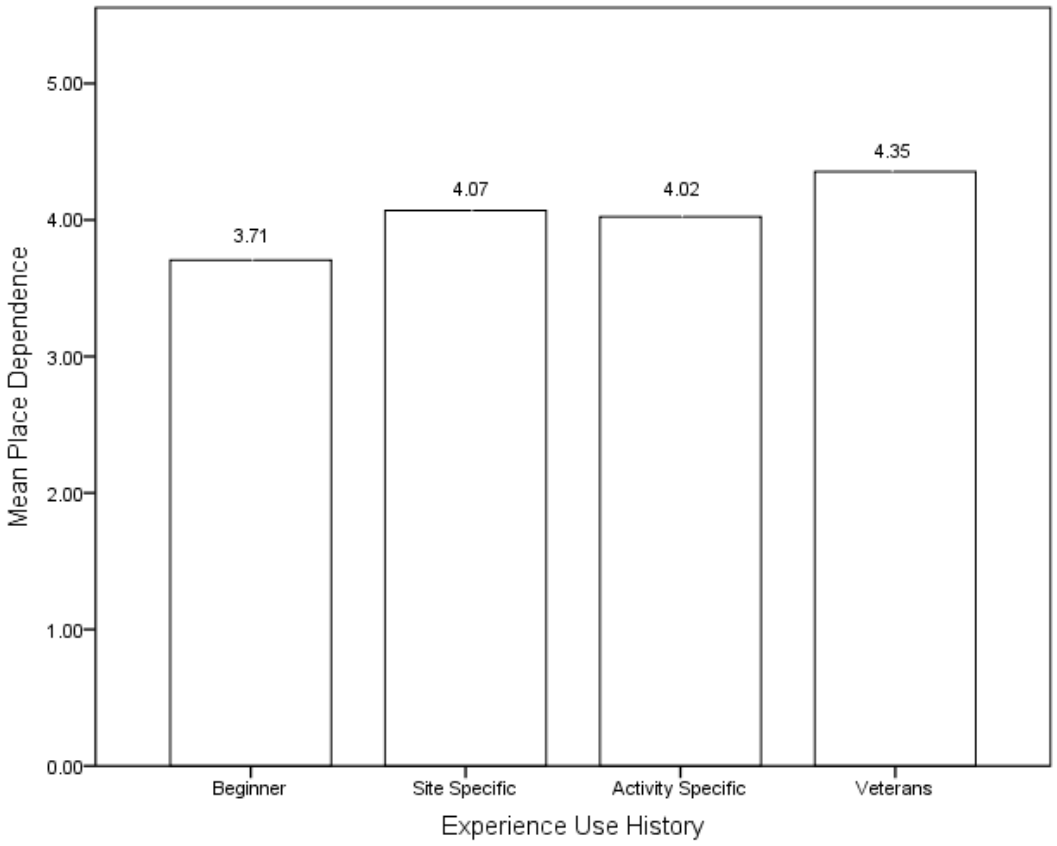


*Figure 16.* Mean of place dependence for experience use history.

Table 24

*Pairwise Comparisons of EUH Groups for Place Dependence*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| Beginner-Activity | -46.461 | 13.993 | -3.320 | .001 | .005* |
| Beginner-Site | -46.936 | 19.488 | -2.408 | .016 | .096 |
| Beginner-Veteran | -90.520 | 17.905 | -5.055 | <.001 | <.001* |
| Activity-Site | .475 | 21.056 | .023 | .982 | 1.000 |
| Activity-Veteran | -44.059 | 19.600 | -2.248 | .025 | .148 |
| Site-Veteran | -43.584 | 23.836 | -1.829 | .067 | .405 |

* Adjusted significance $\alpha \leq .05$

**Place rootedness.** Analysis using Kruskal-Wallis-*H* test indicates that place rootedness is significantly different between EUH groups [$\chi^2$ (3, N = 404) = 19.482, p<.001]. The mean increases from 3.33 for the reported place rootedness score for those in the beginner category to 3.97 for those in the veteran category (Figure 17). To determine if there was a significant difference between groups, pairwise comparisons were run using the Dunn-Bonferroni procedure. Post-hoc analysis showed a significant difference in rank scores for the comparison group Beginner-Veteran (Table 25).

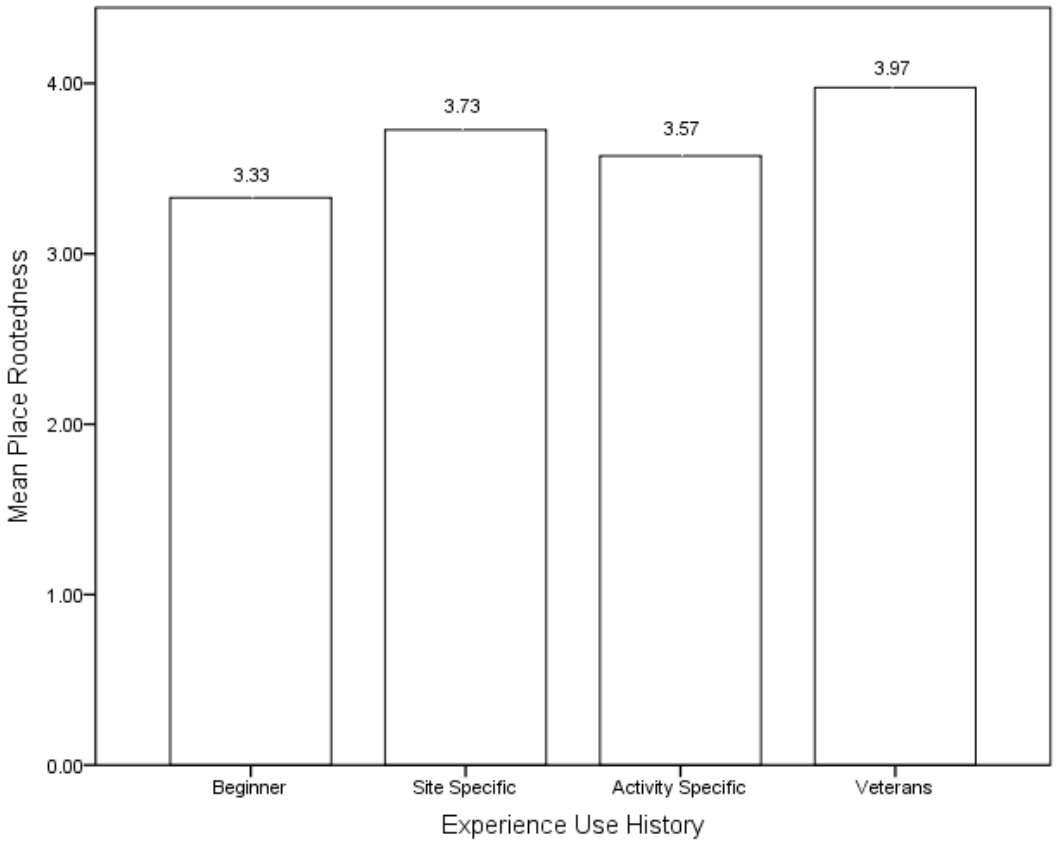


*Figure 17.* Mean of place rootedness for experience use history.

Table 25

*Pairwise Comparisons of EUH Groups for Place Rootedness*

| Group Comparisons | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig |
|---|---|---|---|---|---|
| Beginner-Activity | -25.646 | 14.018 | -1.829 | .067 | .404 |
| Beginner-Site | -45.509 | 19.523 | -2.331 | .020 | .119 |
| Beginner-Veteran | -73.427 | 17.937 | -4.094 | <.001 | <.001* |
| Activity-Site | 19.863 | 21.094 | .942 | .346 | 1.000 |
| Activity-Veteran | -47.782 | 19.635 | -2.433 | .015 | .090 |
| Site-Veteran | -27.919 | 23.879 | -1.169 | .242 | 1.000 |

* Adjusted significance $\alpha \leq .05$

The decision to reject the null hypothesis in favor of the alternative hypothesis was determined as the omnibus test of all five place bonding dimensions indicated a significant difference between EUH groups. Additionally, post-hoc analysis showed a significant increases in multiple pairwise comparisons for all five dimensions.

**Research Hypothesis 4**

$H_0$ = There is no difference in the ranks of place bonding to the OSU campus for one gender over another. Differences in place bonding will be determined by a significant differences in at least three of the five place bonding dimensions.

$H_0$: $\Sigma ranks_1 = \Sigma ranks_2$

$H_1$: $\Sigma ranks_1 \neq \Sigma ranks_2$

There were a 147 males (33.3%) and 295 females (66.7%) providing valid responses for all five dimensions of place bonding. The percentage of males and females was representative of the actual males and females' numbers (36.4% and 63.5% respectively). To determine if there was an actual difference, analysis was performed using a Mann-Whitney *U*-test with SPSS, Version 21 (IBM Corp., 2012). There was no significant differences between males and females in any place bonding dimensions (Tables 26 and 27) therefore the null hypothesis was not rejected.

Table 26

*Ranks for Gender Differences Using a Mann-Whitney U-Test*

| Dimension | Gender | Mean Rank | Sum of Ranks |
|---|---|---|---|
| Place Familiarity | Male | 207.61 | 30519.00 |
| | Female | 228.42 | 67384.00 |
| Place Belonging | Male | 215.09 | 31617.50 |
| | Female | 224.70 | 66285.50 |
| Place Identity | Male | 219.63 | 32286.00 |
| | Female | 222.43 | 65617.00 |
| Place Dependence | Male | 207.61 | 30519.00 |
| | Female | 228.42 | 67384.00 |
| Place Rootedness | Male | 218.57 | 32130.00 |
| | Female | 222.96 | 65773.00 |

Table 27

*Test Statistics for Gender Using a Mann-Whitney U-Test*

| | Place Familiarity | Place Belonging | Place Identity | Place Dependence | Place Rootedness |
|---|---|---|---|---|---|
| Mann-Whitney U | 19397.00 | 20739.50 | 21408.00 | 19641.00 | 21252.00 |
| Z Score | -1.81 | -.75 | -.22 | -1.62 | -.34 |
| Asymp. Sig | .07 | .46 | .83 | .11 | .73 |

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# CHAPTER V

# CONCLUSION

The analysis of data by the researcher was the basis of the following conclusions:

## Influence of Roundup on Place Bonding

One purpose of this study was to determine if repeated attendance to Roundup leads to increased place bonding with the OSU campus. Delegates' place bonding scores increased in all five dimensions with increased attendance at Roundup regardless of gender. This suggests that the more times a delegate attends Roundup the more likely they are to develop a bond with the OSU campus. Analysis of the pairwise comparisons indicate that delegates who return to Roundup will see an increase in most of the place bonding dimensions and the bonding will likely strengthen with increased trips to Roundup.

Place familiarity had the highest Kruskal-Wallis score ($X^2 = 136.50$) which may possibly be contributed to the active engagement delegates have with campus. While at Roundup, delegates engage with the OSU campus by actively finding various locations across campus in order to attend numerous workshops and contests. This type of active engagement with the environment has been shown to support familiarity with a place in numerous previous studies (Appleyard, 1970; Evans & Pezdek, 1980; Kozlowski & Bryant, 1977).

Place dependence ($X^2 = 26.61$), was highly significant when comparing newcomers to those that have attended three or more times. This suggests that returning delegates may develop certain expectations for Roundup that they feel the OSU campus has a unique ability to meet. It is also likely that after 94 years of Roundup being hosted on the OSU campus, delegates may perceive some emotional and symbolic value in holding 4-H events such as Roundup on the OSU campus.

As delegates are participating in social and communal events at Roundup, it is likely that they are developing place belonging bonds with the OSU campus. However, these bonds may take longer to build as they usually entail some type of deep spiritual connection to a place. This may explain why place belonging ($X^2 = 19.56$) did not increase as strongly and quickly as place familiarity and place dependence.

Place identity ($X^2 = 14.17$) was highly significant when comparing first timers to those that attended Roundup four or more times but was not significant through any other pairwise comparisons. This suggests that in order to develop the strong emotional attachment to a place that Proshansky (1978) described as "the individual's personal identity (p.155)," it may require delegates to return to Roundup at least three or more times.

Place rootedness had the lowest Kruskal-Wallis score ($X^2 = 10.24$) and there were no significant pairwise comparisons. This was not surprising as many researchers have argued that ancestral ties (Hay, 1998) and long term residence are required for rootedness to occur which goes beyond most recreational settings (Shumaker & Taylor, 1983). However, the overall omnibus test for rootedness showed a significant increase in

rootedness based on increased Roundup attendance. This suggests that increased trips to Roundup may still contribute to feelings of home and security on the OSU campus.

### Influence of Other Campus Visits on Place Bonding

When comparisons of campus visits in the past year and place bonding were made, all five dimensions were significantly influenced by increased campus visits. This indicates that the more the delegates return to campus for other activities and events, the more likely they are to bond with the OSU campus. In the pairwise comparisons for each dimension, delegates that came to campus at least one other time in the past year had a significant increase in their bond to campus. This shows the importance of any additional exposure to campus for the formation of place bonds.

Place familiarity was highly significant for those that came to campus six or more times in the past year when compared to those that came one to two times or two to three times. Place belonging and place identity also showed similar trends as there was a highly significant increase in bonding levels for delegates that came six or more times as compared to those that only came to campus one to two times in the past year. These findings suggest that as delegates increase their trips to campus for occasions other than Roundup, then their place familiarity, identity, and belongingness will likely increase as well.

### Experience Use History Effects on Place Bonding

By accounting for varying combinations of EUH, results showed that all five dimensions were significantly different across the EUH categories. By combining low campus visits and low Roundup attendance (Beginner) and comparing it to high campus visits and high Roundup attendance (Veteran) the results support the findings and

conclusions of the previous two hypotheses. This is further evidenced by the fact that all five of the Beginner-Veteran pairwise comparisons were highly significant.

By viewing the Beginner-Activity pairwise comparisons and Site-Veteran pairwise comparisons it is possible to more clearly understand the effect that Roundup attendance has on place bonding while controlling for either low frequency of campus visits (< 3 times) or high frequency of campus visits (> 3 times). Delegates with low frequency of campus visits (Beginner-Activity) showed significantly increased bonding for place familiarity, place belonging, and place dependence as Roundup attendance increased. Delegates with a high frequency of campus visits (Site-Veteran) had a significant increase in bonding for place familiarity and place identity as Roundup attendance increased.

The effect of other campus visits in the past year while controlling for the influence of either high Roundup attendance (3 – 8 times) or low Roundup attendance (1-2 times) was analyzed by making pairwise comparisons of Beginner-Site and Activity-Veteran EUH groups. As campus visits increased, delegates with low Roundup attendance showed a significant increase in bonding for place familiarity and place identity while delegates with high Roundup attendance had significantly increased bonding for place identity and place belonging.

These patterns may indicate a trend that as visits increase there is a progression in the type of bonding from familiarity to rootedness. Place familiarity changes significantly with little exposure to campus, regardless of whether the exposure is from Roundup visits or other campus visits. This is supported by Hammitt et al. (2004) claims that familiarity is the initial phase in the bonding experience. It is possible that increased familiarity may

be a contributing mechanism that is required for the development of place belonging, place identity, place dependence, and place rootedness.

The interactions that Roundup attendance and other campus visits has on place bonding is varying. The data in this study does not support one as being more important than or reliant on the other. However, it is clear that Roundup attendance and other campus visits both have their own individual significance as well as combined significance on place bonding.

## Recommendations

After interpreting the data and drawing the aforementioned conclusions, the following recommendations are made:

It is recommended that extension educators continue to provide recreational programming to adolescents in the form of overnight programs held on campus such as Roundup. During these events activities should require participants to actively engage in the environment so that they quickly develop feelings of familiarity with the campus. Adding activities such as scavenger hunts may further develop their familiarity with campus. Additionally, these programs need to provide the youth a sense of safety from physical and emotional harm which may help the delegates develop a sense of security and feelings of home. Furthermore, delegates should be educated about the traditions of Roundup and its historical ties to OSU as this may help develop a sense of symbolic meaning and commonality among delegates and the campus.

It is recommended that Oklahoma 4-H continue to seek other recreational opportunities to bring youth on campus throughout the year. These additional activities should also seek to provide youth engagement with the campus itself. For instance, a

contest held at the Animal Science Arena could conduct its award ceremony in the Student Union providing youth further opportunity to explore and bond with the campus.

It is recommended that the Oklahoma 4-H faculty and the county extension educators communicate with university administrators, university recruiters, delegates' parents, and the delegates themselves that participation in Roundup helps pre-college youth develop a bond to the OSU campus. University administration and recruiters should see this bond as a potential opportunity to recruit and retain new students. Parents and delegates need to be educated that attending Roundup can help adolescents feel comfortable and connected to the OSU campus and how this might help delegates that choose to attend college at OSU successfully transition to college attendance at OSU.

## Recommendations for Future Research

The researcher makes the following recommendations in regard to additional research, based on concluding the study and summarizing the findings:

Due to the relationship that Oklahoma 4-H has with the OSU campus, it is recommended that place bonding be measured in a random sample of Roundup delegates and compared to a random sample of adolescents attending conferences or camps hosted by other organizations. In addition to the place bonding scores, other variables should be measured to make comparisons, such as the number and types of campus locations they visit and the types of activities participated in while on campus. These comparisons may help distinguish any unique effect that Roundup has on place bonding when compared to other organizations and activities.

A random sample of delegates should be selected to determine if their place bonding scores affect their preference of college that they would like to attend. Following

high school graduation, a follow up survey should be conducted to measure the relationship between the delegate's actual campus choice and their pre-college bonding scores. Additionally, it should be determined if there is a relationship between their place bonding score and the level of success during their freshman transition.

Future research should ivestigate additional factors that might affect the place bonding scores of Roundup delegates. The duration and level of involvement in 4-H prior to Roundup could be a significant factor as 4-H members may work closely with OSU educators in their home counties as early as nine years of age. Many of these youth come from rural settings and an investigation of place bonding scores for youth from different regions within the state should be conducted. Additionally, the impact of families with multi-generational involvement in 4-H as well as multi-generational attendance at Roundup should be researched to compare potential differences between first-generation 4-H members and those from multi-generational 4-H families.

Other demographic comparisons should be made in pre-college place bonding studies. It is highly likely that age may affect an adolescents bond to a university campus so it is recommended that future research investigate differences that may occur due to age differences. Further research should investigate the potential differences that may occur between delegates of different sex, ethnic and racial backgrounds. Through careful examination of differences in place bonding between demographic groups, future programs may consider implementing new strategies to enhance place bonding for various audiences.

Place bonding of pre-college youth to campus may potentially be a means to recruit adolescents to college as well as help them transition successfully. Future research

should consider implementing programs targeted to helping at-risk youth develop bonds with campus. Follow up with these students should occur to determine if bonding leads to increased likelihood of college attendance as well as successful freshman transition.

As significant results were found in the effect of Roundup attendance, other campus visits, and the combined effects of each on a delegates bond to the OSU campus, continued investigation into adolescent place bonding to campus should be considered. Research to investigate if place bonding has an effect on the decision to attend OSU as a college student may serve as a useful next step. These findings and future studies into the impact of place bonding may help campus recruiters, faculty, and administrators recognize the important benefits that multi-day recreational conferences and visits on the OSU campus may provide to potential future students.

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# APPENDICES

## APPENDIX A

## THE FINAL PLACE BOND INSTRUMENT

Dear Participant:

You are being given this survey because you are part of a 4-H program or project, and we are surveying young people like you to learn about your experiences.

**This survey is voluntary.** If you do not want to fill out the survey, you do not need to. However, we hope you will take a few minutes to fill it out because your answers are important.

**This survey is private.** No one at your school, home, or 4-H program or project will see your answers. Please answer all of the questions as honestly as you can. If you are uncomfortable answering a question, you may leave it blank.

**This is not a test.** There are no right or wrong answers, and your answers will not affect your participation or place in the program in any way.

Thank you for your help!

| Please rate the following | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I have many memories of 4-H events on the Oklahoma State University (OSU) campus. | O | O | O | O | O |
| I have attended 4-H events at the OSU campus many times and I am quite familiar with it | O | O | O | O | O |
| I could draw a rough map of the OSU campus. | O | O | O | O | O |
| I know the OSU campus like the back of my hand. | O | O | O | O | O |
| I am fond of the OSU campus. | O | O | O | O | O |
| When I am at the OSU campus, I feel part of it. | O | O | O | O | O |
| I feel connected to the OSU campus. | O | O | O | O | O |
| The OSU campus makes me feel like no other place can. | O | O | O | O | O |
| I feel I belong at the OSU campus. | O | O | O | O | O |
| The OSU campus is very special to me. | O | O | O | O | O |
| I am very attached to the OSU campus. | O | O | O | O | O |
| I identify strongly with the OSU campus. | O | O | O | O | O |
| Visiting the OSU campus says a great deal about who I am. | O | O | O | O | O |
| I feel like the OSU campus is a part of me | O | O | O | O | O |
| The OSU campus is the best place for similar 4-H events. | O | O | O | O | O |

| Please rate the following | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I would not substitute any other location (not at OSU) for the 4-H events I do at the OSU campus. | ○ | ○ | ○ | ○ | ○ |
| No other place can compare to the OSU campus for 4-H events similar to Roundup. | ○ | ○ | ○ | ○ | ○ |
| Doing 4-H events that I do at the OSU Campus is more important to me than doing them at any other place. | ○ | ○ | ○ | ○ | ○ |
| The OSU campus is like home to me. | ○ | ○ | ○ | ○ | ○ |
| The OSU campus is the only place I desire to go for 4-H events. | ○ | ○ | ○ | ○ | ○ |
| I would like to be on the OSU campus whenever I participate in 4-H events. | ○ | ○ | ○ | ○ | ○ |
| The OSU Campus is my favorite place for 4-H events. | ○ | ○ | ○ | ○ | ○ |

| Please rate the following question | Weak 1 | 2 | 3 | 4 | 5 | 6 | Strong 7 |
|---|---|---|---|---|---|---|---|
| Overall, how would you characterize your feelings of attachment to the campus at Oklahoma State University? | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

I came to Roundup this year as a ○ youth delegate ○ adult volunteer ○ extension educator

My Age is _____

Gender ○ Male ○ Female

For the next two questions, please fill in the blank
Example: Counting this year, I have attended 4-H Roundup __2__ times.

Counting this year, I have attended 4-H Roundup _____ times.

Not counting 4-H Roundup, in the past 12 months, I have been to the OSU campus _____ times.

(4-H Youth Only) Choose the answer that most likely describes your future education plans

- ○ I plan to attend Oklahoma State University
- ○ I plan to attend Oklahoma University
- ○ I plan to attend a different post-secondary school in Oklahoma
- ○ I plan to attend a post-secondary school outside of Oklahoma
- ○ I have no plans to attend a college/university

# APPENDIX B

# THE 2014 PLACE BOND INSTRUMENT



**Block 5**

Dear Roundup Participant,

Thank you for taking your time to participate in this short study about place bonding with the OSU campus. Place bonding is not about college recruitment but it is about the way a place makes you feel.

This questionnaire should only take about 10 minutes to complete and there are no known risks associated with this study that are greater than those you ordinarily encounter in daily life. There are also no direct benefits that you will receive by participating but you may be helping future programming efforts.

All information collected will be kept private and results will only be reported as group findings. There will be no way to identify your answers on this questionnaire and all records will be securely stored.

Your participation is completely voluntary and if you decide not to participate it will in no way affect your current or future relationship with Oklahoma State University or with 4-H.

If you do participate in this study, you may skip any questions that make you feel uncomfortable or you may stop at any time. You may only complete the survey one time.

If you do not want to participate, simply close your browser.

Thank you for your time,

Steve Beck
4-H Youth Development

Kevin Fink, Ph.D.
Nutritional Sciences

By checking the link below you are implying consent to participate.

- ○ Yes, I understand that my participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw at anytime.

**Place Familiarity**

I have many memories of 4-H events on the Oklahoma State University (OSU) campus.

- ○ Strongly Disagree
- ○ Disagree
- ○ Neither Agree nor Disagree
- ○ Agree
- ○ Strongly Agree

I have attended 4-H events at the OSU campus many times and I am quite familiar with it.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I could draw a rough map of the OSU campus.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I know the OSU campus like the back of my hand.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

**Place Belongingness**

I am fond of the OSU campus.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

When I am at the OSU campus, I feel a part of it.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I feel connected to the OSU campus.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

The OSU campus makes me feel like no other place can.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I feel I belong at the OSU campus.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

**Place Identity**

The OSU campus is very special to me.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

The OSU campus means a great deal to me.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I am very attached to the OSU campus.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I identify strongly with the OSU campus.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Visiting the OSU campus says a great deal about who I am.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I feel like the OSU campus is part of me.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

**Place Dependence**

The OSU campus is the best place for 4-H events.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

The 4-H events that I do at the OSU campus, I would enjoy just as much at a similar site.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I wouldn't substitute any other place for the 4-H events I do at the OSU campus.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

No other place can compare to the OSU campus for 4-H events.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

**Place Rootedness**

The OSU campus is like home to me.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

The OSU campus is the only place I desire to go for 4-H events.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I would like to be on the OSU campus whenever I participate in 4-H events.*

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

The OSU campus is my favorite place for 4-H events.*

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

**Demographics**

I came to Roundup this year as

- a 4-H youth delegate
- an adult volunteer
- an Extension Educator

Age

- 12
- 13
- 14
- 15
- 16
- 17
- 18 or older

Counting this trip to Roundup, in the past year, I have been to the OSU campus _____.

- One time
- Two times
- Three times
- Four times
- Five times
- 6 or more times

Counting this year, how many years have you attended 4-H Roundup?

- This is my first year
- 2 years
- 3 years
- 4 years
- 5 years
- 6 years or more

Gender

- Male
- Female

Please indicate your age.

Please indicate your age.

Choose the answer that describes your education.

- I attended Oklahoma State University.
- I attended the University of Oklahoma.
- I attended a different post-secondary school in Oklahoma.
- I attended a post-secondary school outside of Oklahoma.
- I did not attend a college/university.

Choose the answer that describes your education.

- I attended Oklahoma State University.
- I attended the University of Oklahoma.
- I attended a different post-secondary school in Oklahoma.
- I attended a post-secondary school outside of Oklahoma.
- I did not attend a college/university.

Choose the answer that most likely describes your future education plans:

- I plan to attend Oklahoma State University
- I plan to attend the University of Oklahoma
- I plan to attend a different post-secondary school in Oklahoma
- I plan to attend a post-secondary school outside of Oklahoma
- I have no plans to attend a college/university

APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL

**Oklahoma State University Institutional Review Board**

| | | | |
|---|---|---|---|
| Date | Tuesday, April 21, 2015 | Protocol Expires: | 4/20/2016 |
| IRB Application No: | AG1416 | | |
| Proposal Title: | 4-H Place Bonding | | |

Reviewed and Processed as: Expedited
**Continuation**

Status Recommended by Reviewer(s) **Approved**

Principal Investigator(s)

Stephen Beck
205 4HYD
Stillwater, OK 74078

Kevin Fink
180 Colvin Center
Stillwater, OK 74078

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Approvals are valid until the expiration date, after which time a request for continuation must be submitted. Any modifications to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

The reviewer(s) had these comments:

New enrollment still in progress. New changes are 1) conduct study at 2015 4-H Roundup in July, 2) add pencil and paper survey, 3) edit questions, 4) correct contact information on consent and assents. No increased risks, reportable events, withdrawals, complaints, or new/additional funding.

Signature:

Hugh Crethar, Chair, Institutional Review Board

Tuesday, April 21, 2015
Date

APPENDIX D

PARTICIPANT INFORMATION LETTER


## 2015 Oklahoma 4-H Roundup
## Place Bonding
## Participants Information Sheet

**To:** Roundup Youth Delegate, Adult Volunteer, and Extension Educators

We are inviting you to take short survey about your experience on the OSU campus. Please read this letter and ask any questions you may have before taking this survey.

**The study:** This study will help find out if coming to 4-H events, such as Roundup, affect the way you feel about the OSU campus. You will be asked to complete a survey which will take about 10 minutes to complete.

**Risks and benefits:** There are no known risks in taking this survey. There are also no direct benefits from taking this survey.

**Participation is voluntary:** You do not have to participate even if your parents gave your permission. There is no penalty for not taking the survey and you are free to quit at any time. Your decision to fill out the survey or not to fill it out will not change your relationship with Oklahoma State University or with your school or 4-H club. If you decide to take part, you are free to skip any questions, or stop at any time.

**Confidentiality:** Your answers will be kept private. Anything written about this study will only discuss group results. Your answers will be kept safe and only researchers and those supervising them will be able to see the records.

**Contacts :** Stephen Beck
205 4-H Youth Development
Stillwater, OK 74078
steve.beck@okstate.edu

If you have questions about your rights as a research volunteer, you may contact Dr. Hugh Crethar, IRB Chair, 223 Scott Hall, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu.

*Steve Beck*

Oklahoma 4-H/Youth Development
Oklahoma State University

# APPENDIX E

# PARENTAL INFORMATION LETTER

## 2015 Oklahoma 4-H Roundup
## Place Bonding

## Parental/Guardian Information Sheet

As a 4-H Roundup Delegate, we are inviting your child to participate in short survey about place belonging as part of their experience on the OSU campus. We ask that you read this information and ask any questions you may have before allowing your child to take part in this survey.

**The study:** The purpose of this study is to find out how participating in 4-H events at OSU such as Roundup effect the development of feelings of attachment and belonging to the OSU campus. Your child will be asked to complete a questionnaire which will take approximately 10 minutes to complete.

**Risks and benefits:** There are no known risks associated with this project which are greater than those ordinarily encountered in daily life. There are no direct benefits or tangible rewards to you or your child if he or she takes part in the study.

**Voluntary Participation:** Your child's participation in this survey is completely voluntary. Your child may skip any questions he or she doesn't feel comfortable answering. Your decision whether or not to allow your child to take part will not affect your current or future relationship with Oklahoma State University or with your child's school or 4-H club. If you decide to allow your child to take part, your child is free to not do the survey, skip any questions, or stop at any time.

**Confidentiality:** The records of this survey will be kept private. Any written results will discuss group findings and will not include information that will identify your child. Research records will be stored securely and only researchers and individuals responsible for research oversight will have access to the records. It is possible that the consent process and data collection will be observed by research oversight staff responsible for safeguarding the rights and wellbeing of people who participate in research.

**Participant Rights**: I understand that my child's participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my permission at any time, without penalty.

**Opting Out:** Participation is voluntary, so you or your child can opt out by simply instructing your child to not complete a survey.

**Contacts :** Stephen Beck
205 4-H Youth Development
Stillwater, OK 74078

If you have questions about your rights as a research volunteer, you may contact Dr. Hugh Krethar, IRB Chair, 223 Scott Hall, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu.

*Steve Beck*

Oklahoma 4-H/Youth Development
Oklahoma State University

VITA

Stephen Randall Beck

Candidate for the Degree of

Doctor of Philosophy

Thesis: OKLAHOMA 4-H ROUNDUP: EFFECT ON PLACE BONDING OF YOUTH VISITING THE OKLAHOMA STATE UNIVERSITY CAMPUS

Major Field: Health, Leisure, Human Performance

Biographical:

Education: Graduated from Purcell High School, Purcell, Oklahoma in May 1988; received a Bachelor of Science degree in Agriculture Education from Oklahoma State University, Stillwater, Oklahoma in December 1991; received a Master of Education in Secondary Education from Northwestern Oklahoma State University, Alva, Oklahoma in 2001. Completed the requirements for the Doctor of Philosophy in Health, Leisure, and Human Performance: Option in Leisure Studies in December 2015.

Experience: Extension Educator, Agriculture and 4-H/Youth Development, Harper County Oklahoma Cooperative Extension Service, 9 years; Extension Educator, 4-H/Youth Development, Kingfisher County Oklahoma Cooperative Extension Service, 3 years; Assistant Extension Specialist, 4-H/Youth Development, Oklahoma State University, 6 years.

Professional Memberships: Rho Phi Lambda, Association of Pet Dog Trainers, Academy of Leisure Services, National Parks and Recreation Association, Wilderness Education Association, American Camp Association, Oklahoma Association of 4-H Agents, National Association of 4-H Agents, Epsilon Sigma Phi, Society of Health and Physical Educators, Oklahoma Recreation and Park Society