

**Destination Recreation: A Generational Exploration of Psychographic Characteristics
related to Vacation Recreation Activity Preferences**

by

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This study investigated the association between the preferred vacation recreation activities of different generations of travelers and their individual psychographic profile characteristics as based on Stanley Plog's (1972) model. Additionally, an attempt was made to classify recreation activities across the psychographic continuum as either Dependable (Psychocentric) or Venturer (Allocentric) activities, in accordance with respondent scores from Plog's adapted psychographic instrument. The results indicated an overlap between respondent psychographic scores and their projected vacation recreation activity preferences. There were demographic differences in how travelers distributed across Plog's continuum as well, though the data suggested a uniform psychographic distribution across the generational cohorts, providing support for similarly active tourism preferences across the generations.

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related to Vacation Recreation Activity Preferences**

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By

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Table of Contents

List of Tables	vii
List of Figures	ix
Chapter 1: Introduction	1
Chapter 2: Literature Review	4
Active tourism.....	4
Psychographic conceptual framework – Plog model.....	7
Segmentation.....	14
Generational tourists	15
Chapter 3: Methods.....	20
Sample.....	21
Survey design and distribution.....	22
Analysis.....	23
Chapter 4: Results	25
Introduction.....	25
Descriptive Results	25
Test Results.....	39
Results Summary	50

Chapter 5: Discussion	53
Introduction.....	53
Discussion of research results.....	53
Implications.....	59
Study limitations	61
Suggestions for future research.....	62
Conclusion	63
References.....	66

Appendices.....	77
Appendix A: ECU UMC IRB approval letter.....	77
Appendix B: Vacation recreation survey	78
Appendix C: DMO email contact	84
Appendix D: Second DMO email contact (pilot request).....	85
Appendix E: Participant solicitation emails.....	86
Appendix F: Comparison of vacation recreation activity across psychographic categories	91
Appendix G: Vacation recreation activity generational cohort comparisons	93
Appendix H: Activity dimension pattern matrix	95
Appendix I: Activity dimension structure matrix	98

List of Tables

Table 2.1: Plog’s model in the literature.....	12
Table 2.2: Generational boundaries	16
Table 3.1: Vacation recreation activity index (VRAI).....	22
Table 3.2: Analysis table.....	24
Table 4.1: Demographic summary of respondents	26
Table 4.2: Generational cohorts.....	27
Table 4.3: Vacation recreation activities	28
Tale 4.4: Travel profile	30
Table 4.5: Psychographic category percentages	30
Table 4.6: Psychographic category comparisons.....	33
Table 4.7: Travel planning psychographic category comparisons.....	35
Table 4.8: Generational cohort comparison of demographics, psychographics, and vacation preferences.....	38
Table 4.9: Vacation preferences among the psychographic categories	40
Table 4.10: Psychographic mean scores among demographic variables	42

Table 4.11: Cronbach's alpha for itemized vacation recreation activities.....	44
Table 4.12: Activity dimension differences within the Generation Cohorts	46
Table 4.13: Welch and Brown-Forsythe's test of equality of means for generational cohort activity dimensions	48
Table 4.14: Activity dimension differences within the psychographic categories	49
Table 4.15: Welch and Brown-Forsythe's test of equality of means for psychographic categories activity dimensions	50
Table 5.1: Psychographic distribution comparisons	53

List of Figures

Figure 2.1: Psychographic personality types of tourists8

Figure 3.1: Destination marketing organization map21

Figure 4.1: Psychographic model comparison.....31

Chapter 1: Introduction

For many individuals, recreation activities are integrally linked to vacation behavior. Previous scholarly investigations have indicated that recreation participants display analogous psychological and behavioral indicators at home and while traveling (Carr, 2002; Chang & Gibson, 2011; Hamilton-Smith, 1987; Mannell & Iso-Ahola, 1987; Ryan, 1994). Still, “conceptual and practical gaps” (Chang & Gibson, 2011, p. 162) have been described to exist in the literature concerning recreation and tourism, and these gaps have limited the empirical advancement of both fields (Fedler, 1987; Harris, McLaughlin, & Ham, 1987; Moore, Cushman, & Simmons, 1995; Smith & Godbey, 1991).

Tourism is an extensive field of study that draws from many other disciplines, including recreation (Hardy, 2010). One description of tourism proposed by Gilbert (1990) defines it within a broader recreation perspective: “tourism is one part of recreation which involves travel...in order to satisfy a consumer need for one or a combination of activities” (p. 2). Tourism has also been expressed as a special form of recreation (Cohen, 1974), and is generally mentioned in the form of leisure or vacation tourism. Since its conception in the mid-nineteenth century, the modern “vacation” within American culture has grown out of the need for recovery from work (Americans on Vacation, 1990). Americans are still in need of “time off”; however, factors such as the increase in national health consciousness and outdoor recreation participation, as well as the continued expansion of active and adventure tourism across the generations have led to a shift toward more active vacation trends within the tourism industry (ATTA, 2011; Chon & Singh, 1995; Glover & Prideaux, 2009; Jefferson, 1995; Lehto, Jang, Achana, & O’Leary, 2008; Loverseed, 1997; Mihelj, 2010; Sorensen, 1993; Sung, Morrison, & O’Leary, 2001; Swarbrooke, 2003; Tourism Canada, 1995; Travel Industry Association of America, 1998; Weiler & Hall, 1992).

Active tourism has been expressed as a part of the nature tourism industry; nature tourism is defined as:

[a segment] whose main motivations are conducting recreational and leisure activities, along with the interpretation and / or knowledge of nature, including varying degrees of physical intensity and risk associated with different forms of activity, and the use of the natural environment to ensure the safety of the tourist, without degrading or depleting resources. (Antar-Ecotono, 2004, p. 14)

Thus, nature tourism includes “any activity related to the natural environment” (Antar-Ecotono, 2004, p. 61), and nature activities have been determined to exist within three subgroups: leisure tourism, active tourism, and ecotourism (Vila, Brea, & Carril, 2012). Active tourism is defined as a segment “whose main motivations are conducting recreational and leisure activities, including varying degrees of physical intensity and risk associated with different forms of activity” (Antar-Ecotono, 2004, p. 14). In spite of the suggested shift toward active tourism, without understanding tourism behavior it is difficult to provide a full understanding of tourist dynamics, limiting the ability to express destination products in terms of tourist needs (Pizam & Mansfeld, 1999).

Over the years, researchers have sought to establish a variety of theoretical frameworks to predict tourist behavior: role of novelty in destination choice (Cohen, 1972; Lee & Crompton, 1992; Mo, Howard, & Ravitz 1993), mass tourist or adventurer typology (Boorstin, 1964), the concept of pilgrimage as experienced through separation, margin, and reaggregation (Turner, 1972), and the push-pull model of tourism motivation (Crompton, 1979). However, of the typologies generated in the past, the classifications attempting to distinguish tourism behavior in

terms of individual personality characteristics have been shown to provide a more in-depth explanation of destination preference (Griffith & Albanese, 1996; Plog, 1991b).

Psychographics are personality profiles used to quantify lifestyle preferences (Waryszak & Kim, 1995). Within a tourism context, Stanley Plog (1972) developed a model to examine destination preferences based upon psychographic scores measuring distinguishing personality traits. The initial attempt by Plog was to understand tourist preferences based upon psychographic characteristics (Plog, 1972). The purpose of this study is to examine Plog's psychographic model four decades later, within a potential visitor population to destinations in North Carolina, and to explore links between personality, generation membership, and recreation preferences while on vacation. With the apparent increase in active tourism, and the exhibited usefulness of personality in projecting tourism behavior, research is needed to analyze the psychological indicators related to individual recreational activities to establish tourist preferences. The specific research questions that have been explored in this study are:

1. Is Plog's psychographic model still representative of present-day tourists? (Does the model still fit?)
2. Are the travel planning profiles as expected for each Plog category?
3. Are there demographic differences in regard to how tourists distribute across Plog's continuum?
4. How do preferred vacation recreation activities of tourists relate to their psychographic scores?

Chapter 2: Literature review

2.1 Active tourism

Tourism has an exceptional bearing on the world economy. As reported by the World Travel & Tourism Council (WTTC), the direct contribution of the tourism industry to the world-wide Gross Domestic Product (GDP) in 2011 was \$2 trillion and was projected to grow by 2.8% in 2012 (World Travel & Tourism Council, n.d.). The active tourism industry has shown to be in a stage of economic advancement as well, with a 17% increase in earnings between 2009 and 2010 (ATTA, 2012).

With the maturation of the American tourism industry, tourists continue to expand their vacation preferences (ATTA, 2011; Sung et al., 2001). With destination product preferences evolving, tourism motivations have become more specialized, and tourism marketers are challenged to supply the ever-increasing market niches (Sung et al., 2001; Dwyer, 2005). As reported by Schneider & Vogt (2012):

Today, consumers are driving demand; therefore, understanding the underlying psychological and social dimensions that motivate consumers may offer the tourism industry insight into how to meet their changing needs. (p. 704)

Active tourism experiences have become well-known to tourists in search of unique vacation alternatives (Sung, 2000; Sung, 2004; Sung, Morrison, & O'Leary, 2001), and current tourism predictions have indicated a sustained rise in nature-based outdoor adventure activities (Zeppel & Sibtain, 2011). Adventure tourism is one such alternative that appeals to tourists seeking active opportunities on vacation, and has progressed out of the widespread outdoor recreation participation of the 20th century (Ewert, 1989); it falls under the active tourism

definition of a segment offering activities with “varying degrees of physical intensity and risk” (Antar-Ecotoño, 2004, p. 14)

Adventure tourism has been expressed as the fastest growing tourism segment in North America (Loveseed, 1997), and one of the fastest growing segments within the international tourism industry (ATTA, 2011; Chon & Singh, 1995; Glover & Prideaux, 2009; Jefferson, 1995; Lehto, Jang, Achana, & O’Leary, 2008; Loveseed, 1997; Mihelj, 2010; Sorensen, 1993; Sung, Morrison, & O’leary, 2001; Swarbrooke, 2003; Tourism Canada, 1995; Travel Industry Association of America, 1998; Weiler & Hall, 1992). The rapid growth of the active tourism market has been evident, and as expressed by Sung, Morrison, and O’Leary (1997, p.3), “the variety and availability of adventure travel activities to satisfy a wide range of interests and abilities appear to be limitless.” Further, the needs expressed by tourists within this niche sector have the potential to introduce new service trends, and the ability to improve the marketing potential of tourism providers offering active tourism opportunities (Sung, Morrison, & O’Leary, 2001).

Moreover, a shift has been seen in the increasing popularity and development of sport related leisure tourism (Hinch & Higham, 2003). The idea of vacation for rest and relaxation has shifted to more active, recreation-oriented trips. In industrialized countries, sports tourism contributes between 1% and 2% to the GDP (Hudson, 2003). A survey commissioned by Marriott International found close to one fourth (22%) of tourists surveyed indicated that “opportunities to participate in sports were important when selecting a vacation” (Elrick & Lavidge, Inc. 1994, as cited by Tekin, 2004, p. 320) and trends presented by Hinch and Higham (2011) have displayed comparable results, indicative of the continued relevance of sports tourism.

In conjunction with the steady national increase shown in outdoor recreation participation over the last four years (Outdoor Recreation Participation Report, 2012), Brey (2007) indicated that everyday recreation and leisure activity participation (for ages 18+) parallels vacation activity participation. The link demonstrated by Brey (2007) between everyday leisure activities and tourism activities supports former empirical studies (Carr, 2002; Currie, 1997), “proposing a connection between involvement in leisure activities and subsequent tourism behaviors” (Chang & Gibson, 2011, p. 162).

Additionally, with the increased health consciousness in the United States, destination sites offering active tourism opportunities appeal to a larger group. Consumer demand, specifically in tourism, has grown to include the ever-present need for access to a variety of different physical activities (Yeoman & Butterfield, 2011). Throughout the tourism industry, destinations promoting physical and emotional health through their programs have dramatically increased in the past decade as “new strategies and initiatives imbedding a health label both physical and psychological in scope have been developed by ... hospitality sectors” (Chen, Huan, & Prebensen, 2011, p. 105).

These factors presented above, as well as an increase in active tourism patterns throughout the generations, have given rise to the expansion of active tourism. Research has demonstrated that the Baby Boomer generation will continue setting the pace for consumer tourism products (Glover & Prideaux, 2009); however Boomer preferences align closely to those of younger generations, specifically Generation Y (Lehto et al., 2008), who is soon projected to surpass them in size and spending power (Stevens, Lathrop, & Bradish, 2005). The investigation into active tourism preferences then should be trans-generational to expand the understanding of psychographics and the ever-growing trend of active tourism. Plog’s psychographic model is

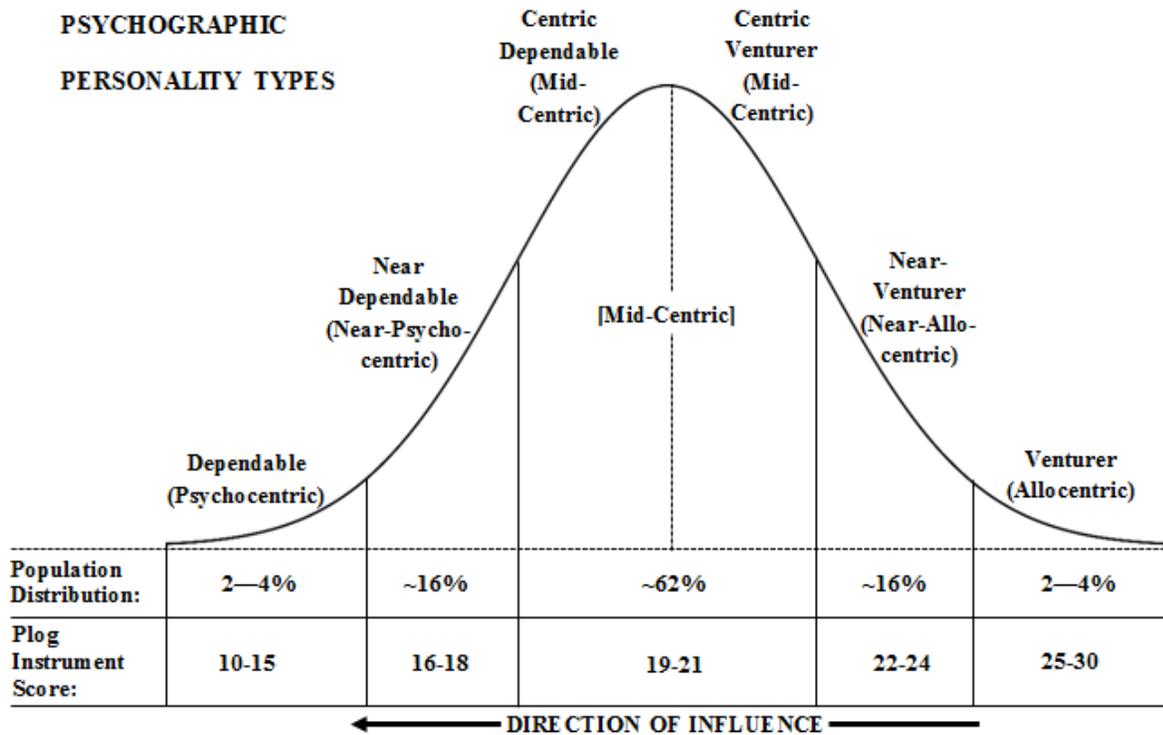
used as the conceptual framework for this study, and therefore it is necessary to outline the applications of his model.

2.2 *Psychographic conceptual framework – Plog model*

In 1972 Plog offered a bipolar continuum of personality types that was normally distributed. At one extreme of the continuum are Allocentrics or Venturers, who travel frequently to explore the world around them seeking novel experiences (e.g., undeveloped tourism markets) and often enjoy participating in active endeavors when traveling (Plog, 2002). At the other extreme, Psychocentrics or Dependables are generally more cautious (e.g., travel with tour groups), seek familiarity, and desire little activity while traveling (Plog, 2002). The continuum is divided into five segments shown in Figure 2.1: (1) Dependable (Psychocentric), (2) Near-Dependables (Near-Psychocentric), (3) Mid-Centric, (4) Near-Venturer (Near-Allocentric), and (5) Venturer (Allocentric) (Griffith & Albanese, 1996). Based on research estimates by Plog (2002), the model disperses normally across the population: 2% to 4 % of tourists align as either pure Dependable or Venturer, nearly 16% as Near-Dependables or Near-Venturer, and approximately 62% of the population is classified as Mid-Centric.

Figure 2.1

Psychographic personality types of tourists.



Source: Adapted from Plog, 2002

Direction of influence indicates that Venturers have the highest level of influence on the other psychographic personality types; marketing efforts should be targeted toward their end of the spectrum to effectively position a tourism product or destination (Plog, 2002). According to Plog (2002), the model is a reliable predictor for vacation activities:

Overall, Venturesomeness shows a stronger relationship to travel characteristics than household income. Income correlates better with travel spending, but Venturesomeness relates more strongly to total trips taken. More important, Venturesomeness is a better predictor of the types of activities pursued on leisure trips. (p. 244)

Plog (1979) later developed an additional energy dimension within his model to designate the level of activity preferred by tourists: “high-energy travelers prefer high levels of activity

while low-energy travelers prefer fewer activities” (Nickerson & Ellis, 1991, p. 26). Plog (1991b) further established the model with the formation of 28 descriptors defining specific Psychocentric/Allocentric tourist types. Finally, Plog (1995) condensed his original psychographic questionnaire to eight questions measuring both Venturesomeness and energy categories. Due to the proprietary nature of these questionnaires, the original 10 question-questionnaire was selected and implemented within this study based on the transparency of the scoring system.

The fundamental theories encompassing Plog’s model are trait aggregation and cross-situational consistency (Griffith & Albanese, 1996). Both theories are founded on the notion that personality variables are enduring, even though individuals change over time (Buss, 1989; Epstein 1979, 1983; Epstein and Teraspulsky, 1986; Foxall and Goldsmith, 1994). The general consistency of personality characteristics has been shown to lead to patterns of reliable behavior within multiple situations (Albanese, 1990; Epstein, 1983; Epstein and Teraspulsky, 1986). According to Griffith and Albanese (1996):

Although situational and demographic characteristics of individuals will change over time, their underlying personality characteristics are relatively enduring. This indicates that although travel destination choices will vary over time, the general types of destination decisions will remain relatively stable. (p. 48)

Plog’s model has not been without criticism. Smith (1990) and Dimanche and Havitz (1994) reproached Plog’s theory for insufficient empirical verification. Additionally, some researchers (Gilbert & Cooper, 1991; Andreu, Kozak, Avci, & Cifter, 2005) have raised concern over Plog’s psychographic model, claiming that there are different motivations surrounding each destination choice and travel occasion. Other reservations surrounding the Plog model include:

subjectivity towards U.S. travelers (Smith, 1990), restricted predictability of tourism behaviors (Chon & Sparrowe, 2000 as cited in Litvin, 2006), and external factors (e.g. financial) influencing archetypal psychographic positioning (Crossley & Jamieson, 1993).

Though the Plog method has received critique, it still can be used as a valuable investigative tool (Siguaw, Enz, & Liu, 2008). A recent analysis of the model by Litvin (2006) showed support for the model observing that it offers a practical foundation for understanding idyllic tourism preferences. Plog's model continues to provide a pragmatic representation of tourist behavior, as shown by its use in contemporary tourism textbooks (Goeldner & Ritchie, 2005; Woodside & Martin, 2007) and through a highly frequented website devoted to determining tourism personalities based on his psychographic research (Best Trip Choices, 2012).

According to Plog (2004), a straight-line relationship has been shown between psychographic influences and certain individual participant recreation activities on vacation, identifying that Venturers participate more frequently in some recreation activities than Dependables, including golf, tennis, and downhill skiing. Further research by Wolfe, Hsu, and Kang (2002) examined niche tourism offerings, revealing distinct psychographic and demographic profiles of leisure tourists and their corresponding activity preferences. Interestingly, participants attracted to outdoor recreation activities were shown to be exploratory, children centered, and outgoing (Wolfe et al., 2002). Another psychographic study by Chandler and Costello (2002) presented research collected from a heritage tourism site in the U.S. Results of the study indicated moderate activity level recreation interests (birdwatching, nature walking) associated with Mid-Centric tourists (Chandler & Costello, 2002). Chandler and Costello's (2002) research is important because it demonstrated the potential to develop a consistent

psychographic profile at multiple types of destinations. Table 2.1 summarizes research where Plog's model has been employed.

Table 2.1

Plog's model in the literature.

Researcher(s)	Year	Study	Sample	Findings
Weaver	2012	Psychographic insights from a South Carolina protected area	U.S. nature preserve (South Carolina)	Visitors (N = 976) to an undeveloped nature preserve were surveyed using an adapted Plog scale to identify psychographic characteristics related to Venturesomeness. The results showed a high majority of Venturer visitors (35%), and findings showed further support for Plog's psychographic model.
Hardy	2010	Equestrians and How They Disperse along Plog's Allocentric/Psychocentric Continuum	Competitive/non-competitive U.S. horse riders	Researchers examined the application of Plog's psychographic traveler method to the specific activity of riding horses, investigating different rider types. Both competitive and non-competitive riders were surveyed (N = 233), and results showed a similar distribution in comparison to Plog's typology, however no correlation existed between rider type and Venturesomeness score. Further research was suggested to observe how different activities driven by personality characteristics could be segmented according to Plog's model.
Siguaw, Enz, & Liu	2008	Using Tourist Travel Habits and Preferences to Assess Strategic Destination Positioning The Case of Costa Rica	U.S. travelers to Costa Rica	Researchers analyzed U.S. travelers to Costa Rica (N = 118) by use of Plog's psychographic method, in attempts to understand how destination lifecycles are impacted by consumer preferences. Results showed consistencies with Plog's distribution and psychographic types; researchers claimed the model should be considered a valuable investigative tool.
Litvin	2006	Revisiting Plog's Model of Allocentricity and Psychocentricity... One More Time	Singapore university student's parents	Parents of university students (N = 290) in Singapore were asked to respond to two generalized questions examining the predictability of Plog's psychographic model: "Where did you go on your most recent vacation?" and "If you could visit any destination in the world, including places you may have already visited, where would you go?". Results supported Plog's model in terms of travel aspirations, however indicated further empirical testing to show the model as predictive of travel behavior.
Plog	2002	The Power of Psychographics and the Concept of Venturesomeness	U.S. travelers	United States tourists (N = 7,961) were surveyed based on a Venturesomeness scale, among other demographic questions. Results indicated commonalities among income and Venturesomeness in forecasting travel characteristics, however Venturesomeness was shown to be more highly correlated with total trips taken and overall more effective in predicting travel activities.

Table 2.1 Continued

Plog's model in the literature.

Researcher(s)	Year	Study	Sample	Findings
Chandler & Costello	2002	A Profile of Visitors at Heritage Tourism Destinations in East Tennessee According to Plog's Lifestyle and Activity Level Preferences Model.	U.S. heritage tourists (East Tennessee)	Visitors (N = 412) to three separate heritage tourism sites were surveyed to investigate Plog's Lifestyle and Activity Level Preferences Model. The results showed psychographic homogeneity, and produced evidence supporting consistent psychographic profiles at multiple destination locations, according to Plog's model.
Albanese & Griffith	1996	An examination of Plog's psychographic travel model within a student population	U.S. undergraduate students	The study attempted to cross-validate Plog's psychographic travel instrument with its three underlying personality trait measures, using surveys collected from an undergraduate sample population (N = 145). The outcome of the tests showed results similar to the distribution of travelers seen in Plog's original study, and helped to expand the implications for further psychographic research using Plog's instrument.
Nickerson & Ellis	1991	Traveler Types and Activation Theory: A Comparison of Two Models		This study examined Plog's (1972) Allocentric/Psychocentric travel model in relation to energy based travel types, using activation theory (1961). Past Allocentric/ Psychocentric investigations were analyzed using the method of linear structural relations (LISREL). Results suggested general support for Plog's model, and showed a high correlation between the Allocentric/Psychocentric scale and the presented energy dimensions.
Smith	1990	A test of Plog's Allocentric/Psychocentric model: Evidence from seven nations	Travelers from: France, Japan, West Germany, United Kingdom, Switzerland, Singapore, & Hong Kong	Within the study, researchers performed a test of Plog's psychographic instrument across seven nations (N = 1,500) to establish empirical foundations for the model. An attempt was made to recreate Plog's study, using four hypotheses synthesized from his original model and a collection of 21 Psychocentric/Allocentric variables determined by the researchers. The results showed weak correlations between the determined psychographic variables and traveler destination preference.

While the previous studies have shed light on the use of psychographic profiles for leisure tourism segmentation, there is very little psychographic research exploring active tourism, specifically from a generational perspective. Traditionally, psychographics have been a major variable for segmentation (Kotler, 1994) because of the ability to use them “to insightfully describe the market segments” (Wolfe, Hsu, & Kang, 2002, p. 20). Psychographics have been shown to provide rich data within market segments, and research by Plummer (1974) emphasized the increased dimensionality of consumer market data when psychographics and demographics were combined, creating more in-depth consumer lifestyle patterns.

2.3 *Segmentation*

From a tourism standpoint, the purpose of segmentation is to distinguish homogeneous tourist groups with similar preferences from the overall heterogeneous tourist population (Andereck & Caldwell, 1994). Understanding the individualities of the homogenous groups helps marketers to “tailor the product or service and promote the product or service more effectively” (Andereck & Caldwell, 1994, p. 40).

Past studies have segmented tourism markets in a number of ways, including: expenditure volume (Spotts & Mahoney, 1991; Mills, Couturier, & Snepenger, 1986) demographics (Anderson & Langmeyer 1978), psychographics (Kotler, 1994; Plummer, 1974; Wolfe, Hsu, & Kang, 2002), repeat and non-repeat visitation (Perdue, 1985; Gitelson & Crompton 1984), and travel motivations and sought benefits (Andereck, Caldwell, & Debbage, 1991; Calantone & Johar, 1984; Moisey & McCool 1990; Snepenger, 1987; Woodside & Jacobs, 1985). Indiscriminant of which market segmentation strategy was used, the researchers consistently found that demographic variables remained relatively constant (Andereck &

Caldwell, 1994). Of all the demographic variables, age has been contended as the most essential for consumer marketers and researchers (Roberts & Manolis, 2000). The importance of age as a demographic characteristic is not only found in its numeric value, but in its ability to externalize time periods through the use of generational cohorts (Stevens et al., 2005). According to Huang and Petrick (2010, p. 27):

In order to develop an accurate understanding of a consumer segment and subsequent effective marketing and promotion strategies, it is imperative to take into consideration both age segments and cohort characteristics to fully understand consumer preferences.

A limited amount of practical research representing cohorts can be found within the tourism literature (Pennington-Gray, Fridgen, & Stynes, 2003). Therefore, with the practicality of using both age segmentation and cohort characteristics, this study will describe the sample both in terms of cohorts (Baby Boomers, Generation X, and Generation Y) and chronologic age. It is also essential to note that the formative experiences associated with cohorts have been shown to “shape specific preferences, beliefs and psychographic tendencies” (Moscardo, Murphy, & Benckendorff, 2011, p. 87).

2.4 *Generational tourists*

Generational cohorts are defined loosely by generational boundaries; however, the endpoints referenced in this study place Baby Boomers between the years of 1946-1964, Generation X, 1965-1976, and Generation Y from 1977-1994 as shown in Table 2.2.

Table 2.2

Generational boundaries.

Birth years	Generation name	Age range in 2013
1946-1964	Baby Boomers	49-67
1965-1976	Generation X	37-48
1977-1994	Generation Y	19-36

Source: Huang & Petrick, 2010

There has been evidence of some overlap between generational dates, as well as sociological and psychological characteristics (Benckendorff, Moscardo, & Pendergast, 2010). Thus, further investigation into the associations between the three aforementioned groups is needed, namely because they “represent large segments of opportunity for marketers” (Huang & Petrick, 2010, p. 28).

2.4.1 *Baby Boomers*

For many years the tourism industry has experienced consistency in travel from the Baby Boom generation (Benckendorff et al., 2010) and current research on population aging suggests that industry-standards will continue to be set according to this group:

Population aging has been identified as a critical element of demographic change which is a key driver for future consumer demand. Driven by the size of the baby boomer generation, population aging is likely to affect the future choice of tourism activities and destinations. As the baby boomers retire, their demand patterns and preferences will grow in significance and will strongly influence the future structure of tourism product development (Glover & Prideaux, 2009, p. 25).

With the sustained influence on tourism held by the Boomer generation, it is vital to understand the needs and wants of this group and how they can be adapted into the mainstream tourism industry, while keeping in mind the younger tourism segments (Glover & Prideaux, 2009).

A recent cross-generational study has shown that “a much more active senior will become the mainstream senior traveler” (Lehto et al., 2008, p. 249), and that senior travelers are traveling specifically for outdoor recreation and the exploration of adventurous locales (Lehto et al., 2008). With the development of active tourism patterns for the senior segment, current research has supported the need for destinations to cater to the more physically conscious seniors to sustain business (Glover & Prideaux, 2009; Grant, 2002). Lehto et al. (2008) reported that Baby Boomers are expected to continue “defying their physical age and seeking experiences that will lead them to venture off the beaten path and engage in adventurous or experimental experiences” (p. 248). With the tourism development of Boomers shown to be active, there is evidence that current mature tourists may be more closely connected to the younger tourism contingent (Lehto et al., 2008). Not only are Baby Boomers looking for the same active tourism opportunities as their younger counterparts, they do not want to be considered *old* (Glover & Prideaux, 2009). The obstacle then, that tourism suppliers face is “designing products and services that are suitable for this age group without offending their own sense of youthfulness” (Glover & Prideaux, 2009, p. 35). Schroeder and Widmann (2007) have noted that “destinations that consciously cater to the senior segment will be able to profit from a demographic change” (p. 11).

Research efforts have been made comparing the workplace similarities (Wesner & Miller, 2008), size (Sullivan & Heitmeyer, 2008), and value (Corporate Leadership Council 1999, as cited by Jorgensen, 2003) among Boomers, Gen X, and Gen Y. The recurring theme is that the

generations are more compatible than previously thought (Treuren & Anderson, 2010). Baby Boomers have also shown travel consistencies with the younger generations. Through the use of cohort analysis, Pennington-Grey et al. (2003) introduced common generational tourist preference variables, which included heightened interest in visiting national and provincial parks as a part of leisure tourism and may also correspond to the more recent upgrowth in nature-based tourism. Glover and Prideaux (2009) asserted, however, that “the tourism industry must also acknowledge the needs and demand of the less numerous younger generations in order to provide products and destinations tailored to their demand preferences” (p. 35).

2.4.2 *Generation X and Y*

As Generation X ages, research has begun to indicate that their values are becoming progressively similar to those of the Baby Boomers (Corporate Leadership Council 1999, as cited by Jorgensen, 2003). Generation X is beginning to reach its highest earning potential, and according to DeLollis (2005), Gen X is the most free-spending generation, already outspending Boomers in certain travel stays.

Prior research by Neuborne and Kerwin (1999), concerning projected generational size, shows the Y generation exceeding 60 million, making it nearly three times larger than Generation X (Stevens et al., 2005). Investigations by Markley (2002) and Dotson, Clark, and Dave (2008) propose that Gen Y will shortly reach the same populace as the Boomers and considerations should be made as how to accommodate this expansive group.

An important topic of research for some time has been the inquiry into the consumer behavior of the youth market (Hollander & Germain, 1992), and as Generation Y enters the consumer marketplace, experts have begun to pay attention to spending patterns due to the sheer

size of their consumer segment (Morton, 2002; Kueh & Voon, 2007). Gen Y represents a highly valued youth market, responsible for an assessed 83 million consumers in the United States alone (Schmitt, 2008). Stevens et al. (2005) suggested that by as early as 2020, the spending power of Gen Y will surpass that of the Baby Boomers.

Further, Gen Y has been shown to expend for recreation and sport related consumer products (Stevens et al., 2005). An overall increase in outdoor recreation participation for the 6 to 24 years old age group was seen from 2008 to 2011, with \$4.2 billion total outdoor outings and an average of 87.2 outings per participant (Outdoor Recreation Participation Report, 2012). For the age range of 25-44 years, within the same time frame (2008-2011) outdoor participation has gradually increased as well, with results showing 7.3 billion total outdoor outings and an average of 79.2 outings per participant. The 45+ age group has shown relative consistency, presenting a steady trend in outdoor participation from 2008 to 2011 (38%, 2008; 39%, 2009; 38%, 2010; 38%, 2011) (Outdoor Recreation Participation Report, 2012).

As previously noted, empirical research by Brey (2007), Carr (2002), and Currie (1997) has demonstrated support for everyday leisure trends corresponding with tourism leisure activity. The interrelation of tourism among the three cohorts is essential in understanding the true nature of psychographics. Therefore this study will investigate the vacation recreation activity patterns of potential visitors to North Carolina, across three generations, using Plog's psychographic framework.

Chapter 3: Methods

In order to accommodate increases in active tourism, destination operators need to recognize what types of experiences are most attractive to tourists (Glover & Prideaux, 2009; Schroeder & Widmann, 2007). As new active tourism trends emerge, researchers and planners are beginning to explore the travel phenomenon of active tourism. However, current methodological research has yet to investigate where vacation recreation activities engaged in by tourists fall on Plog's psychographic continuum. Sung et al. (2001) suggested the need for current segmentation research within active tourism in order for tourism marketers to more effectively match preferred destination activities to potential guests. With the increase in active tourism across the generations and the presented effectiveness of personality in predicting tourism patterns, new research is needed to accurately define the psychographic markers associated with particular vacation recreation activities in order to determine traveler preferences. Consequently, the research questions that this study investigated were:

1. Is Plog's psychographic model still representative of present-day tourists? (Does the model still fit?)
2. Are the travel planning profiles as expected for each Plog category?
3. Are there demographic differences in regard to how tourists distribute across Plog's continuum?
4. How do preferred vacation recreation activities of tourists relate to their psychographic score?

3.2 Survey design and distribution

The survey contained four sections. The first section of the survey consisted of general demographic questions such as gender, age, income, education level, and geographic location (zip code).

The second section consisted of a checklist of 52 recreation activities (Table 3.1) and two questions related to travel planning. The Vacation Recreation Activity Index (VRAI) allowed respondents to indicate their preferred recreation activities while on vacation, asking respondents on a 4-point Likert scale to indicate how likely they were to participate in certain recreation activities when traveling, ranging from *unlikely to extremely likely*. The VRAI was amassed from prior recreation catalogs to allow for a wide variety of activities (Jang, Cai, Morrison, & O’Leary, 2005; Mill, 2001; Nvight, 1996; Sung, Morrison, & O’Leary, 2001), and reported good internal consistency, with a Cronbach alpha coefficient of .932.

Table 3.1

Vacation recreation activity index (VRAI).

Alpine Skiing	Four-Wheel Driving/ Off-roading	Nature Walking	Snowshoeing
Backpacking	Freshwater Fishing	Orienteering	Surfing
Beach Activities (Sunbathing, Walking, Collecting Shells)	Geocaching	Paddle Boarding	Swimming
Biking (Road)	Golfing	Rafting	Tai Chi
Birdwatching/ Birding	Guided Outdoor Tours	Rock Climbing	Team Sports
Boating	Hang-gliding	Running/ Jogging	Tennis
Bungee Jumping	Hiking	Sailing	Tubing (Water)
Camping (Primitive)	Horseback Riding	Saltwater Fishing	Wake Boarding
Camping (RV, Camper, Car)	Hunting	Scuba Diving	Walking
Canoeing	Ice Climbing	Sky Diving	Water Skiing
Cross-Country Skiing	Jet Skiing	Snorkeling	Wildlife/ Nature Viewing
Exercise Classes (Zumba, Spinning, Aerobics)	Kayaking	Snowboarding	Wind Surfing
Fly Fishing	Mountain Biking	Snowmobiling	Yoga

Sources: Jang et al., 2005; Mill, 2001; Nvight, 1996; Sung, Morrison, & O’Leary, 2001

Following the VRAI, two vacation travel planning questions were asked, *At what point in your travel planning do you typically make decisions about your recreational activities?*, and *How far in advance do you usually make your lodging reservations?* The purpose of the recreational travel planning and lodging travel planning questions was to establish if any differences in travel planning behavior existed among groups.

Plog's 10-question psychographic instrument comprised the third section of the survey, with an adaptation of two questions for modern-day context. The question *When a new electronic gadget or product appears in the marketplace, will you probably...* was changed to *When a new electronic product appears in the marketplace, will you probably...* and the question *In terms of the current health-and-exercise phenomenon that has swept the nation, do you...* was changed to *In terms of your current exercise participation, do you....* The final section of the survey included two confirmation questions asking respondents to identify vacation preferences for both vacation location and activity level while on vacation. These questions were included to test for concurrence with the Plog instrument.

The survey was piloted with an expert panel including faculty members in the Recreation and Leisure Studies department at East Carolina University, students in the Principles of Tourism and Sustainability class at East Carolina University, employees at an outdoor recreation supply store, and destination marketing professionals. The responses and edits to the survey were taken into consideration and used to create the final instrument for data collection (Appendix B). The primary researcher worked with four participating Destination Marketing Organizations (DMOs) within North Carolina to distribute surveys through email and Facebook databases. The first distribution of the survey was the week of November 26th, 2012, followed by two reminders

after initial contact to prompt respondents to complete the survey. The survey was closed on December 20th, 2013 (Appendix E).

3.4 Analysis

The present study operated under a cross-sectional approach, observing tourists at a specific point in time. A statistical package (SPSS 20) was used for data analysis. With the VRAI data, blank responses for likeliness to participate were assumed to be *Unlikely*; because of the large number of response options, it was consistently found that respondents skipped activities they were not interested in. Respondent answers from the Plog instrument were summed to create a psychographic profile for each respondent using the assigned values: one point for every “a” answer, two points for every “b” answer, and three points for every “c” answer – in keeping with the Plog model. A participant score between 10 to 15 points designated a “Dependable” tourist, 16 to 18 “Near-Dependables,” 19 to 21 “Mid-Centric,” 22 to 24 “Near-Venturer,” and a “Venturer” tourist was denoted by a score of 25 to 30 points.

Table 3.2

Analysis table.

Research questions	Independent variable	Level of measurement	Dependent variable	Level of measurement	Analysis type
1	Plog categories	Categorical	Psychographic confirmation questions	Interval	One-way ANOVA
1	Plog score	Interval	Psychographic confirmation questions	Interval	Pearson’s correlation coefficient
2	Plog categories	Categorical	Recreation travel planning questions	Categorical	Chi-square
3	Demographics	Categorical	Plog score	Interval	One-way ANOVA/ t-test
4	Plog categories	Categorical	Activity dimensions likeliness scores	Interval	One-way ANOVA
4	Generational cohorts	Categorical	Activity dimensions likeliness scores	Interval	One-way ANOVA

Chapter 4: Results

4.1 Introduction

The goal of this project was to better understand how personality characteristics influence recreation activity choices while on vacation. The basis of the study was founded in psychographics, a way of looking at personality profiles that has been shown to reliably establish tourist preferences. This study assessed how adventurous the respondents were in general, and investigated the links between their generation, their level of adventurousness, and reported recreation preferences while on vacation.

4.2 Descriptive results

As previously stated, the sample of respondents was comprised of potential visitors to North Carolina who requested information from four DMOs within the state. The four DMOs represented geographically distinct recreational regions in North Carolina, including mountains, piedmont, and coast. To answer the specified research questions, usable data analyzed were restricted to members of Generation Y, Generation X, and Baby Boomers. This resulted in the researcher removing 54 respondents from other age groups and reducing the overall sample size to 528.

4.2.1 Demographics

The demographic descriptive data are displayed in Tables 4.1 and 4.2. All data in the table are valid percent scores, where “*N*” represents the number of visitors who responded to each question. The majority of respondents were in the Baby Boomer cohort (between the ages of 49 and 67 - 51.1%), female (68.6%), and well educated, with most having attended college or graduated from college (64.5%), and over one quarter holding a post graduate degree (27.6%).

The majority of respondents earned between \$50,000 and \$100,000 annually (40.2%). Data were collected from respondents in 35 different states, with North Carolina holding the highest percentage (38.2%).

Table 4.1

Demographic summary of respondents.

Variable	Percentage (%)
Gender (N=528)	
Female	68.6
Male	31.4
Highest Level of Education (N=527)	
High school graduate or some high school	7.9
College graduate or some college	64.5
Post graduate	27.6
Yearly Income (N=525)	
Less than \$50,000	28.2
\$50,000 to \$100,000	40.2
\$100,000 to \$150,000	11.2
\$150,000 to \$200,000	4.0
Greater than \$200,000	2.2
Prefer not to answer	14.2
Response by State (N=528)	
North Carolina	38.2
Virginia	11.9
Pennsylvania	7.7
South Carolina	6.0
Florida	5.0
Ohio	5.0
Maryland	3.4
Georgia	2.8
New Jersey	2.4
New York	2.4
West Virginia	2.2
Tennessee	1.9
Indiana	1.4

Table 4.2

Generational cohorts.

Generation (N=528)	Years of birth	Ages	Percentage (%)
Baby Boomer	1946-1964	49-67	51.1
Generation X	1965-1976	37-48	23.8
Generation Y	1977-1994	19-36	16.0

4.2.2 *Vacation recreation activities*

The VRAI contained 52 vacation recreation activities and respondents were asked to indicate how likely they were to participate in each when traveling (Table 4.3). Each item was measured on a four-point Likert scale: 1 *Unlikely*, 2 *Somewhat Likely*, 3 *Likely*, 4 *Extremely Likely*. The recreation activities that respondents were likely or extremely likely to participate in while on vacation were walking (91.1%), beach activities (89.3%), nature walking (75.4%), swimming (74.0%), and wildlife/nature viewing (73.5%).

Table 4.3

Vacation recreation activities.

Vacation recreation activities	(N)	Unlikely	Somewhat likely	Likely	Extremely likely
Walking	528	3.3	5.7	19.8	71.3
Beach Activities (Sunbathing, Walking, Collecting Shells)	528	2.8	7.9	20.3	69.0
Swimming	528	10.5	15.5	23.1	50.9
Wildlife/ Nature Viewing	528	10.2	16.4	25.1	48.4
Nature Walking	528	9.3	15.3	31.7	43.7
Hiking	528	16.5	22.9	23.8	36.8
Boating	528	23.8	26.9	27.9	21.5
Saltwater Fishing	528	47.7	19.4	14.1	18.8
Kayaking	528	36.3	25.8	20.3	17.6
Freshwater Fishing	528	41.5	24.4	16.9	17.2
Camping (RV, Camper, Car)	528	45.3	22.4	16.7	15.7
Tubing	528	38.2	27.2	20.0	14.6
Four-Wheel Driving/ Off-roading	528	48.9	23.2	14.6	13.3
Canoeing	528	27.7	36.3	23.2	12.7
Snorkeling	528	43.9	26.5	17.0	12.6
Guided Outdoor Tours	528	26.5	32.2	30.1	11.2
Birdwatching/ Birding	528	46.3	25.5	17.6	10.7
Biking (Road)	528	35.5	33.4	20.8	10.3
Running/ Jogging	528	58.3	19.6	11.9	10.2
Rafting	528	45.1	28.6	16.7	9.6
Camping (Primitive)	528	54.9	21.5	13.9	9.6
Backpacking	528	46.0	27.5	17.0	9.5
Yoga	528	58.7	21.7	10.2	9.5
Horseback Riding	528	43.2	31.5	16.2	9.1
Golfing	528	71.1	12.7	8.4	7.7
Fly Fishing	528	60.6	21.7	10.5	7.2
Exercise Classes (Zumba, Spinning, Aerobics)	528	57.3	20.1	15.5	7.1
Sailing	528	54.9	25.8	12.7	6.5
Jet Skiing	528	54.4	23.4	15.8	6.4
Mountain Biking	528	60.9	22.7	10.2	6.2
Snowmobiling	528	71.8	15.0	8.4	4.8
Hunting	528	82.3	7.9	5.0	4.8
Water Skiing	528	71.8	14.5	9.3	4.5
Paddle Boarding	528	62.5	24.3	8.8	4.5
Wake Boarding	528	73.3	15.5	7.4	3.8
Tennis	528	66.6	22.9	6.7	3.8
Geocaching	528	72.3	19.4	4.5	3.8
Alpine Skiing	528	83.0	7.7	5.9	3.4
Team Sports	528	72.5	16.4	7.9	3.3
Tai Chi	528	78.3	12.6	6.0	3.1
Scuba Diving	528	74.4	14.6	8.1	2.9

Table 4.3 Continued

Vacation recreation activities.

Vacation recreation activities	(N)	Unlikely	Somewhat likely	Likely	Extremely likely
Rock Climbing	528	80.9	12.7	3.4	2.9
Surfing	528	77.6	13.8	5.9	2.8
Snowshoeing	528	79.2	12.9	5.3	2.6
Snowboarding	528	84.7	9.0	4.0	2.4
Orienteering	528	70.1	21.2	6.5	2.2
Cross-Country Skiing	528	81.2	11.7	5.2	1.9
Hang-gliding	528	80.0	13.4	4.6	1.9
Sky Diving	528	88.8	6.5	2.9	1.7
Wind Surfing	528	81.1	13.8	3.8	1.4
Bungee Jumping	528	84.7	11.5	2.9	0.9
Ice Climbing	528	96.2	2.2	1.2	0.3

4.2.3 *Travel profile*

The respondents' travel profile was composed of the stated travel planning and vacation preference responses (Table 4.4). Overall, respondents plan vacation recreation activities both before and after arriving at the destination (73.8%), and make lodging reservations from one to six months prior (48.8%). Vacation preferences, originally measured on a 10-point scale, were collapsed into three categories to normalize comparisons, as shown below in Table 4.4. Over half of respondents fell into the *Somewhere in the middle* response category (with responses recorded between values 4-7) for both type of location (54.2%) and activity level (58.2%) vacation preferences.

Table 4.4

Travel profile.

Variable	Percentage (%)
Recreational Travel Planning (N=528)	
Before arriving to the destination	18.6
After arriving to the destination	7.6
Both before arriving and after arriving at the destination	73.8
Lodging Travel Planning (N=528)	
After arriving to the destination	1.6
Less than one week prior to the trip	2.9
From one to four weeks prior	25.7
From one to six months prior	48.8
More than six months prior	21.0
Vacation Preferences (Location) (N=528)	
Somewhere you already know (1-3)	16.2
Somewhere in the middle (4-7)	54.2
Somewhere you have never been before (8-10)	29.6
Vacation Preferences (Activity) (N=528)	
A calm relaxing experience (1-3)	27.5
Somewhere in the middle (4-7)	58.2
An active adventurous experience (8-10)	14.3

4.2.4 Psychographic profile

The psychographic scores were normally distributed with the majority of respondents identified as Mid-Centric (46.6%) (See table 4.5).

Table 4.5

Psychographic category percentages.

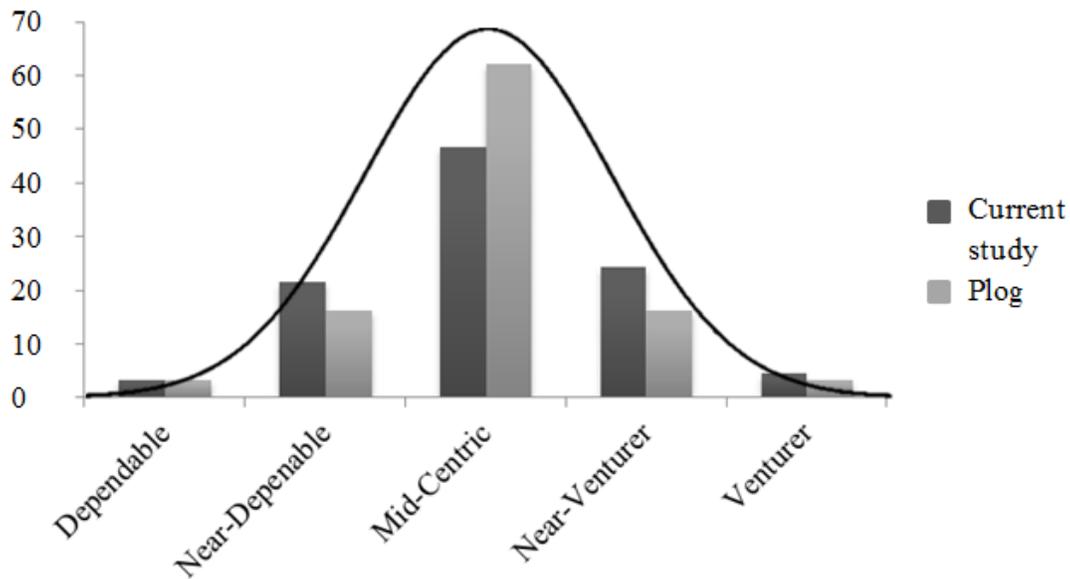
Psychographic score (N=528)	Percentage (%)
Dependable	3.1
Near Dependable	21.5
Mid-Centric	46.6
Near Venturer	24.3
Venturer	4.5

The psychographic distribution found within this study is comparative to the expected results identified by recurring empirical research. According to research approximations

(Griffith & Albanese, 1996; Plog, 2002), Plog’s model produces a normal distribution across the population: 2% to 4 % pure Venturer or Dependable, 16% Near-Venturer or Near-Dependables, and 62% classified as Mid-Centric. Following Plog’s method discussed in 3.4 for psychographic distribution, the model produced within this study was reasonably normal, with dispersal seen as 3.1% Dependable, 21.5% Near-Dependables, 46.6% Mid-Centric, 24.3% Near-Venturer, 4.5% Venturer. Figure 4.1 shows a graphical representation of normality for this study compared to Plog’s model, proposing high face validity.

Figure 4.1

Psychographic model comparison.



4.2.5 Descriptive profile of psychographic categories

A descriptive profile of each psychographic category was created and is displayed in Tables 4.6 and 4.7. Venturers, along with Near-Venturers, showed markedly higher earnings, educational advancement, willingness to visit somewhere they have never been before and to

seek out active, adventurous experiences in contrast to Dependables and Near-Dependables. The travel planning results (Table 4.7) were consistent, and the gender profile remained fairly stable across the continuum; however, there were twice as many male Venturers (44.0%) compared to male Dependables (22.0%).

The overall findings support Plog's research, which identified Venturers as intellectuals, eager to explore the world around them, and Dependables as unadventurous, inclined towards constancy (Plog, 2002). Another indication of similarity to Plog's model is the dispersal of recreation activity preferences across the psychographic continuum. In Table 4.6, eight sample vacation recreation activities (Birdwatching/ Birding, Beach Activities, Walking, Biking (Road), Mountain Biking, Horseback Riding, Kayaking, Rock Climbing) were chosen to reflect a range of activity. The eight sample activities were selected to visualize the transition of activity preference across the psychographic spectrum. Activities considered more active in nature (e.g., Mountain Biking, Horseback Riding, Kayaking, Rock Climbing) were found to have a higher preponderance on the Venturer side of the scale, in line with Plog's research which shows that "[activity] participation levels generally rise or decline across the psychographic spectrum" (Plog, 2002, p. 249). The complete table of vacation recreation activities for each psychographic category can be found in Appendix F.

Table 4.6

Psychographic category comparisons.

DEPENDABLE		NEAR-DEPENDABLES		MID-CENTRIC	
Variable	Percent- age (%)	Variable	Percent- age (%)	Variable	Percent- age (%)
Gender (N=18)		Gender (N=125)		Gender (N=271)	
Female	77.8	Female	76	Female	68.3
Male	22.2	Male	24	Male	31.7
Highest level of education (N=18)		Highest level of education (N=125)		Highest level of education (N=271)	
High school graduate or some high school	0	High school graduate or some high school	12.9	High school graduate or some high school	8.9
College graduate or some college	66.7	College graduate or some college	65.5	College graduate or some college	64.9
Post graduate	33.3	Post graduate	20.8	Post graduate	26.2
Yearly income (N=18)		Yearly income (N=125)		Yearly income (N=271)	
Less than \$50,000	50	Less than \$50,000	36.8	Less than \$50,000	27.5
\$50,000 to \$100,000	33.3	\$50,000 to \$100,000	32.8	\$50,000 to \$100,000	40.9
\$100,000 to \$150,000	11.1	\$100,000 to \$150,000	9.6	\$100,000 to \$150,000	11.5
\$150,000 to \$200,000	0	\$150,000 to \$200,000	5.6	\$150,000 to \$200,000	3
Greater than \$200,000	0	Greater than \$200,000	1.6	Greater than \$200,000	1.1
Prefer not to answer	5.6	Prefer not to answer	13.6	Prefer not to answer	16
Sample vacation recreation activities (N=18)		Sample vacation recreation activities (N=125)		Sample vacation recreation activities (N=271)	
Birdwatching/ Birding	22.2	Birdwatching/ Birding	12	Birdwatching/ Birding	10.3
Beach Activities	94.4	Beach Activities	72.8	Beach Activities	70.5
Walking	61.1	Walking	66.4	Walking	74.5
Biking (Road)	11.1	Biking (Road)	4.8	Biking (Road)	10
Mountain Biking	0	Mountain Biking	1.6	Mountain Biking	5.5
Horseback Riding	11.1	Horseback Riding	6.4	Horseback Riding	10
Kayaking	0	Kayaking	13.6	Kayaking	16.2
Rock Climbing	0	Rock Climbing	1.6	Rock Climbing	2.6
Vacation preferences (Location) (N=18)		Vacation preferences (Location) (N=125)		Vacation preferences (Location) (N=271)	
Somewhere you already know (1-3)	50	Somewhere you already know (1-3)	19.2	Somewhere you already know (1-3)	15.1
Somewhere in the middle (4-7)	44.4	Somewhere in the middle (4-7)	55.2	Somewhere in the middle (4-7)	57.2
Somewhere you have never been before (8-10)	5.6	Somewhere you have never been before (8- 10)	25.6	Somewhere you have never been before (8-10)	27.7
Vacation preferences (Activity) (N=18)		Vacation preferences (Activity) (N=125)		Vacation preferences (Activity) (N=271)	
A calm relaxing experience (1-3)	61.1	A calm relaxing experience (1-3)	39.2	A calm relaxing experience (1-3)	26.9
Somewhere in the middle (4-7)	38.9	Somewhere in the middle (4-7)	53.6	Somewhere in the middle (4-7)	61.3
An active adventurous experience (8-10)	0	An active adventurous experience (8-10)	7.2	An active adventurous experience (8-10)	11.8

Table 4.6 Continued

Psychographic category comparisons.

NEAR-VENTURER		VENTURER	
Variable	Percent- age (%)	Variable	Percent- age (%)
Gender (N=141)		Gender (N=25)	
Female	63.8	Female	56
Male	36.2	Male	44
Highest level of education (N=141)		Highest level of education (N=26)	
High school graduate or some high school	4.3	High school graduate or some high school	0
College graduate or some college	58.9	College graduate or some college	80.8
Post graduate	36.9	Post graduate	19.2
Yearly income (N=141)		Yearly income (N=579)	
Less than \$50,000	19.1	Less than \$50,000	26.9
\$50,000 to \$100,000	45.4	\$50,000 to \$100,000	46.2
\$100,000 to \$150,000	11.3	\$100,000 to \$150,000	15.4
\$150,000 to \$200,000	5.7	\$150,000 to \$200,000	0
Greater than \$200,000	5	Greater than \$200,000	3.8
Prefer not to answer	13.5	Prefer not to answer	7.7
Sample vacation recreation activities (N=141)		Sample vacation recreation activities (N=26)	
Birdwatching/ Birding	9.2	Birdwatching/ Birding	7.7
Beach Activities	66	Beach Activities	34.6
Walking	72.3	Walking	61.5
Biking (Road)	12.8	Biking (Road)	26.9
Mountain Biking	8.5	Mountain Biking	23.1
Horseback Riding	7.1	Horseback Riding	23.1
Kayaking	22.7	Kayaking	34.6
Rock Climbing	3.5	Rock Climbing	11.5
Vacation preferences (Location) (N=141)		Vacation preferences (Location) (N=26)	
Somewhere you already know (1-3)	13.5	Somewhere you already know (1-3)	3.8
Somewhere in the middle (4-7)	51.8	Somewhere in the middle (4-7)	38.5
Somewhere you have never been before (8-10)	34.8	Somewhere you have never been before (8-10)	57.7
Vacation preferences (Activity) (N=141)		Vacation preferences (Activity) (N=26)	
A calm relaxing experience (1-3)	17	A calm relaxing experience (1-3)	11.5
Somewhere in the middle (4-7)	61	Somewhere in the middle (4-7)	46.2
An active adventurous experience (8-10)	22	An active adventurous experience (8-10)	42.3

Table 4.7

Travel planning psychographic category comparisons.

DEPENDABLE		NEAR-DEPENDABLES		MID-CENTRIC	
Variable	Percent- age (%)	Variable	Percent- age (%)	Variable	Percent- age (%)
Recreational travel planning (N=18)		Recreational travel planning (N=125)		Recreational travel planning (N=271)	
Before arriving to the destination	16.7	Before arriving to the destination	15.2	Before arriving to the destination	17.8
After arriving to the destination	16.7	After arriving to the destination	10.4	After arriving to the destination	7
Both before arriving and after arriving at the destination	66.7	Both before arriving and after arriving at the destination	74.4	Both before arriving and after arriving at the destination	75.2
Lodging travel planning (N=18)		Lodging travel planning (N=125)		Lodging travel planning (N=271)	
After arriving to the destination	0	After arriving to the destination	2.4	After arriving to the destination	1.1
Less than one week prior to the trip	11.1	Less than one week prior to the trip	2.4	Less than one week prior to the trip	3.3
From one to four weeks prior	33.3	From one to four weeks prior	22.6	From one to four weeks prior	27.3
From one to six months prior	16.7	From one to six months prior	49.2	From one to six months prior	46.1
More than six months prior	38.9	More than six months prior	23.4	More than six months prior	22.1

Table 4.7 Continued

Travel planning psychographic category comparisons.

NEAR-VENTURER		VENTURER	
Variable	Percent- age (%)	Variable	Percent- age (%)
Recreational travel planning (N=141)		Recreational travel planning (N=26)	
Before arriving to the destination	22.7	Before arriving to the destination	23.1
After arriving to the destination	5.7	After arriving to the destination	3.8
Both before arriving and after arriving at the destination	71.6	Both before arriving and after arriving at the destination	73.1
Lodging travel planning (N=141)		Lodging travel planning (N=26)	
After arriving to the destination	2.1	After arriving to the destination	0
Less than one week prior to the trip	1.4	Less than one week prior to the trip	3.8
From one to four weeks prior	25.5	From one to four weeks prior	19.2
From one to six months prior	55.3	From one to six months prior	61.5
More than six months prior	15.6	More than six months prior	15.4

4.2.6 *Generational cohort psychographic analysis*

The generational cohort psychographic analysis, depicted in Table 4.8, illustrates how the different generations distribute across Plog's continuum and their overall vacation recreation activity preferences. Overall, generational consistencies were seen among the three cohorts (Gen Y, Gen X, and Baby Boomers). Their psychographic distributions were all relatively normal, with Baby Boomers showing a slightly higher proportion of pure Venturer's (4.7%) in comparison to Gen X (4.3%) and Gen Y (3.2%). The sample of eight vacation recreation activities, mentioned in 4.2.5, were moderately constant across the three cohorts. Baby Boomers showed a higher proportion of preferred participation in Birdwatching/ Birding (12.8%) and Walking (74.7%); however, for the higher exertion activities such as Mountain Biking and Kayaking, they showed similar active vacation recreation preferences, paralleling the younger cohorts. The complete table of vacation recreation activities for each cohort can be found in Appendix G. Vacation preferences were also similar across cohorts, both type of location and activity level vacation preferences were highly distributed *Somewhere in the middle*, though Baby Boomers were shown more predominantly wanting to visit somewhere they had never been before (Baby Boomers 31.6%; Gen X, 26.8%; Gen Y, 23.7%).

Table 4.8

Generational cohort comparison of demographics, psychographics, and vacation preferences.

GENERATION Y		GENERATION X		BABY BOOMER	
Variable	Percentage (%)	Variable	Percentage (%)	Variable	Percentage (%)
Gender (N=93)		Gender (N=138)		Gender (N=297)	
Female	73.1	Female	68.1	Female	68.9
Male	26.9	Male	31.9	Male	31.1
Psychographic Category (N=93)		Psychographic Category (N=138)		Psychographic Category (N=297)	
Dependable	3.2	Dependable	2.2	Dependable	2.7
Near-Dependables	22.6	Near-Dependables	19.6	Near-Dependables	22.2
Mid-Centric	44.1	Mid-Centric	49.3	Mid-Centric	45.5
Near-Venturer	26.9	Near-Venturer	24.6	Near-Venturer	24.9
Venturer	3.2	Venturer	4.3	Venturer	4.7
Sample Vacation Recreation Activities (N=93)		Sample Vacation Recreation Activities (N=138)		Sample Vacation Recreation Activities (N=297)	
Birdwatching/ Birding	9.7	Birdwatching/ Birding	5.1	Birdwatching/ Birding	12.8
Beach Activities	78.5	Beach Activities	73.2	Beach Activities	67.7
Walking	67.7	Walking	67.4	Walking	74.7
Biking (Road)	8.6	Biking (Road)	10.9	Biking (Road)	11.1
Mountain Biking	5.4	Mountain Biking	10.1	Mountain Biking	5.5
Horseback Riding	10.8	Horseback Riding	9.4	Horseback Riding	9.4
Kayaking	25.8	Kayaking	18.8	Kayaking	16.5
Rock Climbing	7.5	Rock Climbing	5.1	Rock Climbing	1.0
Vacation Preferences (Location) (N=93)		Vacation Preferences (Location) (N=138)		Vacation Preferences (Location) (N=297)	
Somewhere you already know (1-3)	22.6	Somewhere you already know (1-3)	17.4	Somewhere you already know (1-3)	14.1
Somewhere in the middle (4-7)	53.8	Somewhere in the middle (4-7)	55.8	Somewhere in the middle (4-7)	54.2
Somewhere you have never been before (8-10)	23.7	Somewhere you have never been before (8-10)	26.8	Somewhere you have never been before (8-10)	31.6
Vacation Preferences (Activity) (N=93)		Vacation Preferences (Activity) (N=138)		Vacation Preferences (Activity) (N=297)	
A calm relaxing experience (1-3)	25.8	A calm relaxing experience (1-3)	26.1	A calm relaxing experience (1-3)	30.3
Somewhere in the middle (4-7)	62.4	Somewhere in the middle (4-7)	57.2	Somewhere in the middle (4-7)	56.6
An active adventurous experience (8-10)	11.8	An active adventurous experience (8-10)	16.7	An active adventurous experience (8-10)	13.1

4.3 Test results

4.3.1 Vacation preferences among psychographic categories

To explore research question one, *Is Plog's psychographic model still representative of present-day tourists? (Does the model still fit?)*, and to explore the variability in vacation preferences (location and activity) among the five psychographic categories (Dependable, Near-Dependables, Mid-Centric, Near-Venturer, and Venturer), a one-way analysis of variance (ANOVA) was conducted. Participants in each psychographic category were assessed according to two confirmation questions measuring vacation preferences: vacation preference location, asking *When planning a vacation or getaway, do you prefer to visit?*, response options ranged from *Somewhere you already know* (1) to *Somewhere you have never been before* (10), and vacation preference activity, asking *When planning a vacation or getaway, do you prefer to have?*, responses ranged from *A calm relaxing experience* (1) to *An active adventurous experience* (10). Both vacation preference questions were placed in the survey as a confirmation for the Plog instrument or to reveal potential inconsistencies within the instrument.

The Levene's test for homogeneity of variances for both analyses indicated that the assumption of homogeneity of variance was not violated. Results showed that there was a statistically significant difference at the $p < .05$ level in the psychographic categories for both psychographic confirmation questions: vacation preference location [$F(4, 523) = 6.87, p < .001$] and vacation preference activity [$F(4, 523) = 16.7, p < .001$]. The effect size, calculated using eta squared, was moderate for vacation preference location (eta squared = .05) and for vacation preference activity (eta squared = .11). Using the Tukey HSD post-hoc test, comparisons for vacation preferences location indicated that the mean score for Dependables ($M = 3.64, SD = 2.06$) was significantly different than all other groups, and Venturers ($M = 7.3, SD = 1.96$)

differed significantly from the Dependable ($M = 3.64, SD = 2.06$) and Near-Dependables ($M = 5.54, SD = 2.43$) groups. Running the Tukey HSD post-hoc test for vacation preference activity, comparisons of means scores for Mid-Centrics ($M = 4.78, SD = 2.3$) showed significant differences among all other groups and Venturers ($M = 6.78, SD = 2.65$) differed from all other groups excluding Near-Venturers ($M = 5.69, SD = 2.21$), and Dependables ($M = 2.93, SD = 1.82$) differed from all other groups excluding Near-Dependables ($M = 3.89, SD = 2.17$). As indicated by the vacation preference mean scores in Table 4.9, respondents are more attracted to unfamiliar vacation locations and higher levels of activity on vacation as they increase in their level of Venturesomeness.

Table 4.9

Vacation preferences among the psychographic categories.

Psychographic categories	Vacation preference location Means and <i>SD</i>	Vacation preference activity Means and <i>SD</i>
Dependable	3.64 (2.06)	2.93 (1.82)
Near-Dependables	5.54 (2.43)	3.89 (2.17)
Mid-Centric	6.01 (2.36)	4.78 (2.30)
Near-Venturer	6.32 (2.41)	5.69 (2.21)
Venturer	7.3 (1.96)	6.78 (2.65)

An additional test was conducted to examine the relationship between respondents' raw psychographic scores and the two psychographic confirmation questions. The relationship between psychographic scores and vacation preferences (location and activity) was investigated using Pearson's correlation coefficient. Preliminary analyses were performed (Q-Q Plots) to confirm that no violation of assumptions of normality, linearity, and homoscedasticity had occurred. There was a low, positive correlation between vacation preference location and psychographic scores, $r = .19, n = 528, p < .001$, and there was a moderate, positive correlation

between vacation preference activity and Plog scores, $r = .36$, $n = 528$, $p < .001$ (correlation is significant at the 0.01 level, two-tailed), with higher levels of adventurous activity and novel location preferences associated with higher Plog scores. This agrees with the 4.3.1 ANOVA tests performed with the Plog categories.

4.3.2 *Recreation planning among psychographic categories*

To analyze research question two, *Are the recreation planning profiles as expected for each Plog category?*, two Chi-square tests for independence were conducted, indicating no statistically significant association between recreation planning and psychographic categories, $\chi^2(8, n = 527) = 7.84$, $p = .45$, *Cramer's V* = .086, as well as lodging reservation activity and psychographic categories, $\chi^2(16, n = 527) = 21.8$, $p < .149$, *Cramer's V* = .102. The proportion of cases were as expected, indicating no association between the recreation planning and lodging reservation and psychographic category variables.

4.3.3 *Demographic differences among psychographic categories*

To investigate research question three, *Are there demographic differences in regard to how tourists distribute across Plog's continuum?*, three independent, one-way ANOVAs were performed to investigate the differences in psychographic scores among varying age, education, and income groups. Testing for homogeneity of variances, the Levene's analysis indicated the significance values were greater than .05; therefore, the assumption of homogeneity of variance was not violated.

Results showed a statistically significant difference at the $p < .05$ level in the psychographic scores for both education level [$F(2, 524) = 5.8$, $p = .003$] and yearly income [F

(5, 520) = 5.18, $p < .001$]; however, age was not found to be statistically significant [$F(2, 525) = .04, p = .96$]. The effect size was relatively small for education level (eta squared = .02) and yearly income (eta squared = .04). Post-hoc comparisons (Tukey HSD) for education level showed that the mean score for the *High School Graduate or Some High School* group ($M = 19.2, SD = 1.97$) was statistically significant from the *College Graduate or Some College* ($M = 20.2, SD = 2.51$) and *Post-graduate* ($M = 20.7, SD = 2.4$) groups (Table 4.10). Further post-hoc comparisons (Tukey HSD) on yearly income showed significant differences in mean scores between the *Less than \$50,000* group ($M = 19.5, SD = 2.55$) and groups *\$50,000 to \$100,000* ($M = 20.6, SD = 2.34$) and *Greater than \$200,000* ($M = 22, SD = 2.6$).

Table 4.10

Psychographic mean scores among demographic variables.

Demographic categories	Psychographic score Means and <i>SD</i>
Gender	
Male	20.7 (2.5)
Female	20 (2.43)
Age	
Generation Y 1977-1994	20.2 (2.45)
Generation X 1965-1976	20.3 (2.41)
Baby Boomer 1946-1964	20.2 (2.52)
Highest Level of Education	
High school graduate or some high school	19.1 (2.0)
College graduate or some college	20.2 (2.52)
Post graduate	20.6 (2.42)
Yearly Income	
Less than \$50,000	19.5 (2.55)
\$50,000 to \$100,000	20.6 (2.34)
\$100,000 to \$150,000	20.3 (2.6)
\$150,000 to \$200,000	20.6 (2.39)
Greater than \$200,000	22 (2.6)

Additionally, to answer research question three an independent-samples t-test was performed to compare the psychographic scores of males and females (Table 4.10). The

significance value for Levene's test was larger than .05; therefore, equal variances were assumed. There was a significant difference in the scores for males ($M = 20.7$, $SD = 2.5$) and females ($M = 20$, $SD = 2.43$; $t(525) = 2.86$, $p = .004$, two-tailed). However, the magnitude of the differences in the means (mean difference = .66, 95% *CI*: .207 – 1.12) was small (eta squared = .014), indicating that only 1.4 percent of the variance in psychographic score was explained by gender.

4.3.4 *Vacation recreation activity dimensions*

To examine the central research question within this study, *How do preferred vacation recreation activities of tourists relate to their psychographic score?*, a factor analysis was conducted to group the vacation recreation activities into activity dimensions. Factor analysis “involves determining the smallest number of factors that can be used to best represent the interrelationships among [a] set of variables” (Pallant, 2011, p. 183). In this instance, the 52 variables from the Vacation Recreation Activity Index (VRAI) were subjected to principal components analysis (PCA) using SPSS version 19. Prior to PCA testing, the appropriateness of data for factor extraction was evaluated. Examination of the correlation matrix revealed multiple coefficients above .3, confirming that a majority of the items shared some common variance. The Kaiser-Meyer-Olkin value was .92, exceeding the recommended value of .6 and the Bartlett's Test of Sphericity was also significant [$\chi^2(1326) = 12,277.6$, $p < .001$].

A 12 factor solution explained 62.2% of the total variance. There was a partial leveling off of eigenvalues as seen in most scree plots; however, the 12 factor solution showed a number of strong loadings with most variables loading on only one dimension. The resulting twelve activity dimensions were: Board Sports, Passive Nature, Sportsman, Extreme Adventure,

Exercise, Group Recreation, Snow Sports, Swim/Beach Activities, Camping, Moderate Individual Course Activities, Water Recreation, and Geographic Adventure. The Cronbach Alpha scores for the itemized vacation recreation activities are presented in Table 4.11. Two items, Horseback Riding and Jet Skiing, failed to load sufficiently in any Activity Dimension and therefore were not included in subsequent analyses. Appendix H shows the Pattern Matrix for the 12-factor oblimin rotation, and the Structure Matrix is found in Appendix I.

Participant responses to 50 Vacation Recreation Activity Index (VRAI) questions assessing likeliness to participate in recreation activities while on vacation (1 = Unlikely, 2 = Somewhat Likely, 3 = Likely, 4 = Extremely Likely) were averaged and the mean scores were grouped into 12 corresponding Activity Dimensions (Board Sports, Passive Nature, Sportsman, Extreme Adventure, Exercise, Group Recreation, Snow Sports, Swim/Beach Activities, Camping, Moderate Individual Course Activities, Water Recreation, and Geographic Adventure) to develop a composite likelihood score for each individual dimension.

Table 4.11 Continued

Cronbach’s alpha for itemized vacation recreation activities.

Activity dimensions	Cronbach’s alpha	Individual loadings	Variance Explained
Board Sports	0.852		24.9
Wakeboarding	0.748		
Surfing		0.693	
Wind Surfing	0.648		
Water Skiing	0.493		
Snowboarding	0.482		
Paddle Boarding	0.348		
Passive Nature	0.781		6.73
Nature Walking	0.85		
Nature Viewing	0.85		
Walking		0.739	
Hiking		0.592	
Birdwatching	0.385		
Sportsman	0.815		5.38
Freshwater	0.825		
Fishing			

Table 4.11 Continued

Cronbach's alpha for itemized vacation recreation activities.

Activity dimensions	Cronbach's alpha	Individual loadings	Variance explained
Saltwater Fishing	0.803		
Fly Fishing	0.737		
Hunting		0.609	
Four-Wheel Driving/ Off-roading	0.565		
Boating		0.434	
Extreme Adventure	0.793		4.37
Bungee Jumping	-0.855		
Sky Diving	-0.819		
Hang Gliding	-0.818		
Ice Climbing	-0.401		
Scuba Diving	-0.395		
Rock Climbing	-0.382		
Exercise	0.706		3.54
Exercise Classes (Zumba, Spinning, Aerobics)	0.836		
Yoga		0.795	
Tai Chi		0.589	
Group Recreation	0.546		3.24
Golfing		0.756	
Tennis		0.556	
Team Sports	0.552		
Guided Tours	0.318		
Snow Sports	0.75		2.87
Snowshoeing	-0.74		
Alpine Skiing	-0.681		
Cross-Country Skiing	-0.653		
Snowmobiling	-0.534		
Swim/Beach Activities	0.462		2.45
Beach Activities (Sunbathing, Walking, Collecting Shells)	0.786		
Swimming	0.546		
Camping	0.646		2.3
Camping (RV, Camper, Car)	-0.67		
Camping (Primitive)	-0.633		
Backpacking	-0.369		
Moderate Individual Course Activities	0.638		2.25
Biking (Road)	-0.658		
Mountain Biking	-0.548		
Running/ Jogging	-0.538		
Water Recreation	0.832		2.12
Sailing		-0.422	
Kayaking		-0.408	
Snorkeling	-0.4		
Rafting		-0.4	
Tubing (Water)	-0.359		
Canoeing		-0.353	
Geographic Adventure	0.602		2
Geocaching	0.622		
Orienteering	0.619		

4.3.5 Activity dimensions among generational cohorts

Individual tests were conducted to explore the variability of activity dimension likeliness scores within the three generational cohorts. Examining the homogeneity of variances for the 12 Activity Dimensions, six significant values greater than .05 were found within the within the generational cohorts (Passive Nature, Sportsman, Exercise, Camping, Moderate Individual Course Activities, and Water Sports); for the selected cases the assumption of homogeneity of variance was not violated. ANOVA results showed that there was a statistically significant difference at the $p < .05$ level in the generational cohorts for Sportsman [$F(2, 525) = 7.86, p < .005$], Camping [$F(2, 525) = 5.55, p < .005$], and Moderate Individual Course Activities [$F(2, 525) = 5.87, p < .005$] dimensions. The Tukey HSD post-hoc test for the activity dimension Sportsman within the generational cohorts revealed that the mean scores for Generation Y ($M = 2.22, SD = .82$) differed significantly from both Generation X ($M = 1.91, SD = .75$) and Baby Boomers ($M = 1.88, SD = .72$). The activity dimension Camping within the generational cohorts showed mean scores for Generation Y ($M = 2.14, SD = .87$) differing from Baby Boomers ($M = 1.84, SD = .77$), and within the activity dimension Moderate Individual Course Activity mean scores for Baby Boomers ($M = 1.75, SD = .71$) were significantly different than all other groups.

Table 4.12

Activity dimension differences within the generation cohorts.

Generational cohorts	Board Sports Means and <i>SD</i>	Passive Nature Means and <i>SD</i>	Sportsman Means and <i>SD</i>	Extreme Adventure Means and <i>SD</i>	Exercise Means and <i>SD</i>	Group Recreation Means and <i>SD</i>
Generation Y	1.6 (.69)	2.8 (.72)	2.2 (.81)	1.5 (.63)	1.6 (.67)	1.8 (.65)
Generation X	1.5 (.66)	2.9 (.71)	2.2 (.75)	1.3 (.43)	1.5 (.67)	1.7 (.61)
Baby Boomers	1.3 (.46)	3 (.72)	2.2 (.72)	1.2 (.31)	1.6 (.74)	1.6 (.52)

Table 4.12 Continued

Activity dimension differences within the generation cohorts.

Generational cohorts	Snow Sports Means and <i>SD</i>	Swim/Beach Activities Means and <i>SD</i>	Camping Means and <i>SD</i>	Moderate Individual Course Activities Means and <i>SD</i>	Water Recreation Means and <i>SD</i>	Geographic Adventure Means and <i>SD</i>
Generation Y	1.4 (.68)	3.6 (.60)	2.1 (.87)	2 (.72)	2.2 (.73)	1.5 (.73)
Generation X	1.4 (.60)	3.5 (.62)	2 (.81)	1.9 (.82)	2.1 (.80)	1.4 (.66)
Baby Boomers	1.3 (.50)	3.3 (.76)	1.8 (.77)	1.8 (.71)	2 (.75)	1.4 (.58)

Welch and Brown-Forsythe tests were performed to find the adjusted F statistic for the six activity dimensions within the generational cohorts that did not meet the assumption of homogeneity (Table 4.13). The test demonstrated that the adjusted F statistics within the generational cohorts for the activity dimensions Board Sports, Extreme Adventure, Group Recreation, and Swimming/Beach Activities were significant at the $p < .001$ level.

Table 4.13

Welch and Brown-Forsythe test of equality of means for generational cohort activity dimensions.

Generational cohort activity dimension	Test	Adjusted F statistic	df1	df2	Significance
Board Sports	Welch	10.376	2	188.943	.000
	Brown-Forsythe	9.028	2	264.433	.000
Extreme Adventure	Welch	12.747	2	181.935	.000
	Brown-Forsythe	12.933	2	197.404	.000
Group Recreation	Welch	2.657	2	181.935	.000
	Brown-Forsythe	2.48	2	197.404	.000
Snow Sports	Welch	0.963	2	199.979	.384
	Brown-Forsythe	0.876	2	268.543	.418
Swimming/Beach Activities	Welch	7.189	2	244.656	.001
	Brown-Forsythe	7.914	2	392.85	.000
Geographic Adventure	Welch	0.529	2	203.884	.59
	Brown-Forsythe	0.5	2	279.362	.607

4.3.6 Activity dimensions among psychographic categories

Examining the homogeneity of variances for the 12 Activity Dimensions across the five psychographic categories, five significant values greater than .05 were found within the psychographic categories (Passive Nature, Sportsman, Group Recreation, Swimming/Beach Activities, and Camping); for these cases the assumption of homogeneity of variance was not violated. ANOVA results showed that there was a statistically significant difference at the $p < .05$ level in the psychographic categories for Group Recreation [$F(4, 523) = 2.88, p = .022$]. Using the Tukey HSD post-hoc test, comparisons for the activity dimension Group Recreation within the psychographic categories indicated that the mean score for Near-Dependables ($M = 1.33, SD = .55$) was significantly different than Venturers ($M = 1.63, SD = .77$).

Table 4.14

Activity dimension differences within the psychographic categories.

Psychographic categories	Board Sports Means and <i>SD</i>	Passive Nature Means and <i>SD</i>	Sportsman Means and <i>SD</i>	Extreme Adventure Means and <i>SD</i>	Exercise Means and <i>SD</i>	Group Recreation Means and <i>SD</i>
Dependable	1.2 (.37)	2.7 (.74)	1.8 (.67)	1 (.09)	1.2 (.33)	1.5 (.40)
Near-Dependables	1.3 (.47)	2.8 (.76)	1.9 (.71)	1.2 (.31)	1.5 (.60)	1.6 (.55)
Mid-Centric	1.4 (.59)	2.9 (.70)	2 (.78)	1.3 (.43)	1.6 (.72)	1.7 (.57)
Near-Venturer	1.5 (.61)	3 (.72)	1.9 (.71)	1.3 (.46)	1.7 (.78)	1.7 (.57)
Venturer	1.6 (.68)	3.1 (.58)	1.9 (.91)	1.5 (.67)	1.8 (.82)	2 (.66)

Table 4.14 Continued

Activity dimension differences within the psychographic categories.

Psychographic categories	Snow Sports Means and <i>SD</i>	Swim/Beach Activities Means and <i>SD</i>	Camping Means and <i>SD</i>	Moderate Individual Course Activities Means and <i>SD</i>	Water Recreation Means and <i>SD</i>	Geographic Adventure Means and <i>SD</i>
Dependable	1.1 (.25)	3.5 (.60)	1.7 (.59)	1.5 (.81)	1.5 (.61)	1 (.13)
Near-Dependables	1.2 (.33)	3.4 (.67)	1.8 (.77)	1.6 (.58)	1.9 (.74)	1.3 (.53)
Mid-Centric	1.4 (.58)	3.4 (.69)	1.9 (.82)	1.8 (.72)	2.1 (.77)	1.5 (.68)
Near-Venturer	1.5 (.64)	3.4 (.77)	2 (.80)	2.1 (.76)	2.2 (.72)	1.4 (.61)
Venturer	1.6 (.69)	3.1 (.73)	2.2 (.86)	2.3 (.97)	2.3 (.91)	1.6 (.77)

Welch and Brown-Forsythe tests were performed to find the adjusted F statistic for the seven activity dimensions within the psychographic categories (Table 4.15). The test demonstrated that the adjusted F statistics within the psychographic categories for the activity dimensions Board Sports, Extreme Adventure, Exercise, Snow Sports, Moderate Individual Course Activities, and Geographic Adventure were significant at the $p < .05$ level.

Table 4.15

Welch and Brown-Forsythe test of equality of means for psychographic categories activity dimensions.

Psychographic categories activity dimension	Test	Adjusted F statistic	df1	df2	Significance
Board Sports	Welch	3.02	4	65.667	0.024
	Brown-Forsythe	2.52	4	128.589	0.044
Extreme Adventure	Welch	14.93	4	89.649	0.000
	Brown-Forsythe	4.073	4	69.396	0.005
Exercise	Welch	2.657	2	181.935	0.000
	Brown-Forsythe	2.48	2	197.404	0.000
Snow Sports	Welch	9.181	4	68.087	0.000
	Brown-Forsythe	7.155	4	110.743	0.000
Moderate Individual Course Activities	Welch	12.716	4	62.693	0.000
	Brown-Forsythe	10.587	4	89.096	0.000
Geographic Adventure	Welch	19.271	4	91.121	0.000
	Brown-Forsythe	4.362	4	109.795	0.003

As indicated by activity dimension differences in Table 4.12 and Table 4.14, generational cohorts were relatively consistent with each other in their likeliness to participate in activities while on vacation, and the general trend for psychographic categories was the increase in mean likelihood scores across the psychographic continuum in almost all activity dimensions, excluding inverse trends in Swimming/Beach Activities.

4.4 Results summary

The purpose of this study was to examine Plog's psychographic model (1972) within a visitor population to explore links between personality, generation membership, and recreation activity preferences while on vacation. The main research objective of this study was to explore how preferred vacation recreation activities of tourists relate to individual psychographic scores. This study also examined demographic profiles and generational variances for each of Plog's

psychographic tourist types (Dependable, Near-Dependables, Mid-Centric, Near-Venturer, Venturer).

The first research question investigated whether Plog's model was still applicable to present day tourists. The results indicated that the Plog instrument does correspond to tourist vacation preferences, in terms of both location and activity level.

The second research question investigated the travel planning profiles within each psychographic category. Results indicated that no statistically significant association between travel planning and psychographic categories existed.

The third research question investigated the demographic differences among the psychographic categories. Results showed Venturers as more educated and earning a higher yearly income than the other psychographic categories. Results also indicated generational uniformity for active tourist preferences among the three cohorts, although Baby Boomers presented slightly higher proportions of pure Venturers (Baby Boomers 4.7%; Gen X 4.3%; Gen Y 3.2%), and Boomers more commonly responded as wanting to visit somewhere they had never been before (Baby Boomers, 31.6%; Gen X, 26.8%; Gen Y, 23.7%).

The final research question investigated how vacation recreation activities related to psychographic scores. After removing the two activities Horseback Riding and Jet Skiing due to insufficient loading, 50 Vacation recreation activities from the VRAI were factored into 12 activity dimensions, which explained 62.2% of the total variance. The dimensions were examined for psychographic and generational differences. Generational cohorts showed parity in their activity participation likeliness scores, with the highest likeliness scores for all cohorts seen in Passive Nature and Swimming/Beach Activities dimensions. The results for mean likelihood scores across the psychographic categories increased from Dependable to Venturer in 10 of the

12 activity dimensions, excluding Swimming/Beach Activities and Sportsman activity dimensions.

Chapter 5: Discussion

5.1 Introduction

The purpose of this study was to investigate the application of Plog's tourist typology to explore relationships between personality, generation membership, and recreational preferences of tourists while on vacation. This section will provide research implications and conclusions to be drawn from the study, limitations of the study, and recommendations for future research.

5.2 Discussion of research results

The descriptive results and normal curve of the data (Figure 4.1) was representative of Plog's research: 7.6% pure Venturer and Dependable, 45.8% Near-Venturer and Near-Dependables, and 46.6% Mid-Centric; compared to Plog's projections of 4% to 8 % pure Venturer and Dependable, 32% Near-Venturer and Near-Dependables, and 62% classified as Mid-Centric (Plog, 2002) (Table 5.1).

Table 5.1

Psychographic distribution comparisons.

Psychographic categories	Plog's projected psychographic distribution percentage (%)	Study distribution percentage (%)
Dependable	2 – 4	3.1
Near-Dependables	~16	21.5
Mid-Centric	62	46.6
Near-Venturer	~16	24.3
Venturer	2 – 4	4.5

Plog (2001) indicated that Dependables, along with Venturers, are comprised of common personality traits that define their innate characteristics, including tourist preferences. While

Plog (2001) contended that “no person is a perfect exemplar of any [specific] personality type” (p. 15), typical personality characteristics assigned to individuals with a Dependable personality are described below:

- *Intellectual restriction* – Dependables “do not seek out new ideas and experiences on a daily basis ... they are less Venturesome and less exploring than most persons” (p. 15), also they tend to read less and are less educated compared to Venturers (Plog, 2001).
- *Popular consumer preferences* – Dependable prefer well known consumer products and locales because “the popularity of such items makes them safe choices” (Plog, 2001, p.15).
- *Low activity level* – Dependables are generally less active and prefer activities that require lower levels of effort (Plog, 2001).

Venturers, however, are noticeably at the other end of the spectrum, and their representative personality traits include:

- *Intellectual curiosity* – Venturers “want to explore the world around them in all of its diversity ... they continually seek new experiences and enjoy activity (Plog, 2001, p.16). Venturers also appreciate novel and unusual experiences, and tend to be well read and more educated than Dependables (Plog, 2001).
- *Rare consumer preferences* – Venturers do not prefer popular brands or destinations, as “the thrill of discovery overrides disappointments that can come from a new product” (Plog, 2001, p. 16).
- *High activity level* – Venturers are highly active individuals, looking to venture out to explore new activities and landscapes.

5.2.1 *Confirmation of Plog model with tourist vacation preferences*

In line with the practice of including psychographic confirmation questions (Nickerson & Ellis, 1991), two questions in the current study were created specifically to act as a confirmation for the Plog instrument. Comparison of the confirmation questions to the Plog results showed expected relationships: “[activity] participation levels generally rise or decline across the psychographic spectrum” (Plog, 2002, p. 249). Additionally, in agreement with Nickerson and Ellis’ conclusion that a correlation exists between activity level and Venturesomeness (Nickerson & Ellis, 1991), the results of the current study demonstrated higher levels of adventurous activity and novel location preferences linked to higher Plog scores.

5.2.2 *Travel planning profiles of each Plog category*

There was no significant association between the psychographic categories and lodging and recreational activity planning. This is a unique finding in that previous research has found that Mid-Centrics are generally “more inclined to take the “safe” choice” (Siguaw, Enz, & Liu, 2008, p. 272) and therefore tend to plan ahead, in contrast to the Venturer mindset of taking a chance with their vacation plans (Plog, 2001). These findings could be related to the high proponderan

5.2.3 *Demographic differences in tourists*

Examining the psychographic scores among the demographic categories in Table 4.6, *Post graduate* and *College graduate or some college* mean psychographic scores were found to be significantly different than *High school graduate or some high school* and yearly income results showed significant differences in mean psychographic scores between *Less than \$50,000*

and *Greater than \$200,000*. Both of these results correspond with Plog's (2001) psychographic profile descriptors, showing higher Venturesome averages more closely associated with higher education and elevated yearly earnings. Research by Sigauw, Enz, and Liu (2008) has reported that "a willingness to spend large sums of discretionary income on travel is consistent with Venturesome travelers"; however, this study did not inspect travel spending and therefore cannot infer commonalities between willingness to spend discretionary income and Venturesomeness.

Overall, there was generational uniformity for active tourism preferences among the three cohorts, showing results across the generations consistent with Lehto et al. (2008) who reported that Baby Boomers are expected to continue "defying their physical age and seeking experiences that will lead them to venture off the beaten path and engage in adventurous or experimental experiences" and that mature tourist preferences may be more closely related to younger generational tourists (p. 248).

Baby Boomers exhibited slightly higher proportions of pure Venturers (4.7%), indicating that their cohort is seeking out increasingly adventurous and potentially more active tourism experiences in comparison to Gen X (4.3%) and Gen Y (3.2%). The response for vacation recreation activities throughout the three cohorts was also comparable, though Boomer vacation recreation preferences corresponded to younger cohort participation in activities such as Biking (Road), Mountain Biking, Horseback Riding, and Kayaking. These findings relate to research by Lehto et al. (2008), reestablishing that Baby Boomer preferences line up closely to those of younger generations, and should be considered when implementing new consumer tourism products (Glover & Prideaux, 2009); with the similarities among the generations, marketing efforts could incorporate all three generations. Additionally, trait aggregation theories denote the dependability of personality characteristics, demonstrating that personalities can produce patterns

of reliable behavior in multiple environments (Epstein, 1983; Epstein and Teraspulsky, 1986; Albanese, 1990). This implies that if psychographic personality types can be related to specific vacation recreation activities, then marketing efforts can be more consistent for determined psychographic tourists.

Vacation preferences were also parallel across cohorts, which could be attributed to the high volume of Mid-Centric respondents. Vacation preferences, location and activity level, were generally distributed *Somewhere in the middle*; however, Boomers more commonly responded as wanting to visit somewhere they had never been before, in contrast to the other cohorts (Baby Boomers, 31.6%; Gen X, 26.8%; Gen Y, 23.7%). With the growth of increasingly active tourism patterns for Baby Boomers, existing research has specified a need for destinations to cater to more active senior tourists in order to maintain business (Glover & Prideaux, 2009; Grant, 2002). Also, cross-generational research reports that “a much more active senior will become the mainstream senior traveler” (Lehto et al., 2008, p. 249), which goes along with the concept that Boomers are traveling more actively, and may be more closely connected to younger tourist contingents.

Previous research also identifies Baby Boomers as searching for the same active tourism opportunities as Generation X and Generation Y; however, it has been shown that older tourists typically do not wish to be perceived as aged (Glover & Prideaux, 2009), meaning that destinations and vacation recreation providers need to adapt their programs and attempt to plan “products and services that are suitable for [Baby Boomers] without offending their own sense of youthfulness” (Glover & Prideaux, 2009, p. 35). In short, the generational data suggest a uniform distribution across the generational cohorts, providing support for similar tourism preferences throughout the generations.

5.2.4 *Preferred vacation recreation activities of tourists*

When measuring for the primary research question, principal components factor analysis revealed an initial 12 factor solution, condensing 50 of the 52 vacation recreation activities into 12 activity dimensions. The dimensions were examined for psychographic and generational differences. Generational cohorts were shown as being consistent in their likeliness to participate in activities while on vacation, though results showed increases in mean likelihood scores across the psychographic categories in a majority of the activity dimensions, echoing the common theme for increased activity level moving towards the Venturer psychographic category. These results imply that level of Venturesomeness (psychographic category) has more of an influence than generational cohorts in regard to vacation recreation activity preference. In keeping with Plog (2004), the relationship between Venturesomeness and activity preference has shown that Venturers take part in specific recreation activities more often than their Dependable counterparts, and that “Venturesomeness is a better predictor of the types of activities pursued on leisure trips” (Plog, 2002, p. 244).

Through the data generated in this study, it is apparent that preferred vacation recreation activities of tourists are related to their psychographic score, indicating higher activity and adventurousness is related to increased Venturesomeness scores. Plog (2004) has shown that a relationship exists between psychographic influences and recreation activities on vacation, finding that Venturers take part more commonly in certain recreation activities than Dependables, including golf, tennis, and downhill skiing. Research by Wolfe, Hsu, and Kang (2002) has inspected niche tourism activities, illuminating recognizably different psychographic and demographic profiles related to activity preferences of leisure tourists. The research by Wolfe et al. (2002) showed more Venturesome tourists interested in outdoor recreation activities. Further psychographic research by Chandler and Costello (2002) presented activity level data

from a heritage tourism site in the U.S.; results produced consistent psychographic profiles at multiple types of destinations and indicated moderate intensity recreation interests such as birdwatching and nature walking more closely related with Mid-Centric tourists (Chandler & Costello, 2002). More recent research by Weaver (2012) showed visitor psychographic characteristics within a undeveloped nature preserve as highly Venturesome, providing additional support for Venturers exploring more adventurous regions.

5.3 *Implications*

5.3.1 *Implications for active tourism*

With the rapid expansion of active tourism worldwide, and expressly within the United States (Sung, Morrison, & O’Leary, 2001; Sung, 2000; Sung, 2004), it is important to recognize the relationship between consumer psychographic profiles and individual recreation activity preferences. Active tourism is currently regarded as a booming industry across generations, and the current research has combined generational cohorts and psychographic categories because of the shown effectiveness of these two indicators to fully develop consumer preferences (Huang & Petrik, 2010).

For tourism planners, destination marketing organizations, and both private and public recreation agencies, it is important to understand what types of tourists are more closely linked to specific recreation activities; if a destination offers certain unique recreation opportunities, those activities need to be leading the marketing strategy. For recreation and tourism providers of any nature, this research will enable them to use a scientific approach to product definition, positioning, and marketing.

It is also important to acknowledge the direction of influence among the psychographic categories. Venturers are thought to have the highest level of influence on the other psychographic categories, meaning they seek out new destinations and influence the other categories to attend; therefore, marketing efforts should be concentrated towards the Venturesome side to successfully implement a tourism product or destination (Plog, 2002). Also, Venturesomeness has been identified as a “better predictor of the types of activities pursued on leisure trips” (Plog, 2002, p. 244).

5.3.2 *Academic implications*

Within this study, the VRAI has shown to be a powerful index, and its variance in passive and active recreation activities may allow for more elaborate comparative research in the future. Confirmation and refinement of the new Vacation Recreation Activity Index (VRAI) could also provide practical implications, specifically in defining recreation preferences while on vacation to improve “destination development, service positioning, and advertising and promotion” (Nickerson & Ellis, 1991, p. 29).

Destination Marketing Organizations (DMOs) should be utilized more frequently in academic research settings. Such organizations have built strong ties within regional tourist locations (and beyond) and allow access to robust visitor databases. DMOs are research hungry and willing to partner with educational institutions to research topical issues within the tourism industry. This researcher’s use of regionally specific DMOs is also another important implication in that it targets geographically distinct locations, diversifying the sample base and allowing for data collection on multiple recreation activities.

This study made an effort to explore generational cohorts through segmentation, and the findings have supported generational uniformity in travel preferences among the Baby Boomers, Generation X, and Generation Y cohorts. This observed consistency across the generations is a unique finding, and it has specific implications within academia. With the results presented in the current study, and in previous investigations (Lehto et al., 2008), there is increasing data to support a shift in active tourism preferences of older adults; academicians should therefore recognize the importance of cohorts, especially in the changing tourism climate.

5.4 *Study limitations*

While the sample was drawn from visitor inquires to each region of North Carolina (mountains, piedmont, and coastal), the study cannot be generalized to all areas within the state or beyond. The regions were unique, in that each area had different types of recreational offerings. Further, respondents were limited to only those recreation activities listed on the Vacation Recreation Activity Index (VRAI).

Another potential constraint could be the adaptation of the Plog instrument. Two of Plog's ten questions were adapted for modern contextualization, which could have affected the validity of the instrument. Additionally, it is imperative to note that Plog's model is one frame of reference to observe tourism psychology; thus, it is understandable that there are naturally multiple effects influencing travel choice (McIntosh, Goeldner, & Ritchie, 1995). Also, the Plog model has been criticized as being somewhat limited having been primarily tested within in the private sector.

The survey was distributed electronically; therefore, individuals without Internet access were unable to take the survey. In addition, because of the proprietary nature of the DMO

databases, the researcher was not allowed to distribute the survey links directly to the respondents. Although instructions were provided and follow up phone calls were performed to keep the DMOs on the same timeline, inconsistencies in the survey distribution may have impacted the response. The verbiage for survey solicitations and DMO correspondence can be found in Appendix E. Additionally, two of the DMOs encouraged participation in the study via their Facebook page; however, this was not consistent for all DMOs.

5.5 *Suggestions for future research*

To better understand the interactions between psychographics, generation membership, and recreation preferences, prospects for future research are listed below.

- Expand upon the current survey with more vacation recreation activity options
- Explore how often individuals engage in specific recreation activities while on vacation vs. at home
- Investigate tourists' inclination to try new kinds of recreation activities while on vacation and/or the participation in new activities as partial motivation for selecting vacation destinations
- Examine visitors to multiple geographic regions to understand if similar recreation activity and demographic trends for the psychographic categories exist across the United States
- Investigate the differences between seemingly active and non-active tourists; what would make them more active?
- Compare active tourists within the United States to international active tourists

5.6 *Conclusion*

Previous research has used the Plog model in attempt to define tourist preferences and related activity behaviors while on vacation, and though there has been some disagreement, the general consensus within academia is that Plog's psychographic instrument is a useful investigative tool (Siguaw, Enz, & Liu, 2008) and that it offers a real-world understanding of characteristic travel preferences of tourists (Litvin, 2006).

The apparent need for vacation is inherent, and it is evident that a range of tourists exist, some more adventurous than others. Also apparent is the potential to link vacation preferences to certain, individual tourist categories in order to improve target marketing strategies for destinations and recreation suppliers. Within this study, the increased existence of active tourism was investigated along with Plog's psychographic model; the objective was to explain tourist preference by matching psychographic categories with vacation recreation activities.

The results indicate a connection between respondent psychographic scores and their projected vacation activity preferences, showing expected results for Plog's model with regard to tourist vacation preferences. There were demographic differences in how tourists distribute across Plog's continuum, though the data suggest a uniform psychographic distribution across the generational cohorts, providing support for similarly active tourist preferences throughout the generations, in line with previous research projections (Glover & Prideaux, 2009; Grant, 2002; Lehto et al., 2008). The results for mean likelihood scores across the psychographic categories increased from Dependable to Venturer in 10 of the 12 activity dimensions, excluding Swimming/Beach Activities and Sportsman activity dimensions. There was further consistency shown among the generational cohorts for their likeliness to participate in the factored activity dimensions; however, the results for mean likelihood scores across the psychographic categories

increased from Dependable to Venturer in a majority of the activity dimensions, reiterating the finding that activity level increases moving towards the Venturer psychographic category. This result was also indicative that level of Venturesomeness has more of an influence than generational membership in regard to vacation recreation activity preference.

Most interestingly, preferred vacation recreation activities of tourists were intuitively related to psychographic score, with data indicating higher activity and adventurousness related to increased Venturesomeness scores. Another intriguing result was that no significant association in travel planning profiles amidst the psychographic categories existed.

Overall there was support presented within this study for the increase in activity-based tourism across the generations, and specifically Baby Boomers showed vacation recreation activity preferences comparable to younger generations. Within a broader context, these results should aid destinations in recreation activity development, positioning, and marketing, understanding that generational tourists are seeking out similarly active vacation activities, and the more Venturesome the tourist contingent, the more adventurous and novel the experiences that should be offered.

Consumers are the driving force behind demand; thus, it is valuable for social science researchers to explore the psychological and social characteristics related to consumers to comprehend their changing preferences (Schneider & Vogt, 2012). This study has the potential to be expanded in numerous recreation and tourism contexts and to provide a new strategy for targeting active tourists within the tourism industry; one that has been previously overlooked. The results should be applied informatively, to help destinations determine tourism patterns based on recreation activities linked to psychographic profiles, as well as to provide destinations with a more in-depth view of the current active tourism market trends and how destination

service providers can capitalize on the expanding market. Further, this study has made an attempt to make active tourists a known entity within the broader tourism segment, and helped to bring the matter of active tourism to the forefront of academic thought, hopefully sparking further investigation into this diverse topic of study.

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Appendices

Appendix A: ECU UMC IRB approval letter



EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board Office
4N-70 Brody Medical Sciences Building · Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834
Office **252-744-2914** · Fax **252-744-2284** · www.ecu.edu/irb

Notification of Exempt Certification

From: Social/Behavioral IRB
To: [Ryan Merritt](#)
CC: [Carol Kline](#)
Date: 11/5/2012
Re: [UMCIRB 12-001764](#)
Destination Recreation Psychographics

I am pleased to inform you that your research submission has been certified as exempt on 11/5/2012. This study is eligible for Exempt Certification under category #2.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

The UMCIRB office will hold your exemption application for a period of five years from the date of this letter. If you wish to continue this protocol beyond this period, you will need to submit an Exemption Certification request at least 30 days before the end of the five year period.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

Vacation Recreation Preferences

Thank you for agreeing to participate in this research study. It is being conducted by a graduate student in the Department of Recreation and Leisure Studies at East Carolina University. The goal of this project is to better understand how personality characteristics influence recreation activity choices while on vacation.

The questionnaire should take approximately 10 minutes of your time. Your participation in this study is voluntary and you may withdraw from the study at any time without penalty or loss of benefit. Your consent will be indicated by filling out the survey and returning it. There are no foreseeable risks to participating in the study. The results of this study may be published but no names will be used and individual responses will be maintained in confidence by the researchers. Anonymity and confidentiality will be assured.

While there are no risks to you, your participation will allow us to develop a greater understanding of recreational preferences while traveling.

If you have any questions concerning the research study, please contact Dr. Carol Kline at klinec@ecu.edu or 919-306-1705. If you have questions about your rights as a research subject, you may call the Chair of the University and Medical Center Institutional Review Board at phone number 252-744-2914 (week days).

Thank you in advance for taking the time to share your insights with us.

Sincerely,

Ryan Merritt
Recreation and Leisure Studies
East Carolina University
merritr12@students.ecu.edu

These questions are strictly for classification purposes and will be reported in aggregate only.

1. **What is your gender?**
 Male
 Female

2. **In what year were you born?**

3. **What is your highest level of education?**
 High school or some high school
 College graduate or some college
 Post graduate

4. **What is your yearly household income?**
 Less than \$50,000
 \$50,000 to \$100,000
 \$100,000 to \$150,000
 \$150,000 to \$200,000
 Greater than \$200,000
 Prefer not to answer

5. **What is your zip code?**

In this section, please indicate the typical recreation activities you prefer while on vacation.

6. **Please indicate by checking the box below how likely you are to participate in these activities while on a weekend getaway or vacation.**

	Unlikely	Somewhat Likely	Likely	Extremely Likely
Alpine Skiing				
Backpacking				
Beach Activities (Sunbathing, Walking, Collecting Shells)				
Biking (Road)				

	Unlikely	Somewhat Likely	Likely	Extremely Likely
Birdwatching/ Birding				
Boating				
Bungee Jumping				
Camping (Primitive)				
Camping (RV, Camper, Car)				
Canoeing				
Cross-Country Skiing				
Exercise Classes (Zumba, Spinning, Aerobics)				
Fly Fishing				
Four-Wheel Driving/ Off- roading				
Freshwater Fishing				
Geocaching				
Golfing				
Guided Outdoor Tours				
Hang-gliding				
Hiking				
Horseback Riding				
Hunting				
Ice Climbing				
Jet Skiing				
Kayaking				
Mountain Biking				
Nature Walking				
Orienteering				
Paddle Boarding				
Rafting				
Rock Climbing				
Running/ Jogging				
Sailing				
Saltwater Fishing				
Scuba Diving				
Sky Diving				
Snorkeling				
Snowboarding				
Snowmobiling				
Snowshoeing				
Surfing				
Swimming				
Tai Chi				
Team Sports				
Tennis				
Tubing				
Wake Boarding				
Walking				
Water Skiing				
Wildlife/ Nature Viewing				
Wind Surfing				
Yoga				

7. **At what point in your travel planning do you typically make decisions about your recreational activities?**
Before arriving to the destination
After arriving to the destination
Both before arriving and after arriving at the destination
8. **How far in advance do you usually make your lodging reservations?**
After arriving to the destination
Less than one week prior to the trip
From one to four weeks prior
From one to six months prior
More than six months prior

This section will assess general personality characteristics. Please respond by circling one answer from each of the following questions.

9. **In most of your daily activities, do you:**
a. Try to avoid rushing so you can relax a bit
b. Find that you are sometimes slow and sometimes fast
c. Find yourself hurrying even when you don't have to hurry
10. **When a new electronic product appears in the marketplace, will you probably:**
a. Wait until it has been around for quite awhile and drops low in price
b. Wait for a short period of time before you buy, just to be certain they've "worked all the bugs out"
c. Pay more to be one of the first to buy it, to enjoy the sense of discovery
11. **When you visit a place that has steep cliffs or canyons, are you likely to:**
a. Stay quite far away from the edge
b. Get a bit closer to look over but feel uncomfortable doing it
c. Get a bit closer to the edge so you can see down the canyon
12. **Compared to most people, do you feel your energy level is:**
a. Perhaps a little less
b. About the same

- c. Much higher than others
- 13. As you work on things around the house or apartment, do you like to do them:**
- a. Slowly and deliberately
 - b. At a moderate pace
 - c. Quickly to get them over with
- 14. If you were going to take a short vacation, would you rather:**
- a. Drive to the destination
 - b. Fly but stay in one place to relax after you get there
 - c. Fly, rent a car and explore different places
- 15. In terms of your current exercise participation, do you:**
- a. Not participate because you don't believe it does much good
 - b. Agree that it's helpful but don't do as much of it as you should
 - c. Exercise regularly to stay in great shape
- 16. Compared to most people, do you:**
- a. Have a wide circle of friends and see them more frequently
 - b. Enjoy family and friends but also have a need to get away from them
 - c. Have a very small but perhaps close circle of friends that you see only occasionally
- 17. Compared to most people you know, are you:**
- a. Bothered by the many pressures of daily life
 - b. Able to handle most things well but sometimes feel strong anxiety
 - c. Able to handle pressure well without feeling much anxiety
- 18. When you make a decision, do you:**
- a. Think and worry about it a lot
 - b. Make a decision relatively quickly but worry later if you made the right one
 - c. Make decisions quickly and easily and seldom worry later whether or not it was correct

Please respond to the following question by indicating where your typical vacation preference falls on the scales below.

19. When planning a vacation or getaway, do you prefer to visit:

1 2 3 4 5 6 7 8 9 10



**Somewhere
you already
know**

**Somewhere
you have
never been
before**

20. When planning a vacation or getaway, do you prefer to have:

1 2 3 4 5 6 7 8 9 10



**A calm,
relaxing
experience**

**An active,
adventurous
experience**

Appendix C: DMO email contact

Hello everyone.

Thank you again for your interest in our project and for helping me work toward the completion of my Master's degree.

The basis of the study is founded in psychographics, a way of looking at personality profiles that will help establish travel preferences. The model for this study will assess how adventurous the respondent is in general, and explore the links between their personality, their generation, and their recreation preferences while on vacation.

The first part of the survey gathers demographic information about the respondent. The second section asks respondents to indicate how likely they are to participate in certain recreation activities while traveling. The final section includes 10 personality questions. The survey will include 18 total questions, and should take no longer than 10 minutes.

We have attached a hardcopy of the survey, although as you recall the data will be collected online. I will provide you three solicitation emails to forward to your contact lists (going back up to three years).

Ideally, we would like for you to send the first solicitation email out on Tuesday, November 27th with the survey link, and if possible a reminder email on Wednesday, December 5th and Monday, December 10th. Please consider offering an incentive to the respondents for completing the survey, e.g. "you will be entered into a drawing for a two-night stay at...." While this isn't necessary, it typically increases the response rate and will provide us and you with more reliable and complete results.

I would greatly appreciate it if you could please review the attached survey in terms of readability, content, and appropriateness for the subject and audience. If you would like to make notes electronically on the document, that is fine, or if you prefer to make them on the hardcopy and scan it, that works too. Also, I ask that you please send me your feedback by Monday, November 19th.

Again, we are very appreciative of your participation in this project, and look forward to collecting valuable information for your office. The completion of this study is projected for Summer 2012, however a copy of the technical report can be expected by the end of March. If you have any questions, please do not hesitate to email or call Dr. Kline or me – thank you!

Sincerely,

Ryan Merritt
merritr12@students.ecu.edu
[\(563\) 529-1881](tel:(563)529-1881)

Appendix D: Second DMO email contact (pilot request)

Hello again!

I understand this is a very hectic time of year for all of us, but I just wanted to reconnect with everyone and kindly ask once more if you could please provide feedback for the pilot survey. I highly regard your expertise, and that's why it's beneficial for your organization to go over the survey instrument, so that the information gathered is representative of what you need/want. If you can find a few minutes this weekend to glance over it, I would greatly appreciate any and all suggestion you may have.

Thanks again, and I look forward to hearing from you all!
-Ryan

Appendix E: Participant solicitation emails

First Solicitation

Good morning _____,

First off, I hope you had a great Thanksgiving! Secondly, I wanted to remind you that the vacation recreation survey is scheduled to go out today. I have included the link (below and in the attached word document) along with a short solicitation (which you may use if needed). The link can also be posted on your social media accounts, and is specific to _____ County.

Thanks again for your participation, and if you have any questions please don't hesitate to contact me.

-Ryan
563-529-1881

Solicitation:

Hello,

You are receiving this email because of your request for travel information from the _____ and we value your feedback! We are collaborating with the Department of Recreation and Leisure Studies at East Carolina University to better understand how personality characteristics influence recreation activity choices while on vacation. The following survey asks you about your preferred recreation activities while on vacation, as well as details about your travel behavior. We would greatly appreciate your participation. The survey should only take approximately 10 minutes of your time. To take the survey, simply click the link below or copy and paste the text into your browser:

Take Survey

https://ecu.qualtrics.com/SE/?SID=SV_9Rkfh7pOpTVGyMZ

Thank you in advance for taking the time to share your insights with us.

Regards,

Second Solicitation (Lake Norman):

Hi Cyndi,

I know you plan to send the vacation recreation survey out again with the January calendar (Dec. 21st), but I wanted to share the final solicitation with you -- I came up with a charitable giving incentive (that we will be funding) for the seasonal charity "Toys for Tots". The incentive listed below (and attached as a word document) allows for a 50 Cent donation to the "Toys for Tots" organization for every survey completed -- you may use the incentive attached, or create your own, but either way we ask that you please stress the importance of forwarding the email or reposting/sharing/retweeting on your social media accounts so that we can get as many responses as possible for Lake Norman.

Currently, your survey has been taken a total of 8 times, and in order for us to provide a more beneficial report for your department, we need quite a few more responses. One suggestion that another department had mentioned was to send the link as a message on your social media accounts, so that along with being posted as a tweet or status update, it is also distributed to every contact.

I hope this incentive is acceptable, and that we get a great response for Lake Norman!

Thanks Cyndi, I look forward to hearing from you soon!

-Ryan
(563) 529-1881

(Subject) Help Give the Gift of Holiday Spirit:

The holidays are a busy time of year for all of us, but lets remember the reason for the season -- with a few minutes of your time, your feedback will help provide a gift for children in need. For every completed survey, 50 Cents will be donated to the "Toys for Tots" organization.

Every survey counts, so please forward/ re-post this message to friends and family.

Again, the following survey asks you about your preferred recreation activities while on vacation, as well as details about your travel behavior and should only take approximately 10 minutes of your time. To take the survey, simply click the link below or copy and paste the text into your browser:

Take Survey

https://ecu.qualtrics.com/SE/?SID=SV_3KtNO8CWQboxEX3

HAPPY HOLIDAYS!

Second Solicitation (Transylvania County):

Hi Brad,

I know you plan to send the vacation recreation survey out again in mid December with the January newsletter, but I wanted to share the final solicitation with you. I have included a solicitation below (and attached as a word document) that you are welcome to reformat to include the Adventurist.

Thanks again Brad for your participation, and we look forward to getting even more results for Transylvania County!

-Ryan
(563) 529-1881

Hello again!

We understand this is a very hectic time of year for all of us, but we just wanted to reconnect with everyone and kindly ask once more for your participation in the vacation recreation study. We highly regard your feedback, and if you can find a few minutes to take this survey, we would greatly appreciate your participation. To take the survey, please click the link below or copy and paste the text into your browser:

Take Survey

https://ecu.qualtrics.com/SE/?SID=SV_eg3mOPLCQkwfNOt

Thanks again, and we look forward to hearing from you all!

Second Solicitation (Montgomery County):

Hi Tricia,

I wanted to share the final vacation recreation survey solicitation with you -- I came up with a charitable giving incentive (that we will be funding) for the seasonal charity "Toys for Tots". The incentive listed below (and attached as a word document) allows for a 50 Cent donation to the "Toys for Tots" organization for every survey completed -- you may use the incentive attached, or create your own, but either way we ask that you please stress the importance of forwarding the email or reposting/sharing/retweeting on your social media accounts so that we can get as many responses as possible for Montgomery County.

Currently, your survey has been taken a total of 51 times, and in order for us to provide a more beneficial report for your department, we need a few more responses. One suggestion that another department had mentioned was to send the link as a message on your social media accounts, so that along with being posted as a tweet or status update, it is also distributed to every contact.

I hope this incentive is acceptable, and that we get a great response for Montgomery County!

Thanks Tricia, I look forward to hearing from you soon!

-Ryan
(563) 529-1881

(Subject) Help Give the Gift of Holiday Spirit:

The holidays are a busy time of year for all of us, but let's remember the reason for the season -- with a few minutes of your time, your feedback will help provide a gift for children in need. For every completed survey, 50 Cents will be donated to the "Toys for Tots" organization.

Every survey counts, so please forward/repost/retweet this message to friends and family.

Again, the following survey asks you about your preferred recreation activities while on vacation, as well as details about your travel behavior and should only take approximately 10 minutes of your time. To take the survey, simply click the link below or copy and paste the text into your browser:

Take Survey

https://ecu.qualtrics.com/SE/?SID=SV_eX2VwAw9JTrVbtb

HAPPY HOLIDAYS!

Second Solicitation (Dare County):

Hi Lee,

I wanted to let you know that we've already had a great response from Dare County (231 respondents and counting) for the vacation recreation survey, and we look forward to sharing the results with your department. As we had mentioned in our original conversation, if possible we would appreciate the distribution of a second solicitation email to Dare County contacts reminding them to participate in the vacation recreation survey. I have included a solicitation below (and attached as a word document) that you are welcome to use or reformat to your liking.

Thanks again Lee for your participation, and we look forward to getting even more results for Dare County!

-Ryan
(563) 529-1881

Hello again!

We understand this is a very hectic time of year for all of us, but we just wanted to reconnect with everyone and kindly ask once more for your participation in the vacation recreation study. We highly regard your feedback, and if you can find a few minutes to take this survey, we would greatly appreciate your participation. To take the survey, please click the link below or copy and paste the text into your browser:

Take Survey

https://ecu.qualtrics.com/SE/?SID=SV_9Rkfh7pOpTVGyMZ

Thanks again, and we look forward to hearing from you all!

Appendix F: Comparison of vacation recreation activity across psychographic categories

DEPENDABLE		NEAR-DEPENDABLES		MID-CENTRIC		NEAR-VENTURER		VENTURER	
Variable	Percent- age (%)								
Alpine Skiing	0	Alpine Skiing	.8	Alpine Skiing	2.6	Alpine Skiing	8.5	Alpine Skiing	0
Backpacking	0	Backpacking	8.0	Backpacking	9.6	Backpacking	11.3	Backpacking	11.5
Beach Activities	94.4	Beach Activities	72.8	Beach Activities	70.5	Beach Activities	66.0	Beach Activities	34.6
Biking (Road)	11.1	Biking (Road)	4.8	Biking (Road)	10.0	Biking (Road)	12.8	Biking (Road)	26.9
Birdwatching/ Birding	22.2	Birdwatching/ Birding	12.0	Birdwatching/ Birding	10.3	Birdwatching/ Birding	9.2	Birdwatching/ Birding	7.7
Boating	16.7	Boating	15.2	Boating	21.8	Boating	26.2	Boating	26.9
Bungee Jumping	0	Bungee Jumping	0	Bungee Jumping	1.1	Bungee Jumping	0	Bungee Jumping	7.7
Camping (Primitive)	11.1	Camping (Primitive)	8.0	Camping (Primitive)	9.6	Camping (Primitive)	9.2	Camping (Primitive)	19.2
Camping (RV, Camper, Car)	11.1	Camping (RV, Camper, Car)	15.2	Camping (RV, Camper, Car)	17.0	Camping (RV, Camper, Car)	13.5	Camping (RV, Camper, Car)	19.2
Canoeing	0	Canoeing	12.0	Canoeing	11.8	Canoeing	14.2	Canoeing	26.9
Cross-Country Skiing	0	Cross-Country Skiing	.8	Cross-Country Skiing	1.8	Cross-Country Skiing	2.1	Cross-Country Skiing	7.7
Exercise Classes	0	Exercise Classes	3.2	Exercise Classes	6.3	Exercise Classes	11.3	Exercise Classes	15.4
Fly Fishing	0	Fly Fishing	6.4	Fly Fishing	7.7	Fly Fishing	5.7	Fly Fishing	19.2
Four-Wheel Driving/ Off- roading	0	Four-Wheel Driving/ Off- roading	16.0	Four-Wheel Driving/ Off- roading	12.5	Four-Wheel Driving/ Off- roading	12.1	Four-Wheel Driving/ Off- roading	7.7
Freshwater Fishing	16.7	Freshwater Fishing	20.0	Freshwater Fishing	17.7	Freshwater Fishing	12.8	Freshwater Fishing	23.1
Geocaching	0	Geocaching	3.2	Geocaching	3.7	Geocaching	4.3	Geocaching	7.7
Golfing	0	Golfing	4.8	Golfing	8.9	Golfing	7.8	Golfing	15.4
Guided Outdoor Tours	5.6	Guided Outdoor Tours	11.2	Guided Outdoor Tours	11.1	Guided Outdoor Tours	9.9	Guided Outdoor Tours	23.1
Hang-gliding	0	Hang-gliding	1.6	Hang-gliding	1.5	Hang-gliding	2.1	Hang-gliding	7.7
Hiking	5.6	Hiking	28.0	Hiking	33.9	Hiking	50.4	Hiking	57.7
Horseback Riding	11.1	Horseback Riding	6.4	Horseback Riding	10.0	Horseback Riding	7.1	Horseback Riding	23.1
Hunting	0	Hunting	3.2	Hunting	4.4	Hunting	5.0	Hunting	19.2

DEPENDABLE		NEAR-DEPENDABLES		MID-CENTRIC		NEAR-VENTURER		VENTURER	
Variable	Percentage (%)								
Ice Climbing	0	Ice Climbing	0	Ice Climbing	.4	Ice Climbing	0	Ice Climbing	3.8
Jet Skiing	5.6	Jet Skiing	4.8	Jet Skiing	6.3	Jet Skiing	7.8	Jet Skiing	7.7
Kayaking	0	Kayaking	13.6	Kayaking	16.2	Kayaking	22.7	Kayaking	34.6
Mountain Biking	0	Mountain Biking	1.6	Mountain Biking	5.5	Mountain Biking	8.5	Mountain Biking	23.1
Nature Walking	38.9	Nature Walking	37.6	Nature Walking	42.8	Nature Walking	51.1	Nature Walking	46.2
Orienteering	0	Orienteering	.8	Orienteering	3.3	Orienteering	1.4	Orienteering	3.8
Paddle Boarding	0	Paddle Boarding	1.6	Paddle Boarding	4.4	Paddle Boarding	5.7	Paddle Boarding	15.4
Rafting	0	Rafting	5.6	Rafting	10.3	Rafting	11.3	Rafting	19.2
Rock Climbing	0	Rock Climbing	1.6	Rock Climbing	2.6	Rock Climbing	3.5	Rock Climbing	11.5
Running/Jogging	5.6	Running/Jogging	2.4	Running/Jogging	6.6	Running/Jogging	24.1	Running/Jogging	11.5
Sailing	5.6	Sailing	4.8	Sailing	6.3	Sailing	8.5	Sailing	7.7
Saltwater Fishing	16.7	Saltwater Fishing	17.6	Saltwater Fishing	21.0	Saltwater Fishing	15.6	Saltwater Fishing	19.2
Scuba Diving	0	Scuba Diving	.8	Scuba Diving	3.0	Scuba Diving	5.7	Scuba Diving	0
Sky Diving	0	Sky Diving	.8	Sky Diving	2.2	Sky Diving	2.1	Sky Diving	0
Snorkeling	5.6	Snorkeling	6.4	Snorkeling	14.8	Snorkeling	14.9	Snorkeling	11.5
Snowboarding	0	Snowboarding	2.4	Snowboarding	2.2	Snowboarding	3.5	Snowboarding	0
Snowmobiling	5.6	Snowmobiling	2.4	Snowmobiling	4.4	Snowmobiling	6.4	Snowmobiling	11.5
Snowshoeing	0	Snowshoeing	0	Snowshoeing	3.0	Snowshoeing	3.5	Snowshoeing	7.7
Surfing	0	Surfing	2.4	Surfing	2.2	Surfing	4.3	Surfing	3.8
Swimming	33.3	Swimming	52.0	Swimming	52.0	Swimming	52.5	Swimming	38.5
Tai Chi	0	Tai Chi	.8	Tai Chi	4.1	Tai Chi	3.5	Tai Chi	3.8
Team Sports	0	Team Sports	.8	Team Sports	4.1	Team Sports	5.0	Team Sports	0
Tennis	0	Tennis	4.0	Tennis	3.0	Tennis	4.3	Tennis	11.5
Tubing	11.1	Tubing	13.6	Tubing	15.5	Tubing	14.2	Tubing	15.4
Wake Boarding	0	Wake Boarding	2.4	Wake Boarding	4.4	Wake Boarding	5.0	Wake Boarding	0
Walking	61.1	Walking	66.4	Walking	74.5	Walking	72.3	Walking	61.5
Water Skiing	0	Water Skiing	3.2	Water Skiing	4.8	Water Skiing	5.0	Water Skiing	7.7
Wildlife/ Nature Viewing	44.4	Wildlife/ Nature Viewing	48.0	Wildlife/ Nature Viewing	47.2	Wildlife/ Nature Viewing	51.1	Wildlife/ Nature Viewing	50.0
Wind Surfing	5.6	Wind Surfing	2.4	Wind Surfing	.4	Wind Surfing	1.4	Wind Surfing	3.8
Yoga	0	Yoga	7.2	Yoga	8.9	Yoga	14.2	Yoga	7.7

Appendix G: Vacation recreation activity generational cohort comparisons

GENERATION Y		GENERATION X		BABY BOOMER	
Variable	Percentage (%)	Variable	Percentage (%)	Variable	Percentage (%)
Alpine Skiing	4.3	Alpine Skiing	5.1	Alpine Skiing	2.4
Backpacking	17.2	Backpacking	9.4	Backpacking	8.4
Beach Activities	78.5	Beach Activities	73.2	Beach Activities	67.7
Biking (Road)	8.6	Biking (Road)	10.9	Biking (Road)	11.1
Birdwatching/ Birding	9.7	Birdwatching/ Birding	5.1	Birdwatching/ Birding	12.8
Boating	28	Boating	23.9	Boating	19.9
Bungee Jumping	3.2	Bungee Jumping	0.7	Bungee Jumping	0.3
Camping (Primitive)	20.4	Camping (Primitive)	10.9	Camping (Primitive)	6.7
Camping (RV, Camper, Car)	14	Camping (RV, Camper, Car)	19.6	Camping (RV, Camper, Car)	14.1
Canoeing	16.1	Canoeing	14.5	Canoeing	13.1
Cross-Country Skiing	3.2	Cross-Country Skiing	2.2	Cross-Country Skiing	1.7
Exercise Classes	6.5	Exercise Classes	3.6	Exercise Classes	9.1
Fly Fishing	10.8	Fly Fishing	5.8	Fly Fishing	7.1
Four-Wheel Driving/ Off-roading	26.9	Four-Wheel Driving/ Off-roading	10.1	Four-Wheel Driving/ Off-roading	11.4
Freshwater Fishing	24.7	Freshwater Fishing	18.8	Freshwater Fishing	15.2
Geocaching	6.5	Geocaching	5.1	Geocaching	3
Golfing	6.5	Golfing	10.1	Golfing	7.4
Guided Outdoor Tours	12.9	Guided Outdoor Tours	12.3	Guided Outdoor Tours	9.8
Hang-gliding	4.3	Hang-gliding	2.2	Hang-gliding	1.3
Hiking	38.7	Hiking	34.1	Hiking	37.7
Horseback Riding	10.8	Horseback Riding	9.4	Horseback Riding	9.4
Hunting	11.8	Hunting	3.6	Hunting	3.7
Ice Climbing	1.1	Ice Climbing		Ice Climbing	0.3
Jet Skiing	8.6	Jet Skiing	10.1	Jet Skiing	4.4
Kayaking	25.8	Kayaking	18.8	Kayaking	16.5
Mountain Biking	5.4	Mountain Biking	10.1	Mountain Biking	5.7
Nature Walking	38.7	Nature Walking	45.7	Nature Walking	45.1

GENERATION Y		GENERATION X		BABY BOOMER	
Variable	Percent-age (%)	Variable	Percent-age (%)	Variable	Percent-age (%)
Orienteering	2.2	Orienteering	3.6	Orienteering	2
Paddle Boarding	6.5	Paddle Boarding	7.2	Paddle Boarding	3.4
Rafting	8.6	Rafting	12.3	Rafting	9.4
Rock Climbing	7.5	Rock Climbing	5.1	Rock Climbing	1
Running/ Jogging	11.8	Running/ Jogging	15.2	Running/ Jogging	8.4
Sailing	3.2	Sailing	8	Sailing	7.1
Saltwater Fishing	25.8	Saltwater Fishing	19.6	Saltwater Fishing	18.5
Scuba Diving	6.5	Scuba Diving	3.6	Scuba Diving	2
Sky Diving	6.5	Sky Diving	1.4	Sky Diving	0.7
Snorkeling	14	Snorkeling	20.3	Snorkeling	9.8
Snowboarding	6.5	Snowboarding	4.3	Snowboarding	0.7
Snowmobiling	6.5	Snowmobiling	8.7	Snowmobiling	3
Snowshoeing	5.4	Snowshoeing	3.6	Snowshoeing	1.7
Surfing	6.5	Surfing	5.1	Surfing	0.7
Swimming	63.4	Swimming	61.6	Swimming	46.8
Tai Chi	3.2	Tai Chi	1.4	Tai Chi	3
Team Sports	8.6	Team Sports	5.1	Team Sports	1
Tennis	6.5	Tennis	7.2	Tennis	1.7
Tubing	16.1	Tubing	20.3	Tubing	13.5
Wake Boarding	6.5	Wake Boarding	9.4	Wake Boarding	1
Walking	67.7	Walking	67.4	Walking	74.7
Water Skiing	4.3	Water Skiing	6.5	Water Skiing	4
Wildlife/ Nature Viewing	46.2	Wildlife/ Nature Viewing	49.3	Wildlife/ Nature Viewing	49.5
Wind Surfing	0	Wind Surfing	3.6	Wind Surfing	1
Yoga	7.5	Yoga	8.7	Yoga	10.4

Appendix H: Activity dimension pattern matrix

Activity Dimensions:	Board Sports	Passive Nature	Sportsman	Extreme Adventure	Exercise	Group Recreation	Snow Sports	Swim/Beach Activities	Camping	Moderate Individual Course Activities	Water Recreation	Geographic Adventure
Wakeboarding	0.748											
Surfing	0.693											
Wind Surfing	0.648											
Water Skiing	0.493											
Snowboarding	0.482						-0.374					
Paddle Boarding	0.348											
Nature Walking		0.85										
Nature Viewing		0.85										
Walking		0.739										
Hiking		0.592								-0.379		
Birdwatching		0.385										
Freshwater Fishing			0.825									
Saltwater Fishing			0.803									
Fly Fishing			0.737									
Hunting			0.609									
Four-Wheel Driving/ Off-roading			0.565									
Boating			0.434								-0.363	
Bungee Jumping				-0.855								
Sky Diving				-0.819								
Hang Gliding				-0.818								
Ice Climbing				-0.401							0.387	

Activity Dimensions:	Board Sports	Passive Nature	Sportsman	Extreme Adventure	Exercise	Group Recreation	Snow Sports	Swim/Beach Activities	Camping	Moderate Individual Course Activities	Water Recreation	Geographic Adventure
Scuba Diving				-0.395								
Rock Climbing	0.311			-0.382						-0.308		
Exercise Classes (Zumba, Spinning, Aerobics)					0.836							
Yoga					0.795							
Tai Chi					0.589							0.319
Golfing						0.756						
Tennis						0.556						
Team Sports						0.552						
Guided Tours		0.301				0.318						
Snowshoeing							-0.74					
Alpine Skiing							-0.681					
Cross-Country Skiing							-0.653			-0.322		
Snowmobiling							-0.534					
Beach Activities (Sunbathing, Walking, Collecting Shells)										0.786		
Swimming										0.546		
Camping (RV, Camper, Car)									-0.67			
Camping (Primitive)									-0.633			
Backpacking									-0.369			
Biking (Road)										0.312		-0.658

Activity Dimensions:	Board Sports	Passive Nature	Sportsman	Extreme Adventure	Exercise	Group Recreation	Snow Sports	Swim/Beach Activities	Camping	Moderate Individual Course Activities	Water Recreation	Geographic Adventure
Mountain Biking										-0.548		
Running/Jogging					0.32					-0.538		
Sailing											-0.422	
Kayaking										-0.344	-0.408	
Snorkeling											-0.4	
Rafting											-0.4	
Tubing (Water)									-0.327		-0.359	
Canoeing											-0.353	
Horseback Riding												
Geocaching												0.622
Orienteering												0.619
Jet Skiing												-0.311

Appendix I: Activity dimension structure matrix

Activity Dimensions:	Board Sports	Passive Nature	Sportsman	Extreme Adventure	Exercise	Group Recreation	Snow Sports	Swim/Beach Activities	Camping	Moderate Individual Course Activities	Water Recreation	Geographic Adventure
Wakeboarding	0.798			-0.347								
Surfing	0.767			-0.414								
Wind Surfing	0.74		0.305	-0.426			-0.325					
Water Skiing	0.677			-0.381		0.392	-0.409				-0.411	
Snowboarding	0.648			-0.422			-0.549					
Paddle Boarding	0.538			-0.366	0.364		-0.375			-0.306	-0.382	
Nature Walking	0.418		0.346	-0.379		0.388		0.313			-0.41	
Nature Viewing		0.869										0.303
Nature Walking		0.841										0.321
Hiking		0.69						-0.326	-0.357	-0.317		0.357
Birdwatching		0.686										
Freshwater Fishing		0.478										0.372
Saltwater Fishing		0.422			0.326	0.31						0.386
Fly Fishing			0.846									
Hunting			0.813									
Four-Wheel Driving/ Off-roading			0.761									0.343
Boating			0.627	-0.332								
Bungee Jumping			0.621						-0.375			
Sky Diving			0.555					0.366			-0.489	
Hang Gliding	0.37			-0.826								
Ice Climbing				-0.818								

Activity Dimensions:	Board Sports	Passive Nature	Sportsman	Extreme Adventure	Exercise	Group Recreation	Snow Sports	Swim/Beach Activities	Camping	Moderate Individual Course Activities	Water Recreation	Geographic Adventure
Scuba Diving				-0.814								
Rock Climbing	0.467		0.348	-0.578			-0.373				-0.349	
Exercise Classes (Zumba, Spinning, Aerobics)	0.492			-0.55			-0.314			-0.415		0.322
Yoga	0.314			-0.503			-0.367					
Tai Chi		0.335		-0.394			-0.378		-0.326		-0.36	
Golfing					0.818							
Tennis					0.811							
Team Sports					0.658							0.418
Guided Tours						0.732						
Snowshoeing	0.414					0.636						
Alpine Skiing	0.381				0.336	0.636						
Cross-Country Skiing					0.337		-0.778					
Snowmobiling							-0.721			-0.439		
Beach Activities (Sunbathing, Walking, Collecting Shells)	0.371						-0.686					
Swimming	0.413		0.347	-0.451			-0.652		-0.307			
Camping (RV, Camper, Car)								0.77				
Camping (Primitive)								0.578			-0.372	
Backpacking			0.359						-0.723			0.308
Biking (Road)									-0.69			

