COMPARING PERSONALITY TRAITS AND UNDERGRADUATE STUDENT ENROLLMENT CHOICES IN ADVENTURE-BASED COURSES VS. NON-ADVENTURE-BASED COURSES AT NORTHEASTERN STATE UNIVERSITY

By

CHAD STANGL

Bachelor of Science in Parks and Recreation Management
Southwestern Oklahoma State University
Weatherford, Oklahoma
2005

Master of Education in Parks and Recreation Management
Southwestern Oklahoma State University
Weatherford, OK
2008

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
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Dissertation Approved:

Dr. Donna Lindenmeier, Dissertation Adviser and Chair

Dr. Tim Passmore, Committee Member

Dr. Jason Linsenmeyer, Committee Member

Dr. Jam Khojasteh, Committee Member

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Name: CHAD STANGL

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Abstract: The purpose of this study was to compare personality traits of undergraduate students who chose to enroll in adventure-based (a-b) courses vs. undergraduate students who chose to enroll in non-adventure= based (n-a) courses at Northeastern State University. Although prior research has been conducted concerning college students and personality, little has research has been conducted addressing the possible link between college student's personality traits and specific course selection. The sample is made up of 269 respondents, 64 reported enrolling only in a-b courses, while 205 reported enrolling in n-a courses at NSU. All respondents completed the Big Five Inventory (BFI). The BFI is designed to measure the Big Five Personality Traits: Openness to New Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (OCEAN). 5 independent sample T-tests were performed in order to determine if there was a statistically significant difference in the means of the subcategories. A Bonferroni adjusted alpha of .05 was used to control for type I error (.05.5=.01).

This statistical analysis indicated that NSU students who enrolled in a-b courses scored significantly higher in Extraversion than NSU students who enrolled in n-a courses. The analysis also indicated that NSU students who enrolled in a-b courses scored significantly lower in the area of Neuroticism than students who enrolled only in n-a courses. The research did not indicate a significant difference in Openness to New Experience, Conscientiousness, or Agreeableness between the two groups. The implications of this research in practice can include targeting specific personality traits as it relates to specific college courses, more efficient advisement of college students based on personality traits, and planning and development of new courses or programs. Future research may include personality traits and enrollment choices across gender or ethnicity.

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CHAPTER I

INTRODUCTION

As of 2017, over 19 million students were enrolled in undergraduate programs at colleges and universities in the United States (NCES, 2021). At every one of these institutions, students are advised, select majors, choose elective courses, and enroll. Some of these universities and degree programs require students to take activity-based classes as general education or program specific required courses. Other universities leave activity-based courses to be taken as electives.

Universities and departments are consistently planning ways to reach the most likely students to enroll in courses in order to plan timing of courses offered, build programs, and allocate resources (Reeve, 2010; Kocak & Sever , 2011). Trying to determine which student is more or less likely to take a specific activity-based class can be determined to some degree if requisite courses are required. However, if specific activity-based courses are not required, or if no activity-based courses are required, it can be more difficult to determine if a student is more likely to enroll in one course over another, or at all.

Factors that may aid advisors as well as marketing efforts guiding students in course and program selection, and enrollment might include aptitude tests, past experience, and advice from others. These are not the only possible factors. One factor that may provide

insight into likelihood of a student's enrollment in a specific class or type of class may be the student's personality traits. There may be a personality difference in those students who chose an adventure-based (a-b) activity course, and those who choose a non-adventure (n-a) based activity course.

Statement of the Problem

Colleges and universities are experiencing rapid changes stemming from the diminishing availability of resources, escalating expenditures, and changing student diversity and enrollment patterns (Yeager et al., 2013). These changes have highlighted the need for more efficient planning and alignment of resources, strategic planning, and curriculum delivery i.e. class size, staffing level, and scheduling (Breslawski et al., 2013). Universities have implemented marketing strategies to encourage enrollment in their institution but may lack in the area of market segmentation, identifying appropriate target audiences for specific courses or programs that may encourage enrollment, retention, and eventually graduation (Han, 2014; Kocak & Sever, 2011). Many course options are dictated by the students' major while others are classified as electives, leaving the student to choose courses that he or she has little knowledge of what is included in the course. The inability to accurately predict specific course enrollment may negatively affect strategic alignment, planning, and overall institutional sustainability (Breslawski et al.; Goni et al., 2017).

Limitations

Limitations of the study include the method of convenience sampling in the n-a group, and errors in rating i.e. halo effect, generosity error, and error of central tendency

(Ary, et al., 2006). Data was collected at NSU only and may not be applicable for other universities. Finally, the Big Five Inventory (BFI) is a self-reporting data collection instrument and the data was limited to those who elected to respond in both the a-b and na group.

Assumptions

As the respondents were previous college students, current college students, and college graduates, it is assumed that respondents were able to read and understand the BFI. It is also assumed that all respondents took the time to read the questionnaire fully and respond truthfully.

The Big Five Personality Trait Theory

Personality trait theory is rooted in the idea that a person's core personality is stable across time and can effect an individual's motivation and behavior. The Big Five Personality Trait Theory has gained some acceptance as a comprehensive and applicable model of these traits (Ehrler et al., 1999). The Big Five Personality Trait Theory is an "empirical generalization about the covariation of personality traits" (John et al., 2008, p. 159). Traits outlined by this theory are individually quantifiable, observable, and comparable. The Big Five Personality Trait Theory identifies five distinct traits. These five traits are identified as Openness (O), Conscientiousness (C), Extraversion (E), Agreeableness (A), and Neuroticism (N), collectively (OCEAN) (John et al., 2008). The Big Five Inventory (BFI) is a self-reported, 44-question instrument designed to measure individual components of the Big Five Personality Trait Theory (John et al., p. 129).

Research Question

Is there a statistically significant difference in BFI personality scores between NSU students that enrolled in a-b courses vs. NSU students that enrolled in n-a courses?

Hypotheses

H1 NSU students enrolled in a-b courses will score higher on the BFI in the area of Openness to New Experience than will NSU students enrolled in n-a courses.

H1N1 There is no difference between BFI scores in the area of Openness to New Experience between NSU students enrolled in a-b courses and NSU students enrolled in n-a courses.

H2 NSU students enrolled in a-b courses will score higher on the BFI in the area of Agreeableness than will NSU students enrolled in n-a courses.

H2N2 There is no difference between BFI scores in the area of Agreeableness between NSU students enrolled in a-b courses and NSU students enrolled in n-a courses.

H3 NSU students enrolled in a-b courses will score higher on the BFI in the area of Extraversion than will NSU students enrolled in n-a courses.

H3N3 There is no difference between BFI scores in the area of Extraversion between NSU students enrolled in a-b courses and NSU students enrolled in n-a courses.

H4 NSU students enrolling in a-b courses will score differently on the BFI in the area of Neuroticism than will NSU students enrolled in n-a courses.

H4N4 There is no difference between BFI scores in the area of Neuroticism between NSU students enrolled in a-b courses and NSU students enrolled in n-a courses.

H5 NSU students enrolled in a-b courses will score differently on the BFI in the area of Conscientiousness than will NSU students enrolled in n-a courses.

H5N5 There is no difference between BFI scores in the area of Conscientiousness between NSU students enrolled in a-b courses and NSU students enrolled in n-a courses.

Definition of Terms

- Adventure

"Adventure is a subset of the leisure experience" (Priest et al., 1999, p. 112). In order for an activity to be considered adventure it must take place in the realm of leisure, being entered into of free choice, and be intrinsically motivated, and the outcome of the activity must be uncertain. Outcomes of activities become uncertain when critical information for successfully completing a task is vague, missing or unknown, leading to risk (Priest et al., 1999).

- Adventure Education

The purposeful use of adventurous activities for education. Adventure education is a "branch of outdoor education concerned primarily with interpersonal and intrapersonal relationships" (Priest & Gass, 2018, p. 29).

- Challenge with Choice

The ethical principle dictating that participants in an adventure activity will not be coerced, peer pressured, or forced into a level of participation in which they did not choose or willingly and knowingly consent too (Challenge Quest LLC, 2021).

- Games

Games are "leisure experiences with formal rules that define the interactional content, attempt to equalize the players, and define the role that skill and chance will play in determining the outcome" (Rossman & Schlatter, 2000, p. 10).

- High element

Ropes course elements that require the participant to be on belay. Activities in which participants are off of the ground and supported by belay equipment.

- Initiative

Initiatives can be defined as "a group problem-solving task that requires mental and sometimes physical effort to resolve" (Meier & Henderson, 2012, p. 205).

- Leisure

Leisure is a state of mind that includes perceived freedom and intrinsic motivation. Leisure is a "state of mind that allows the adult to participate in an activity of his or her choice during time freed from work or civil or familial obligations" (Ibrahim & Cordes,2002, p. 8). Priest et al. (1999) explain that for an activity qualify as leisure it must

be entered into voluntarily and it must be "intrinsically motivating in and of its own merit" (p. 112).

- Low element

  Ropes course elements that do not require a belay technique. Activities in which participants are supported by spotters instead of belay equipment.

- Outdoor Recreation

  Outdoor recreation can be defined as "[a]ny activity done outdoors at leisure or in natural settings; can include motorized and animal-powered activities" (Priest & Gass, 2018, p. 416). Narrowing the definition some, outdoor recreational activities require the outdoor environment, or landscape, be a key part of the recreational experience (Martin et al., 2017).

- Perceived risk

  An individual's estimation of the danger involved in a given activity. The individual's belief that harm, loss, or injury will occur. Perceived risk is in the eye of the beholder, it different for every individual. The perception of risk gives rise to uncertainty and excitement, elements necessary in adventure. Modern adventure programs strive to reduce real dangers while maintaining a high degree of perceived risk (Miles & Priest, 1999; Priest & Gass, 2018).

- Physical activity course

  Undergraduate college course focused on the participation and or instruction of physical activity that does not contain a high degree of adventure.

- Real Risk

The true potential for harm, loss or injury. Real risk can never actually be known. Real risk can never completely be known, but should be estimated and mitigated as needed (Miles & Priest, 1999).

- Ropes course

A graduated series of challenging events presented to a group of participants. Ropes course activities encompass low and high elements (Meier & Henderson, 2012).

Statement of Intent:

The Big Five Personality Trait Theory identifies five distinct traits. These five traits are identified as Openness (O), Conscientiousness (C), Extraversion (E), Agreeableness (A), and Neuroticism (N), (John et al, 2008). Operational definitions of the subcategories are as follows:

- Openness

Conceptional definition: "[d]escribes the breadth, depth, originality, and complexity of an individual's mental and experiential life" (John et al., 2008, p. 120).

- Conscientiousness

Conceptional definition: "socially prescribed impulse control that facilitates task- and goal- directed behavior, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing and prioritizing tasks" (John et al., 2008, p. 120).

- Extraversion

  Conceptional definition: “Implies an energetic approach toward the social and material world and includes traits such as sociability, activity, assertiveness, and positive emotionality” (John et al., 2008, p. 120).

- Agreeableness

  Conceptional definition: “[c]ontrasts a prosocial and communal orientation towards others with antagonism and includes traits such as altruism, tender-mindedness, trust, and modesty” (John et al., 2008, p. 120).

- Neuroticism

  Conceptional definition: “[c]ontrasts emotional stability and even-temperedness with negative emotionality, such as feeling anxious, nervous, sad, and tense” (John et al., 2008,p 120).

Universities and colleges have a constant concern about aligning curriculum and resources (Breslawski et al., 2013). A significant source of resources funding comes in the form of tuition from current and future students. Many universities have begun analyzing student information in an effort to better advise students toward compatible programs and to identify areas of potential growth within their programs (Hossler et al., 2001). The ability to understand student behavior in class selection “could improve the cost effectiveness as well as the scheduling of course offering to enhance students and lecturers learning and teaching experience (Othman et al., 2019 p. 588). Implications include improving collegiate recruitment, enrollment, and retention rates.

Personality traits have been linked to some academic preferences motivation and performance (Komarraju et al., 2009), and may have implications on students' academic advisement preferences (Motteralla et al., 2004). It is hypothesized that personality traits may also be linked to enrollment and retention of college freshman (Lounsbury et al., 2004). Research conducted by Corker et al. (2016) suggests that personality traits may influence a student's university of choice affecting enrollment.

If personality characteristics can be used to accurately predict or even suggest trends of course preference, it may allow for programs to more accurately match perspective students to specific courses. Colleges may be able to use personality traits of students to more appropriately provide student counseling, advising, career planning, and advising to students (Lounsbury, 2004).

A-b activity courses offered at NSU include Recreation Leadership, Camp Recreation, Outdoor Recreational Activities, Beginning Ropes Course, Advanced Ropes Course, Ropes Course Facilitation, and Lifeguarding. N-a activity courses offered at NSU include First Aid and Responding to Emergencies, Personal Health, and Walking for Fitness. Both a-b and n-a based courses are required for particular majors and offered as electives to all other NSU students.

The BFI will be administered to NSU students who enrolled in an a-b course, and to students who enrolled in n-a only courses. The results of the personality questionnaire will be examined to determine if one or more personality traits were more likely to be present in a-b course students or n-a courses students. This information may be used to better define the target audience for a-b and n-a courses according to personality type. This may allow

NSU to sharpen marketing, program planning, student advisement, and course delivery based on the personality characteristics of Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism.

Utilizing information gained through the BFI, the research will focus on personality trait scores in the subsets of Openness, Conscientiousness, Extraversion,

Agreeableness, and Neuroticism. Scores will be compared across two groups of students. Group 1 are students who enrolled a-b courses. Group 2 are students who enrolled in n-a courses. The data will be compared between the two groups of subjects to determine if there is a significant difference in any of the 5 personality trait scores.

Lee and Jan (2015) found that research regarding personality and adventure activity was limited. This study aims to examine personality traits of the two groups to determine if a personality trait can be used as a predictor to enrollment in a-b courses. This information may be used to indicate to whom NSU should devote time and resources marketing existing and new a-b activity courses. While this may increase the student experience, "from the perspective of the university's administrators, this issue is Very critical for planning purposes" (Othman et al., 2019, p. 588).

CHAPTER II

REVIEW OF LITERATURE

Play, Recreation, Leisure, Outdoor Recreation

The concepts of play, recreation, and leisure are key in the field of leisure studies and are often used interchangeably. While there is some overlap in these foundational concepts, significant differences exist in definition and application. These concepts have evolved over time and been utilized by different leaders throughout history.

Play

The concept of play can be difficult to define. It is the most spontaneous type of leisure, and is considered by some as a childlike use of time. Rossman and Schlatter (2000) explain that play contains the "characteristics of spontaneity, self-expression, and the creation of a nonserious realm of meaning (p.12). Play is unstructured activity that is intrinsically motivated, pleasurable, and free flowing (Kraus, 1998). Kraus (1998) further explains the concept as being "marked by freedom and lack of structure, but may involve rules and prescribed actions, as in sports and games" (p.37). During play, the participant is able to develop a "sense of self and reality that cannot otherwise be attained in daily life" (Rossman & Schlatter, 2000, p. 12). To play with (a person or object) is to experience the thing in a whole new way. Play is a direct contrast to work as it is not productive or

purposeful. Play is free from risk and therefore allows the participant the freedom to try out new roles without consequence.

Theories of play began to develop in the nineteenth and twentieth centuries as scholars began to study the role of play on society and human development. The self-expression theory of play was developed by Elmer Mitchell and Bernard Mason, two physical educators, who saw play as a means to satisfy human's need for self-expression. The two theorized that play was used to satisfy five universal wishes including: "(1) the wish for new experience; (2) the wish for participation in a group enterprise; (3) the wish for security; (4) the wish for response and recognition from others; and (5) the wish for the aetheric" (Kraus, 1998, p. 29). The competence-effectance theory of play suggests play is an opportunity for participants to test problem solving strategies and new skills in an environment free from the consequences of failure. Priest and Gass (2018) explain that play "is characterized by the absence of fear," (p. 201) and is a stage in which to learn new skills.

Recent studies on play include the educational environment. Jung et al., (2014) conducted a study involving 211 undergraduate college students enrolled in classes required by the department of education or child and family studies at one university. The study explored students' exposure to play related curriculum during college coursework, their personal perceptions about play, and intentions to incorporate play curriculum as future professionals. The study concluded that future professionals who were exposed to play curriculum during their college education were more likely to have positive perceptions related to play curriculum and the intention to incorporate play related curriculum as future professionals. However, the future professional's perception of the play curriculum was found to be a full mediating variable and accounted for the majority of the students' intention

to use play related curriculum in the future. The researcher's state, "Keeping in mind the complete mediating role of perception of play, play-related coursework no more significantly predicted students' intention to incorporate play in their practices after accounting for the role of perception of play in the regression model" (Jung et al., 2014, p. 304).

Another study involving play curriculum and preschool aged children found that there is a significant power dynamic involved in the seemingly free and spontaneous act of play. The researcher observed that children's play choices were influenced by the social support of their peers i.e. being seen as a competent player. The researcher also noted that individual children's play choices were influenced by adult intervention, both for safety rules, and conflict resolution. Finally, the researcher observed that supporting free choice may advantage certain groups and inherently disadvantage others (Wood, 2013).

Recreation

Kraus (1998) provides a simple definition for the complex phenomenon of recreation; "[r]ecreation consists of human activities or experiences that occur in leisure time" (p.53). There are several philosophical assumptions of recreation that have changed over time. Today it is generally assumed that recreational activity should be freely chosen, intrinsically motivated, and pleasurable. Overall recreation represents activity that occurs during leisure and tends to be more structured than play.

Another element debated as being included in recreation or not due to questions of wholesomeness and/or societal acceptance includes high risk activities. These activities may include bungy jumping, sky diving, white water kayaking, and street luge.
Rossman and Schlatter (2000) that recreation "is an institutionalized form of leisure that is manipulated to accomplish socially desirable goals and objectives that are often defined by

the sponsoring agency" (p.12). Recreation was once primarily provided by the family or close local community is now being regularly offered more often by agencies and organizations. These agencies and organizations include business and small groups offering higher risk and adventure activities.

Recent studies in recreation have been linked to academic success at the college level. Slade and Kies (2015) tracked the visits to campus recreation facilities of approximately 110 first year medical students enrolled at the University of Illinois. The campus recreation center offered a climbing wall, racquetball court, an indoor track, a pool, as well as traditional exercise space and equipment. The recreation facility also offered members instruction in personal training, nutrition, wellness, and fitness. The researchers specifically tracked visits 21 days prior to a scheduled exam. While studying first year medical student's, researchers found a reciprocal relationship between increased frequency in visits to the campus recreation center and higher exam scores. On average, students who visited the recreational center more often during the three weeks leading up to an exam, tended to score higher on the exam. Also, students who scored higher on exams, on average, tended to visit the recreation center more often during the three weeks leading up to the exam (Slade & Kies, 2015).

While studying retention rates, Miller (2011) found that the existence of recreational opportunities on campus, i.e. recreation center not only influenced college students choice in which university to attend but also positively affected retention rates.
Miller (2011) describes the importance of this finding, "the university to better understand how to attract and retain students throughout their academic careers by the presence of a student recreation center" (p.127).

Leisure

Leisure is a state of mind that includes perceived freedom and intrinsic motivation. Ibrahim and Cordes (2002) explain that leisure is a "state of mind that allows the adult to participate in an activity of his or her choice during time freed from work or civil or familial obligations" (p.8). Priest et al. (1999) explain that for an activity qualify as leisure it must be entered into voluntarily and it must be "intrinsically motivating in and of its own merit" (p.112). Intrinsic motivation includes the concept that the process of the activity is more important than the end product, a direct contrast to work where the end product is all important. Leisure is the state of mind that a participant is in, and a recreational activity is the act engaged in while in leisure, As stated by Priest et al. (1999)
"[r]ecreational activities take place during an experience known as leisure" (p.112). In modern leisure studies, it is believed that leisure is a fundamental human right (Long & Robertson, 2020).

Outdoor Recreation

Outdoor recreational activities are pastimes pursued by some in the realm of leisure. Priest and Gass (2018) define outdoor recreation as "[a]ny activity done outdoors at leisure or in natural settings; can include motorized and animal-powered activities" (p. 416). Martin et al. (2017) narrow this broad definition arguing that outdoor recreational activities require the outdoor environment, or landscape, be a key part of the recreational experience. For example, an individual walking in a park in the state of leisure is considered an outdoor recreational activity because the setting is a key part to the recreational experience. In contrast, traditional sports that occur outdoors, football, rugby, and baseball are "typically not considered to be outdoor recreation activities because of the minimal role that nature plays in each" (p.20).

Andre et al. (2017) take a somewhat contradictory stance arguing campus outdoor recreational activities, “includes recreational activities that approximate outdoor settings (e.g., climbing walls or kayaking in pools) but do not take place in the outdoors” (p.16).

In recent research, Izenstark and Middaugh (2021) studied participation patterns in family-based nature activities (FBNA) through early life stages. The researchers quote earlier literature by Izenstark and Ebata (2016), in listing examples of FBNA: “outdoor recreation (e.g., camping, hiking), utilization of natural environments (e.g., parks, backyard),or family trips/vacations in natural areas (e.g., visiting a forest preserve, national park) (p. 3). The participants in this study were 349 undergraduate students attending a Midwestern university from 2014-2017. The participants were asked to complete a questionnaire regarding their past and present FBNA participation patterns.

The researchers found a decrease in time spent out of doors engaging in FBNA over time. They also found a change in types of activities over time, most notably more time spent traveling in young adulthood.

Adventure

“Adventure is a subset of the leisure experience” (Priest et al., 1999 p.112). In order for an activity to be considered adventure it must take place in the realm of leisure, being entered into of free choice, and be intrinsically motivated, and the outcome of the activity must be uncertain (Priest et al., 1999). Outcomes of activities become uncertain when critical information for successfully completing a task is vague, missing or unknown, leading to risk. Risk, simply defined is “the potential to lose something of value” (Priest et al., 1999, p. 112). Risk may be related to physical, mental, social or financial loss.

Risk can be divided into two subcategories, actual and perceived. Perceived risk is in the eye of the beholder. It is the individual's best estimate of the likelihood of a loss occurring (Miles & Priest, 1999). Perceived risk may be influenced by many factors including experience and personality characteristics. The real risk is true potential for a loss or injury occurring and can never be truly known (Miles & Priest, 1999). In an effort to provide safer experiences, modern adventure programs strive to reduce actual risk while maintaining a level of perceived risk.

Adventure Programs

Miles and Priest (1999) define adventure programming as "the deliberate use of adventurous experiences to create learning in individuals or groups, that results in change for society and communities." (p.xiii). Priest and Gass (2018) describe Kurt Hahn as the grand parent of adventure programming. Martin et al. (2017) explain that Hahn used experiential learning and adventure experience to prepare his students to serve as competent and moral citizens. Kurt Hahn is best known for establishing the world's first Outward Bound School in 1941, at Aberdovey, Wales (Martin et al., 2017).

Today Project Adventure has expanded their services in and out of public schools. They provide training for professionals, adventure programming for youth, and ropes course construction/inspection for companies. Their mission remains, "To empower individuals and communities to make positive change through experiential learning" (Project Adventure, 2020).

The pioneers and movements involved in the organized camping and adventure programs movements greatly influenced the field of outdoor recreation and adventure. They were pioneers in programming and implementation that helped to professionalize the field.

These individuals and their work have established an environment allowing for a-b courses to be included in university offerings.

College Students and Adventure-Based Courses

A-b courses have been associated with increased resiliency at college universities. Researchers Ewert and Yoshino (2011) conducted a study in which they compared two groups of undergraduate students (N=85). The control group of students were enrolled in traditional classroom instruction. The experimental group was made up of student that participated in a three-week adventure education expedition that involved trekking, rock climbing, winter camping, and a three-day solo wilderness experience. The students were administered both qualitative interviews and quantitative pre and posttests designed to examine the students' overall sense of resiliency. The quantitative results indicated that only the group that participated in the short-term adventure education program showed significant gains in resiliency scores on average. While interpreting the qualitative interviews, the researchers identified the following themes: "Perseverance, Selfawareness, Social support, Confidence, Responsibility to others, [and] Achievement" (Ewert & Yoshino, 2011, p. 42).

Another study by Sibthorp et al. (2013) investigated the potential effect of participation in an adventure based educational course on self-directed learning of college students. Two groups of college-aged students were studied. Group one had enrolled and completed an a-b educational experience during a summer semester, sponsored by NOLS. Group two had enrolled, but not yet participated, in an a-b educational experience sponsored by NOLS. The study did yield a significant finding in the self-directed learning scores in the area of initiative with the experimental group scoring significantly higher.

(Sibthorp et al., 2013 p. 167).

Andre et al. (2017) conducted a literature review investigating the possible benefits of campus outdoor recreation programs that involve a-b courses. The researchers found numerous benefits for the sponsoring agency (universities) including positive effects on student recruitment, enrollment, retention, and student satisfaction rates (p.15).
The literature review also outlined benefits to the student; "increased academic success, smoother transitions to college, better mental and physical health, lower levels of stress and anxiety, better and more numerous social connections, better intra- and interpersonal skills" (Andre et al., 2017, p. 15).

College Students Selection of Courses to Take

College and university administrators may greatly benefit in gaining a better understanding of undergraduate students' enrollment decisions. Required core classes for a particular major are prescribed and may be driven by future career plans. Othman et al. conducted research about college students' decision making and class selection and found that many factors influence college student's decision to enroll in a particular class. Specifically: class and instructor, time and space the course is offered in, and the ease or comfort level expected in the course (Othman et al, 2019).

Wladis et al. (2014) conducted a study examining college students enrollment choices in online vs face to face classes and how the enrollment choice effected retention. The researchers found that the if the course was a requirement for the students major, course format had no significant effect on student retention. However, "lower level courses taken as either electives or to fulfill distributional requirements have statistically significantly(α=0.01) lower retention rates online than face-to-face" (Wladis et al., 2014

p. 8). One possible explanation is offered by the researchers "if students believe there is a greater "pay off" from a specific course or set of courses, it may induce the student to persist (Wladis et al., 2014 p. 3).

In other research, Kocak & Sever (2011) compare that college students are also consumers and the courses that they choose are similar to products. The researchers conducted a qualitative focus group study involving 34 students at Anadolu University, Faculty of Communication Sciences, split into 3 separate groups. This particular university was chosen for the project because of the high volume of elective courses offered, 65 during the semester the study was conducted. The participants were of traditional college ages, 20-22. The researchers found that word of mouth advice from fellow students, especially senior students, was the strongest influencing factor on participants choice to enroll in a course. This word of mouth advice centered around "instructors' in-class performance, the degree of attractiveness of course-related virtual environment, and the toughness of course assignments and their grading policies" (Kocak & Sever, 2011, p.3). Participants of this study viewed the toughness of grading policies as an avoidable risk and would follow advice from others. Participants of this study also voiced that official concerns, level of expertise of the instructor and use of technology in the course, did weigh in to their decision of whether or not to enroll in a specific course but this information was secondary to the word of mouth advice received from their peers (Kocak & Sever, 2011).

Similar research conducted by Tavares and Cardoso (2013) investigated if Portuguese college students' enrollment patterns mirrored that of a rational consumer. This sample for this qualitative study was 60 first year undergraduate students enrolled in private, and public universities, as well as polytechnic institutions. The students were interviewed in

a semi-structured environment and asked questions about their choice to enroll in higher education, their choice to attend a particular institution, and their choice of a specific field of study. This study found that students' decision to attend a higher education institution was consumeristic, as most answers were tied to economic opportunity. This pattern did not apply to the student's choice in a specific field of study. Tavares and Cardoso (2013) found, "the study programme choice seems not to be guided by an economic rationale since students' behaviour, at this level, appeared to be far from being consumerist" (p. 305).

Akbulut-Bailey, A. (2012) studied enrollment in the declining field of informational systems in an effort to understand the lack of enrollment despite high economic rewards associated with the field of study. Akbulut-Bailey (2012) were particularly interested in social support and its possible effect on several factors, including choice goals (enrollment in the IS major). The participants in this study were students enrolled in an introductory level information management course at an American
University who chose to complete a survey about motivations for enrolling in this field. The researchers found several factors to be significantly influential in the students' enrollment choices. The researchers found that while social support did have a positive influence to several aspects of student success, i.e. self-efficacy levels, outcomes expectations, and interests, it did not have a direct influence on choice goals. Akbulut-Bailey (2012) concluded, "the effects of social support on choice goals are channeled indirectly through self-efficacy, outcome expectations, and interests" (p. 266).

College Students and Personality Traits

Recent research in the area of college students and personality suggests that a great deal may be learned about the student's choices, preferences, enrollment, and behavior in

relation to personality. Corker et al. (2016) conducted research regarding personality traits and campus enrollment. The researchers did not find a statistically significant difference in personality type between campuses but did note that "larger campuses had more extraverted students, and more diverse and urban campuses had more open students" (p.133). Colleges had more stringent standards, i.e. letters of recommendation tended to have more agreeable and less neurotic students. (Corker et al., 2016).

Hazrati-Viari et al. (2012) studied the effect of personality traits on academic motivation and academic performance. The researchers collected data from 250 college students. Personality traits were measured by the NEO Five Factor Inventory, an instrument designed to measure components of The Big Five Personality Trait Theory. Academic motivation was measured by Academic Motivation Scale, which is designed to both intrinsic and extrinsic motivation (Vallerand et al., 1992). Academic performance was measured by GPA. The researchers found "the results indicated that conscientiousness and openness to experience can predict academic performance" (Hazrati-Viari et al., 2012 p. 370). The researchers found that Conscientiousness could be used to predict intrinsic and extrinsic motivation, while Openness only predicted intrinsic motivation. The researchers explain that conscientious individuals may be more academically successful because they do not leave tasks incomplete. While individuals scoring high in Openness tend to be curious and insightful, valuing learning for the sake of knowing, making them more invested in the learning process (Hazrati-Viari et al., 2012).

Lounsbury et al. (2004) conducted a study investigating college students' personality traits and their intention to withdraw from college. The researchers studied (OCEAN) of The Big Five Personality Trait Theory as well as the narrow personality traits of Aggression,

Career-Decidedness, Optimism, Self-Directed Learning, Sense of Identity, Tough-Mindedness, and Work Drive. The participants were 223 freshman college students. They were administered the Resource Associates' Adolescent Personal Style Inventory for College Students to measure personality traits. The participants were then asked to answer a single question, "How likely is it that you will withdraw from school (for whatever reason) in the next 12 months" (p.523). The students were asked to rank their answer to this question on a 7-point scale from very unlikely to almost certain.

Lounsbury et, al. (2004) found that the "results of this study suggest that normal personality traits, including Big-Five as well as narrow traits, are significantly related to student intention to withdraw from college" (p.525). There was a negative correlation between Conscientiousness and intention to withdrawal that was somewhat expected. In addition, the researcher found that Extraversion, Agreeableness, and emotional stability were also negatively correlated to students' intention to withdraw from college.

The Big Five Personality Trait Theory

Modern personality trait theory has is rooted in early 20th century psychology. The aim of this theory is to explore human nature and individual differences in an attempt to understand the whole person (John et al., 2008; DeYoung, 2015). The Big Five Personality Trait Theory, also referred to as the Five Factor Model of Personality emerged in the early 1980s (John et al., 2008). The Big Five Personality Trait Theory is an extension of Fiske's (1949) research exploring personality factor structure, and Norman's (1963) five factor taxonomy (Ehrler et al., 1999). The new taxonomy led to an explosion of new research in the field of personality psychology because it provided a more comprehensive variable set to examine individual differences (John et al., 2008). The Big Five Personality Trait Theory

represents an effort to construct and apply a common framework that is consistent with existing personality theory. It adopts the basic tenants of trait theory (John et al., 2008). The Big Five Personality Trait Theory identifies the following as major personality traits: Openness to New Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (OCEAN). One instrument used measure these traits is the Big Five Inventory (BFI). The Big Five Personality Trait Theory is currently the most popular framework for organizing the many personality traits studied by personality researchers (Roberts et al., 2007).

Openness to New Experience (O) "describes the breadth, depth, and complexity of an individual's mental and experiential life" (John et al., 1994), and is related to the extent to which individuals are curious, creative, reflective, original, and accepting of diversity (Moss & Ngu, 2006). John et al. (1994) provides adjectives describing individuals who score high in Openness: artistic, original, imaginative, introspective, and a wide range of interests. Further, someone who scores high in Openness to experience may value intellectual matters, display unusual thought processes, and judge situations in unconventional ways. Gardiner & Jackson (2011) describe Openness as broadmindedness, fostering new ideas in novel situations. A college student scoring high in Openness may exhibit behaviors such as learning a new skill for the sake of exploration, viewing documentaries for enjoyment, or participating in new activities in order to break the norm (John et al., 2008). Cucu-Ciuhan & Răban-Motounu (2012) researched this personality trait and found that O scores separate down to earth type people from more creative types. Also, those scoring high in O may be more willing to try on or "play" different social roles (p.717).

Recent research by Dong & Ni (2019) investigates the role of O as it relates to the subjective well-being and sense of dispositional awe of Chinese college students. The researchers utilized a convenience sample of 332 undergraduate and graduate enrolled in a psychology course at the Zhejiang University of Finance and Economics, Zhejiang, China. The study measured personality traits, dispositional awe, and subjective wellbeing with three separate questionnaires. After data analysis, the results of this study indicate that Openness to Experience predicts dispositional awe" (Dong & Ni, 2019, p. 917). The study also found that dispositional awe predicts subjective well-being.

Martin et al. (2015) studied the role of O in college students who chose to study abroad. The sample of 59 students were asked to complete an online Big Five Inventory before and after their study abroad experience, along with a critical thinking questionnaire and a cultural understanding measure. The researchers employed a series of repeated measures analyses of covariance (ANCOVAs) to analyze the data. Martin et al. (2015) found that there was a significant increase in O, but only in the group who scored relatively low prior to the study abroad experience (p. 622).

Conscientiousness can be described as "socially prescribed impulse control that facilitates task- and goal- directed behavior, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing and prioritizing tasks" (John et al., 2008, p. 120). Some behavioral examples of a college student scoring high in Conscientiousness may be arriving early to class meetings, exerting a high degree of effort towards test preparation, or proofreading a written assignment with great care

(John et al., 2008). Corker et al. (2012) find, "[d]ecades of research support the general notion that Conscientiousness is positively associated with performance in academic and employment settings" (p.1021).

A recent study conducted by Komarraju et al., (2011) investigated the role of personality type, learning styles, and GPA among college students. The researchers administered the NEO-FFI, a 60-item questionnaire designed to measure components of The Big Five Personality Trait Theory, to 308 undergraduate students. Komarraju et al. (2011) also measured learning styles via The Inventory of Learning Processes. The researchers found "Conscientiousness was positively and significantly associated with all four learning styles, and also showed the strongest association of any of our predictors with GPA" (Komarraju et al., 2011, p. 476).

Corker et al. (2012) conducted another study involving Conscientiousness and academic performance. The researchers investigated the effect of Conscientiousness, effort, and achievement goals on academic success. The participants were 347 college students at a large Midwestern research university. The students were given extra credit for participating in this study, or an alternative research project of their choosing, yielding a 78% participation rate. The participants were administered the 300-item International Personality Item Pool in order to score personality traits, especially Conscientiousness. Cognitive ability was measured by the students self-reported ACT score. Effort and achievement goals were also measured by standardized questionnaires.

In relation to Conscientiousness and academic outcomes, the researchers found, "[t]hree of the five Conscientiousness correlations were statistically significant (Corker et al.,

2012, p. 1009).” The study also found that Conscientiousness positively affected participants effort, achievement goal setting, and exam performance.

Extraversion (E) “implies an *energetic approach* toward the social and material world: (John et al., 1994, p. 138). Extraversion is related to traits like assertiveness, sociability, activity, and assertiveness. Individuals scoring high in Extraversion tend to seek stimulating events that are social in nature and may be seen as some as risky or uncertain (Moss & Ngu, 2006). Individuals scoring low in Extraversion may be seen as quiet, introspective, and risk avoidant (Gardiner & Jackson, 2011).

Agreeableness (A) “a prosocial and communal orientation towards others with antagonism and includes traits such as altruism, tender-mindedness, trust, and modesty” (John et al., 2008, p. 120). Individuals who score high in Agreeableness may be seen as being cooperative, participative, and inclined to work well with others (Gardiner & Jackson, 2011). College students who score high in Agreeableness may display such behaviors as emphasizing others strength’s when talking about them, and lending class materials to others, or consoling others who are upset. Individual’s scoring highly in this personality trait tend to work well in groups (Gardiner & Jackson, 2011).

Neuroticism (N) “[c]ontrasts emotional stability and even-temperedness with negative emotionality, such as feeling anxious, nervous, sad, and tense” (John et al., 2008, p. 120). Individuals scoring high in N maybe unstable, erratic, vulnerable, and discontent (Moss & Ngu, 2006), and are viewed as having poorer coping skills and reactions to adverse events (John et al., 2008).

CHAPTER III

METHODOLOGY

Statement of Intent

The purpose of this study is to examine the components outlined by The Big Five Personality Trait Theory (OCEAN) in order to determine if they may be related to undergraduate students' enrollment in a-b or n-a college courses at NSU. This study was comparative; survey research into personality characteristics and traits of two groups of college students, those enrolled in a-b courses and those enrolled in n-a courses.

Population

The population for this study is present and former undergraduate students enrolled in a-b or n-a courses at NSU over the past 5 years. NSU is a regional university with a 5-year average enrollment of 7,933 undergraduate students spread across 3 campuses. Percentage of students by class for the 5-year time period are 19.2% freshman, 11.8% sophomores, 20.3% juniors, and 31% seniors, with 2.8% of students remaining unclassified. 64% of NSU students are female and 36% are male. The vast majority, 92%, of students are Oklahoma residents. 5.5% of NSU students are from out of state while 2.5% are international students (Northeastern State University, 2020).

The sampling methodology for this research has two parts. The a-b activity courses at NSU are Recreation Leadership, Camp Recreation, Outdoor Recreational Activities,

Beginning Ropes Course, Advanced Ropes Course, Ropes Course Facilitation, and Lifeguarding. For the students enrolled in a-b courses, the sampling methodology used was a census. Every person who fit this population criteria was a part of the sample and received the BFI.

The sampling methodology used for the n-a students is a convenience sample. The n-a courses at NSU and included in this study were First Aid and Responding to Emergencies, Personal Health, and Walking for Fitness. The researcher used all students enrolled in these select n-a courses due to having access to student contact records and lacking access to other n-a course enrollment records. The target N for each group in this study was 30 respondents per group (Martin et al., 2015).

Data Gathering Methodology

The data collection instrument (BFI) was distributed as a link in an email to the members of the two sample groups. Preliminary demographic information was collected, i.e. age, gender, and enrollment information. The initial email was sent on September, 1st 2021 with a weekly reminder until October, 1st 2021 when data recording ceased. Data was separated into the two sample groups, students who have enrolled in an a-b course at NSU and students who enrolled in a n-a course at NSU. Scores were analyzed to determine the mean of each subset (OCEAN) of both groups for later comparison.

Instrumentation

The BFI is a 44-item self-reported questionnaire that was designed to quantify the components outlined by The Big Five Personality Trait Theory; Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (John et al., 2008). Participants answer 44 questions about themselves on a Likert scale scored from 1, strongly

disagree, to 5, strongly agree. For example, “I see myself as someone who is talkative” is designed to measure the trait of Extraversion, and “I see myself as someone who has a forgiving nature” is designed to measure Agreeableness. The BFI has been proven to be reliable across all 5 personality traits. It has a mean internal consistency score of .83. The internal consistency of individual traits are as follows: O .83, C.82, E .86, A .79, and N .87. The BFI is also reliable as the mean alpha coefficient is .83 (John et al., 2008). The corrected convergent validity correlations across measures of this inventory is .95. The data collection instrument was distributed via email to the participants.

The BFI is published in John et al.’s Handbook of Personality (2008), and is also available through Oliver John's lab website. No permission is needed to use the BFI for noncommercial research purposes (Srivastava, 2021).

Statistical Analysis Plan

The Qualtrics software was used to distribute the anonymous link to the BFI. Qualtrics was also utilized to gather and score the BFI. Data was then entered in Microsoft Excel to sort the individual BFI scores into the 2 groups, n-a and a-b. Excel was also utilized to sort and score the five subcategories, OCEAN, of the BFI. Each respondents a-b or n-a designation, along with their 5 OCEAN scores were transferred into SPSS. Descriptive statistics were run to determine if all to investigate the significance of the hypotheses, and to determine trends that may not be evident in later statistical analysis. 5 independent sample T-tests were performed in order to determine if there was a statistically significant difference in the means of the subcategories (OCEAN) of the BFI between the two groups (a-b and n-a). A Bonferroni adjusted alpha of .05 was used to control for type I error (.05.5=.01).

CHAPTER IV

FINDINGS

Introduction

The purpose of this study is to examine the components outlined by The Big Five Personality Trait Theory (OCEAN) in order to determine if they may be related to undergraduate students' enrollment in a-b or n-a college courses at NSU. This study is comparative; survey research into personality characteristics and traits of two groups of college students, those enrolled in a-b courses and those enrolled in n-a courses.

Data collection ended on October 1st, 2021 with a sample of 276 respondents. The data was exported to Microsoft Excel to clean, code, and score the BFI. Of the 276 respondents, 269 were deemed usable instruments. 7 instruments were deemed unusable because they were incomplete. Responses to the questionnaire submitted after October 1st were not included in the analysis. Of the 269 respondents included in the analysis, 205 76.2% reported enrolling only in n-a courses while 64, 23.79% reported enrolling in at least 1 a-b course at NSU.

The sample included NSU students in every classification as well as graduates. The majority of respondents, 91 reported being enrolled in their senior year at the time of the study. Seniors accounted for 33.83% of all respondents. A close second 86, or 31.97% of respondents reported that they had graduated previously from NSU. Fifty-six responses came

from those who reported being juniors, accounting for 20.82% of respondents. Thirty-one of the total respondents reported their classification as sophomores, accounting for 11.52%. Freshmen accounted for 5 total responses, or 1.86% of respondents for this analysis (see Table 1).

Table 1

Classification Reported by Respondents

Classification	Count	Percentage
Freshman	5	1.86%
Sophomore	31	11.52%
Junior	56	20.82%
Senior	91	33.83%
Graduate	86	31.97%

The majority of respondents, 128, included in this study reported having a cumulative GPA between 3.6 and 4.0 on a 4-point scale, accounting for 47.58% of all respondents. Seventy-six participants reported a GPA between 3.1 and 3.5, making up 28.25% of all respondents. Fifteen, 5.58% of respondents reported a cumulative GPA between 2.1 and 2.5. 3 respondents reported a GPA between 1.6 and 2.0, accounting for 1.12% of all respondents included in this study. A small number of respondents, 3 or 1.12% of all respondents indicated that they preferred not to respond to this specific question (See Table 2).

Table 2

Cumulative GPA of Respondents

Cumulative GPA	Count	Percentage
1.0-1.5	0	0.00%
1.6-2.0	3	1.12%
2.1-2.5	15	5.58%
2.6-3.0	44	16.36%
3.1-3.5	76	28.25%
3.6-4.0	128	47.58%
Prefer not to respond	3	1.12%

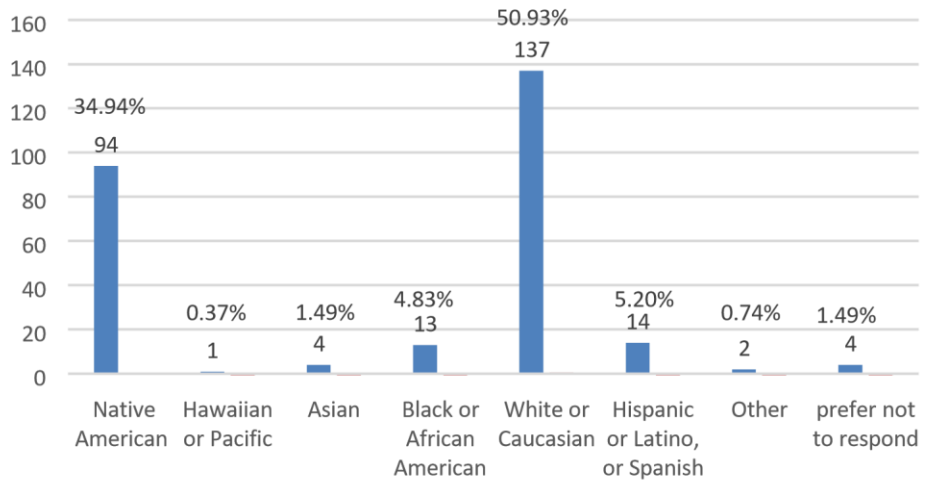
Respondents Demographics

Demographic information concerning race and ethnicity was collected. The majority of respondents, 137, described their race/ethnicity as being white or Caucasian, representing 50.93% of all respondents. Ninety-four respondents, 34.94%, described themselves as Native American. 14 respondents, 5.20%, identified their race/ethnicity as Hispanic, Latino, or Spanish. Four respondents, 1.49%, identified their race/ethnicity as Asian. While, 1 respondent, 0.37%, identified as Native Hawaiian or Other Pacific Islander. Two respondents, 0.74%, reported "other" as their race/ethnicity. Four respondents, 1.49%, indicated that they preferred not to respond to this particular question (see Figure 1). The samples' demographic information concerning ethnicity/race was representative of NSU's student population. The five-year average indicates that 49.1% of NSU students reported their ethnicity/race as being white. Eighteen percent of NSU students reported their

ethnicity/race as Native American or Alaska Native, this number grew significantly when considering those who selected multiple races. Just over 35 percent of students reported Native American as one of their ethnicities/races. NSU students from 2016-2020 that reported their ethnicity as Hispanic or Latino equaled 5.2%, while less than 1% reported their race or ethnicity as Native Hawaiian or Other Pacific Islander.

Figure 1

Respondents Ethnicity/Race



Participants were asked about their sex or gender. The majority of respondents, 186 reported that female best described their sex/gender making up 69.14% of this sample. Seventy-nine respondents, 29.37% selected male. Two respondents, 0.74%, identified as non-binary/ third gender. One respondent, 0.37%, indicated that they preferred not to respond to this question (see Table 3). The samples sex/gender is similar to that reported as the five-year average at NSU. From 2015-2019, 37.2% of NSU students reported identifying as male, while 62.8% of NSU students reported being of female gender (Northeastern State University, 2020).

Table 3

Sex / Gender of Respondents

Variable options	Count	Percentage
Prefer not to Respond	1	0.37%
Male	79	29.37%
Female	186	69.14%
Non-binary/Third Gender	2	0.74%

Respondents Enrollment

All Respondents were asked about enrollment information and their reason they chose to enroll in specific courses. Of the 269 useable responses included in this study, 64 indicated that they had taken or were currently taking at least one a-b course at NSU. These a-b responses make up 23.79% of total responses included in the study.

Forty-nine respondents, 18.22% indicated that they had enrolled in Beginning Ropes Course. Of these respondents, 5, or10.20%, respondents indicated that it was a required course, or that that they were currently enrolled because the course is required. Thirty-five, 71.43%, respondents indicated that Beginning Ropes Course was an elective, or that they were currently enrolled and because it is an elective. Of the 49 respondents, 9, 18.37%, indicated that they had enrolled in the course but did not specify whether it was required or an elective.

Thirty-three respondents, 12.27% indicated that they had enrolled in Advanced Ropes Course. Of these respondents, 3, 9.09% respondents indicated that it was a required course, or that that they were currently enrolled because the course is required. Twenty-six, 78.79%,

respondents indicated that Beginning Ropes Course was an elective, or that they were currently enrolled in the course as an elective. Of the 33 respondents, 4, 12.12%, indicated that they had enrolled in the course but did not specify whether it was required or an elective.

Twenty-three respondents, 8.55% indicated that they had enrolled in Lifeguarding. One respondent, 4.35% indicated that they were currently enrolled because it is a required course. Eighteen, 78.26%, respondents indicated that Lifeguarding was an elective, or that they were currently enrolled in the course as an elective. Of the 23 respondents, 4, 17.39%, indicated that they had enrolled in the course but did not specify whether it was required or an elective.

Twenty-seven respondents, 10.04% of respondents indicated that they had enrolled in Ropes Course Facilitation. Of these respondents, 3, 11.11%, respondents indicated that it was a required course, or that that they were currently enrolled in it as a required course. Twenty-one, 77.77%, respondents indicated that Ropes Course Facilitation was an elective, or that they were currently enrolled in it as an elective. Of the 27 respondents, 3, 11.11% indicated that they had enrolled in the course but did not specify whether it was required or an elective.

Thirty-six respondents, 13.38% of respondents indicated that they had enrolled in Camp Recreation. Of these respondents, 14, 38.89% respondents indicated that it was a required course, or that that they were currently enrolled in it because it is required. Fifteen, 41.67% respondents indicated that Camp Recreation was an elective, or that they were currently enrolled in it as an elective. Of the 36 respondents, 7, 9.44%, indicated that they had enrolled in the course but did not specify whether it was required or an elective.

Forty respondents, 14.87%, of respondents indicated that they had enrolled in Recreation Leadership. Of these respondents, 15, 37.50%, respondents indicated that it was a

required course, or that that they were currently enrolled because it is required. Eighteen respondents, 45% indicated that Recreation was an elective, or that they were currently enrolled in it as an elective. Of the 40 respondents, 7, 17.5% indicated that they had enrolled in the course but did not specify whether it was required or an elective (see Table 4).

Table 4

Enrollment in A-B Courses

AB Courses	Count	Percentage of Respondents
Beginning Ropes Course	49	18.22%
Advanced Ropes Course	33	12.27%
Lifeguarding	23	8.55%
Ropes Course Facilitation	27	10.04%
Camp Recreation	36	13.38%
Recreation Leadership	40	14.87%
Any A-B Course	64	23.79%

All Respondents were asked about enrollment information and their reason they chose to enroll in specific courses. Of the 269 useable responses included in this study, 205 indicated that they had taken or were currently taking at least one n-a course, and had not taken any a-b courses. These n-a only responses make up 76.20% of total responses included in the study.

Overall, 223, 82.90% out of the total 269 respondents indicated that they had taken Personal Health. One hundred and sixty-eight, or 75.34%, of respondents indicated that this course was required or that they were currently enrolled in it as a requirement. Thirty-three, 14.80%, respondents who were enrolled or had enrolled indicated that Personal Health was an elective. Twenty-two, 9.87%, students indicated that they had enrolled in this course but did not indicate whether it was an elective or a required course. One hundred and five respondents, 39.03%, indicated that they had enrolled in First Aid and Responding to Emergencies. Of these respondents, 61, 58.10%, indicated that they had enrolled in the course as a requirement, or that they were currently enrolled and it was a requirement. Twenty-seven, 25.71%, respondents indicated that the course was an elective, or that they were currently enrolled and the course was an elective. Seventeen, 16.19%, respondents indicated that they had enrolled but did not specify if the course was required or an elective.

Twenty-four respondents, 8.92% indicated that they had enrolled in Walking for Fitness. Of these respondents, 1, 4.17%, respondent indicated that it was a required course. Twenty-one, 87.50%, respondents indicated that Walking for Fitness was an elective, or that they were currently enrolled in it as an elective. Of the 24 respondents, 2, 8.33%, indicated that they had enrolled in the course but did not specify whether it was required or an elective (see Table 5).

Table 5

Enrollment in N-A Courses

N-B Courses	Count	Percentage of Respondents
Personal Health	223	82.90%
First Aid and Responding to Emergencies	105	39.03%
Walking for Fitness	24	8.92%
Any N-A Course	205	76.20%

The BFI scores were coded and scored in Microsoft Excel. The scores for the 5 subcategories (OCEAN) were then transferred into SPSS. The groups were designated as a-b and n-a for comparison. Means, sample sizes, demographics, and standard deviations between the two groups were compared. Respondents in the n-a group scored higher on average in Neuroticism, 3.29 with a standard deviation of .872, than respondents enrolled in a-b courses, 2.56 with an SD of .708. Respondents enrolled in a-b courses scored higher on average in Extraversion, 3.40 with an SD of .583, than respondents in n-a courses, 3.1 with an SD of .655. The means among the two groups in the area of Openness to New Experience were extremely close with the a-b group averaging slightly lower than the n-a group, 3.66 with an SD of .567 and 3.68 with an SD of .545 respectively. The a-b respondents scored higher on average, 3.96 with an SD of .589, than the n-a group in the area of Conscientiousness, 3.80 with an SD of .604.

Respondents in the a-b group also averaged higher scores in the area of Agreeableness, 3.89 with an SD of .337, than the respondents in the n-a group, 3.83 with an SD of .359

(see Table 6).

Table 6

Means of A-B and N-A Groups by Trait

Trait	Mean N-A	Mean A-B	SD N-A	SD A-B	SD Error N-A	SD Error A-B
Neuroticism	3.30	2.57	0.87	0.71	0.06	0.09
Extraversion	3.12	3.40	0.65	0.58	0.05	0.07
Openness	3.68	3.66	0.55	0.57	0.37	0.07
Conscientiousness	3.80	3.96	0.60	0.59	0.04	0.07
Agreeableness	3.83	3.89	0.36	0.34	0.03	0.04

N N-A= 205

N A-B= 64

The assumption of independence was controlled for and ensured by experimental design. If a respondent indicated that they had enrolled in any a-b course, their responses were excluded from the n-a group. N-a respondents indicated that they had not enrolled in any of the a-b courses. Levene's test of equal variances was run in order to ensure equal variances within the group's personality scores. Both n-a and a-b groups met the assumption

of equal variances within groups for all five personality traits (OCEAN) as $p > .05$ (see Table 7).

Table 7

Levene's Test for Equality of Variance

Trait	F	Sig.	t
Neuroticism	2.697	0.102	6.112
Extraversion	1.098	0.296	-3.053
Openness	0.001	0.978	0.203
Conscientiousness	0.080	0.778	-1.857
Agreeableness	0.474	0.495	-1.167

In order to answer the research question, "Is there a statistically significant difference in BFI personality scores between NSU students that enrolled in a-b courses vs. NSU students that enrolled in n-a courses," 5 independent samples t-tests were performed in order to test the 5 hypotheses at a level Bonferroni adjusted a of .05, making the critical value .01 for each trait. The null, research hypotheses, and outcomes are as follows:

Hypotheses Testing

The first experimental hypothesis tested was "NSU students enrolled in a-b courses will score higher on the BFI in the area of Openness to New Experience than NSU students enrolled in n-a courses. The null hypothesis was "there is no difference between BFI scores in the area of Openness to Experience between NSU students enrolled in a-b courses and NSU students enrolled in n-a courses." To test this experimental hypothesis, a directional independent-samples t-test was conducted to compare Openness to New

Experience scores on the BFI in NSU students who enrolled in a-b courses and NSU students who enrolled only in n-a courses. There was not a significant difference in the scores for Openness to New Experience in NSU students enrolled in a-b courses (M=3.6625, SD=.56695) and NSU students enrolled in n-a courses (M=3.6785, SD=.54524) t(267)=.203, p =0.4195> .01. The research failed to reject the null hypothesis and found no significant difference in Openness to New Experience scores on the BFI between NSU students who enrolled in a-b courses, and those NSU students who enrolled only in n-a courses (see Table 8).

Table 8

Trait T-Test

Trait	T	DF	Sig. (1 tailed)
Openness to Experience	.001	.203	.4195
Agreeableness	-1.167	267	.122
Extraversion	-3.053	267	.001
Neuroticism	6.112	267	.000
Conscientiousness	-1.857	267	0.064

The second experimental hypothesis was “NSU students enrolled in a-b courses will score higher on the BFI in the area of Agreeableness than will NSU students enrolled in n-a courses.” The null hypothesis was “there is no difference between BFI scores in the area of Agreeableness between NSU students enrolled in a-b courses and NSU students enrolled in n-a courses. To test the second experimental hypothesis, a directional independent-samples

t-test was conducted to compare Agreeableness scores on the BFI in NSU students who enrolled in a-b courses and NSU students who enrolled only in n-a courses. There was not a significant difference in the scores for Agreeableness in NSU students enrolled in a-b courses (M=3.8938, SD=.33659) and NSU students enrolled in na courses (M=3.8346, SD=.35881) t(267)=.-1.167, p =0.122> .01. The research failed to reject the null hypothesis and found no significant difference in Agreeableness scores on the BFI between NSU students who enrolled in a-b courses, and those NSU students who enrolled only in n-a courses (see Table 8).

The third experimental hypothesis was "NSU students enrolled in a-b courses will score higher on the BFI in the area of Extraversion than will NSU students enrolled in n-a courses." The null hypothesis was "there is no difference between BFI scores in the area of Extraversion between NSU students enrolled in a-b courses and NSU students enrolled in n-a courses." To test this experimental hypothesis, a directional independent-samples ttest was conducted to compare Extraversion scores on the BFI in NSU students who enrolled in a-b courses and NSU students who enrolled only in n-a courses. There was a significant difference in the scores for Extraversion in NSU students enrolled in a-b courses (M=3.4010, SD=.58280) and NSU students enrolled in n-a courses (M=3.1220, SD=.65458) t(267)=.-3.053, p =0.001> .01. The research rejected the null hypothesis and found that NSU students who enrolled in a-b courses had significantly higher
Extraversion scores on the BFI than those NSU students who enrolled only in n-a courses (see Table 8).

The fourth experimental hypothesis was "NSU students enrolling in a-b courses

will score differently on the BFI in the area of Neuroticism than will NSU students enrolled in n-a courses." The null hypothesis was "there is no difference between BFI scores in the area of Neuroticism between NSU students enrolled in a-b courses and NSU students enrolled in n-a courses." To test the fourth hypotheses, a non-directional independent-samples t-test was conducted to compare Neuroticism scores on the BFI in NSU students who enrolled in a-b courses and NSU students who enrolled only in n-a courses. There was a significant difference in the scores for Neuroticism in NSU students enrolled in a-b courses (M=2.565290179, SD=.7084599352) and NSU students enrolled in n-a courses (M=3.296951220, SD=.8715828780) t(267)=.6.112, p =0.000 < .01. The research rejected the null hypothesis and found a significant difference in Neuroticism scores on the BFI between NSU students who enrolled in a-b courses, and those NSU students who enrolled only in n-a courses. By examining the means, the conclusion is that students who enrolled in a-b courses scored significantly lower in Neuroticism on the BFI then NSU students who enrolled only in n-a courses at NSU (see Table 8).

The fifth experimental hypothesis is "NSU students enrolled in a-b courses will score differently on the BFI in the area of Conscientiousness than will NSU students enrolled in n-a courses." The null hypothesis was "there is no difference between BFI scores in the area of Conscientiousness between NSU students enrolled in a-b courses and NSU students enrolled in n-a courses." To test this hypothesis, a non-directional independent-samples t-test was conducted to compare Conscientiousness scores on the BFI in NSU students who enrolled in a-b courses and NSU students who enrolled only in n-a courses. There was not a significant difference in the scores for Conscientiousness in NSU students enrolled in a-b courses (M=3.9635, SD=.58929) and NSU students enrolled in n-a courses (M=3.8038, SD=.60423)

t(267)= -1.857, p =0.064> .01. The research failed to reject the null hypothesis and did not find a significant difference in Conscientiousness scores on the BFI between NSU students who enrolled in a-b courses, and those NSU students who enrolled only in n-a courses (see Table 8).

CHAPTER V

CONCLUSION

Introduction

Lee and Jan (2015) found that research regarding personality and adventure activity was limited. The aim of this study was to examine personality traits of the two groups of NSU students, a-b and n-a, to determine if a personality trait may be used as a predictor to enrollment in a-b courses. This information may be used to indicate which students NSU should devote time and resources marketing existing and new a-b activity courses towards. "From the perspective of the university's administrators, this issue is very critical for planning purposes" (Othman et al., 2019, p. 588). This analysis did find a significant difference in personality traits in two of the five personality traits, OCEAN, measured by the BFI.

Discussion of Results

This analysis indicated that NSU students who enrolled in a-b courses scored significantly higher in Extraversion than NSU students who enrolled in n-a courses. The analysis also indicated that NSU students who enrolled in a-b courses scored significantly lower in the area of Neuroticism than students who enrolled only in n-a courses. This research did not indicate a significant difference in the scores between the two groups in the areas of Openness to Experience, Conscientiousness, or Agreeableness.

Students who enrolled in a-b courses scoring higher in the area of Extraversion might be somewhat expected since Extraversion (E) "implies an *energetic approach* toward the social and material world:" (John et al., 1994, p. 138). Previous research in this trait further indicated that Extraversion is related to traits like assertiveness, sociability, activity, and assertiveness, and that individuals scoring high in Extraversion tend to seek stimulating events that are social in nature and may be seen as some as risky or uncertain (Moss & Ngu, 2006). The a-b courses in this study commonly include a higher level of social engagement and activity than the n-a courses. Also, adventure by definition contains an element of risk derived from the uncertain outcome (Priest et al., 1999). Thus, an extraverted individual could be more willing to engage in active a-b courses that expose them to more perceived risk than n-a courses than an individual scoring low in this personality trait.

The analysis also indicated that NSU students enrolled in a-b courses scored significantly lower in the area of Neuroticism than students enrolled in n-a courses. Individuals scoring high in Neuroticism maybe unstable, erratic, vulnerable, and discontent (Moss & Ngu, 2006), and are viewed as having poorer coping skills and reactions to adverse events (John et al., 2008). Conversely, individuals scoring low in Neuroticism, as the a-b group did, tend to have better coping skills and more positive reactions to adverse or challenging environments. Examining the components or risk, challenge, and uncertainty inherent in a-b courses, it may make sense that individuals scoring higher in Neuroticism would be more less likely to want to enroll in a-b courses while those scoring lower in Neuroticism would be more interested in a-b courses.

Openness to New Experience "describes the breadth, depth, and complexity of an individual's mental and experiential life" (John et al., 1994). With this description, and the

experiential learning environment of a-b courses, it may appear that Openness should be more prevalent with a-b students. This not occurring in the data may be due to the particular respondents, a need for a larger sample pool, or a true lack of difference.

The study also failed to find a significant difference in the area of Conscientiousness between NSU students who enrolled in a-b courses and those who enrolled only n-a courses. John et al. (2008) describes Conscientiousness as "socially prescribed impulse control that facilitates task- and goal- directed behavior, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing and prioritizing tasks" (p. 120). The a-b group did score higher than the n-a group of students, but not enough to be statistically significant.

Finally, the study failed to find a significant difference in the trait of Agreeableness in NSU students who enrolled in a-b courses and NSU students who enrolled in n-a courses. Agreeableness (A) "a prosocial and communal orientation towards others with antagonism and includes traits such as altruism, tender-mindedness, trust, and modesty" (John et al., 2008, p. 120). Individuals who score high in Agreeableness may be seen as being cooperative, participative, and inclined to work well with others (Gardiner & Jackson, 2011). College students who score high in Agreeableness may display such behaviors as emphasizing others strength's when talking about them, and lending class materials to others, or consoling others who are upset. Individual's scoring high in this personality trait tend to work well in groups (Gardiner & Jackson, 2011). With this description, and the strong group dynamic and team focus involved in a-b courses, it may appear that Agreeableness should be more prevalent with a-b students.

This not occurring in the data may be due to the particular respondents, a need for a larger sample pool, or a true lack of difference.

Implications

The implications of this research in practice can include targeting specific personality traits as it relates to specific college courses, more efficient advisement of college students based on personality traits, and planning and development of new courses or programs. This study found that students who score higher in the areas of Extraversion and lower in Neuroticism are more likely to enroll in a-b courses than n-a only courses at NSU. The university may use this information to identify and market specific courses, or entire programs, to a better-defined target audience. The information generated through this study could serve as justification for future a-b courses or full degree programs.

To better serve NSU students, the BFI could be administered to incoming freshmen during the required University Strategies course. Information about courses that correlate specific personality traits could be included with the student's inventory results to better direct them in enrollment plans. Guiding students toward programs that might match personality traits may very well improve enrollment, retention, and graduation rates.

Identifying NSU student's BFI scores could give the university a more complete picture of the students and potential courses or programs. More information about the student could allow the college to operate in a more student-centered fashion.

Future Research

Future research in this area could center around personality differences among college students and enrollment choices. It may be impactful to investigate the personality

differences across different demographics and enrollment in a-b vs n-a courses. For instance, could there be a personality difference between NSU female students who enroll in a-b courses when compared to the NSU female students who enrolled in only n-a courses. Previous by Hazrati-Viari et al., (2012) linked Conscientiousness and Openness to New Experience to higher GPA among college students. Future study could examine if this pattern of personality traits and GPA holds true among a-b and n-a students.

Future research in this area at NSU specifically may include the demographic or race/ethnicity and personality. NSU has a unique population with 18% reporting American Indian or Alaska Native over the past five years (Northeastern State University, 2021). Of the respondents to this study, 34.94% of respondents for this study reported identifying to this specific group. This is an extremely high percentage when compared the reported 1% of college students nationally (Post-Secondary National Policy Institute, 2020). Because of the small sample size, this specific demographic is often excluded from research in the field of higher education. Research involving this particular demographic may serve as valuable specifically at NSU.

Conclusion

This study was designed to answer the research question: is there a statistically significant difference in BFI personality scores between NSU students that enrolled in a-b courses vs. NSU students that enrolled in n-a courses? The results of the BFI found a statistically significant difference in two of the five personality traits. This study found that students who enrolled in a-b courses scored significantly higher in the trait of Extraversion than NSU students who enrolled only in n-a courses, and significantly lower in the trait of Neuroticism than NSU students who enrolled only in n-a courses. Just targeting these two

personality traits in tandem may provide more directed advisement and increased visibility and enrollment in adventure-based courses at NSU

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APPENDICES

University Research Compliance

PARTICIPANT INFORMATION FORM

Personality and Undergraduate Enrollment Choices

You are invited to be in a research study about the Personality traits and college enrollment choices conducted by Chad Stangl, under the direction of Dr. Donna Lindenmeier, Oklahoma State University. Your participation in this research is voluntary. There is no penalty for refusal to participate, and you are free to withdraw your consent and participation in this project at any time.

If you agree to be in this study, we would ask you to do the following things: Complete an online survey that will take 10 minutes.

Compensation: You will receive no payment for participating in this study.

Confidentiality: The information you give in the study will be anonymous. This means that your name will not be collected or linked to the data in any way. The researchers will not be able to remove your data from the dataset once your participation is complete. This data will be stored in a password protected computer indefinitely. The research team will ensure

anonymity to the degree permitted by technology. Your participation in this online survey involves risks similar to a person's everyday use of the internet. If you have concerns, you should consult the survey provider privacy policy at https://www.qualtrics.com/privacy-statement/.

Contacts and Questions: If you have questions about the research study itself, please contact the Principal Investigator at 918-444-3924, chad.stangl@okstate.edu. If you have questions about your rights as a research volunteer, please contact the OSU IRB at (405) 744-3377 or irb@okstate.edu.

If you agree to participate in this research, please click "I Agree" to continue.

How I am in general

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which **you agree or disagree with that statement.**

1	**2**	**3**	**4**	**5**
Disagree Strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly

I am someone who…

1. _____ Is talkative

2. _____ Tends to find fault with others

3. _____ Does a thorough job

4. _____ Is depressed, blue

5. _____ Is original, comes up with new ideas

6. _____ Is reserved

7. _____ Is helpful and unselfish with others

8. _____ Can be somewhat careless

9. _____ Is relaxed, handles stress well.

10. _____ Is curious about many different things

11. _____ Is full of energy

12. _____ Starts quarrels with others

13. _____ Is a reliable worker

14. _____ Can be tense

15. _____ Is ingenious, a deep thinker

16. _____ Generates a lot of enthusiasm

17. _____ Has a forgiving nature

18. _____ Tends to be disorganized

19. _____ Worries a lot

20. _____ Has an active imagination

21. _____ Tends to be quiet

22. _____ Is generally trusting

23. _____ Tends to be lazy

24. _____ Is emotionally stable, not easily upset

25. _____ Is inventive

26. _____ Has an assertive personality

27. _____ Can be cold and aloof

28. _____ Perseveres until the task is finished

29. _____ Can be moody

30. _____ Values artistic, aesthetic experiences

31. _____ Is sometimes shy, inhibited

32. _____ Is considerate and kind to almost everyone

33. _____ Does things efficiently

34. _____ Remains calm in tense situations

35. _____ Prefers work that is routine

36. _____ Is outgoing, sociable

37. _____ Is sometimes rude to others

38. _____ Makes plans and follows through with them

39. _____ Gets nervous easily

40. _____ Likes to reflect, play with ideas

41. _____ Has few artistic interests

42. _____ Likes to cooperate with others

43. _____ Is easily distracted

44. _____ Is sophisticated in art, music, or literature

SCORING INSTRUCTIONS

To score the BFI, you'll first need to **reverse-score** all negatively-keyed items:

Extraversion: 6, 21, 31

Agreeableness: 2, 12, 27, 37

Conscientiousness: 8, 18, 23, 43

Neuroticism: 9, 24, 34

Openness: 35, 41

To recode these items, you should subtract your score for all reverse-scored items from 6. For example, if you gave yourself a 5, compute 6 minus 5 and your recoded score is 1. That is, a score of 1 becomes 5, 2 becomes 4, 3 remains 3, 4 becomes 2, and 5 becomes 1.

Next, you will create scale scores by ***averaging*** the following items for each B5 domain (where R indicates using the reverse-scored item).

Extraversion: 1, 6R 11, 16, 21R, 26, 31R, 36

Agreeableness: 2R, 7, 12R, 17, 22, 27R, 32, 37R, 42

Conscientiousness: 3, 8R, 13, 18R, 23R, 28, 33, 38, 43R

Neuroticism: 4, 9R, 14, 19, 24R, 29, 34R, 39

Openness: 5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44

VITA

Chad Stangl

Candidate for the Degree of

Doctor of Philosophy

Thesis: COMPARING PERSONALITY TRAITS AND UNDERGRADUATE STUDENT ENROLLMENT CHOICES IN ADVENTURE-BASED COURSES VS. NON-ADVENTURE-BASED COURSES AT NORTHEASTERN STATE UNIVERSITY

Major Field: Health Leisure and Human Performance

Completed the requirements for the Doctor of Philosophy in Health, Leisure, and Human Performance at Oklahoma State University, Stillwater, Oklahoma in May, 2022.

Completed the requirements for the Master of Education in Parks and Recreation Management at Southwestern Oklahoma State University, Weatherford, OK in 2008.

Completed the requirements for the Bachelor of Science in Parks and Recreation Management at Southwestern Oklahoma State University, Weatherford, OK in 2005.

Experience: Instructor at Northeastern State University, Tahlequah, OK

Instructor – Health and Kinesiology, Recreation: Tahlequah, OK

Program Director at Southwestern Oklahoma State University: Weatherford, OK

Professional Memberships: Oklahoma Parks and Recreation Society