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The relationship between personality type and choice of college major

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THE RELATIONSHIP BETWEEN PERSONALITY TYPE AND CHOICE OF COLLEGE MAJOR

by
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ABSTRACT

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Dr. John Klanderman and Dr. Roberta Dihoff
School Psychology

The purpose of this study was to examine the relationship between personality type and choice of college major. Twenty-six students in Psychology and thirty students in Engineering majors were used in this study to determine if there was a statistically significant difference in personality types with regard to major. The subjects were administered the Keirsey Temperament Sorter-II to determine their personality type and the Spearman Rank Order Correlation Coefficient was used to analyze the data. Results indicated that no relationship was found between personality type and major or type and sex. However, there was a significant relationship found between sex and major.

MINI-ABSTRACT

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The purpose of the present study was to examine the relationship between personality type and choice of college major. Results indicate that no significant relationship was found between personality type and major, or type and sex. The only relationship to be found significant was between sex and major.

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Chapter 1

Introduction

For most people the period during and beyond high school is marked by important career decision making that are like most in life, not irrevocable. While some people battle with choosing an occupation and finding their first full time job, others are faced with choosing a college and a course of study that will lead to a satisfying career. Most students facing this particular time in life often turn to friends, family, and guidance counselors for advice or career counseling. The basic premise for career counseling is that people with similar personalities have a tendency to choose similar careers. In fact, a variety of research has shown that there are predictable relationships among personality types, work, values, and occupational interests.

John L. Holland (1959) theorized that career choices are largely a function of personal factors (e.g. personality traits) and environmental factors (e.g. family and school). In making career choices, individuals seek the type of environment that matches, or is congruent with their personality type. Holland believes that personality is a main contributor to career choice. A lot of controversy surrounds this theory. Other research conducted (described in detail later) showed conflicting results to Holland's theory. Therefore, there remains a need to substantiate and further validate Holland's findings. It is also important to gain more understanding between the relationship of personality and career choice. Understanding the role personality plays in career decision making will aid counselors and educators to assist students in determining what is best for them.

Purpose

Does personality type have an effect on career type? An understanding of the relationship between personality and career choice will enable teachers, parents, and school guidance counselors to identify, understand, and respond to students' goals or problems. Guidance counselors would be able to help students gain and understand information about themselves (e.g. their abilities, aptitudes, skills and interests) so that they can make informed career decisions. The purpose of this research is to examine the relationship between personality type and career preferences or choice of college major.

Hypothesis

Given the potential that personality type may have an effect on choice of career/major, the present study sought to examine the relationship between personality and career choice. Through the use of personality tests, it is predicted that certain personality types will, in fact, congregate towards certain majors. It is hypothesized that students in science related majors will be more analytical, introverted, logical, and depend on senses for information and decision making. While students in psychology related fields will be more intuitive, extroverted, spontaneous and flexible, and depend on their feelings or personal values to make decisions. This study will also look at the relationship between personality type and sex. The hypothesis here is that there will be a significant relationship between personality type and sex as well as a significant relationship between sex and major.

Theory

Research has demonstrated that career choice, as well as success and satisfaction with one's chosen career, is often consistent with one's personality characteristics. One of the most prominent researchers who recognize this idea is John Holland. The present study wanted to further test the assumption of John Holland's personality theory of vocational choice. Holland's theory (1966, 1973, 1985) says, "achievement of people is a function of congruence or "fit" between their personality type and their environment." In other words, people are motivated to seek out occupational environments consistent with their dominant personality traits. The theory assumes that most people and environments can be classified or grouped into 6 major categories or themes: Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), Conventional (C) based on their distinctive patterns of abilities, attitudes, and interests (descriptions of each appear in definition section) (Miller & Cowger, 1999).

Holland's theory further assumes that each personality type is most likely to flourish in a corresponding environment because this environment provides opportunities, activities, tasks, and roles congruent with competencies, interests, and self perceptions of its parallel personality type (Feldman, Smart, & Ethington, 1999). Usually an individual and an environment are described in 3 letter codes reflecting the most important, second in importance, and third in importance of the six categories. For example, a three letter code of SAE would indicate an individual who resembles most the social type, followed by progressively fewer resemblance's to the artistic and enterprising types. Congruence is sought by assessing the client's type and attempting to match it with the right occupations (Holland, 1977). Congruence results when the code describing the person

and environment match or approximately match. The more similar the personality is to the environment, the more congruent the relationship.

The act of classifying did not start with Holland though. Classifying people into different categories started back in the middle of the fifth century B.C.E. with Hippocrates. Hippocrates classified people by temperaments in terms of dominant humors in the body. He believed that there were four temperaments: melancholic, sanguine, phlegmatic, and choleric. The melancholic is dominated by the yellow bile in the kidneys; the sanguine by humors in the blood; the phlegmatic by phlegm; and the choleric by the black bile of the liver. Hippocrates believed a person's physical, psychological, and moral qualities could easily be understood by which humor was dominant in the body (Direnzo, 1998).

Another person to classify people into categories was Carl Jung. Jung was a Swiss psychologist who argued that personality traits are inherited or innate. He believed that we all share certain inborn "racial" or "species-specific" memories and ideas, most of which reside in our unconscious. What appears to be random variation in human behavior is actually quite orderly, logical, and consistent, and is the result of a few basic differences in mental functioning and attitude (Kolezynski, 2000). Jung thought that there were four basic mental functions or processes: rational thinking, feeling, sensing, and intuiting. Each of these four functions represent a characteristic way of approaching experience. Jung believed that everybody uses all four kinds of thinking, but that people vary in which kind of thinking predominates. Jung believed that the differences in the way people use their minds results in predictable and differing patterns of normal behavior (Funder, 1997).

Robert McCrae and Paul Costa are very well known for their classification system of personality. They claim the basic structure of personality consists of five superordinate factors. McCrae and Costa classify people's personalities by these five basic traits, often referred to as the Five-Factor Model or the "Big Five." They believe that these five basic traits are present to some extent in every individual and that they account for much of the variation from one individual to another. These five basic traits are extraversion, neuroticism, conscientiousness, agreeableness, and openness to experience. Like Jung, McCrae and Costa, believe that one or more of these traits are more dominate in each person and that you can predict a person's actions or behavior by looking at which traits are dominate (Carver & Scheier, 2000).

Throughout history there have been many different theories of personality and what one can tell from a person's personality. From the theories discussed above one can see that while these theories are different in the terms they use for classification they are similar in the methods they use to classify. The current research will look to further validate the appropriateness of classifying people by their personality types and to find the usefulness of classifying people into these different categories.

Definitions

Throughout this paper there are words that you will come across that may have a variety of meanings. The definitions listed here are the way they are meant to be understood.

The second factor of personality is called agreeableness. Agreeableness includes qualities such as being warm and likeable and a sense of nurturance and emotional supportiveness.

Artistic people have an interest in creative expression such as writing and the arts. They have little need for structure. Music, Drama, Art, Writing, English, and Speech are the fields for them.

Congruence is a construct, used by Holland, to refer to the relationship of the personality to the environment. Congruence is sought by assessing the client's personality type and attempting to match it with the right occupations.

The third factor of personality is most commonly called conscientiousness. The qualities that are included under this term are a little hard to determine. Many theorists have different opinions as to what this term really means. Some say that qualities such as planning, persistence, and purposeful striving towards goals should be included. Others say it is simply the will to achieve.

Conventional types prefer well-structured environments and chain of command. They tend to be a follower rather than a leader. They achieve goals through conformity. Conventional types are best suited for Office type occupations.

Enterprising people prefer leadership roles aimed at achieving economic objectives. Professions such as Public Speaking, Law or Politics, Merchandising, Sales, and Business Management are great for these types.

The first factor or dimension of personality is commonly referred to as extraversion. Extraversion means many different things to different people. It is sometimes characterized by assertiveness, open expression of impulses, a kind of

dominance and confidant assurance, or sometimes a quality of happiness. It is mostly associated with sociability. Extroverted type people seek to act on the environment, to be social, and to be action-oriented. They tend to act then think and they tend to think out loud. They talk more often than they listen and they communicate with enthusiasm. They seem to enjoy a fast paced lifestyle.

Feeling type individuals rely on personal and group values, an understanding of people and what matters to them, a capacity for warmth, and a desire for harmony. They make decisions using personal feelings, desires, or values. They are compassionate and empathetic. They consider the effect of actions on others and see the exception to the rule. They naturally like to please others and they show appreciation easily. May be seen as overemotional, illogical, and weak. They are motivated by the desire to be appreciated and to help others.

Guardians, also known as Sensing-Judgers, make up about 38 percent of the American population. They are realistic and decisive "traditionalists." Their core values include belonging, duty/service, and commitment to society. SJs are the great maintainers of institutions.

Idealists, also known as Intuitive-Feelers, make up the last 12 percent of the American population. They see possibilities related to people and are idealists. Their core values include meaning and uniqueness, becoming, and relationships/cooperation. NFs strive to be catalysts for positive change in themselves and others.

Introverted types exhibit a detachment from external events. Their enjoyment comes from privacy and solitude. Introverts tend to think before they act. They listen more than they talk and they keep their thoughts and feelings to themselves.

Investigative is another one of Holland's personality types. Investigative types have an interest in the sciences such as mathematics and the physical sciences. They tend to work independently and attempt to organize and understand the world. They are task oriented and think through problems. Biology, Astronomy, Chemistry, Physics, Statistics, Mathematics, Finance, Civil and Chemical Engineering, and Medical Sciences suit investigative types.

Intuition refers to perceptions that extend beyond the senses. Intuitive people experience hunches and creative discoveries. They often overlook the actualities of a situation and display such characteristics as creativity, imagination, abstract, and futuristic thinking. Intuitive types like to read between the lines looking for meaning. They tend to be general, figurative, and become bored easily.

Judging type people show a great concern for making decisions, seeking closure, planning and organizing. They have a strong work ethic-work first and play later.

Neuroticism or negative emotionality is the fourth term commonly used to classify personality. Neuroticism is the dimension that concerns the ease and frequency with which a person becomes upset and distressed or the experience of anxiety. In tests, questions on neuroticism are supposed to assess happiness, well being, and physical health.

Factor five of the Five-Factor Model of personality is openness to experience. This term named by Costa and McCrae suggests that social experience is important to personality. This term includes inquiring intellect and experiencing culture.

Perceiving individuals are more open, curious, spontaneous and flexible. They seek to understand and experience life rather than control it. Perceivers avoid closure at

all costs since they regard decision making as a stressful cutting off of options. They are always changing their goals and their motto in life is enjoy now finish job later.

Personality is a dynamic organization, inside the person, of psychophysical systems that create the person's characteristic patterns of behavior, thoughts, and feelings. Or in other words, personality is an individual's characteristic patterns of thoughts, emotions, and behaviors, together with the psychological motivations behind those patterns.

Rationals, also known as Intuitive-Thinkers, make up about 12 percent of the population. They are imaginative and logical "visionaries." Their core values include knowledge, competence, and power. NTs are great long-range thinkers with high standards for excellence.

Realistic is one of Holland's vocational interest themes or personality types. Realistic people have an interest in working with things and gadgets and working outdoors. They have an intense need for structure. Realistic types prefer concrete and abstract problems and tend to be aggressive. They posses good motor skills and organizational skills but lack verbal and interpersonal skills. Occupations that are well suited for realistic types include Agriculture, Adventure, Military, Electrical and Mechanical Engineering, Marine Science, or Drafting and Design.

Sensing individuals tend to focus on the immediate, are realists, and have acute powers of observation, have a memory for details, and exhibit practicality. They literally gather information or data using their five senses. They concentrate on what they see, hear, touch, smell, and taste. They trust what is real and concrete and seek documentation

and measurement to back it up. Sensing people value realism and common sense and tend to be specific and literal.

Artisans, also known as Sensing-Perceivers, make up another 38 percent of the population. These are realistic and spontaneous "experiencers." Their core values include action/excitement, experiencing the moment, performance, and skill. SP's are often risk takers and pragmatists.

Social types have an interest in people and are drawn towards the helping professions: Teaching, Social Services, Athletics, Domestic Arts, Religion, Nursing, and Political Science.

Thinking types rely on cause and effect relationships, analytical abilities, objectivity, and a concern for fairness and justice- one standard for all. They are motivated by desire to achieve and accomplish. They also tend to be critical and may be seen as heartless, insensitive, and uncaring.

Assumptions

Throughout this study it is assumed that the sample is a random sample from the Psychology and Engineering majors from Rowan University in Southern New Jersey. It is also assumed that the subjects are accurately and honestly answering all the items on the personality test and that each test is given in a standardized fashion.

Limitations

As with any study there are always limitations to the research being conducted. One major limitation to the current research has to do with sample size. The sample size

is much smaller than would have liked. This is due to the fact that there was not enough time and funds to conduct this research with a larger sample population. This study was only conducted at one school, Rowan University in Southern New Jersey and the sample consisted of all Caucasians and one African American. This limits the ability to generalize the findings to all groups of people throughout the United States.

Overview

In Chapter 2 there will be a discussion on the intensive review of research relating to personality types and career issues. Chapter 2 will be followed by Chapter 3 where the research design or methodology will be described in detail. Issues concerning the sample population, measures used, and design of the study will be included in Chapter 3. Chapter 3 will also include an analysis and a summary. In Chapter 4, the findings that were gathered during the study will be presented and analyzed. The last chapter, Chapter 5, will contain a summary and a conclusion of the study, followed by a discussion. Chapter 5 will also include recommendations and implications for further research.

Chapter 2

Introduction

There has been quite a lot of research conducted on the role that personality plays in life and career choice. In this chapter, previous research will be presented and reviewed at great length. The chapter is organized by research topics. Research that closely resembles the current study will be discussed first. This will be followed by a general review of research that has some bearing on, but is not directly related, to the current research. A summary of the research results will conclude the chapter.

A Relationship between Personality Type and College Major

John L. Holland and Joan E. Holland (1977) took results from the Self-Directed Search (SDS) and Vocational Preference Inventory (VPI) from their files and organized them into four occupations for workers and five fields of study for college students. They observed two things: There is considerable latitude for a variety of people within a given field, but at the same time there are usually two to three types that rarely occur, if at all. For example, employed clinical psychologists include three main types (Enterprising, Social, and Investigative) in about equal percentages. In contrast, medical technology students are 80% Investigative. Based on Holland's 3 letter SDS code and the 3 letter code of an individuals current occupation or field of study, 57% of individuals had all three letters of SDS code match the letters of the other code in any order. Therefore,

about 75% of the people in the sample possess codes that have a reasonable degree of resemblance to the average code for their occupation.

Mark Miller and Ernest Cowger, Jr. tried to determine the degree of similarity between personality type and students' anticipated future career choice. They gave the Self-Directed Search to 91 students (40 juniors and 51 seniors) from a regional high school. Ninety-six percent of those who participated were white, middle to upper middle class and had an average age of 16.8 and an age range between 15 and 19. The students were also asked, "What type of career are you presently thinking about pursuing?" The title for each career was located in the Directory of Holland Occupational Codes and assigned its corresponding 3-letter code. The Iachan Index was used to examine the magnitude of the relationship between two separate 3-letter codes. The interpretation of the congruence score on the Iachan index are as follows: Scores of 26 through 28 are very close matches, scores in the range of 20 through 25 are reasonably close matches, scores of 14 through 19 are not close matches and scores of 13 and below are poor matches. In this study, the mean score was found to be 20.28 (SD=6.45) between the students' 3 letter SDS summary code and their 3-letter anticipated career selection. These results indicated a reasonably close agreement between the Self-Directed Search scores and anticipated career pursuits after graduation (Miller & Cowger, 1999).

Hilmar Nordvik (1996) conducted a study to determine the relationship between Holland's vocational typology and Myers-Briggs' types. He took 320 Norwegian males and females, who belonged to different groups such as personnel groups, university students, persons seeking career guidance, and applicants for various kinds of jobs taking tests during the recruitment program. The subjects were given the vocational inventory

and the anchor inventory, developed to measure six vocational personality types in Holland's theory, and a Norwegian version of the Myers-Briggs Type Indicator, Form G. The age range of the subjects was 18 to 70 years with a mean of 40 years and a standard deviation of 9.1 years. The coefficient alpha, for the scales in this sample, varied from .73 to .83, and correlations between the four MBTI variables were found to be high. It was determined that extraversion-introversion, sensing-intuition, and thinking-feeling were associated with distinctions between the enterprising and investigative, the conventional and artistic, and the realistic and social vocational categories. The highest mean realistic scores were obtained by the industrial and agrarian workers, the military leaders, and aviation pilots. The technical science researchers, psychologists, and psychology and social science students obtained the highest investigative scores. There was no well-defined artistic group in this sample and according to standard deviations, the artistic scores tended to vary much in the occupational groups. Social service and health personnel obtained the highest social score and the second highest social score was found among school teachers. Marketing leaders and top administrative leaders had the highest enterprising scores. These results support the validity of the vocational inventory scales and prove a relationship between personality and major choice.

Brian Bolton (1985) analyzed the Sixteen-Personality Factor Questionnaire (16 PF) profiles for 69 occupational groups according to Holland's six occupational types: RIASEC. An preliminary overall MANOVA comparison of the six Holland types using all 16 personality scales produced a highly significant Wilk's criterion ($F(80, 235) = 3.13$, $p < .0001$. It was determined that 12 of the 16 PF scales significantly differentiated among the six types. Three discrimant functions, Independence, Extraversion, and

Anxiety enabled correct classification of 75% of the groups to Holland's types. The predictive accuracy for these three discrimant functions for the six occupational types were found to be: R (70%), I (75%), A (100%), S (85%), E (44%) and C (50%). These results strongly suggest that on the average, occupations when grouped into Holland's typology have distinguishable personality characteristics that correspond to traits enumerated by Holland.

Do similar persons choose similar jobs? This question was answered by a study conducted by Sandra J. Lancaster and her colleagues. She tried to determine if personality characteristics were a factor in job choice. What they found did not support Holland's theory of vocational choice. They determined that while individuals with similar cognitive ability and vocational interests selected similar jobs, people with similar personality characteristics did not choose similar jobs. They discussed the possible explanations of this finding. One explanation is that the personality measures used may not have been relevant to job choice. Another explanation is that the personality characteristics measured were not the ones that might differentiate between the types of jobs included in their study (Lancaster, Colarelli, King, and Beehr, 1994).

Rosen and Baggaley (1982) used the Milwaukee Academic Interest Inventory (MAII) to determine if the scores could discriminate the examinees according to Holland's six personality types. The results of the discriminant analyses showed that the seven academic interest variables were able to effect significant discrimination among the six personality types. Therefore, the relationship between personality and academic major can be extended to include personality and academic interest measurement as well. The realistic type's highest score was on the Mechanical variable. For the males and females

the Conventional and Enterprising type's highest mean scores were on the Commercial variable. The results of this research provide strong support for the construct validity of both the Vocational Preference Inventory and the Milwaukee Academic Interest Inventory.

Leon J. Gross and Eugene L.Gaier (1974) made an effort to examine whether the previously established relationship between vocational choice and self-ratings on Holland's personality stereotypes among college freshmen would be strengthened with a sample of college seniors. They used 109 male college seniors as subjects, sampled on the basis of major field choice. The R category contained 19 engineering students, the I category consisted of 8 anthropology subjects, 8 geography, and one each from architecture and biology. The S category was composed of 9 sociology students, 3 education, and 2 each from American studies and psychology. The C category consisted of 23 subjects from accounting, The E had 9 political science students and 8 from history while the A category contained 15 english majors and 1 theatre student. These subjects were given a questionnaire to complete in which they had to select career stereotypes, which described them best. Significant relationships were obtained for four stereotypes (realistic, conventional, enterprising, and artistic) on the basis of both major and vocational choice which supports Holland's theory.

Prediction of Career Choice from Personality

Ralph B. Vacchiano and Robert J. Adrian (1966), tried to determine if one could predict a person's academic major based on their personality need constructs. They

looked at three male groups representing three academic majors, business, chemistry, and mathematics, and two female groups, representing education and nursing. Through Chi-squares, it was discovered that both the male and female groups were significant ($p<.001$). For the classification of the male business, chemistry, and mathematics groups, 74% of business, 69% of chemistry, and 56% of the mathematics students were correctly classified. Second discriminant analysis, computed for only the business and mathematics students, resulted in the correct classification of 90% of the business and 88% of the mathematics students. For the female groups, 82% of the education and 84% of the nursing students were correctly classified. These findings suggest that prediction of academic major based on personality variables is feasible.

Another study examined the efficacy of Holland's theory in business education and specifically tested the accuracy of predicting undergraduate student's major field of study using their scores on an interest measurement test, the Strong Campbell Interest Inventory (SCII). Harsha E. Chacko gave the SCII to 97 students, 45 accounting majors and 52 hospitality management majors and discovered that in accordance with Holland's typology, accounting students scored higher in the conventional type than did hospitality management students. Hospitality management students scored high on the enterprising theme, and they differed from the conventional types in their preference for ambiguous social tasks and greater concern for power, status, and leadership. These findings prove the efficacy of Holland's theory of vocational choice in business education. While students in business administration do show similarities, the different departments within business administration have certain interests and preferences that make them stand apart from other departments (Chacko, 1991).

Barbara Paige (2000) looked at a different group of students to determine if certain psychological types were present in certain majors. Paige looked at the psychological profiles of dental hygiene students. She examined the type preferences of 165 dental hygiene students (aged 20-55 years) attending a community college-based dental hygiene program. Paige found that 75% of the people attending this program were predominantly of the Sensing-Judging temperament. The most frequently occurring types were ESFJ, ISFJ, ESTJ, and ISTJ, and these 4 types alone accounted for 61% of the sample. These results are consistent with the type theory of occupation choice. Martha Grindler and Beverly Stratton (1990) looked at the personality types of teachers. They used the MBTI to determine the type of students who showed a preference for elementary teaching as an occupational choice. The top three rankings for students in the education program included the ESJF (17.13%), the ISFJ (16.34%), and the ENFP (12.50%) personality profiles. This information could be used by colleges to determine success in teaching.

Carol Elam investigated whether or not you can predict a medical student's specialty area by their undergraduate major. She discovered that the majority of medical students completed science majors in Investigative disciplines. While the majority of medical specialties attracted students from all personality types the students who studied undergraduate study in Artistic and Social majors were more likely to select a career in psychiatry. Students pursuing careers as orthopedic surgeons were more likely to have studied Realistic or Investigative majors and less likely to have pursued Artistic or social majors. Medical Students entering radiology completed studies in Realistic or Enterprising fields (Elam, 1994).

James A. Batesky, John A. Malacos, and Kevin M. Purcell (1980) examined the personality characteristics of physical education and recreation majors and ascertained why some students chose one over the other. What they found was that both the recreation and physical education students were alike in personality profiles and were very similar to recreation and physical education professionals already in the field. They also discovered significant differences on secondary, less dominant characteristics, which may contribute to selection of a specialized area. Recreation majors tended to be somewhat more artistic than physical education majors who were more enterprising.

Robert C. Wicklein and Jay W. Rojewski looked at personality types of technology and industrial arts educators. They found that the ESTJ, ENTJ, ENFJ, ISTJ personality types were found in higher prevalence (44%) in this group. Industrial Arts educators reported a higher proportion of ESFJ (12.4%) of ISFJ (10.1%) type than technology educators while Technology educators had a higher percentage of ENTJ (16.2%), ENFJ (16.2%), and ENFP (7.6%) personality profiles. Theodore Ferdinand (1969) discovered four distinct character types among a population of undergraduate technologists. Each of these four types were found to approach their scientific and technical careers in distinctive ways.

Exploring Gender Differences-Women Studies

Barbara Bradley Stonewater decided to explore gender differences in two career related areas- traits, or personality, and decision making style. Stonewater discovered that men are considerably more likely to be realistic and Investigative types, and to a lesser

extent, Artistic and Enterprising, and that women are clearly more likely to be Social and Conventional types and be External decision makers (Stonewater, 1987).

Another study to concentrate on women was the research of Mark Miller, Rose Heck, and Daniel Prior (1988). They compared the similarity of 40 women's General Occupational Themes and their selection of college majors. Each of the subjects had a declared major in Business, Math/Computer, Music, or Social Work. The majors were then classified according to the College Majors Finder under the respective Holland personality type: Social (Social Work), Enterprising (Business), Artistic (Music), and Investigative (Math/Computer). Analyses were reported for the percentage of good matches between the subjects' declared major and their highest score on the General Occupational Themes. Forty-six percent were found to be good hits, 27% were poor hits, and another 27% was clean misses. These results show that there is a correspondence, although modest, between personality type and later selection of college major and proves that Holland's theory of career choice is useful for women.

It is interesting to look at how women compare to men in occupations that are traditionally male dominated professions. Are women who enter these occupations similar to those men in the occupations? Cooper and Robinson set out to determine just that. Their results indicated that female and male students with highly technical majors had some similar interpersonal characteristics and some different characteristics. The males and females were similar in these characteristics: controlling, assertive, angry, and self-critical. The female students were significantly more cooperative, supportive, submissive, and passive than the male students were (Cooper & Robinson, 1985).

Validity of Measures

Thomas F. Harrington, Rich Feller, & Arthur O'Shea conducted a study to determine what methods were the most effective for obtaining the highest degree of agreement with the *Dictionary of Holland Occupational Codes (DHOC).* Of the four methodologies used to obtain college codes, they found that the Career Decision-Making (CDM) codes had the highest degree of agreement. Ninety-six percent of the student CDM codes had reasonably close matches or better with the Holland Occupational Codes. For most majors there was a substantial similarity between the first two letters of the CDM student codes and the DHOC occupational codes. This study suggests the usage of the CDM when career counselors are trying to help high school students decide which major to choose (Harrington, Feller, & O'Shea, 1993).

John Holland and colleagues (1993) examined the validity of using the Career Beliefs Inventory (CBI). Through their research it was determined that the CBI, although based on a small adult sample, correlated with some well-established inventories and scales imply that most CBI Scales have at least moderate construct validity (Holland, Johnston, Asama, & Polys, 1993).

Stability of Choice

Ronald L. Mullis, Ann K. Mullis, & Deborah Gerwels (1998) investigated the stability of adolescents' career interests using the Strong-Campbell Interest Inventory (SCII). Significant differences were found for all Occupational Themes and Basic Interests except the Realistic Theme. The correlation coefficients, ranging from .48 to .70, indicated that the students were generally consistent in their career interests over a

three-year period. These results were further validated in a study done by Feldman, Smart, & Ethington (1999). Four types (Investigative, Artistic, Enterprising, Social) were found to have a significant pattern of increasing differentiation between their abilities and interests from the time students entered college to four years later. Test-retest reliabilities ranged from .46 to .69. In his study, Hilmar Nordvik (1996) also discovered that there was stability among the vocational and career preferences.

Cognitive Relationship to Choice

Though sparse, there is data that appears to support the assumption that persons gravitate toward different occupations as a function of their self-monitoring propensities and that such motivations are reflected in Holland vocational preferences. Several studies looked at cognitive processes and how they effected career choice. Michael T. Brown, Michael J. White, and Lawrence H. Gerstein (1989) examined the association between self-monitoring and occupational preferences. From their study they discovered that self-monitoring motivations play a role in the vocational orientations of men and to a lesser degree women. They found that individuals in Social occupations tended to be low in self-monitoring while those in Enterprising expressed higher self-monitoring tendencies. York and Tinsley (1986) explored the relationship of cognitive approaches to perception, learning, and decision making to students' personality types. Their results were found to be consistent with Holland's theory. Gregory Waas (1984) studied cognitive differentiation in relation to career choice. His results confirm the hypothesis that information related to Holland personality characteristics of persons in various occupations would increase subjects' ability to differentiate among job titles. This

finding suggests that personality information may be more useful in promoting career choice than the types of information traditionally provided. Another study looked at how freshmen work values were related to Holland-typed majors. Work values are said to play a crucial role in an individual's life and career development. Research suggests that they influence educational and career choices, and one's commitment to learning and work. The MANOVA results ($F=.67$, $p<.000$), in a study conducted by Huang & Healy (1997), showed that Holland-typed majors attracted freshmen whose work values fit the departmental environment in which the major is located thus implying an influence in career choice.

Summary of Research

Previous research was discussed and reviewed at length in this chapter. While most of the research presented supported Holland's theory of vocational choice most of the results were modest at most. Miller and Cowger (1999) discovered that personality type was reasonably related to students anticipated future career choice. Bolton (1985) analyzed differences in personality characteristics within Holland's occupations. MANOVA results show a significant Wilk's criterion $F=3.13$. Nordvik (1996) also found positive correlations ranging from .73 and .83 between personality and major choice. Paige (2000) found that four personality types predominated among dental hygiene students- ESFJ, ISFJ, ESTJ, and ISTJ. She found that 75% of the students were among these four types. Chacko (1991) found similar results among business education majors. She discovered that business education majors differed in interests and preferences within different departments. Accounting majors were found to be more conventional than

hospitality management students who were found to score high on the enterprising theme. The same thing was found to be true for physical education and recreation majors. While they were found to be similar in personality, each group had significant differences on secondary, less dominant characteristics, thought to be contributed by selection of their specialized area. Grindler and Stratton found three dominant personality types in the teaching profession: 17.13% of education students were of the ESFJ types, 16.34% were ISFJ types, and 12.5% were of the ENFP profile.

While these results show a relationship between personality and career choice, the review of literature implies that more research must be conducted to determine the strength of the relationship. Most of the above research focused on one particular group at a time, whether it was women, men, white, middle class, etc., or looked at many groups as a whole. The current research looks at and compares two common college majors to determine if certain personalities tend to congregate toward them. If a significant relationship is found between personality and career choice, career counseling can begin to focus on the use of personality inventories as a tool for guiding unsure students.

Chapter 3

Sample

The sample consisted of 56 undergraduate students, 31 males and 25 females, enrolled in the psychology or engineering field at Rowan University in Glassboro, NJ. The subjects ranged in age from 18 to 47 with the mean age being 20. The Psychology subsample was comprised of 26 subjects, with 8 males and 18 females. The Engineering subsample was composed of 30 subjects, with 23 being male and 7 being female. Of the Psychology majors, 11 were seniors, 10 were juniors, and 5 were sophomores. All but one of the Engineering students were freshmen with the other being a sophomore. The entire sample was of Caucasian decent with the exception of one African American in the Psychology subsample.

Measures

The Kiersey-Bates Temperament Sorter-II (KBTS) was picked as the instrument to use to determine psychological type in this study. The Kiersey is one of several instruments used to measure personality type preference and is based on the work of Carl Jung. Modeled after the Myers-Briggs Type Indicator, the Kiersey-Bates Temperament Sorter-II provides a framework for determining predispositions toward favored or natural tendencies in human behavior. The KBTS-II seeks to determine how people consciously prefer to attend to the world, how they choose to perceive that to which they attend, and how judgements are made about those perceptions.

The KBTS-II is a 70-item forced-choice questionnaire designed to elicit an individual's preference on four dichotomous scales or dimensions. It takes approximately 15 minutes to complete. The four basic preferences are Extraversion (E) –Introversion (I), Sensation or Sensing (S)-Intuition (N), Thinking (T) – Feeling (F), and Judging (J) – Perception or Perceiving (P). Specific relationships between the four dichotomous scales lead to descriptions and characteristics for 16 separate psychological types. Personality types are expressed by a four-letter composite that represents an individual's preference on each of the four indices. These four make up your personality. There are 16 possible type combinations. No one type is best and no two people with the same type are exactly the same. One's personal preferences interact and that interaction makes up your unique personality. Individual's can use the Keirsey Temperament Sorter-II to learn more about themselves, their motivations, and potential areas for growth. It provides individuals with valuable insight for understanding and appreciating one's own and others' strengths and weaknesses. Reliabilities for the Kiersey were reported in two key areas-internal consistency and replicability over time. Internal consistency was done by X and Y split-half scores. In all cases the Pearson product- moment correlation's exceeded .79. Replicability over time showed a percent agreement in each category to consistently exceed 68%.

The Extraversion-Introversion dimension deals with how we interact with the world and where we direct our energy. Extraversion includes active involvement with people as a source of energy and focuses perception and judgement on people and things. The introversion scale composes of a preference for solitude to recover energy. Within the introversion scale perceptions and judgements are focused on concepts and ideas.

Seventy-five percent of the general population prefer an extraverted orientation, while twenty-five percent prefer an introverted one. The Sensing-Intuition domain looks at the kind of information we naturally notice and remember. The sensing orientation includes people who prefer to receive or gather information directly through the use of the five senses. Intuitive people perceive things indirectly, through hunches or a "sixth sense." Three-fourths of the general population report a sensing preference, while the remaining one-fourth prefer intuition as a means of perceiving and gathering information. The Thinking-Feeling dimensions determine how we make decisions in our lives. Thinking types draw conclusions based on logical processes using impersonal and objective facts. Feeling people draw conclusions based on personal values and subjective observations. The general population is divided equally between a preference for thinking and feeling. The Judging-Perceiving scale looks at whether we prefer more structure or more spontaneity in our lives. Judging type people live a structured, orderly, and planned life while those who are perceiving types have a preference to live in a more spontaneous and flexible way. Fifty percent of the general population report to be judging while the other half report a preference for perception (for more detailed descriptions see definitions).

The KBTS-II characterizes observed behavior into four broad temperament groups; Guardians (SJ), Artisans (SP), Rationals (NT), and Idealists (NF). These specific combinations of the Myers-Briggs' dichotomous indices were selected to mirror four temperament groups proposed by past researchers. Keirsey and Bates viewed their four temperament types as the base for the 16 Myers-Briggs psychological types and felt that each of the 16 psychological preferences could be categorized into one of the four temperament types.

Design

A correlational design was employed in this study. Correlational studies are used to determine relationships among variables. In this study, the relationship between personality type and major choice was determined. After receiving clearance from the Institutional Review Board and obtaining permission from classroom professors in the selected academic departments, the primary investigator went to six separate classes, explained the research project and asked students to volunteer. The primary investigator visited two psychology classes and four engineering classes. Students who volunteered to participate were given a test packet containing an informed consent form, an information sheet to fill out and the Kiersey-Bates Temperament Sorter-II. The personal data sheet or information sheet was administered to determine the respondents' age, gender, academic class level and choice of major. The primary investigator explained what each sheet of the packet was for and gave a packet to each student who volunteered. The students were given as much time as needed to fill out the information sheet and the personality test. Once all the students were done the test packets were collected and the primary investigator entered all the data into the computer on the Kiersey website. For each student, one of the four types of personality described above was established based on the way the students answered the questions. While the response rate was not as high as hoped, it was considered acceptable.

Testable Hypothesis

The Null Hypothesis states that no relationship will be found between personality type and choice of major as measured by the Keirsey Temperament Sorter II. Engineering

majors will tend to be more extroverted, more intuitive, more sensitive, and more perceptive than originally thought. Psychology majors will be more introverted, take a sensing approach to perceiving and learning, be more analytical, and less judging than research has previously suggested.

The Alternate hypothesis or Testable Hypothesis suggests that there is a positive correlation between personality type and choice of major. Engineering students will be determined to be more introverted, prefer a sensing approach to decision making, and prefer a judging classification to applying decisions to specific environments. While Psychology students will be discovered to be extroverted, intuitive, rely on their feelings to make decisions, and be both judging yet perceptive.

Analysis

The principal statistic utilized in this study was the Spearman Rank Order Correlation Coefficient, which is similar to the Pearson Product Moment Correlation. The Pearson Product Moment Correlation is a parametric test of correlation applied to studies that are looking to determine a relationship among variables. The Spearman Rank Order Correlation Coefficient is a non-parametric test that measures the relationship between two variables that are both measured on ordinal scales. The Spearman correlation is interested in obtaining a measure of consistency between variables.

Summary

In the current study, the Keirsey Temperament Sorter-II will be used to investigate people's personalities or predisposition's of behavior. The results from the

Keirsey will then be compared to previous results found regarding personality's relationship to career choice or choice of major. The relationship between personality type and choice of major will be investigated to determine if certain types of people have a tendency to enter into certain majors. Psychology majors and engineering majors are the two groups that will be investigated in this study. The hypothesis is that there will be different types of people that tend to choose the psychology field and the engineering field.

Chapter 4

Overview

Three hypotheses directed the analysis of the data and provided comparisons involving psychology and engineering majors in relation to personality type. The Spearman Rank Order Correlation Coefficient method was used to tabulate significance.

Sample Characteristics

A summary of the subjects used is included in Table 4.1. Table 4.1 includes age, sex, year in college, major, ethnicity, and personality type information for all the subjects used in the study. The table shows that the subjects aged in range from 18-47 with the mean age being 20. It also shows that the majority of students from the engineering major were freshman students while the subjects from the psychology classes were mixed from all classes with the majority coming from the senior class. All the students were Caucasian with the exception of one student who was African American.

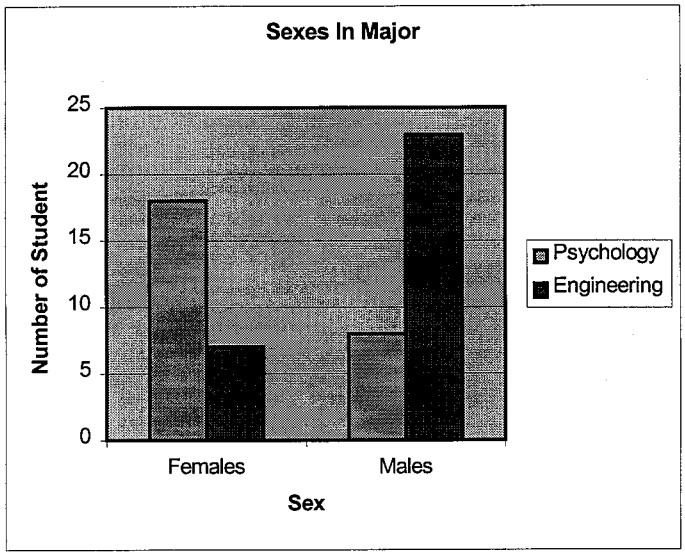
Table 4.1 – Characteristics of the Sample

Age	Sex	Year	Major	Ethnicity	Type
21	F	S	Psychology	Caucasian	Guardian SJ
20	F	J	Psychology	Caucasian	Idealist NF
22	F	S	Psychology	Caucasian	Idealist NF
20	M	So	Psychology	African Am.	Idealist NF
20	F	J	Psychology	Caucasian	Artisan SP
21	M	S	Psychology	Caucasian	Artisan SP
20	F	J	Psychology	Caucasian	Guardian SJ
21	M	S	Psychology	Caucasian	Idealist NF
22	F	S	Psychology	Caucasian	Guardian SJ
20	F	J	Psychology	Caucasian	Rational NT
21	F	J	Psychology	Caucasian	Idealist NF

21	F	S	Psychology	Caucasian	Idealist NF
21	F	S	Psychology	Caucasian	Guardian SJ
22	F	S	Psychology	Caucasian	Guardian SJ
20	F	J	Psychology	Caucasian	Guardian SJ
20	F	J	Psychology	Caucasian	Guardian SJ
21	M	So	Psychology	Caucasian	Guardian SJ
21	F	J	Psychology	Caucasian	Guardian SJ
22	F	So	Psychology	Caucasian	Guardian SJ
19	F	So	Psychology	Caucasian	Guardian SJ
47	F	So	Psychology	Caucasian	Guardian SJ
23	M	J	Psychology	Caucasian	Rational NT
21	M	J	Psychology	Caucasian	Guardian SJ
21	F	S	Psychology	Caucasian	Rational NT
21	M	S	Psychology	Caucasian	Guardian SJ
21	M	S	Psychology	Caucasian	Guardian SJ
18	M	F	Engineering	Caucasian	Rational NT
19	F	F	Engineering	Caucasian	Guardian SJ
19	M	F	Engineering	Caucasian	Guardian SJ
18	M	F	Engineering	Caucasian	Idealist NF
19	M	F	Engineering	Caucasian	Artisan SP
18	M	F	Engineering	Caucasian	Idealist NF
19	M	So	Engineering	Caucasian	Rational NT
19	F	F	Engineering	Caucasian	Idealist NF
18	F	F	Engineering	Caucasian	Guardian SJ
18	M	F	Engineering	Caucasian	Guardian SJ
19	M	F	Engineering	Caucasian	Guardian SJ
18	M	F	Engineering	Caucasian	Guardian SJ
18	M	F	Engineering	Caucasian	Guardian SJ
18	M	F	Engineering	Caucasian	Guardian SJ
18	M	F	Engineering	Caucasian	Guardian SJ
19	F	F	Engineering	Caucasian	Guardian SJ
19	M	F	Engineering	Caucasian	Idealist NF
18	F	F	Engineering	Caucasian	Artisan SP
19	M	F	Engineering	Caucasian	Artisan SP
18	M	F	Engineering	Caucasian	Guardian SJ
18	F	F	Engineering	Caucasian	Guardian SJ
19	M	F	Engineering	Caucasian	Artisan SP
19	M	F	Engineering	Caucasian	Guardian SJ
19	M	F	Engineering	Caucasian	Guardian SJ
18	M	F	Engineering	Caucasian	Rational NT
18	M	F	Engineering	Caucasian	Guardian SJ
18	F	F	Engineering	Caucasian	Guardian SJ
19	M	F	Engineering	Caucasian	Idealist NF
18	M	F	Engineering	Caucasian	Rational NT
19	M	F	Engineering	Caucasian	Guardian SJ

Figure 4.1 shows the distribution of males and females within the majors. The Psychology subsample consisted of 18 males and 8 females while the Engineering subsample consisted of 7 females and 23 males.

Figure 4.1 – Distribution of Sexes Within Major



Testable Hypothesis

The first Null Hypothesis stated that no relationship would be found between personality type and choice of major as measured by the Keirsey Temperament Sorter II. Engineering majors would tend to be more extroverted, more intuitive, more sensitive, and more perceptive than originally thought. Psychology majors would tend to be more introverted, be more analytical, and less judging than research has previously suggested.

The second Null Hypothesis stated that no relationship would be found between sex and personality type. While the third Null Hypothesis stated that no relationship would be found between sex and major.

The first Alternate Hypothesis or the Testable Hypothesis suggested that there would be a positive correlation between personality type and choice of major. Engineering students would be more introverted, use their senses for decision making and be judging type of people. While Psychology students would be more extroverted, intuitive, rely on their feelings to make decisions, and be both judging yet perceptive.

The second Alternate Hypothesis suggested that there would be a significant relationship between sex and personality type. While the third Alternate Hypothesis stated that there would be a significant relationship between sex and major.

Using the Spearman Rank Order Correlation Coefficient to analyze the results, it was determined that all but one of the Null Hypotheses failed to be rejected and all but one of the alternate hypotheses failed to be accepted. Table 4.2 shows the results of the analyzed data. The table shows that there was no significant relationship between personality type and major (group). The correlation coefficient was determined to be .021 with significance being .878, which is over and above the needed significance level of .01. The relationship between sex and personality type was also found to be not significant. Table 4.2 shows that the correlation coefficient was -.110 at the .418 significance level. The only relationship found to be significant was between sex and major. The coefficient was determined to be -.460 and was significant at the .000 level.

Table 4.2 - Spearman's Correlation Coefficient

		Group	Type	Sex
Group	Correlation Coefficient	1	0.021	-0.460
	Significance (2-tailed)	.	0.878	0
	N	56	56	56
Type	Correlation Coefficient	0.021	1	-0.110
	Significance (2-tailed)	0.878	.	0.418
	N	56	56	56
Sex	Correlation Coefficient	-0.460	-0.110	1
	Significance (2-tailed)	0	0.418	.
	N	56	56	56

The present study sought to examine the relationship between personality type and major choice. Through the use of a personality test it was hypothesized that certain personality types would tend to congregate towards certain majors. Figure 4.2 shows the distribution of students into the four main personality types according to each major. As one can see there did end up being a majority personality type within each major but they ended up being the same type, the Guardian type. While by numbers there was a majority type, statistically it was found to not have any significance.

Figure 4.2 – Personality Type by Major

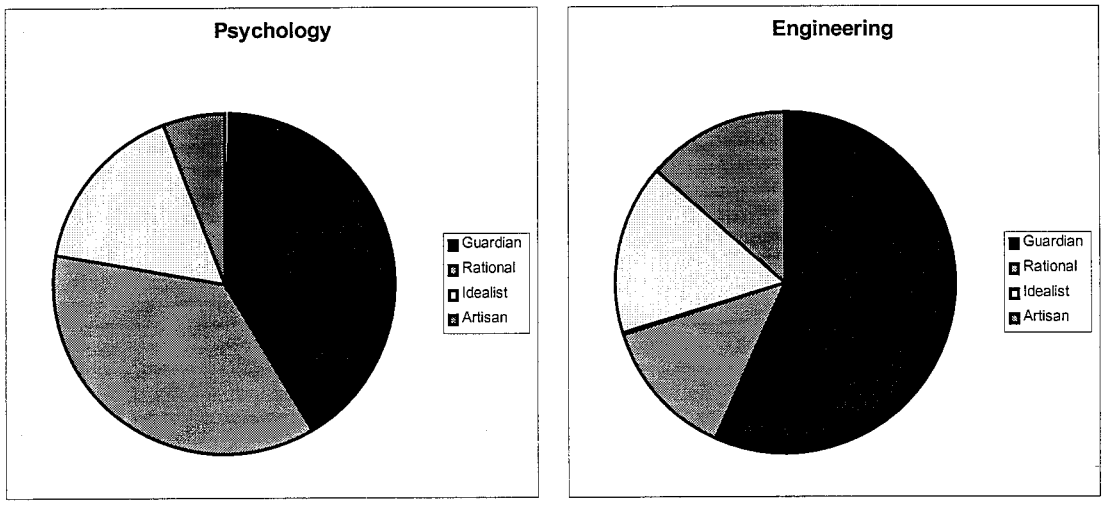
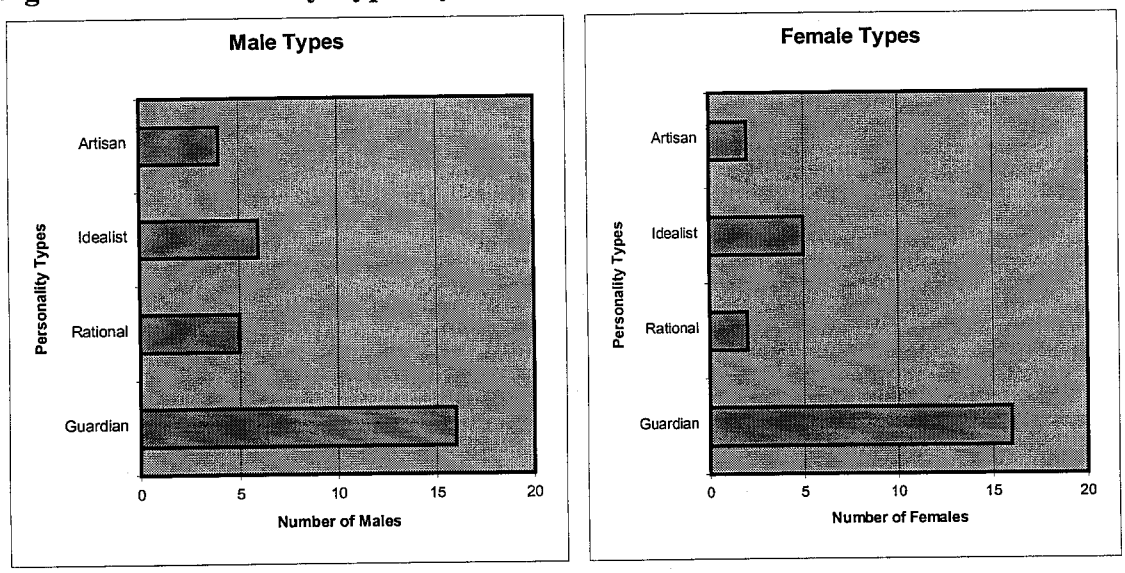


Figure 4.3 is another distribution of personality types but by sex. The two figures show that the guardian type was the most prominent in both sexes. With the other types following the same importance between the two sexes. The Idealist type was the second most common, followed by the Rational and then the Artisan.

Figure 4.3 – Personality Types by Sex



Summary

This study tested three hypotheses. The first hypothesis stated that there was going to be a significant relationship between personality type and choice of college major. The results of the analysis showed that no significant relationship was found thereby rejecting the Alternate hypothesis and failing to reject the Null Hypothesis (r=.021, .878). The second hypothesis stated that there was going to be a significant relationship between sex and personality type. This too, was found to be not significant (r=-.110, .418). Again, the Null hypothesis failed to be rejected and the Alternate hypothesis failed to be accepted. The third hypothesis looked to see if there was a

significant relationship between sex and major. This is the only result that was found to be significant at the .000 level with a coefficient of -.460.

Chapter 5:

Summary

High School is a time when people are trying to figure out what to do with their life after high school. Will they continue their education or get a job? For most young people, continuing their education is the choice for them but once they make this decision they have another question to answer, what should I major in?

John L. Holland theorized that career choices are largely a function of personality traits and environmental factors. In making career choices, individuals seek the type of environment that matches or is congruent with their personality type. Other researchers such as Miller and Cowger (1999) and Bolton (1985) found results to validate Holland's theory. The current research set out to further validate previous research findings and to determine if there was a relationship between personality type and choice of college major.

To determine if any relationship existed, the Keirsey Temperament Sorter-II was administered to investigate psychology and engineering subjects' personalities or predisposition's of behavior. The results from the Keirsey where then analyzed using the Spearman Rank Order Correlation Coefficient to determine if there were any significant differences between the groups.

Conclusions

The Spearman Rank Coefficient determined that there was no relationship between personality type and major suggesting that certain types of people do not have a tendency to enter into certain majors. Psychology and Engineering majors do not differ in their personality types as was hypothesized. The relationship between personality and sex as also investigated using Spearman's Rank Order Correlation Coefficient. The results of that analysis show that no significant relationship was found between the two suggesting that sex had no bearing on personality type. The only relationship found to be significant was between sex and major. This result implies that sex did have an impact on what major a person chose. In this case, more males entered the engineering field while more females entered the psychology field.

Discussion

The results of the analysis failed to support earlier research that demonstrated that students of different personality types selected different academic majors. While the results of this research fail to support the earlier research of Holland, Miller, Cowger, Bolton, and the like, it does not mean this research was useless. Instead it emphasizes the fact that more research needs to be done on this topic so that educators, counselors, and parents will be able to understand more about the career preferences of adolescents and be able to expose individuals to a broader range of options.

The present study suggests that there may be additional variables to consider when evaluating an adolescent's career interest. Some additional variables that may

contribute to major choice include: salary, benefits, location, opportunities for advancement, parents, teachers, counselors, career guidance programs, test scores, race socioeconomic background, maturity level, gender, and previous work experience. Career interest inventories and personality tests such as the Keirsey Temperament Sorter-II utilized in this study are not useless. They can help guide students in their search for a major and allow students to discover preferences or traits they did not know they had. However, they should not be used as the sole source to help adolescents make a career decision. Many other variables such as those discussed above and many other instruments can and should be taken into consideration when making career decisions.

Parents and other family members, as well as counselors should assist adolescents with career exploration. Professionals and parents together can expose adolescents to a variety of career options. Through proper understanding and application of career development theories to their career counseling practices, high school counselors may be better able to assist students who are about to commit to careers or college major make informed decisions about their career and future.

Implications for Further Research

This study was lacking in sample size due to time constraints imposed on the primary investigator. Further research on this topic should consist of a larger sample size that is more representative of the college population. Future researchers should set out to find more minorities to be involved in their study and they should focus exclusively on one group of people, for example all college seniors with one declared major. In this study the sample was too diverse in education level and not diverse enough in ethnicity

which rendered unreliable results. Some subjects were double or triple majors, which may have let to inconclusive results as to which type or major they really belonged and may have effected the outcome.

It would be interesting to look at college seniors in a few different majors and compare them across the board. College seniors would be a good sample because it is assumed that by senior year students know what they want to do with their life and are in a major that suits them and interests them. Looking at seniors might yield more reliable results since they probably are not going to change their majors at that point and time. With the current sample, almost all of the engineering majors were freshmen, which may have effected the outcome of the study since most freshmen are not sure what they want to do. Research shows that most freshmen change majors at least once during their college career and sometimes even two or three times. This suggests that these students may not be in the "right" major for their personality type.

Future research should also be conducted at various universities and colleges across the United States and should look at other variables besides personality type to see their effect on major choice. Other variables that should be considered: Socioeconomic status, career guidance programs, parent's beliefs, race, self-concept, and previous work experience are a few that should be looked at. If such a study is conducted, the availability of such a diverse population, large sample size, and number of variables included will have a major influence in the field of career exploration, career development programs and education. Larger studies may provide greater insight into how and when adolescents clarify vocational choices and eventually commit to a career.

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Appendix A

TEST PACKET

Informed Consent Form

I agree to participate in a study entitled "The Relationship Between Personality Type and Choice of College Major," which is being conducted by Melissa Pollock for obtainment of a Masters Degree in School Psychology. The purpose of this research is to examine the relationship between personality type and choice of college major.

I understand that I will be required to complete a 70-question personality test and a one-page personal data information sheet for use in a Masters Thesis. My participation in taking the test will not exceed 15 minutes.

I understand that my responses will be anonymous and that all the data gathered will be confidential. I agree that any information obtained from this study may be used in the research project provided that I am in no way identified and my name is not used.

I understand that there are no physical or psychological risks involved in this study, and that I am free to withdraw my participation at any time without penalty.

I understand that my participation does not imply employment with the State of New Jersey, Rowan University, the principal investigator, or any other project facilitator.

If I have any questions or problems concerning my participation in this study I may contact Melissa Pollock at 856-256-3180.

_____ _____

(Signature of Participant) (Date)

_____ _____

(Signature of Participant) (Date)

Personal Data Information Sheet

1. Age in years: _____

2. Male_____ Female_____

3. Year in College: Freshman____ Sophomore____ Junior____ Senior____

4. What is your major? _____

5. What is your ethnicity? _____
   (Asian American, African American, European American, Hispanic American, Native American, Other).

The Keirsey Temperament Sorter II

Keirsey Temperament Web Site

About the Questionnaire

1. Does interacting with strangers
   - ○ energize you
   - ○ tax your reserves
2. In stories do you prefer
   - ○ action and adventure
   - ○ fantasy and heroism
3. Is it preferable mostly to
   - ○ make sure things are arranged
   - ○ just let things happen naturally
4. If you must disappoint someone are you usually
   - ○ frank and straightforward
   - ○ warm and considerate
5. Is clutter in the worksplace something you
   - ○ take time to straighten up
   - ○ tolerate pretty well
6. In a heated discussion, do you
   - ○ stick to your guns
   - ○ look for common grounds
7. Which seems the greater fault:
   - ○ to be too compassionate
   - ○ to be too dispassionate
8. Which appeals to you more
   - ○ consistency of thought
   - ○ harmonious relationships
9. On the job do you want your activities
   - ○ scheduled
   - ○ unscheduled
10. Do you prefer contracts to be
    - ○ signed, sealed, and delivered
    - ○ settled on a handshake
11. Is it easier for you to
    - ○ put others to good use
    - ○ identify with others
12. At work do you tend to
    - ○ be sociable with your colleagues
    - ○ keep more to yourself
13. Do you tend to
    - ○ say right out what's on your mind
    - ○ keep your ears open
14. Do you consider yourself

- ○ a good conversationalist
- ○ a good listener

15. Are you swayed more by
    - ○ convincing evidence
    - ○ a touching appeal
16. Do you speak more in
    - ○ particulars than generalities
    - ○ generalities than particulars
17. Are you more inclined to feel
    - ○ down to earth
    - ○ somewhat removed
18. At work, is it more natural for you to
    - ○ point out mistakes
    - ○ try to please others
19. When in charge of others do you tend to be
    - ○ firm and unbending
    - ○ forgiving and lenient
20. Do you tend to be more
    - ○ factual than speculative
    - ○ speculative than factual
21. Are you more likely to trust
    - ○ your experiences
    - ○ your conceptions
22. Do you see yourself as basically
    - ○ thick-skinned
    - ○ thin-skinned
23. Which is more of a compliment:
    - ○ "There's a logical person"
    - ○ "There's a sentimental person"
24. Are you more satisified having
    - ○ a finished product
    - ○ work in progress
25. Do you tend to choose
    - ○ rather carefully
    - ○ somewhat impulsively
26. Do you prefer to work
    - ○ to deadlines
    - ○ just whenever
27. Are you more often
    - ○ a cool-headed person
    - ○ a warm-hearted person
28. Are you inclined to be
    - ○ easy to approach
    - ○ somewhat reserved
29. Facts
    - ○ speak for themselves
    - ○ illustrate principles
30. Do you tend to notice

- ○ disorderliness
- ○ opportunities for change

31. Do you more often see
    - ○ what's right in front of you
    - ○ what can only be imagined
32. Are you the kind of person who
    - ○ is rather talkative
    - ○ doesn't miss much
33. Do you prize in yourself
    - ○ a strong hold of reality
    - ○ a vivid imagination
34. Are you more frequently
    - ○ a practical sort of person
    - ○ a fanciful sort of person
35. Are you drawn more to
    - ○ fundamentals
    - ○ overtones
36. Which do you wish more for yourself:
    - ○ strength of will
    - ○ strength of emotion
37. Do you feel better about
    - ○ coming to closure
    - ○ keeping your options open
38. In trying circumstances are you sometimes
    - ○ too unsympathetic
    - ○ too sympathetic
39. Are you more interested in
    - ○ what is actual
    - ○ what is possible
40. Are you more
    - ○ sensible than ideational
    - ○ ideational than sensible
41. When the phone rings do you
    - ○ hurry to get it first
    - ○ hope someone else will answer
42. Waiting in line, do you often
    - ○ chat with others
    - ○ stick to business
43. Would you say you are more
    - ○ serious and determined
    - ○ easy going
44. Do you more often prefer
    - ○ final, unalterable statements
    - ○ tentative, preliminary statements
45. Are you more
    - ○ observant than introspective
    - ○ introspective than observant
46. Are you inclined to be more

- ○ hurried than leisurely
- ○ leisurely than hurried

47. Do you think of yourself as a
    - ○ tough-minded person
    - ○ tender-hearted person
48. Are you inclined to take what is said
    - ○ more literally
    - ○ more figuratively
49. In making up in your mind are you more likely to go by
    - ○ data
    - ○ desires
50. Do you find visionaries and theorists
    - ○ somewhat annoying
    - ○ rather fascinating
51. Are you more comfortable in making
    - ○ critical judgements
    - ○ value judgements
52. Do you usually want things
    - ○ settled and decided
    - ○ just penciled in
53. Do you like writers who
    - ○ say what they mean
    - ○ use metaphors and symbolism
54. In most situations are you more
    - ○ deliberate than spontaneous
    - ○ spontaneous than deliberate
55. In sizing up others do you tend to be
    - ○ objective and impersonal
    - ○ friendly and personal
56. Is it worse to
    - ○ have your head in the clouds
    - ○ be in a rut
57. Is it better to be
    - ○ just
    - ○ merciful
58. Which rules you more
    - ○ your thoughts
    - ○ your feelings
59. Do you value in yourself more that you are
    - ○ reasonable
    - ○ devoted
60. Are you prone to
    - ○ nailing things down
    - ○ exploring the possibilities
61. Do you think of yourself as
    - ○ an outgoing person
    - ○ a private person
62. Children often do not

- ○ make themselves useful enough
- ○ exercise their fantasy enough

63. At a party, do you
    - ○ interact with many, even strangers
    - ○ interact with a few friends
64. Common sense is
    - ○ usually reliable
    - ○ frequently questionable
65. Is it your way to
    - ○ make up your mind quickly
    - ○ pick and choose at some length
66. With people are you usually more
    - ○ firm than gentle
    - ○ gentle than firm
67. When finishing a job, do you like to
    - ○ tie up all the loose ends
    - ○ move on to something else
68. Are you more comfortable
    - ○ after a decision
    - ○ before a decision
69. Is it worse to be
    - ○ a softy
    - ○ hard-nosed
70. Are you more
    - ○ routinized than whimsical
    - ○ whimsical than routinize

Score Questionnaire

CGI Keirsey Temperament Sorter II by David M. Keirsey
Keirsey Temperament Sorter by Dr. David Keirsey

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