

An Abstract of the Thesis of
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**A WELLNESS MODEL
FOR CAREER DEVELOPMENT**

Evidence presented in the quasi experimental study A Wellness Model for Career Development indicates that it is possible to assist college freshmen at a Comprehensive I Carnegie Classification School in significantly improving vocational maturity as indicated by career choices, through an eight week personal self exploration program that is modeled after Hettler's six dimensional wellness structure. A model for career education now exists that can significantly enhance the consistency and differentiation of freshmen career choices whether they seek career counseling or not. It may be possible to provide career education services to college freshmen through personal self exploration activities implemented into the curriculum, residence hall programs, or counseling services.

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Abstract Approved

A WELLNESS MODEL FOR CAREER DEVELOPMENT

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Counselor Education & Rehabilitation Programs
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**A WELLNESS MODEL
FOR CAREER DEVELOPMENT**

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Chapter 1

INTRODUCTION

Life is about learning. From birth to the time of one's death, a person seeks, dreams, experiments and discovers. How one lives, or learns, how one seeks, dreams, experiments, or discovers, is a decision reserved for each individual to make. Making life decisions however, is sometimes very difficult.

American society dictates to the young the indicators of success. Money, power, and control, are flaunted as the keys to happiness. Yet for many individuals happiness and success are found only when the individuals feel self-worth, or satisfaction in their own personal role in the promotion of what they have come to believe is the human purpose. It is these people who often struggle with life decisions.

Life decisions require self exploration, self discovery, and an analysis of life in society. Through an understanding of self and society a person can narrow the infinite list of life choices to a few specific, realistic options that can lead to personal success and fulfillment.

Upon entering college, freshmen are faced with the challenge of making some of the most important decisions in their lifetime. Questions about life, work, and relationships ensue and develop. Over 70% of all college freshmen indicate that making a career decision is an item of great concern, yet most freshmen indicate that they will never seek assistance from a vocational counselor (Astin, Korn, & Berz, 1989). The results of poorly made decisions may manifest themselves in many areas of persons' lives but in differing ways. Change of college major or institution,

occupational dissatisfaction, low self esteem, "mid-life crisis", low job productivity, and general unhappiness may all be the result of poorly made career decisions.

Through career exploration programs it has been suggested that the quality of freshmen career decisions can be improved. Dr. David Hurt showed in 1975 that one's vocational maturity can be developed through a series of group vocational exploration activities (Hurt, 1975). By improving persons' vocational maturity, meaning to make them more prepared to draw on their own personal resources to make life decisions, and by narrowing down the field of occupational choices, college freshmen can improve their chances of making career decisions of superior quality.

Background of the Problem

In the early 1900's Frank Parsons developed an idea that became a solid foundation upon which to build a career guidance movement. The late 1800's was a time of dramatic change in American society. Industrialism replaced agriculture and changed the way Americans lived. Industry created a new environment for working, and a new social structure. The new reality was that people could choose a vocation. Frank Parsons developed a three step process to help people get jobs. The process he outlined is still a basis for career guidance today.

First, develop a clear understanding of yourself, aptitudes, abilities, interests, resources, limitations, and other qualities.

Second, obtain a knowledge of the requirements and conditions of success, advantages and disadvantages,

compensations, opportunities, and prospects in different lines of work.

Third, apply a true reasoning on the relations of these two groups of facts (Parsons, 1909, p. 5).

Even more important than the three step process Parsons outlined was the nation's new interest in career guidance that was ignited by the 1909 publication of his process in his classic book On Changing a Vocation. Parsons' three step process was the foundation of what is now called Trait-Factor theory. Trait-Factor theory suggests that one's interests can be systematically matched with a particular work environment. This theory opened the door to new research and the development of interest inventories.

The Strong Vocational Interest Blank, was published in 1927 by Stanford University and was just one of many tests and inventories developed between 1900 and 1940. It was an inventory of individual interests developed from the responses of people in different occupational settings. The Strong Vocational Interest Blank was one of the first tools a counselor could use to link personal interest to a particular occupation.

The United States Government was also a significant player in the development of the career guidance movement. Federal grants, legislation supporting career education, and the formation of the Labor Department, the United States Employment Service, the Civilian Conservation Corps, and the Works Progress Administration were all established around the time of the Great Depression and were all authorized to provide employment services. In 1939 the first edition of the Dictionary of Occupational Titles was published by the United States Employment

Service. This book provided the first comprehensive list of job titles offered in America.

During World War II the military introduced a battery of testing procedures to classify military personnel based upon abilities. Counseling programs were actually established by the military for the purpose of military career guidance. Following World War II new counseling programs were developed by the military to provide services to veterans returning to civilian life. These services included educational and vocational planning for the future.

At the conclusion of the war there was a significant increase in enrollment at American colleges and universities and an increased need for educational planning and vocational guidance became evident. In the early 1950's, society was ready for the introduction of new theories for career guidance. Landmarks in the career guidance movement were the emergence of career development theories, and theories of occupational choice by Ginzberg, Ginsburg, Axelrod, and Herma (1951), Roe (1956), and Super (1957). The work of these people inspired other theorists and researchers to continue to add to the development of the career guidance movement. Gelatt (1962), Tiedman (1963), Bordin (1963), Holland (1973), and Krumboltz (1975) all added to the resources available to the career guidance counselor. Each theorist provides a starting point for new ideas.

The impact of the career guidance movement is far reaching. Directive styles of counseling developed and were challenged by the non-directive counseling ideas of Carl Rogers (Crites, 1981). Structural models for career counseling were reworked and developed. Developmental models of career decision making were introduced. It was a new idea that people move through phases of development during their lifetime. Today many

interesting and useful theories exist due to the work of many individuals throughout history.

College freshmen enter a college or university at an exciting time in the developmental process of life. Adolescents are becoming adults. Each individual begins to accept new responsibility, and seek independence. A new and developing “adult” self-concept is being formed. It is a time of experimentation, discovery, and perhaps most importantly, it is a time to learn about one’s self.

Donald Super (1957) showed that from age fifteen to age twenty four a person moves through the exploration stage of career development. The exploration stage is a time for people to make some specific educational and/or vocational choices and implement them into their life. Super stresses the importance of developing and implementing one’s self-concept to successfully meet the challenges of the exploration stage of development.

John Holland (1973) suggested that career satisfaction, and one’s behavior is determined by how well a chosen environment allows a person to exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles. Holland explains that there are six personality types that are directly associated with six model environments. Through self discovery a person can identify which occupational environment is suitable for their own personality type. As Super did, Holland stresses the importance of exploring and developing one’s self-concept.

Because the development of self-concept is so vital to career decision making, it is important to identify ways of creating and/or developing self-concept. One of the most comprehensive models of developing and supporting a healthy self-concept is the wellness model for total health

(Ardell, 1982). Halbert Dunn (1960) inspired others to address the interrelationship of living things, the value of lifestyle, and the importance of health (Ardell, 1982). These ideas developed into what is now known as wellness. The balancing of six dimensions of well being (physical, social, emotional, spiritual, intellectual, occupational) facilitates healthy growth and development (Hettler, 1980, American Association of Counseling Development, 1991).

Finally, Alexander Astin (1989), who has been doing studies on college freshmen for over two decades, indicated that 75.9% of college freshmen expressed significant concern about making career decisions. The big surprise is that even though this is such a critical time in career development, and services exist to help freshmen make career decisions, and even though freshmen indicate significant concern about making career decisions, only 4.4% of college freshmen anticipate seeking career guidance (Astin, Korn & Berz, 1989).

Statement of the Problem

College freshmen are entering colleges and universities at a critical point in career and human development. Each student brings with them unique needs and desires to be happy and healthy. Although services are in place, colleges and universities are not meeting college freshmen needs for career guidance satisfactorily (Astin, Korn, & Berz, 1989).

There is a need to develop ways of reaching more students who need career guidance, but do not seek it. A system for helping college freshmen develop their self-concept, and move through the developmental process of career exploration and decision making needs to be introduced. Because of

the unique nature of every individual, a personal career guidance program would be most beneficial if it could indeed significantly enhance career decision making.

The short and long term effects of not meeting college freshmen career guidance needs can only be presumed. Short term effects may include the changing of college major, which over 25% of all college freshmen anticipate doing after the first year of school, dissatisfaction with one's program of study, lack of interest or motivation, anxiety, and finally dissatisfaction with a poorly selected career. Long-term effects can include lower productivity and lower job satisfaction, a sense of worthlessness and a lack of personal satisfaction, mid-life crisis, divorce, psychological problems, general unhappiness and a lower quality of life.

Statement of the Purpose

This study is being conducted to determine if it is possible to help college freshmen narrow career choices to a realistic few that are significantly more consistent and differentiated through personal exploration activities that are consistent with the wellness model of total health. Incorporation of the distinctive ideas of Donald Super, John Holland, and William Hettler will be used to enhance the quality of college freshmen career decision making. This can strengthen the individual's quality of career choices and ultimately lead to a superior quality of life than is probable without personal guidance. Successful application of the research plan will contribute to the career guidance profession by introducing a method of personal career exploration that can be offered to all freshmen regardless of whether or not they seek career guidance.

Statement of Hypothesis

Individual exploration activities consistent with the wellness model of total health, will significantly enhance the consistency and differentiation of vocational choice. The exploration activities consistent with the wellness model for total health will promote career development by narrowing the list of occupational choices to more consistent and differentiated selections.

Statement of Significance

Together three distinct and separate ideas may form a foundation for personal self exploration that can significantly enhance career decision making and the quality of human life. If it is shown that relating the ideas of Super, Holland, and Hettler can indeed enhance the quality of career decision making for college freshmen and promote career development, then a more complete and practical model for career education may be available to colleges and universities as well as to individuals working through career development.

Summary

The theories of Donald Super, John Holland, and William Hettler all focus on particular aspects of college freshmen's career decision making capabilities. Super outlines the developmental process of career decision making. Holland offers a structural model of topologies and occupational environments. Hettler established a foundation for a wellness model that

provides a matrix to discover and develop one's self-concept. Together the three ideas may be the foundation to a more complete model of career guidance and decision making. Using Holland's hexagonal model, the researcher will identify the consistency and differentiation of college freshmen career choices. Then by administering exploration activities consistent with the wellness model, the researcher hopes to promote the development of college freshmen career decision making and significantly enhance the consistency and differentiation of career choices. In doing so, college freshmen will be better prepared to choose a realistic and satisfying program of study or interesting occupation. The following chapters will include a review of related literature, the researcher's methodology, results, and discussion.

Chapter 2

REVIEW OF LITERATURE

The following chapter will deal with the related literature to this research project. In order to fully understand the scope of career decision making which will be the focus of this research, there are four instrumental ideas that have significantly impacted career and human development that must be understood. The four ideas are the vocational development theory of Donald Super, a theory of vocational personalities and work environments developed by John Holland, the history of "self" in psychology initiated first by Mary Whiton Calkins and later by Abraham Maslow and Carl Rogers, and the ideas associated with wellness and total health developed by Halbert Dunn, John Travis, Don Ardell and Bill Hettler. An understanding of these four ideas is necessary to understand the research goals. The relationship of wellness to the decision making process will also be defined. Finally, the work of Alexander Astin as it relates to college freshmen and career decision making will be presented.

Vocational Development Theory

The idea of vocational behavior being a developmental process can be attributed in part to Donald Super (1957). Super added a time dimension to career decision making by introducing the idea that vocational decision making extended across the life span. Super has a comprehensive overview of career guidance which he outlines in ten postulates that covers

four fundamental ideas. The first three postulates are basically trait-factor statements.

1. People differ in abilities, interests and personalities.
2. People are qualified by virtue of traits for a number of occupations.
3. Each occupation requires a characteristic pattern of abilities, interests and personalities with enough tolerance to allow for a variety of individuals in each occupation.

The next two postulates address career guidance.

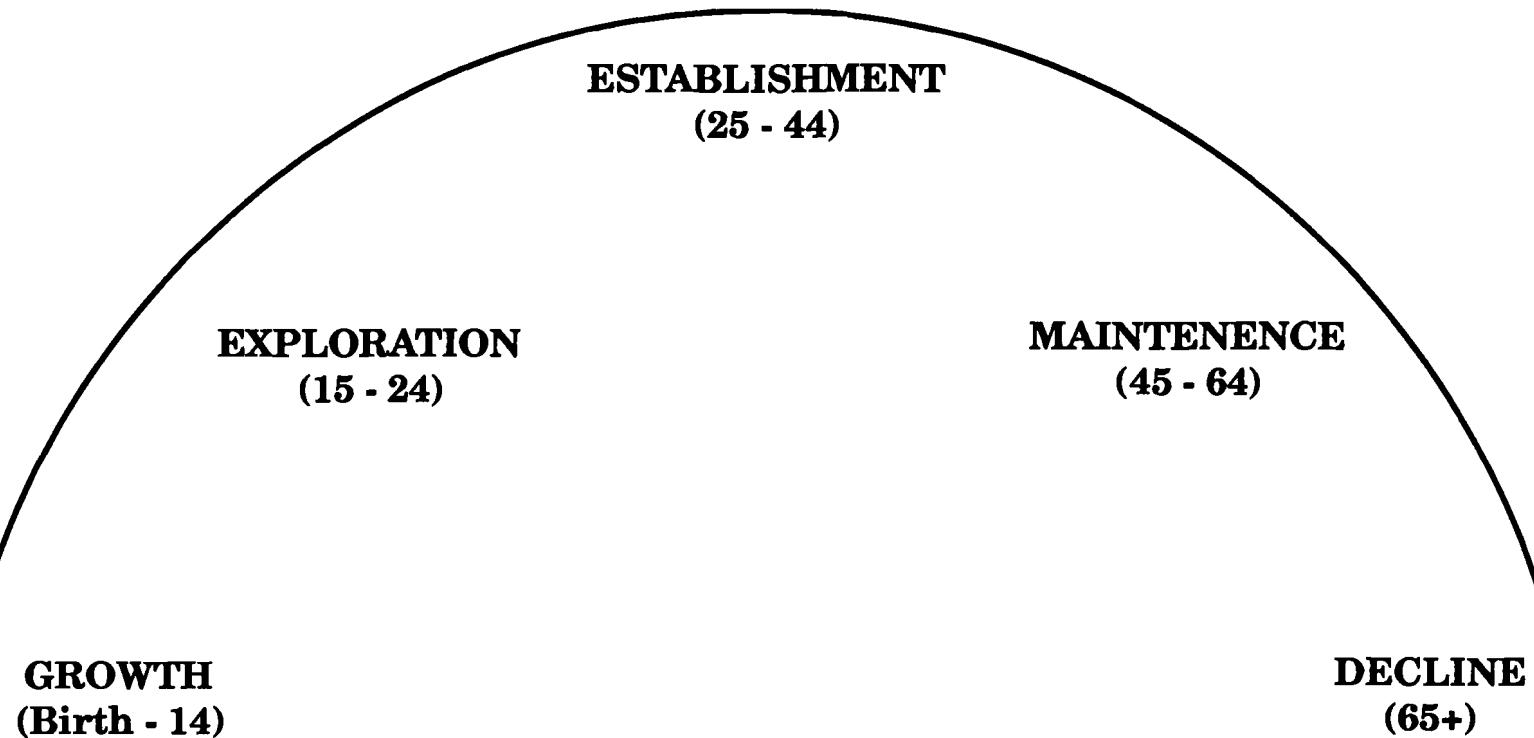
4. Development through the life stages can be guided by aiding individuals in reality testing and the development of self-concept.
5. Vocational preference and competency change with time and experience making change and adjustment a continuous process.

The sixth postulate explains his developmental process and is summed up in a series of life stages (Figure 2.1).

6. The first stage of the developmental process is the Growth Stage (birth to age 14). During the Growth Stage an individual may engage in fantasy (ages 4-10). Meeting basic needs is the dominant motivator. As a child grows he/she develops interest (ages 11-12). Likes determine aspirations and activities. The final part of the Growth Stage is called capacity (ages 13-14). During this time individual abilities become the focus and job requirements are considered. The second stage of development is the Exploration Stage (ages 15-24). During the Exploration Stage an individual will begin to make some tentative decisions (ages 15-17). Needs, interests, capacities, values, and

Figure 2.1

**Super's Life Stages
1957**



opportunities are all considered. Transition (ages 18-21) is the next step and at this point reality considerations are evaluated as one

enters the labor market or professional training. During this time a person attempts to implement a self-concept. The next step is trial-uncommitted (ages 22-24). A beginning job in the field is found and tried as life work, but there is little or no commitment vested in the decision. The third stage in the developmental process is the Establishment Stage (ages 25-44). This begins with trial (committed) and stabilization (ages 25-35). Advancement (ages 30-45) and maintenance (ages 45-64) all occur during this stage. Finally there is Decline (ages 65+), the last stage of the developmental process. It is important for an individual to find meaningful activity other than his/her job during this final stage.

Postulate number seven identifies the influential factors of career development.

7. The nature of career patterns is determined by the individual's parental socio-economic levels, mental abilities, personal characteristics and the opportunities to which the person is exposed.

Finally, the last three postulates focus on the importance of one's self-concept.

8. The process of vocational development is essentially developing and implementing a self-concept.

9. Compromise between individual and social factors, between self and reality, is one of role playing.

10. Work satisfaction and life satisfaction depend on the extent to which individuals find adequate and acceptable outlets for abilities, interests, personality traits and values.

Along with progressing through the developmental stages, Super (1957) outlined five specific developmental tasks. They are:

Crystallization (ages 14-18) which occurs during the exploration stage of development and is a time when the individual begins formulating ideas about the world of work and self concepts that will lead to tentative educational and vocational choices.

Specification (ages 18-21) which occurs during transition in the exploration stage of development and is when the individual begins to move from general choices to specific educational and vocational choices.

Implementation (ages 21-24) which occurs late in transition or in trial-uncommitted during the exploration stage of development and is when the individual actually makes a career choice.

Stabilization (ages 24-35) which occurs in the trial period of the establishment stage of development and is when the individual settles into a field of work.

Consolidation (ages 35+) which occurs in the advancement time of the establishment stage of development and is when the individual becomes firmly established in a chosen field of work.

College freshmen will most likely be somewhere in the exploration stage of development working on the tasks of crystallization and specification.

Super (1957) also proposes three types of factors that have an influence on the vocational choice process. They are role factors, personal factors, and situational factors. Role factors are the person's expectations

of a particular occupational environment. Fantasy or actual role expectations have an important influence in one's vocational choice. Acceptance or rejection of the occupational role expectation is due largely to one's self-concept. Personal factors related to vocational development include intelligence, special aptitudes, interests, and values. They come from within the individual and are unique to each individual. Situational factors are the environmental factors that influence vocational development and are directly related to vocational choice. Religion, socio-economic status, availability of training, and personal limitations are examples of situational factors.

Super (1957) strongly emphasized the importance of one's self-concept. Career choice is an expression of one's self and requires an investment of self. "College freshmen are on the threshold of having to make definite educational and/or vocational decisions, it is imperative that they are able to clarify the components of their self concepts which will enable them to make realistic career decisions" (Hurt, 1975, p. 5).

College freshmen are at a crucial stage of career development and are overcoming what may seem to be very difficult developmental tasks. The need for guidance and assistance seems clear. Self discovery including one's interests, aptitudes, and expectations are all very important. Learning about different occupations and occupational environments is also important at this time. While going through this process persons are also expected to remain in good physical and mental health. When persons reach college, they have reached a difficult, but critical stage of career development.

Vocational Personalities and Work Environments

Another theorist who has contributed significantly to career development is John Holland. Holland (1973) developed a structural theory of careers that has its basis in typology. Typology simply means the study of types and that's exactly what Holland does. He focuses on types of personalities and occupational environments. Understanding one's self and developing an occupational preference establishes an individual's personal modal orientation. Personal modal orientation is how a person fits an occupational environment. Three fundamental questions answered by Holland's (1973) theory are:

1. What personal and environmental characteristics lead to satisfying career decisions, involvement, and achievement, and what characteristics lead to indecision, dissatisfying decisions, or lack of accomplishment?
2. What personal and environmental characteristics lead to stability or change in the kind of level and work a person performs over a lifetime?
3. What are the most effective methods for providing assistance to people with career problems? (Holland, 1985, p. 3)

The goal of Holland's (1973) theory is to explain vocational behavior. Through an understanding of why a person chooses certain vocations and rejects others, the counselor is better equipped to suggest some practical solutions to inherent career decision making problems.

There are four basic assumptions at the heart of Holland's theory.

1. In our culture, most persons can be categorized as one of six types: realistic, investigative, artistic, social, enterprising, and

conventional. This personality type, is a model personality that can be measured against a real person.

2. There are also six model environments: realistic, investigative, artistic, social, enterprising, and conventional. Each environment is dominated by a particular personality type and setting.

3. People search for environments that will let them exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles.

4. Behavior is determined by an interaction between personality and environment. (Holland, 1985, p. 4)

There are five supplements to these assumptions that outline how this theory is to be used and understood. The supplements are also applied to both personality types and environments.

Consistency. Consistency means the degree to which one's personality types are related or the degree to which model environments relate.

Differentiation. Differentiation is the degree to which one's personality type or environmental model is dominated by a single type. A person who resembles many types or environments is said to be undifferentiated or poorly defined.

Identity. Identity is the degree to which a personality type possesses clear and stable goals, interests, and talents.

Congruence. Congruence is achieved when a personality type is matched to the related environment. Incongruence is when personality types and model environments do not match.

Calculus. An ordering of the relationships “according to a hexagonal model in which the distances between types or environments are inversely proportional to the theoretical relationships between them” (Holland, 1985, p. 5). This is illustrated in Figure 2.2.

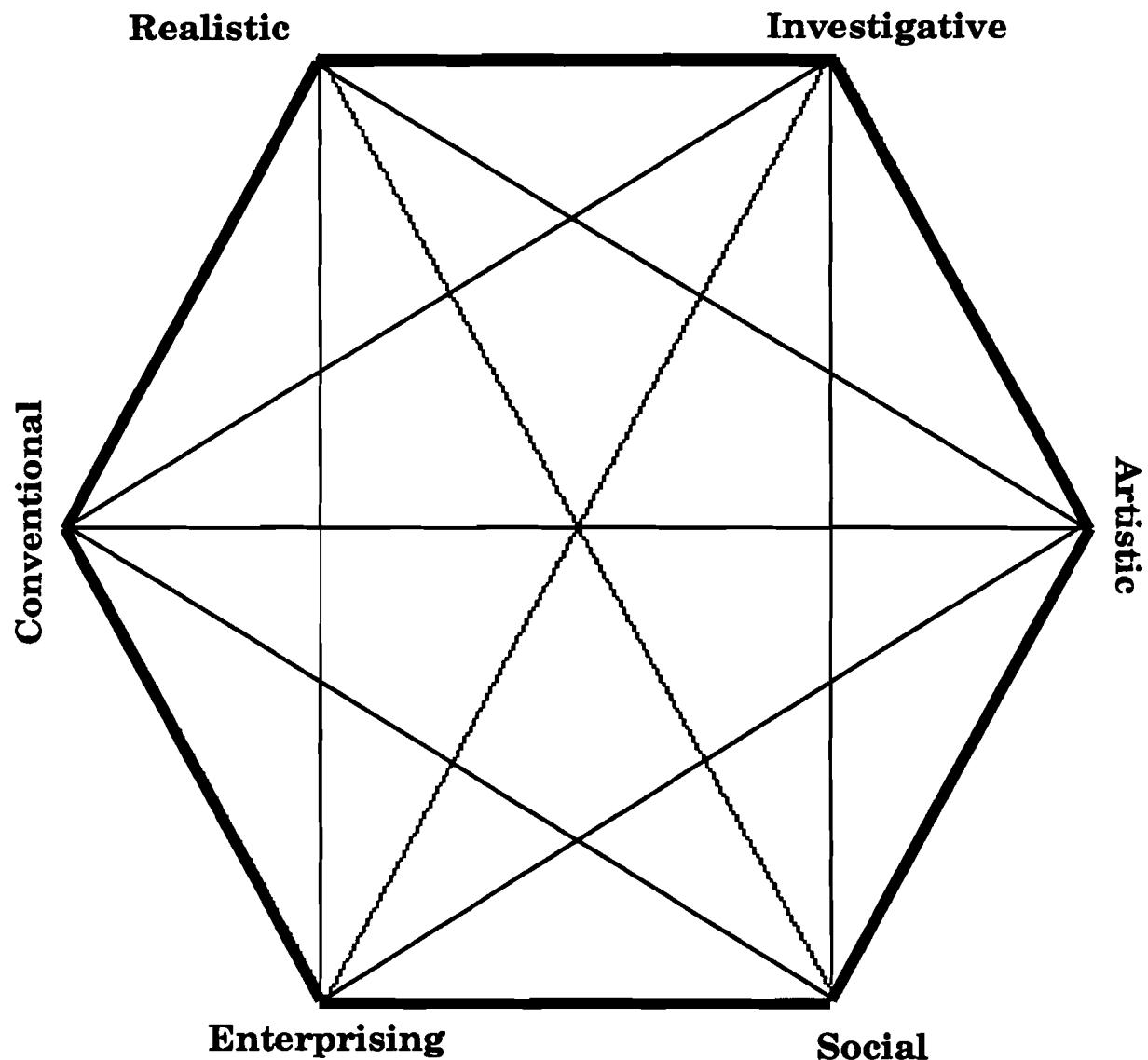
The six personality types (Holland, 1985) exist to categorize individuals and occupations. The realistic type will be most comfortable in realistic job settings such as mechanic, surveyor, farmer, electrician, or aircraft controller. Mechanical abilities are high while social skills are less dominant. The realistic type may be described as conforming, frank, honest, humble, materialistic, natural, persistent, practical, modest, shy, stable, and thrifty.

Investigative type persons will enjoy jobs that require intellectual or investigation type tasks. Jobs include biologist, chemist, physicist, anthropologist, geologist, and medical technologist. Investigative persons are usually strong in mathematics and science and weaker in leadership ability. They may be described as analytic, cautious, critical, curious, independent, intellectual, introverted, methodical, modest, precise, rational, and reserved.

Artistic type persons can be found in jobs such as composer, musician, stage director, writer, interior decorator, or actor/actress. Usually strong in writing, music, or artistic abilities, the artistic personality type is weaker in clerical skills and can be described as complicated, disorderly, emotional, expressive, idealistic, imaginative, impractical, impulsive, independent, intuitive, nonconforming, and original.

Figure 2.2

**Holland's
Personality Types & Model Environments
1973**



Adapted from: Holland, J. L. (1985). Making Vocational Choices A theory of Vocational Personalities & Work Environments.

The social personality types are ideal for such jobs as teacher, religious worker, counselor, clinical psychologist, psychiatric, case worker, or speech therapist. Strong in social skills and talent persons of this type are weaker in mechanical and scientific abilities. Social personality types can be described as convincing, cooperative, friendly, generous, helpful, idealistic, insightful, kind, responsible, sociable, tactful, and understanding.

Enterprising personality types can be found in jobs such as salesperson, manager, business executive, television producer, sports promoter, or buyer. Leadership and speaking abilities are usually excellent while scientific ability is less proficient. Enterprising persons may be described as adventurous, ambitious, attention-getting, domineering, energetic, impulsive, optimistic, pleasure seeking, self-confident, sociable, and popular.

Finally, conventional personality type persons will find jobs such as bookkeeper, stenographer, financial analyst, banker, cost estimator, or tax expert. Clerical and arithmetic skills stand out while artistic abilities often are less common. The conventional type person can be described as conforming, conscientious, careful, conservative, inhibited, obedient, orderly, persistent, practical, self-controlled, unimaginative or efficient.

The Future Possibilities (Holland, Gottfredson, Nafziger, 1973) assessment inventory (Appendix A) and the Self Directed Search (Holland, 1979) are used to determine an individual's Holland three letter code. Once a code is identified, a matching environment can also be identified by consulting the Dictionary of Holland Occupational Codes 2nd edition (1989). The consistency of the code and the differentiation between the six personality types and environments is determined.

Through the use of Holland's Future Possibilities (1979) it is possible to determine persons' three letter code of personality type. The three letter code is made up of the three top personality types as determined by the interest inventory, such as S (social), E (enterprising), A (artistic). The information provided by the code SEA can then be used in counseling to help an individual identify a congruent environment or determine the degree of differentiation present. The code SEA would be considered consistent as compared to a code like S (social), R (realistic), A (artistic). This can simply be determined by identifying the code on the hexagonal model. Codes that are grouped adjacent to each other are more consistent than codes that are opposite from each other. Counseling is suggested to individuals whose codes showed a low level of consistency. The goal of counseling is to increase consistency, hence increasing career decision making maturity. A more mature decision is one that is consistent with a narrow field of realistic occupational choices.

The Future Possibilities instrument has been compared to the results of the Strong Campbell Interest Inventory and the Self Directed Search (Hurt, 1975). The finding makes it possible to establish the validity of the Future Possibilities instrument. Holland three letter codes were determined for thirty-three subjects using the three instruments. A code was determined accurate if the first letter of the three letter code was the same, such as S(social), E(enterprising), I(investigative), compared to S(social), I(investigative), A(artistic). The codes were also considered a match if all three letters of the code appeared in the other instrument. An example would be the code SEA compared to the code EAS. Comparing the instruments in this way showed that the Future Possibilities has a

correlation range of .57 and .78 with the Strong Campbell Interest Inventory and the Self Directed Search respectively.

"Holland has indicated that consistency and differentiation of interests are signs of stability in vocational choice, decision making ability, interpersonal competency, and vocational maturity" (Hurt, 1975). Based on the reliability and validity information available, this instrument appears to be acceptable and appropriate for determining an individual's decision making ability as outlined in this paper.

Humanistic Psychology & The Self

The self has long been a puzzling aspect of humanity for scientists, philosophers and psychologists. Many questions have been asked, few have been answered. Self is a word that is freely used in concepts such as self-image, self understanding, self-confidence, but it is not easily explained. There are many important theories however, that have impacted human understanding of self, and there are many individuals in psychology who have contributed to the development of the concept of self.

Understanding of the self has been a difficult task for centuries. The ancient Greek paradigm of the fully functioning person was one of total health: body, mind, and spirit. The unity or balanced development of an individual was a model to be followed. As scholars dissected the concept of total health, the unity of the three areas body, mind and spirit were separated as well. In the scholars' zeal for understanding, three separate disciplines emerged and developed. Body became the domain of health and medical science, psychology focused on the mind, and spirit was left to philosophers and theologians.

The ancient Greek scholars believed that an optimal state of health was achieved through the unification of body, mind, and spirit (Archer, Probert, & Gage, 1987). The ancient Chinese believed that although things are often perceived as being polar opposites, they are complimentary and a part of the whole (Allinson, 1989). Ever since Plato's and Descartes' introduction of a dualistic view of the mind being a separate entity from the body, philosophers and psychologists have struggled with this mind/body issue. Early pragmatists such as Dewey and James and existentialists such as Sartre argued against the dualistic view, believing it to be an impractical approach to understanding man because the mind and body are embodied or bound together. The mind cannot gain knowledge without a body to experience, thus the body can be considered the source of knowledge (Thomas, 1983). Both are integral parts of a person's existence.

This concept of viewing man as an integrated being was further developed by humanistic philosophers and psychologists. A humanistic movement validated human significance and individuals were considered more active in making choices toward reaching optimal potentials. Hence, humanistic philosophy and psychology focused on human potential and emphasized self-discovery of integrated beings.

With the development of psychology and the effort to build it into a true science, ideas associated with one's spirit, soul, or self were largely ignored. Other theories of psychology with more scientific explanations were focused on and developed. As psychologists developed an understanding of the individual and began to further explore the uniqueness of personality, age-old questions about the self resurfaced and were considered (Hilgard, 1987).

Mary Whiton Calkins was a leader in the field of self psychology in 1908 and brought the self into academic focus for American psychology. Calkins said that there was a distinct and discoverable self in every act of introspection (Hilgard, 1987). Edward Titchner did not agree with Calkins and in 1912 determined that the self was not a suitable subject for a descriptive psychological science and disregarded the theory of Calkins (Hilgard, 1987). Although Calkins remained faithful to her ideas and claimed Titchner had made an unwarranted assumption that there was a distinction between the ordinary person and the scientist, the antagonism of Titchner and his students along with the rise of Behaviorism put the self out of the central focus of academic psychology (Hilgard, 1987). Behaviorists also avoided the subjectivism of Calkins' ideas. It was philosophers such as E. S. Brightman who took an interest in the renewed discussion of the self and the ideas of Calkins. Brightman credits Calkins as a leader in philosophy and maintained that her ideas were of significant value to philosophy (Hilgard, 1987). A social psychologist named James Mark Baldwin also recognized the importance of the social self and a child's developmental understanding of self in society (Hilgard, 1987). This was not enough however, to keep the self from becoming taboo in psychology.

It wasn't until Gordon Allport in 1943 followed up on the "life space" and ego enhancement work done by Kurt Lewin reported in 1936 that the self was brought back into the light of academic scrutiny. Allport wrote a paper on the topic, "The Ego in Contemporary Psychology," that became a new starting point for a self-psychology. Allport attempted to identify aspects of personality which included: body sense, self-identity, ego enhancement, ego extension, rational process, self image, proprieate

striving, and the knower (Hilgard, 1987). Allport concluded that psychologists could know nothing about the knower, and as Titchner did, left that to the philosophers.

Around the same time Gordon Allport was developing his ideas associated with ego development in psychology, Kurt Goldstein in 1939 and Andreas Angyal in 1941 attempted to explain personality simply through the motives of biological self-actualizing tendencies. In 1938 Henry Murray was also developing a theory of personology, claiming that the rich individuality of each person was essential in assessing motivation.

It wasn't long after that Carl Rogers gave his 1947 presidential address before the American Psychological Association which introduced an idea that therapy must concentrate on the process that brings out the self-integration within a person. Abraham Maslow in 1954 followed up Goldstein's and Angyal's ideas with his own hierarchy of needs. Both Rogers and Maslow believed that the understanding and acceptance of self is a process, not a product. Acceptance of one's self meant a person could make better value judgements, while uncertainty of choice lessens or disappears in many areas of life (Moustakas, 1956). All these events generated renewed interest in the self. Over 2,000 empirical studies were done in the next twenty years providing at least some scientific support and an unquestionable credibility as to the importance of the self to psychological well-being (Hilgard, 1987).

W. L. Kell, a student of Carl Rogers, conducted one such study on self-understanding that produced interesting results. Kell (1960) found in a study of 151 adolescent delinquents that behavior was not predicted best by family climate, education, social experience, neighborhood, cultural influence, health history, or hereditary background; by far the best

predictor was the degree of self-understanding each person possessed which correlated .84 with later behavior (Kell, 1960). Self-understanding influences behavior and seems to be a vital ingredient in the decision-making process. It is unfortunate that more studies have not been done to explain the factors associated with self-understanding and decision-making.

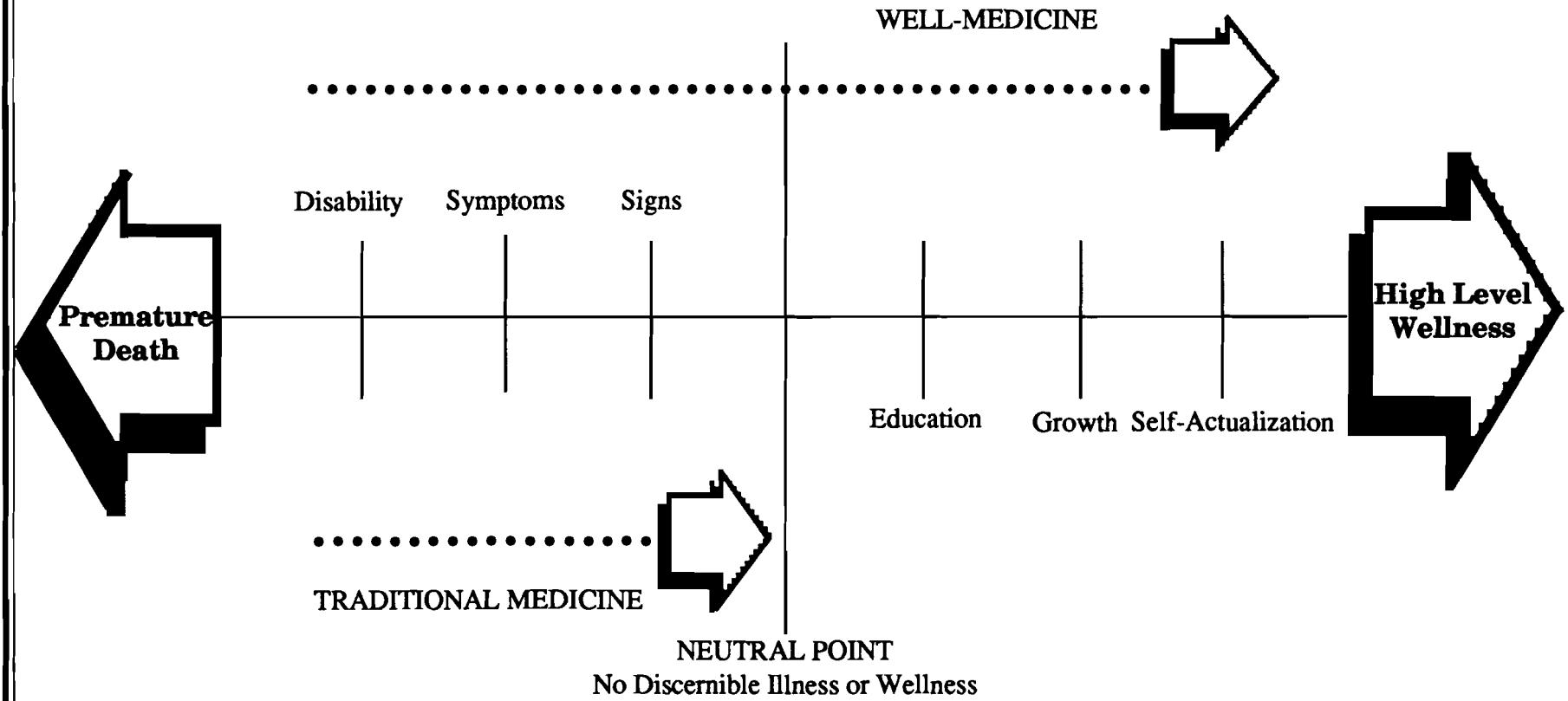
Fully understanding the self has not been possible from within one academic discipline. Throughout history individuals have attempted to bridge the disciplines and relate one perspective to another. It is as if people have realized the need to incorporate philosophical ideas into psychology and science, or vice versa, yet are reluctant to express a dependence on another discipline for fear that the discipline will lose its integrity. This is very unfortunate. Usually these relatively few attempts to unify the disciplines were of interest for a short time until they were finally discredited, slowly forgotten, or rejected. Mary Whiton Calkin's self-psychology, the European structure of higher education with a strong emphasis on moral and ethical training, and E.G. Williamson's and his colleagues' Student Personnel Point of View in 1949, are all examples of attempts to look beyond a single discipline's perspective and combine ideas and theories into one system structure to further the development of society. A final result of this history has been the independent development of each discipline and an understanding of the self which has never been more than fragmented and incomplete.

The Wellness Concept

About the time Maslow and Rogers were developing their ideas in psychology, Halbert Dunn, a physician was researching self discovery and his own ideas about what he called “high level wellness”. In 1961 Dunn wrote a book titled High Level Wellness that influenced a few individuals and started a wellness movement. Dunn (1961) believed that before a person could reach a state of high level wellness, the individual had to search for and discover personal satisfaction, valued purposes, and a view of health that was more than not being sick (Ardell, 1984). In order to find personal satisfaction and a sense of purpose in life, Dunn believed that a person must have the opportunities for expression of uniqueness and a place of dignity among others (Dunn, 1961). The importance of life choices, such as career choice, could not be overstated in a theory such as this.

John Travis (1975), also a physician, was another pioneer in the wellness movement. Travis developed the first Wellness Resource Center based on the work of Dunn (Ardell, 1984). He also became the first physician to offer wellness services and became a hard working promoter of wellness concepts. Travis created an innovated wellness continuum (Figure 2.3). The center point is a neutral state where there is no illness and no notable wellness. A person can move along the continuum to the left of the neutral point or to the right. Movement to the left represents sickness which could lead to premature death. Physicians usually treat the symptoms of sickness in an attempt to return people to the neutral. One may also move to the right of the neutral point to high level wellness by giving attention to the physical self, channeling stress energies into positive emotions, becoming creative in socialization, and by making an effort to be

Figure 2.3
Travis' Wellness Continuum
1975



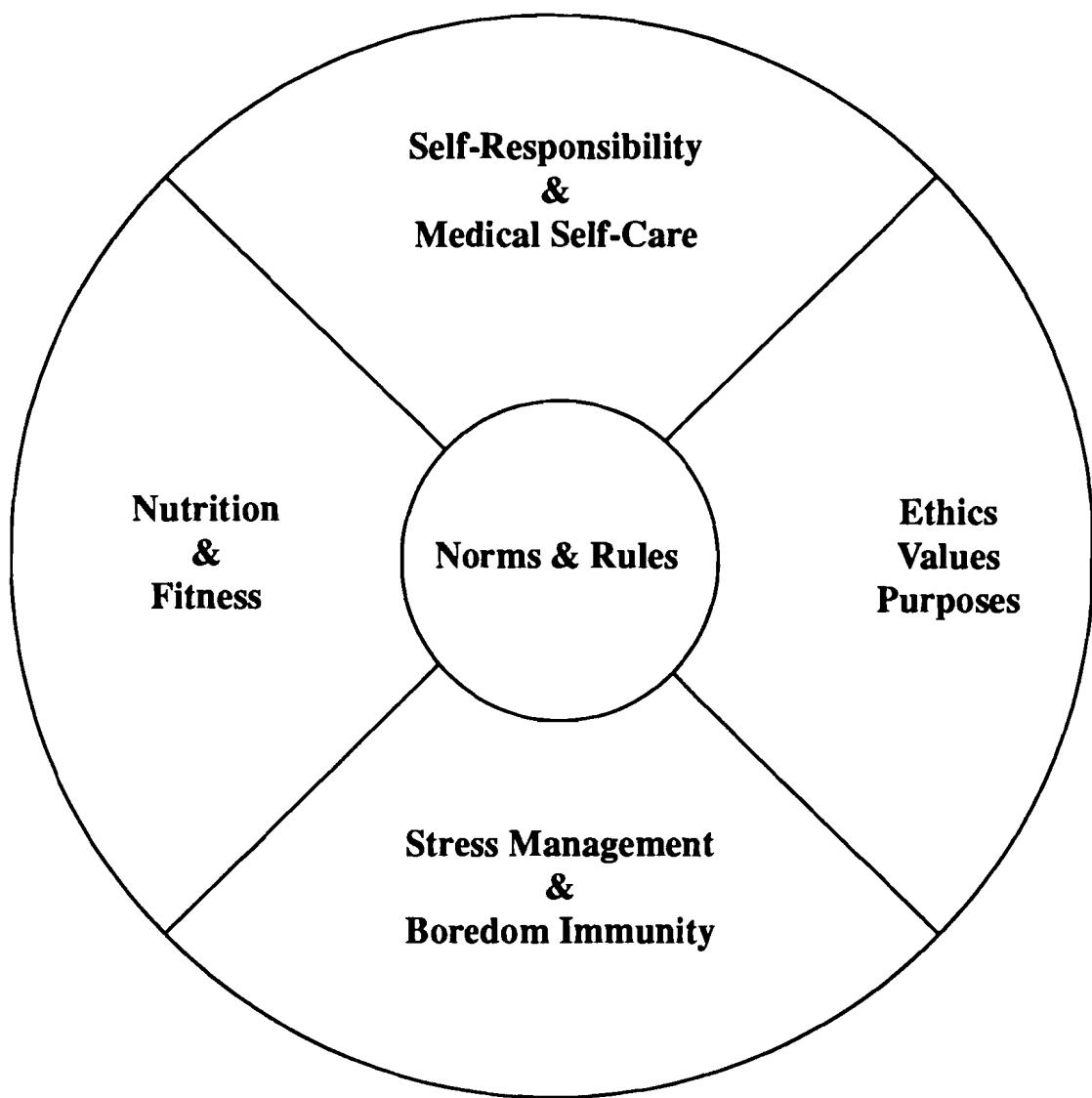
Adapted from: Ardell, D. B. (1977). High Level Wellness An Alternative to Doctors, Drugs, and Disease.

in touch with one's environment (Ardell, 1977). Travis continued to develop the wellness ideas of Dunn and wrote the Wellness Workbook with Regina Sara Ryan, which was published in 1981. The Wellness Workbook is a guide for obtaining high level wellness. Travis was able to transform Dunn's theoretical ideas and convert them into practical, helpful programs for the prevention of sickness and disease. Travis believed that all people are responsible for their own health and well-being and each person must take control of his/her life and develop the confidence necessary to make intelligent choices (Travis and Ryan, 1981). Travis also brought the spirit into wellness as he made the effort to "weld scientific knowledge and spiritual growth" (Travis and Ryan, 1981, p. ii). Meaning and purpose, values and a sense of mission were said to be vital to total health. "Health comes when we are total, whole people; when we have achieved a level of integration between the mind, body, emotions, and spirit; when we allow ourselves to balance" (Travis and Ryan, 1981, p. ii). Travis made it clear that self-understanding is essential in building confidence to make informed choices.

Don Ardell (1977) wrote a book titled High Level Wellness An Alternative to Doctors, Drugs, and Disease. This book, unlike Dunn's or Travis and Ryan's, was a best seller that moved wellness into the national and academic spotlight. Ardell also introduced a five dimensional wellness structure including self responsibility, nutritional awareness, stress management, physical fitness, and environmental sensitivity (Figure 2.4). This was the first time wellness was truly considered a structure for self understanding. Although this first structure was narrow in scope, focusing primarily on the physical self, it took some of the essential ideas of Dunn and Travis and organized them into a practical system structure.

Figure 2.4

**Ardell's Wellness Model
1977**



Adapted from: Ardell, D. B., Tager, M. J. (1988). Planning for Wellness. (3rd ed.)

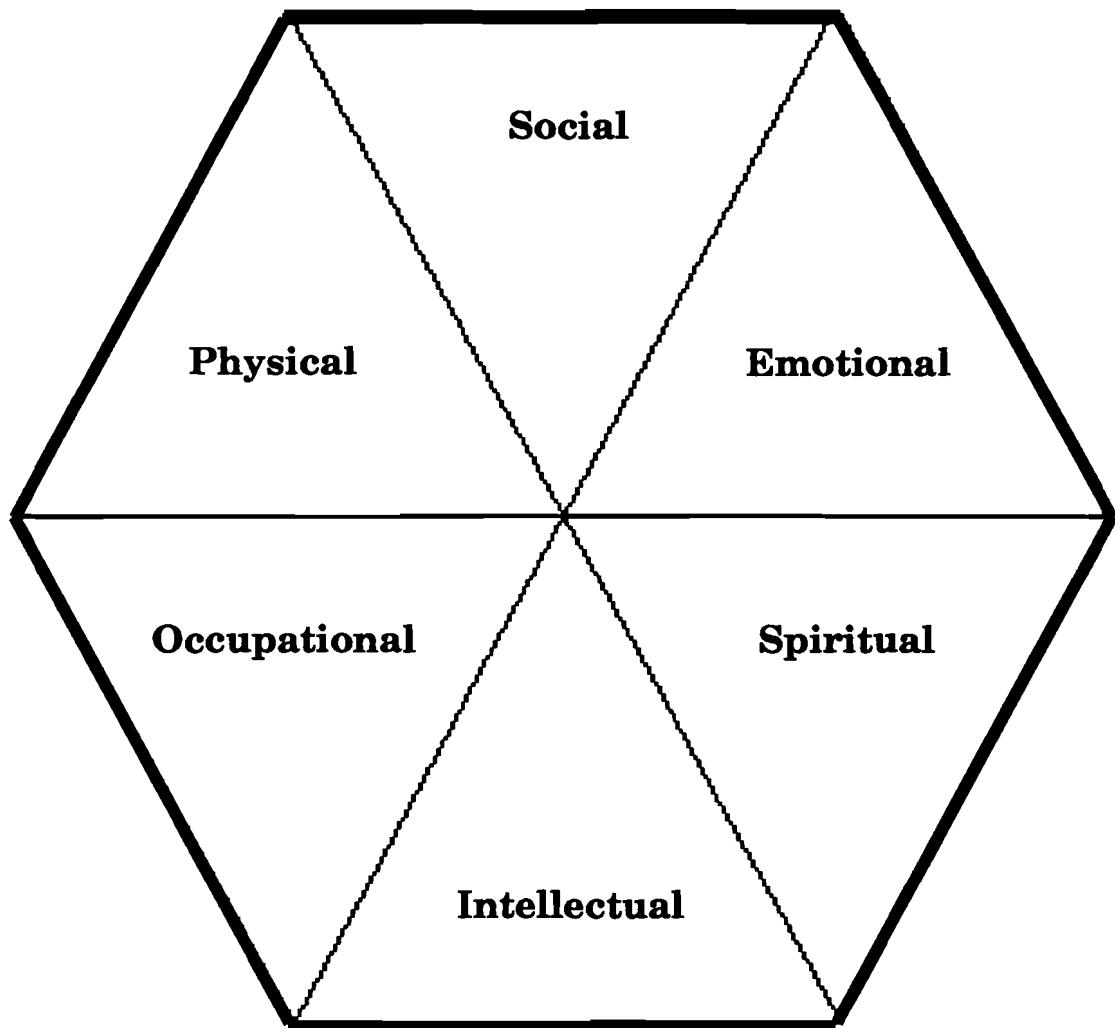
Ardell's greatest contribution to the wellness movement was his zeal for promotion. It was his work that further inspired others to continue to develop wellness ideas.

William Hettler (1980) took wellness to a new level with his introduction of a six dimensional model including physical, social, emotional, spiritual, intellectual, and occupational dimensions (Figure 2.5). Hettler finally initiated a complete system structure which incorporated all dimensions of the self without bias to a particular discipline such as philosophy, psychology, or science. Hettler's model works to identify six dimensions of total health, all equally important for self-understanding. According to Archer, Probert, and Gage (1987) the physical dimension of Hettler's model included nutrition, exercise, sleep, and safety. Emotional wellness included awareness, expression of feeling, and feelings about self. Spiritual wellness included philosophical or religious pursuits of personal meaning. Occupational wellness included career and school. Social wellness included relationships and helping others. Finally, intellectual wellness included understanding, analysis, reading, writing, and cultural activities.

Wellness is a system structure that illustrates a process of self understanding, that for practical purposes, begins with the transition into adolescence and adulthood. Children can experience high level wellness, but the idea really engages adult concepts and development. It is a term to indicate a high level of total health: physical, spiritual, and mental health. It is all about satisfaction and fulfilment in life. It is about making informed decisions. Balanced involvement of the six wellness dimensions leads to self understanding which can lead to better decisions and a healthier more satisfying life.

Figure 2.5

**Hettler's Wellness Model
1985**



Adapted from: Ardell, D. (1981). High Level Wellness An Alternative to Doctor's Drugs & Disease.

College Freshmen and Career Decision Making

The goal of most colleges and universities is to meet the needs of the students. Alexander Astin and colleagues have been studying college freshmen for over two decades. It has been their goal to identify needs of college freshmen and monitor changes over time. Every student has varying needs, so the task is quite difficult.

During the adolescent and young adult years which includes the college years, adolescents and young adults are asked to make some vital life choices. Decisions about career, relationships, education, independence, and sexual roles must all be considered. College freshmen are faced with these life choices and the pressures associated with human development, expectations of society, education, and college life (Bligh, 1990). Over the years colleges and universities have used a variety of programming and curricula to meet students' needs. Focusing specifically on how colleges and universities meet career decision making needs of students is very difficult as career decision making embodies many aspects of higher education. A variety of course offerings, clubs, specialized organizations, counseling centers, advisors, and testing centers are some of the ways colleges and universities have worked to meet career decision making needs.

College students are faced with making a career choice early in their college experience. The freshmen survey by Cooperative Institutional Research Program (CIRP), done by Alexander Astin and colleagues have been a valuable resource for policy analysis, human resource planning, campus administration, educational research, and guidance counseling (Astin, Korn, & Berz, 1989). According to CIRP (1989), 75.9% indicated

significant concern about choosing a better occupation. Only 4.4% indicated that they would seek a counselor's assistance in making their career decisions (Astin, Korn, Berz, 1989). These results indicate that there is a need for colleges and universities to reach out to freshmen with programs of career education. Programs are needed that assist students with career decision making so that each individual can develop a greater confidence in his/her career choice. Apparently students will not seek out vocational counseling services, so a program that reaches out to the students that does not carry the stigma associated with counseling is necessary.

The college student enters a college or university with ambitions of finding a satisfying career path. It is a time for discovery. For centuries institutions of higher education have been preparing young people for this successful adjustment into society. The goal has been not only to learn about society and the world in which one lives, but also to discover the hidden longings of one's self. One strives to unravel the unique mystery of personal fulfilment. For each individual, the path chosen will be a personal road that may be shared by many, but must be traveled alone.

Summary

Super introduced a developmental process of career decision making. He noted the importance of self-understanding and identifying interests, aptitudes, capabilities and the need to apply them to realistic occupational environments. This all takes place during the exploration stage of development which is the typical time a traditional student enters college.

Holland outlined a method for identifying interests, needs, aptitudes and capabilities. By identifying a personality type that is directly related to

an occupational environment for each individual, it becomes possible to determine how differentiated a person is and the degree of consistency in one's career decision making. Holland also stresses the importance of one's self-understanding.

Wellness embodies the process of self-discovery and renewal that is the foundation of a creative, fulfilling life. The six wellness dimensions outlined make it possible for a young adult to engage oneself in self-discovery and in doing so, possibly enhance the quality of decision making.

In psychology, understanding the self has always been an elusive project. For college freshmen however, self-understanding is of primary importance as they are in the exploration stage of development. For traditional freshmen between the ages of fifteen and twenty four, this is a critical time in personal development. It is at this time that individuals will be forming an initial adult self-identity, establishing a sense of relative independence, assuming increasing levels of responsibility, and developing the skills for social interaction. Wellness is the system structure that can guide a person through the process of self renewal that is the foundation of a creative, fulfilling life. It is about striving for achievement at the highest level of human potential. Wellness is all about self-discovery, and the concepts of wellness are directly related to self understanding and career decision making.

Alexander Astin has made clear the career concerns and needs of college freshmen, which makes a strong case for the development of better career guidance services. Based on the information Astin has gathered, one realizes the need to reach out to all college freshmen with a personal career education program.

Career guidance which includes self discovery is an essential service for college freshmen that must be offered to all students, not just those who seek guidance. According to Super and Holland, the self is a key component in career development and the decision making process. In psychology, self understanding has been determined by Rogers, Maslow, Kell and others to be a vital component in human behavior, motivation, and mental health. The self can be defined in terms of Hettler's wellness model which includes physical, social, emotional, spiritual, intellectual, and occupational dimensions. Wellness promises to be an ideal system structure for self discovery, meaning if a person attends to his/ her needs as defined by the six wellness dimensions, behavior and or decision making can be influenced.

This study proposes to incorporate the ideas of Super, Holland, and Hettler to develop a system of self-discovery which by simply engaging in the process of self-discovery will affect individual career choices, and ultimately career development. If it is possible to show that systematic self-discovery experiences can positively influence career choices, then a model for career education that does not require the individual student to seek out vocational guidance will be identified and can be developed for use in colleges and universities for improved career development services.

Results from Astin's CIRP studies on college freshmen indicates that students usually do not seek out vocational guidance, yet are very concerned about getting a job and selecting an appropriate career. This study will introduce a model for self-discovery based on Hettler's wellness dimensions. The self-discovery activities will work to influence consistency and differentiation scores of career choices as determined by Holland's Future Possibilities instrument. The procedures, results, and a discussion

of the results including recommendations will be included in the following chapters.

Chapter 3

METHODOLOGY

The following chapter will outline the details of this study. The chapter is organized under eight sub-headings including database, sampling, research design, instrumentation, procedures, statistical design, statistical hypothesis, and research question.

Database

The population of the study was college freshmen. The target population for this study was college freshmen at a Comprehensive I Carnegie Classification school. The subjects included only those students who were considered traditional aged college freshmen (ages 17-22). Subjects were selected from the Emporia State University Freshmen Seminar classes. The target population included male and female subjects of any ethnic and/or religious background.

Sampling

Eight classes of Freshmen Seminar were selected from a total of eighteen classes, which included representation of all freshmen at Emporia State University as it is a required freshmen class that is only offered during the first eight weeks of the fall semester. Four classes were randomly selected as the experimental group. Another four classes were randomly selected for a control group. All participants in the study were

required to sign an informed consent form (Appendix B). Those who did not wish to participate were not required to participate and were not included in the study. Two students chose not to participate. The sample size was one-hundred and eighteen students, fifty-eight in the experimental group and sixty in the control group.

This study was conducted with approval from the Human Subjects Committee at Emporia State University (Appendix C). By participating as subjects, students had the opportunity to work through self exploration activities designed to lead to a better understanding of self. Extra credit was given by the instructor to students who completed the research activities. The control group was also given the opportunity to participate in the exploration activities after the eight weeks of experimentation were completed.

Research Design

The research was quasi experimental with a pretest post-test control group design. The classes were randomly assigned to either the experimental group or the control group. All classes were administered the pretest during the first week of classes. For the following six weeks the experimental group received a series of self exploration activities which were the treatment. The control group received no special treatment. During the final week of Freshmen Seminar, both groups were post-tested exactly the same way the pretest was administered. Scores of the experimental group were compared to scores of the control group.

The research design greatly reduced the threats to internal validity. Pretest sensitization and uncontrollable external noise were accounted for

through the use of a control group. Both the experimental group and the control group were affected by the same environmental factors, except the experimental group received the experimental treatment that the control group did not receive. Differences in the experimental groups' and the control groups' post-test scores can be attributed to the manipulated independent variable.

Instrumentation

The Future Possibilities instrument, innovated by Holland, Gottfredson, and Nafziger (1973), was used as the pretest and the post-test instrument. It is designed to assess individuals' ability to translate personal occupational knowledge into appropriate choices and actions (Hurt, 1975). According to Hurt (1975), Holland has reported alternate forms of reliability for the Future Possibilities instrument up to .54 (Hurt, 1975). No other published reliability or validation studies were identified.

The Future Possibilities instrument is simple to use and easy to understand. It requires an individual to give ten responses to the following statement:

LIST ALL THE JOBS OR OCCUPATIONS YOU COULD DO AND WOULD
LIKE, IF YOU HAD ENOUGH MONEY TO GET THE NECESSARY
TRAINING, AND IF YOU COULD GET THAT JOB WHEN YOU FINISHED
YOUR TRAINING OR EDUCATION.

Consistency and differentiation can then be determined by identifying the Holland three letter code for each occupation listed. Ten codes are then identified and evaluated.

The number of times each letter appears in the first, second, or third position is recorded on the Environmental Summary Table (Appendix D). Then first position scores are multiplied by three, second position scores are multiplied by two, and third position scores are multiplied by one. Scores are added together and the totals provide a means for determining the individual's preferred code, or summary code.

Once a total score for each letter has been determined a differentiation score can be figured by finding the difference between the highest and lowest scores. High scores mean there is a greater degree of differentiation. Differentiation scores can be illustrated on a simple line graph. A well differentiated person will have a graph with higher peaks and lower valley's when compared to the less differentiated profile which would look flat.

Consistency can be determined by comparing the three letter code that is determined from the Environmental Summary Table, with each of the ten selected occupations from the raw data. Similar codes are evaluated according to Holland's Agreement of Occupations and Summary Codes Table found in the Self Directed Search manual (Appendix E). The total of the scores for each occupational control indicates the consistency of the occupations chosen. A high score indicates a high degree of consistency.

Procedures

The setting for the introduction to the activities given by the researcher, was the classroom. All data collection and instruction was done in each of the Freshmen Seminar classrooms at Emporia State

University. Generally, a classroom setting will suffice for data collection and the implementation of treatment to the experimental group.

An eight week period, consistent with the eight weeks of Freshmen Seminar, was the time frame for the administration of the assessments and treatment. Instruction was given during the class sessions between 9:00 AM and 1:00 PM. Each individual worked through the treatment activities in his/her own way, and on his/her own time outside of class. Each of the eight weeks constituted one session. There were eight sessions to the research and six sessions of a treatment program for the experimental group.

Before the actual treatment began, an information sheet was completed by the subjects (Appendix F). This information was collected in case it became necessary to contact a student, or to provide demographic information for further research. All subject information was held strictly confidential.

Session one was the introduction, explanation, and signing of consent forms. Once a consent form was signed, the Future Possibilities pretest was administered. The instructions at the top of the pretest were read after the instrument had been distributed. Students were given ten minutes to complete the activity. Following the ten minutes, the instrument was collected. The first session took about twenty minutes. All questions were answered before the distribution of the instrument. No questions were answered following the completion of the activity. All eight classes involved in the research completed session one as outlined. Following session one, the control group received no further attention by the researcher until session eight.

Session two through seven was implemented during the following six weeks of Freshmen Seminar class. The four randomly selected classes that made up the experimental group were given self exploration activities focusing on the six dimensions of total health as outlined by the wellness concept and discussed later in this chapter. Instructions were given as outlined on the activity forms. To reduce the chances of contaminating the control group, the importance of not discussing the activities with other students and sharing information with students outside of class was stressed. Ten minutes was spent instructing the class. The activities were distributed to the four classes that make up the experimental group and they were given one week to complete each activity.

The treatment in this research project was the exploration activities consistent with the wellness model for total health. Each of the activities dealt with one aspect of wellness. Each activity was non-directive in the sense that the subjects were asked to respond to subjective, open-ended questions. No subject was required to answer any questions they felt were too personal. Subjects always had the right to leave an answer blank, however they were asked to make an effort to try to complete or at least think deeply about each of the questions. Throughout the treatment period, the Occupational Outlook Handbook was on reserve at the library for the subjects to consult and use as an exploration tool. Subjects were not required to consult the Occupational Outlook Handbook, but were encouraged throughout the treatment activities. The following is a detailed explanation of each of the six activities.

The first of the six wellness activities focused on the physical dimension. The purpose of this activity was to explore one's personal perspective on physical wellness and how it relates to career choice. First,

the subjects read and participate in an imagery experience (Appendix G). After the subjects went through the imagery experience on their own, they were asked to do the exploration activity (Appendix H). The questions for each activity were designed to be open-ended and relevant to the wellness issue being explored. All questions were evaluated and approved by a three-person panel asked to select and validate the questions. To explore one's perception of the importance of physical wellness, the following questions were asked:

When do you enjoy exercise?

In what ways would you consider yourself physically active?

How is exercise part of your daily schedule?

Do you like to exercise outdoors or indoors?

Why is exercise important to you?

Then the subjects were asked to look ahead five years into the future and consider the following questions:

Will you be physically fit? Why or Why not?

Next the subjects were asked to look ahead ten years into the future and consider the following question:

Why might you be concerned about your physical health?

Once that was complete, the subjects were asked to consider physical wellness as it relates to a career. The following questions were asked:

How will the type of work you choose include physical activity?

What will you need to do to stay physically healthy, and how will you do it?

What occupations do you think you would like that would promote your ideas about a physically healthy you? (List at least three)

A note was included encouraging subjects to find out more about the listed occupations by looking at the Occupational Outlook Handbook on reserve in the library. A description of the Occupational Outlook Handbook with instructions for use was given in session two.

The final question gave the subjects a chance to consider the value of physical wellness in their own life.

What is the value of physical wellness?

The subjects were asked to turn in the activity the following week.

The second activity dealt with social wellness (Appendix H). The purpose was to explore one's personal understanding of social wellness and how it relates to career choice. The activity on social wellness began with an imagery experience (Appendix G). Following the imagery experience, the subjects were asked to complete the activity in the same way the physical wellness activity was introduced. The following questions were asked:

How do you socialize with others?

What do you like about being alone?

How are you intimate with others?

Who is part of your social support system?

When you make important decisions, who do you consult with? Why?

The subjects were then asked to look ahead five years into the future and consider the following questions?

What social activities will you be involved in? Why?

The subjects were then asked to look ahead ten years into the future and consider the following question:

How would you describe yourself socially?

Once again the subjects were asked to consider the aspects of social wellness and relate them to career choices.

Would you choose a job where you work alone or with others? Why?

How will you meet your social needs outside of a job?

What jobs do you think you would like that would be ideally social for you? (List at least three)

Subjects were again directed to the library to explore their options in the Occupational Outlook Handbook. Finally the subjects were given the opportunity to consider the value of social wellness.

What is the value of social wellness?

The activity was turned in after one week.

Emotional wellness was the focus of the next activity (Appendix H).

The purpose of the activity was to allow the subjects to explore their own personal ideas on emotional wellness and relate those ideas to making career choices. Again, the activity was preceded by an imagery experience (Appendix G). The activity was introduced the same way as the others.

The following questions were asked:

How do you enjoy your day?

How do you relax?

The subjects were then asked to think of some of the most stressful times in their lives.

What were you feeling?

What did you like about those feelings? Why?

What did you dislike about those feelings? Why?

Next, subjects were asked to remember some of the most wonderful times in their lives.

What were you feeling?

What did you like about those feelings?

What did you dislike about those feelings?

As before subjects were asked to look five years into the future and consider the following questions?

How will you go about enjoying life?

How will you deal with stress?

Looking ahead ten years, subjects were asked to consider the following question:

Why might you be concerned about your emotional health?

As before, subjects were asked to consider their ideas about emotional wellness and relate them to career choices.

How will your work make you happy?

How will your work be stressful?

What occupations would you like that would make you happy and support your emotional needs? (List at least three)

A reminder was again given about the reserved Occupational Outlook Handbook in the library. Finally, the subjects were asked to consider the value of emotional wellness.

What is the value of emotional wellness?

The activity was turned in after one week.

The next activity focused on spiritual wellness (Appendix H). The purpose of the activity was to allow the subjects to explore their own sense of spiritual wellness and give them an opportunity to relate their ideas to making career choices. An imagery experience was again offered before the completion of the activity (Appendix G). The activity focusing on spiritual wellness included the following questions:

What is life all about?

How are you a spiritual person?

What is death? How does it relate to life?

Where did you get your values? Are they still valid? Why?

What can you do to actively create your future?

Is religion good or bad? Why?

Subjects were then asked to look ahead five years and consider the following question:

What will be the meaning and purpose of your life?

They were then asked to look ahead ten years and consider the following question?

How will you be a spiritual person?

Next, subjects were asked to relate their ideas to making career choices in the following way:

What jobs might you choose that promotes your ideas about spirituality?

Will other people or institutions influence key choices for you? How, or why not?

What occupations can you think of that will promote your ideas about spirituality? (List at least three)

Once again a note was included reminding the subjects to look at the Occupational Outlook Handbook on reserve in the library. Finally, the subjects were asked to consider the value of spiritual wellness as had been the case with each of the wellness activities.

What is the value of spiritual wellness?

The activity was turned in after one week.

The next activity dealt with intellectual wellness (Appendix H). The purpose was to explore one's personal understanding of intellectual

wellness and how it relates to career choice. The activity on intellectual wellness began with an imagery experience (Appendix G). Following the imagery experience, the subjects were asked to complete the intellectual wellness activity in the same way the other wellness activities were introduced. The following questions were asked:

How would you describe yourself intellectually?

What do you like about learning?

What do you dislike about learning?

What are your favorite areas to study? Why?

What type of degree would you like (Bachelors, Masters, Doctorate)?

Why?

What do you like to do outside of school that promotes learning?

As in the other activities the subjects were asked to look ahead five years and consider the following question?

How will you still be involved in life's process of learning?

Looking ahead ten years the subjects were asked to consider the following question:

What will you be doing to promote your continued learning?

How intellectual wellness relates to career choices was the focus next and the questions were as follows:

How will the work you choose stimulate you intellectually?

What will you do outside of work to continue your education?

What occupations might you choose that would be intellectually stimulating? (List at least three)

A reminder about the Occupational Outlook Handbook on reserve at the library was included. The subjects were then given the opportunity to consider the value of intellectual wellness.

What is the value of intellectual wellness?

The subjects had one week to complete the activity.

The last treatment activity distributed in the beginning of week seven was the activity that focuses on occupational wellness (Appendix H). The purpose of the activity was to help the subjects explore their own ideas about occupational wellness and allow them to relate those ideas to making career choices. An imagery experience preceded the activity (Appendix G). The following questions focusing on occupational wellness were asked:

How do you know when you are interested in an occupation?

What are the three most important things to consider when choosing an occupation?

How important is an occupation compared to the other aspects of your life? Why?

How will you find an occupation?

Who will you consult with when choosing an occupation?

Again, subjects were asked to look ahead five years and consider the following questions:

What occupation will you have or be pursuing?

Why will an occupation be important to you?

Subjects were then asked to consider life ten years from now. They were asked:

What will you like most about your occupation?

What will you like least about your occupation?

As with the other activities, the subjects were asked to consider how their occupational choice relates to their over-all career.

What other factors in your life will you consider when choosing an occupation?

If career means "a way of life", how important is your occupation?

What occupations do you think you would like as part of your career?

(List at least three)

A note encouraging subjects to explore their choices in the Occupational Outlook Handbook in the library was included. Finally, the subjects were asked to consider the value of occupational wellness.

What is the value of occupational wellness?

Subjects were given one week to complete the activity.

Specific data used for this research project was consistency and differentiation scores. Other data such as gender differences and cultural differences may be used for further research or related reports.

Statistical Design

The sample was 118 college freshmen selected from the Freshmen Seminar class as outlined at the beginning of this chapter. Of the 118 freshmen, 58 were part of the experimental group and 60 were part of the control group. Division of the subjects was done according to classes. Four classes were used as the experimental group, and four classes formed the control group.

The freshmen in the two groups were given the Future Possibilities assessment inventory. The instrument assisted the researcher in determining a numerical level of consistency and differentiation of career decision making for the target population.

The experimental group received six weeks of treatment while the control group received no treatment. During the eighth week both the experimental group and the control group were administered the Future

Possibilities instrument for the second time. Results of the post-test were calculated.

Since there were two dependent variables being measured, consistency and differentiation, two independent t-tests were done on the data. Consistency scores for each subject were determined from the pretest and the post-test results. The difference of the pretest and post-test score for consistency and differentiation were compared in the independent t-tests. The consistency and differentiation scores are determined as outlined under the instrumentation heading. Students involved in the experimental group were given the opportunity to comment on the value of the activities through the use of a questionnaire (Appendix I).

Research Question

Can the consistency and differentiation scores from the Future Possibilities inventory of college freshmen occupational choices at a Comprehensive I Carnegie Classification school be significantly increased through a six week program of self exploration activities consistent with the wellness model for total health so as to improve the quality of career decision making? The research established existing levels of freshmen consistency and differentiation scores and determined if the proposed self-exploration activities that follow the concepts associated with total health, or wellness, can in fact improve college freshmen consistency and differentiation scores. If the treatment did indeed raise the post-test consistency scores and post-test differentiation scores were greater than the pretest scores, the researcher can infer that the treatment did in fact raise

the level of vocational maturity, hence improving college freshmen preparedness to make more consistent and differentiated career choices.

Summary

The implementation of the procedures and designs outlined in this chapter provides a valuable format for collecting information about career development of mid-western college freshmen who attend Comprehensive I Carnegie Classification schools. Procedures and designs are expressed in such a way so that further research or replication can be done easily.

By administering the Future Possibilities instrument to a population of traditional mid-western college freshmen who attended a Comprehensive I Carnegie Classification school, the researcher determined consistency and differentiation scores of occupational choices through the identification and analysis of Holland three letter codes. Personalized self exploration activities consistent with the wellness model for total health were then administered and the effects on consistency and differentiation of the occupational choices were measured and tested for significance through a t-test for independent samples. Results of these analyses are presented in Chapter 4.

Chapter 4

RESULTS

An analysis of the data according to the hypotheses in Chapter 1 will be presented in this chapter. Post-test scores were subtracted from pretest scores to determine a difference score. The difference scores were analyzed at a $P < .05$ level of significance using a t-test for independent samples. For statistical purposes, the hypothesized differences were said to be zero. The results are presented in three major sections: Preliminary Data, Consistency Results, and Differentiation Results. The results of a self-assessment by the experimental group is also included.

Preliminary Data

The study consisted of 118 college freshmen between the ages of 17 and 22. Sixty students made up the control group while the other 58 students were the experimental group. Pretest, post-test, and differences between the pretest and post-test scores for both the control group and the experimental group are presented in Table I.

A initial consistency and differentiation score for each of the subjects was determined through the Future Possibilities pretest. The Future Possibilities pretest revealed similar results for both the experimental and control groups.

Pretest consistency scores for the control group had a mean of 30.083, a median of 30, and a mode of 29. The standard deviation was 8.714 and the range was 42. Pretest consistency scores for the experimental group had a

Table I
Comparison of Results

	N	PRETEST					POST-TEST					DIFFERENCES		
	N	Consistency					Consistency					Consistency		
		\bar{x}	Md	Mo	SD	R	\bar{x}	Md	Mo	SD	R	\bar{x}	SD	R
Control	60	30.08	30	29	8.714	42	29.55	29.5	28/38	9.182	38	- 0.733	8.694	39
Experimental	58	27.55	26.5	27	10.645	34	33.64	34	34/40	12.288	36	6.466	6.134	25
	N	Differentiation					Differentiation					Differentiation		
		\bar{x}	Md	Mo	SD	R	\bar{x}	Md	Mo	SD	R	\bar{x}	SD	R
Control	60	17.43	17	19	4.907	21	17.88	19.5	21	5.049	20	0.450	4.586	27
Experimental	58	16.93	16.5	13/17	6.498	22	19.66	21	19	6.263	19	2.759	3.556	16
Difference														

mean of 27.55, a median of 26.5, and a mode of 27. The standard deviation was 10.645 and the range was 34. Pretest differentiation scores for the control group had a mean of 17.43, a median of 17, and mode of 19. The standard deviation was 4.586 and the range of scores was 21. Pretest differentiation scores for the experimental group had a mean of 16.93, a median of 16.5, and modes of 13 and 17. The standard deviation was 6.498 and the range was 22.

During the eighth week post-test scores for all groups were determined through a Future Possibilities post-test. The post-test consistency scores for the control group, also shown in Table I, had a mean of 29.55, a median of 29.5, and modes of 28 and 38. The standard deviation was 9.182 with a range of 38. The post-test consistency scores for the experimental group had a mean of 33.64, a median of 34, and modes of 34 and 40. The standard deviation was 12.288 with a range of 36. The post-test differentiation scores for the control group had a mean of 17.88, a median of 19.5, and mode of 21. The standard deviation was 5.049 with a range of 20. The post-test differentiation scores for the experimental group had a mean of 19.66, a median of 21, and a mode of 19. The standard deviation was 6.263 with a range of 19.

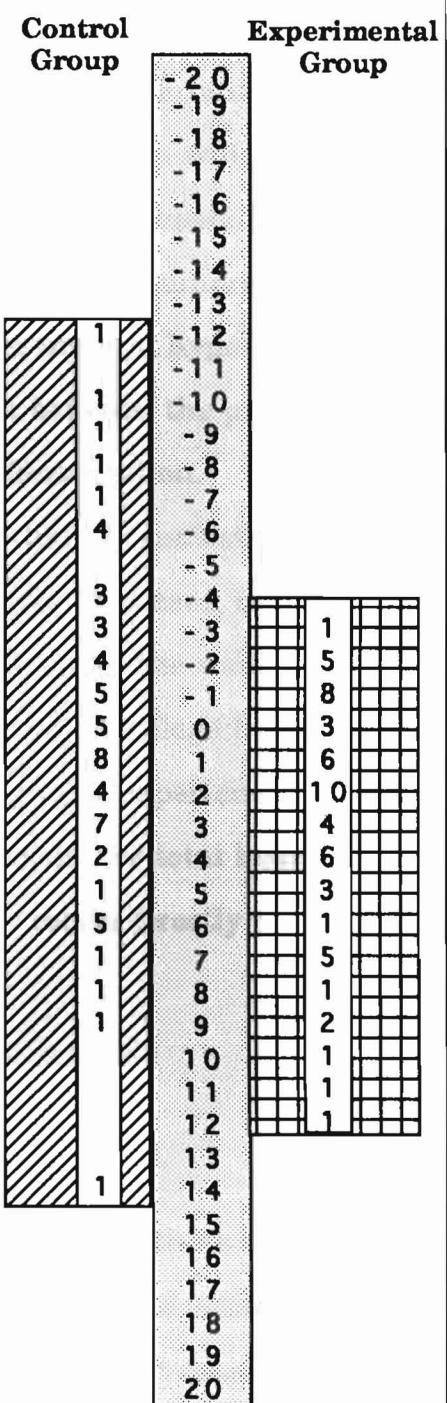
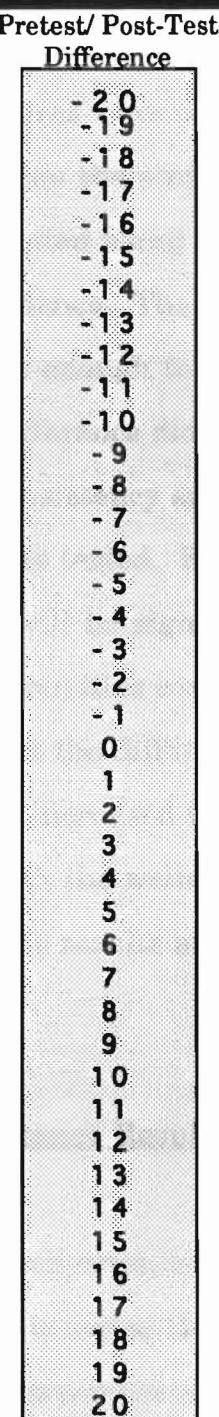
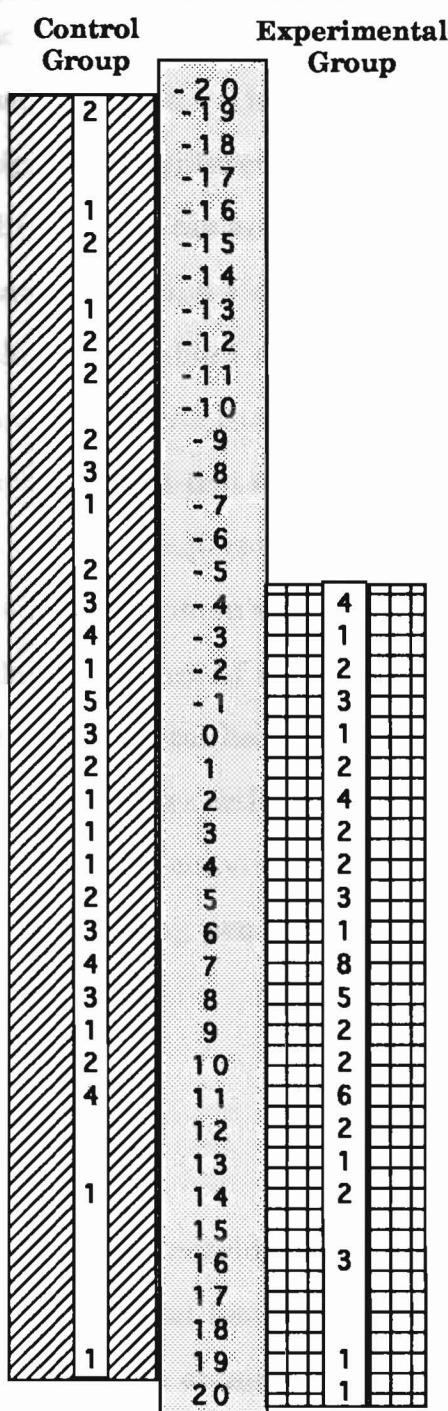
Each raw score from the post-test was subtracted from the pretest score to determine the difference between the two scores. A flow chart of the frequency of the difference scores for all groups is presented in Table II. The consistency difference scores for the control group had a mean of -0.733 with a standard deviation of 8.694. The range of the consistency difference scores for the control group was 39 points. The consistency difference scores for the experimental group had a mean of 6.466 with a standard deviation of 6.134. The range of the experimental group's consistency

Table II

Frequency of Pretest/Post-test Consistency, Differentiation and Difference Scores for Experimental & Control Groups

Consistency

Differentiation



Totals:

60

58

60

58

* Note the movement of the experimental group in both the difference scores, and the range of the scores.

difference scores was 25 points. The control group's differentiation difference scores had a mean of 0.45 with a standard deviation of 4.586. The range was 27 points. The experimental group's differentiation difference scores had a mean of 2.759 with a standard deviation of 3.556. The range was 16 points. These difference scores were compared to determine if a significant difference existed between the scores, and if so, in which direction. This analysis was completed using a t-test for independent samples with a P<.05 level of confidence. The results of this difference shown in Table I and Table III was enough to reject the null hypothesis and determine that a significant difference did exist between the pretest and the post-test scores for both consistency and differentiation.

Two separate hypotheses were tested. First, that the consistency of college freshmen's career choices will be significantly increased through the experience of self-exploration activities consistent with the wellness model for total health. Second, that the differentiation of college freshmen's career choices will be significantly increased through the experience of self-exploration activities consistent with the wellness model for total health. The following two sections report the results as they relate directly to these hypotheses.

Consistency Results

Can individual exploration activities, consistent with the wellness model of total health, significantly increase the consistency of vocational choice? The obtained difference between pretest and post-test consistency scores for the experimental and the control groups was -7.199 with a standard deviation of 1.389 and a range difference of 14 points. The obtained

Table III
Mean and Mean Difference Pretest & Post-test Consistency,
Differentiation, & Difference scores for Experimental & Control Groups

