

IDENTIFICATION OF PERSONALITY PROFILES  
IN A STUDENT WELLNESS PILOT PROGRAM

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## CHAPTER I

### INTRODUCTION

"We have met the enemy and he is us." This short quotation states succinctly and comprehensively the thesis of this study, which deals with the concept of wellness. These insightful words were spoken several years ago by a very wise but imaginary cartoon character by the name of Pogo Possum. Lucius Annaeus Seneca, a statesman and humanist at the court of Nero, is said to have stated that man does not die, he kills himself. No matter where one looks, be it through the eyes of an historian or in a written commentary on today's contemporary society, each individual seems to be the determining factor in his or her own happiness and well-being.

Edlin and Golanty (1988) stated that the concept of wellness is embraced by the holistic view of health. The word "holistic," according to Edelman and Mandle (1986), comes from the Greek word holos, which means the entirety or completeness of a thing in its wholeness, and is an expansion of the idea of the person as a biopsychosocial being. Then, if wellness can be thought of as the "holistic view of health," personality might be thought of as the "holistic view of self."

When the "holistic view of health" (or the multidimensional approach) is examined, the word "health" must be defined. Edlin and Golanty (1988) stated that the World Health Organization, has defined health as "a complete state of physical, mental, and social well-being and not merely the absence of disease or infirmity" (p. 4). Greek society

believed that health was a balance between mind and body and recognized the importance of developing the individual in both the intellectual and physical domains. The modern interpretation of the term "wellness" has been expanded further to include the affective domain.

This 'holistic' view recognizes 'the interrelatedness of the physical, psychological, emotional, spiritual, social, and environmental factors that contribute to the overall quality of a person's life. No part of the mind, body, or environment is truly separate and independent' (Edlin and Golanty, 1988, p. 6).

According to Edelman and Mandle (1986), it is an ongoing state of health which involves taking care of oneself physically, using the mind constructively, and expressing emotions appropriately.

#### Statement of the Problem

Research has shown that there are measurable personality traits that might indicate a personality profile more prone to certain illnesses and destructive behaviors. However, the researcher found no studies to identify personality traits or combinations of personality traits that might be indicative of positive behaviors which could contribute to a wellness lifestyle. The problem of this study was to identify personality profiles in a Student Wellness Pilot Program at Oklahoma State University.

#### Importance of the Study

Research has shown that certain personality types are more prone to coronary heart disease and other lifestyle diseases. Since a person's personality is thought to be fixed by the early 20's, administering a personality questionnaire to the traditional university student could be one way to identify those individuals who might need further testing or counseling.

The information gained from a personality questionnaire and an awareness of one's personality profile might help the student in reassessing and modifying his/her personal habits and behaviors. This information would also be a valuable asset in structuring and administering a campus wellness program.

### Hypotheses

The research hypotheses stated in the null form were:

1. There will be no significant difference between students who participated in the Student Wellness Pilot Program and the students who did not participate in the Student Wellness Pilot Program on each of the Sixteen Personality Factor Scales.

2. There will be no significant difference in the personality types between male and female students who participated in the Student Wellness Pilot Program and the students who did not participate in the Student Wellness Pilot Program.

3. There will be no significant difference between the two groups (students who participated in the Student Wellness Pilot Program and students who did not participate in the Student Wellness Pilot Program) on their personality profiles.

### Limitations

The results of this study were limited by:

1. The treatment group who were Oklahoma State University students who participated in the Student Wellness Pilot Program and in this study.

2. The control group who were Oklahoma State University students who did not participate in the Student Wellness Pilot Program but who participated in this study.

## Delimitations

This study was delimited to:

1. Thirty male and 29 female students who participated in the Student Wellness Pilot Program at Oklahoma State University.
2. Forty-eight male and 29 female members of six sections of beginning and intermediate golf at Oklahoma State University.
3. Primary personality traits as measured by Form A (1967-68, Edition R) of the Cattell Sixteen Personality Factor Questionnaire.

## Assumptions

It was assumed that:

1. The participants who volunteered for this study did so without coercion of any kind.
2. The responses to the items on the questionnaire were honest responses.

## Definition of Terms

### Conceptual Definitions

The following terms were defined by authorities:

#### Health.

Jesse Williams (1934), one of the founders of modern health education, wrote that health is 'that condition of the individual that makes possible the highest enjoyment of life, the greatest constructive work, and that shows itself in the best service to the world. . . . Health as freedom from disease is a standard of mediocrity; health as a quality of life is a standard of inspiration and increasing achievement' (Edlin and Golanty, 1988, p. 4).

Personality. "The combination of all of the relatively enduring dimensions of individual differences on which an individual can be measured" (Byrne, 1966, p. 26).

Profile. "The scores of a person or group of persons on each of a set of distinct traits or factors" (Cattell, 1965, p. 373).

Source Traits. "A factor-dimension, stressing the proposition that variations in value along it are determined by a single unitary influence or source" (Cattell, 1965, p. 374).

Trait. "A unitary configuration in behavior such that when one part is present in a certain degree, we can infer that a person will show the other part in a certain degree" (Cattell, 1965, p. 375).

Sixteen Personality Factor Questionnaire (16PF). A multidimensional set of 16 questionnaire scales, arranged in omnibus form. It is designed to make available, in a practicable testing time, information about an individual's standing on the majority of primary personality factors (Cattell, Eber, and Tatsuoka, 1970).

### Functional Definitions

The following terms were defined by the researcher and hold special meaning to this study:

Control Group. Oklahoma State University students who were members of beginning and intermediate golf classes.

Group 1. Oklahoma State University students who participated in the Student Wellness Pilot Program, the treatment group in this study.

Group 2. Oklahoma State University students who were members of beginning and intermediate golf classes, but who did not participate in the Student Wellness Pilot Program, the control group in this study.

IPAT. Institute for Personality and Ability Testing.

Lifestyle. The day-to-day living that includes one's interests, actions, and personal philosophies.

Norm Tables. Tables that permit the conversion of any given raw score to STEN scores for any of the 16 personality factors.

Organismic Efficiency. Wellness.

Participants. The Oklahoma State University students who took the 16PF Questionnaire and were either members of the treatment group or members of the control group.

Profile Sheet. A graphic record sheet used for recording STEN scores on the 16 primary personality factors.

STEN Scores. This term comes from "standard ten" and are raw scores that have been converted using standardization tables to 10 equal-interval standard score points.

SWPP. Student Wellness Pilot Program.

Systems Approach. A larger system, a wellness lifestyle, composed of subsystems designated as physical, mental, emotional, social, and occupational.

Treatment Group. The Oklahoma State University students who participated in the Student Wellness Pilot Program.

Wellness. A state of being in which an organism is able to function at or near his maximum potential.

Wellness Prone. A condition in which personality traits in combination might be identified with a healthier lifestyle or having a tendency toward wellness.

## CHAPTER II

### REVIEW OF LITERATURE

Enhancing the quality and quantity of life is essentially a matter of personal choice. The behavior a person chooses may be the result of a combination of distinct personality traits. Very little research has been done to identify individuals who possess certain traits that might indicate a "wellness prone" personality.

According to Berardo (1986), survivorship is affected significantly by our attitudes, habits, and the risks associated with them. The decisions one makes on an hourly and daily basis form one's personal philosophy of life. This individualized philosophy of life influences the way in which we attend to our health and well-being.

The contributing factors to morbidity, such as smoking, excessive eating, and substance abuse, are known by most and ignored by many. The need to recognize that these factors may contribute to suicidal behavior has become more apparent within the last few years as more research has been completed. And yet, even with the current information, good advice may still be ignored in favor of instant gratification. Barardo (1986) also stated that survivorship, to a large degree, reflects how actively a person pursues the goals of self-knowledge and self-control.

The wellness philosophy is an all-encompassing philosophy which includes a balance and interaction between cognition, implementation, and outcome. It is not an easy philosophy to live by and will never be perfectly achieved by anyone. Each person must determine for himself/



herself the most realistic dynamic mix of the components associated with wellness and strive to achieve "organismic efficiency."

### Personality

When one tries to understand the determining factor or factors that influence well-being, an investigator must look at the person as a whole. In order to develop a theory of personality, one must define personality. Psychologists studying personality are primarily concerned with examining separate traits that combine into a unique and individual pattern and make it possible to distinguish people, one from the other. Smith (1968, p. 42) defined personality as being "A distinguishable individual, definable in terms of a qualitative and quantitative differentiation from other such individuals."

One might ask: What is the difference between attitudes of an individual and what we might term his/her traits? Cattell (1983) stated that attitudes have an object of reference and traits do not. Baughman and Welsh (1962) wrote that we infer personality traits from segments of behavior, and Lahey (1983) defined traits as relatively enduring and consistent ways of behavior. This behavior, according to Baughman and Welsh (1962), is composed of patterns of action that are broader than a single and specific act but less complex than total behavior.

Other psychologists, according to Lahey (1983), believe that situations may determine specific behavior and have called this behavior "situationism." Lahey also stated that social learning theorists have suggested compromise and termed it "interactionism," which means that a certain behavior is influenced by a combination of traits and the situation.

Personality, as viewed by Filsinger and Stilwell (1979), also involves the dynamics of the individual in a social context. They found additional support that different types of personalities exist and can be empirically discovered. Those who study personality often focus on personality profiles rather than on separate scores. Using this approach, one might understand human behavior by studying these categories.

Presently, it is not known how or in what way personality traits of an individual can influence his/her health. Professionals have spent most of their time studying illness and abnormality rather than the normal personality. Maxwell (1976) stated that there is an increasing awareness of possible psychological predisposing factors exemplified in accident-proneness, migraine headaches, and ulcers. He mentioned that the individual's psychological "set" seems related in some way, and there is a close proximity between mind and body. William James (cited in Rubin, 1981) wrote in 1887 that "By the age of 30, the character has set like plaster, and will never soften again" (p. 18). Rubin believed that, according to psychological dogma, this plaster of character is set by one's early 20's, if not sooner. He wrote that even though our bodies may be bent and our opinions changed by the years, there is a self, a personality, that remains basically unchanged. This constancy, according to Rubin, provides an individual with a stable sense of identity and an ability to make wise choices about his/her future.

Llorente (1986) suggested that there are some behaviors that are more dependent on personality variables than others. An example would be the tense, anxious, Type A behavior pattern. Also, according to Edlin and Golanty (1988), research has shown that particular personality characteristics are more determinant in certain health and wellness

situations and may cause a person to be more prone to such problems as heart disease and heart attacks.

Allport (1961) stated that psychologists cannot tell us exactly what normality, health, or maturity of personality mean. According to Weiten (1983), the most elaborate work on the healthy personality has been done by Maslow. Maslow is one of the few theorists to study healthy people and he called his healthy subjects "self-actualizing people" (cited in Weiten, 1983, p. 111). Maslow ". . . attributed their health to both their basic needs and their higher metaneeds" (cited in Weiten, 1983, p. 112). Weiten also stated that, according to Maslow, gratification of the basic physiological, security, love, and esteem needs was necessary for personal growth. Maslow also felt that the satisfaction of metaneeds for knowledge, beauty, order, and meaningfulness produced healthy people, and stated that "Fulfilling one's potential was assumed to be a crucial feature of the healthy personality" (cited in Weiten, 1983, p. 112).

Allport (1961, p. 307) cited six criteria that sum up the area of agreement as the value conceptions of Western culture. He stated that the mature personality will:

- (1) have a widely extended sense of self;
- (2) be able to relate himself warmly to others in both intimate and nonintimate contacts;
- (3) possess a fundamental emotional security and accept himself;
- (4) perceive, think, and act with zest in accordance with outer reality;
- (5) be capable of self-objectification, of insight and humor;
- (6) live in harmony with a unifying philosophy of life (p. 307).

These six criteria seem to be a statement indicative of a wellness prone personality, a personality that would actively pursue a positive approach to lifestyle management.

## Students

The average university student of today seems to be a very sophisticated and intelligent individual. They are more involved with determining their own future than students of past decades. The results of a study done by Shannon and Houston (1980) showed students of the late 1970's to be quite different than those of the early 1970's. They found them to be more extroverted, better adjusted, less suspicious, less tense, more assertive, more enthusiastic, more venturesome, more conscientious, more self-assured, and more secure.

Research has demonstrated that there are different and meaningful personality differences between students who show a compulsive behavior pattern as opposed to those students who do not. Dunn and Ondercin (1982), in a study on compulsive eating and utilizing Cattell's 16PF Questionnaire, found that female subjects manifested higher inner tension, greater suspiciousness, and less emotional stability. These subjects were also more in need of external approval.

In another study on eating disorders in female college students, Nagelberg, Hale, and Ware (1984) found a significant difference in bingers and purgers. They discovered that women in the high compulsive group were characterized by higher inner tension, greater suspiciousness and guilt-proneness, and less self-control and emotional stability. Nagelberg (1984) found that binge eating occurred rather frequently in college students, but self-induced vomiting occurred much less frequently.

In a study conducted on body image by Mintz and Betz (1986), it was determined that female college students were significantly more dissatisfied with their bodies than were male college students. Females were more likely to perceive themselves as overweight and desired to lose

weight regardless of their actual weight. Mintz and Betz stated that these distortions might not lead to anorexia or bulimia, but they have been linked to chronic dieting. Men who were dissatisfied perceived themselves as underweight and wanted to gain weight rather than lose weight. Relationship of body image to psychological health is definitely an important consideration.

The sexual behavior of university students may change drastically within the next few years because of the presence of incurable infectious diseases. Yarber (1982) found that in recent years attention has been given to psychological and cultural conditions, as well as to biological conditions, as playing an important role in determining sexual behavior. He mentioned that some researchers who are involved with the study of sex are concerned with the relationship between sexual behavior and various personality characteristics.

### Wellness

The concept of wellness as it is known and understood today, is a relatively recent idea. The idea of "wholeness" is not. Hippocrates believed that the body could be better understood if perceived as a whole, and that physicians should try to heal the whole and not just the parts. Wellness is not just the absence of disease, nor is it a condition that some refer to as "health." Juechter and Utne (1982) stated that wellness is an arena in which the individual is full partner and participant. The idea that an individual's thoughts, choices, and actions can be a major factor that contributes to his well-being is not a concept that came with the physical fitness movement of the 1970's and 1980's.

In 1961, Halbert L. Dunn published a book about the interdependent and interrelated whole human being. According to Ardell (1979), Dunn stated in his book that this human being (composed of body, mind, and spirit) must find personal satisfaction and a sense of purpose in life. Dunn wrote of a state of well-being ". . . wherein you are 'alive clear to the tips of your fingers. You have energy to burn. You tingle with vitality. At times like these, the world is a glorious place'" (cited in Ardell, 1979, p. 7). Dunn called this state high level wellness.

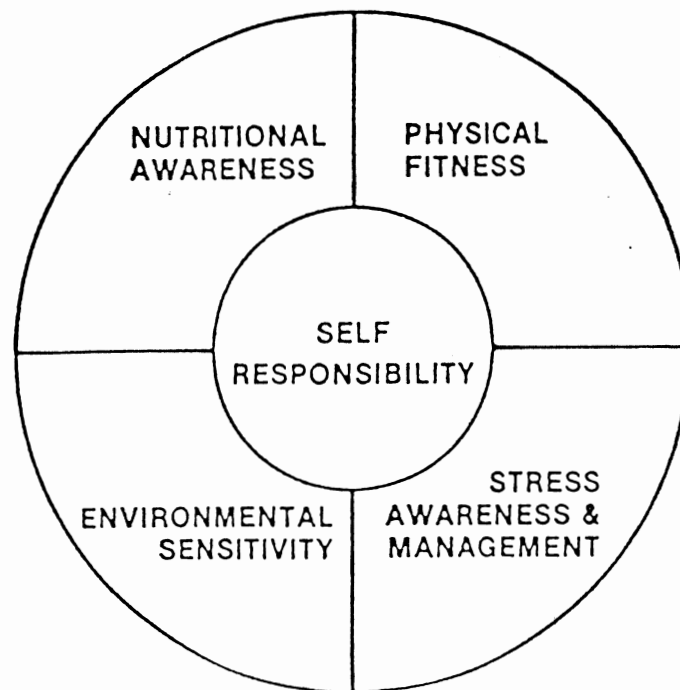
Another early advocate in the wellness movement extolled by Ardell (1976) in his article in Prevention Magazine was John W. Travis. Travis, a medical doctor who also had a degree in public health, established a Wellness Resource Center and used its programs to support his assertion that self-responsibility is the key to high-level wellness.

Ardell (1979) stated that high-level wellness is more fun than low-level worseness and wrote of wellness as a continuum with low-level worseness at one end and high-level wellness at the other. He also stated that

High-level wellness is not the same as holistic health. The latter is an approach to treating illness. In a wellness context, the individual is concentrating on moving to higher and higher levels of total fitness--with less attention given to existing or imagined illness states (p. 9).

Ardell's five dimensions of high-level wellness are: self-responsibility, nutritional awareness, physical fitness, stress management, and environmental sensitivity. Figure 1 shows Ardell's model of the dimensions of wellness.

Cooper (1982) believed that there are three basic human needs that must be satisfied in order to achieve an overall balance necessary for total well being. These are: aerobic exercise, a positive eating plan, and emotional equilibrium.



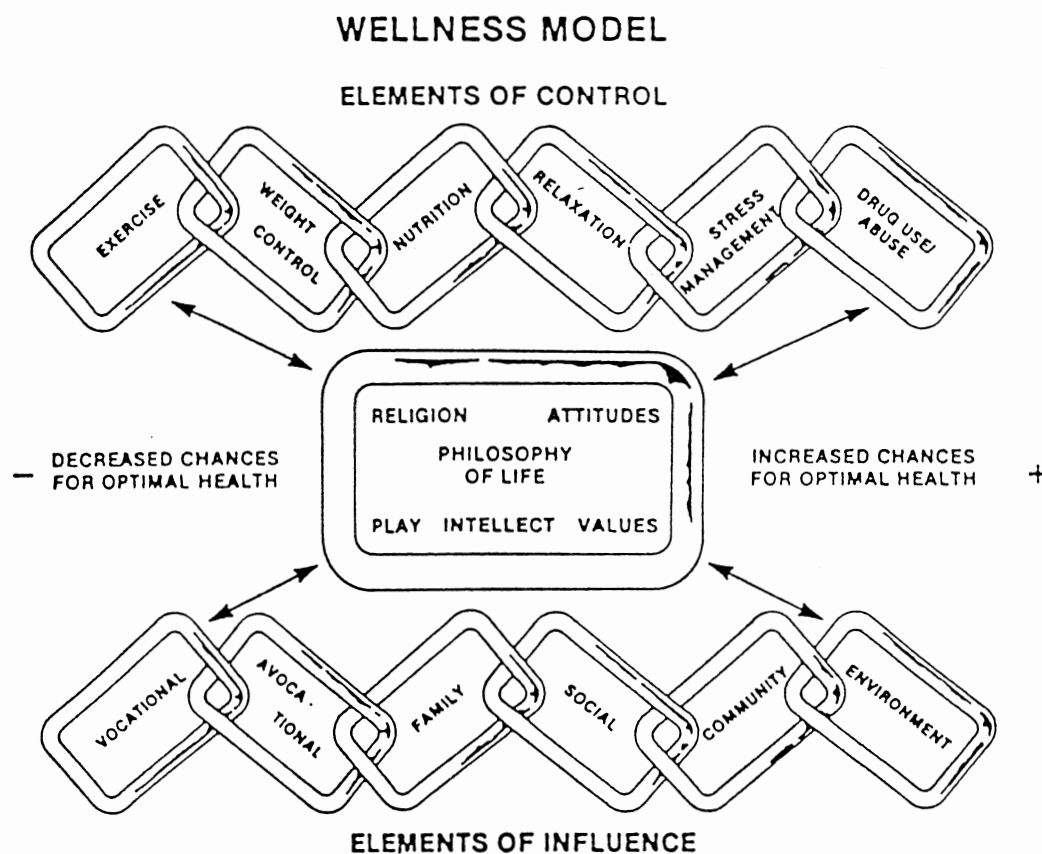
Source: D. B. Ardell, High Level Well-ness (1979).

Figure 1. Dimensions of Wellness

There are others who have pictured wellness in various configurations. McCrory and Baker (1984) pictured many interrelated and interdependent segments of wellness in their model. It was shown as a chain composed of interlocking links. This model is graphically illustrated in Figure 2, and is more complex than some. It includes "Elements of Control" and "Elements of Influence" that act on the well known and basic components of wellness. Philosophy of life was shown as being the central influence on these elements.

Lawson (1985) illustrated the concept of wellness as an umbrella, with the "brella" divided into sections representing the different dimensions of wellness, and the "um" representing self-responsibility.

Lawson's dimensions of wellness were labeled habit control, physical fitness, nutritional awareness, and stress awareness management. Together they contributed to emotional well-being. Figure 3 is a model showing Lawson's wellness umbrella.



Source: M. L. McCrory and W. Baker, "Wellness: A Model for Corporate Programming," Visions in Leisure and Business (1984).

Figure 2. The Wellness Model



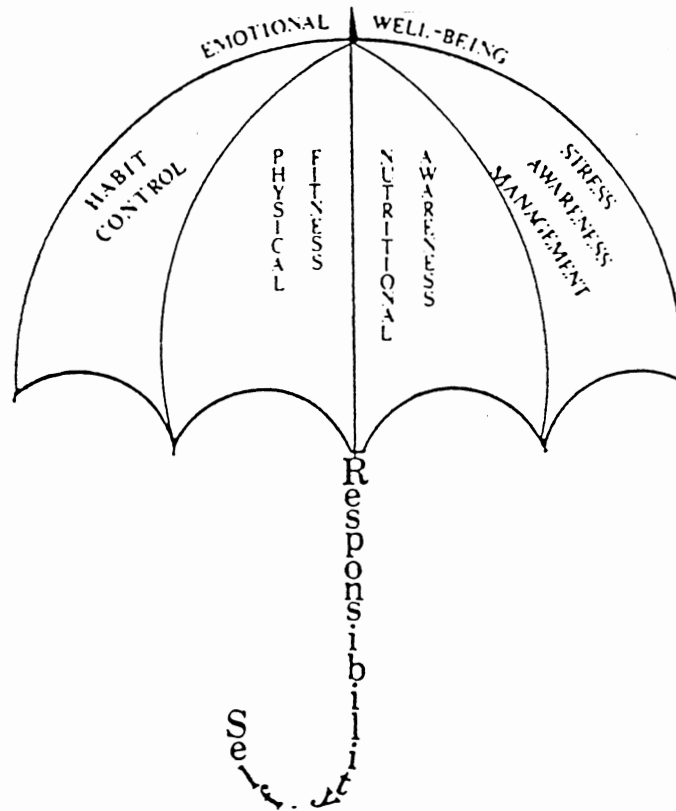


Figure 3. The Wellness Umbrella

Allport (1975) stated that psychology may be a territory where all four intellectual winds collide and run a tempestuous course. Wellness may be a "state of being" where these four winds--natural science, biological science, and the humanities--combine. And, in a synergistic manner, they help to make the course of life more smooth and less tempestuous.

As Cattell (1983, p. 36) pointed out, biblical scripture asserts that "no man liveth to himself," and as Juechter and Utne (1982) mentioned, the first principle of ecology is that everything affects everything else. Therefore, it also appears to be in wellness--mind, body;

work play; individual and society; culture and economy--all are interdependent.

This interdependence might be thought of as a systems theory. Banathy (1968, p. III) stated that "Evidence from various realms of our contemporary life indicates that in the systems concept we have available a way of thinking with which we can deal with complex problems and their changing relationships." The larger systems, what the researcher has termed a Wellness Lifestyle, is composed of subsystems designated as physical, mental, emotional, social, and occupational. With the systems approach we may have ". . . something by which we cannot only cope with our environment, but also be able to shape and master it and make change work for us" (Banathy, 1968, p. IV).

According to Banathy (1968), systems developers first had to identify the purpose and performance expectations of the system before they could develop all the parts. The expectations of the system illustrated is a Wellness Lifestyle. The individual components interact for the purpose of achieving the goal of the system. The researcher has termed the individual components of life as the physical component, the mental component, the emotional component, the social component, and the occupational component. Systems need purpose, process, and content. The purpose is to improve the quantity and quality of life, the process uses self-responsibility, and the content is composed of the five dimensions, or subsystems. The effectiveness of the total system depends on the integration and interfunction of these subsystems. Input into this system is through self-responsibility. Output is a Wellness Lifestyle. This System-Subsystem Relationship Model is shown in Figure 4. Banathy (1968, p. 13) emphasized that "The key criterion by which the effectiveness or adequacy of the performance of a system can be evaluated is how

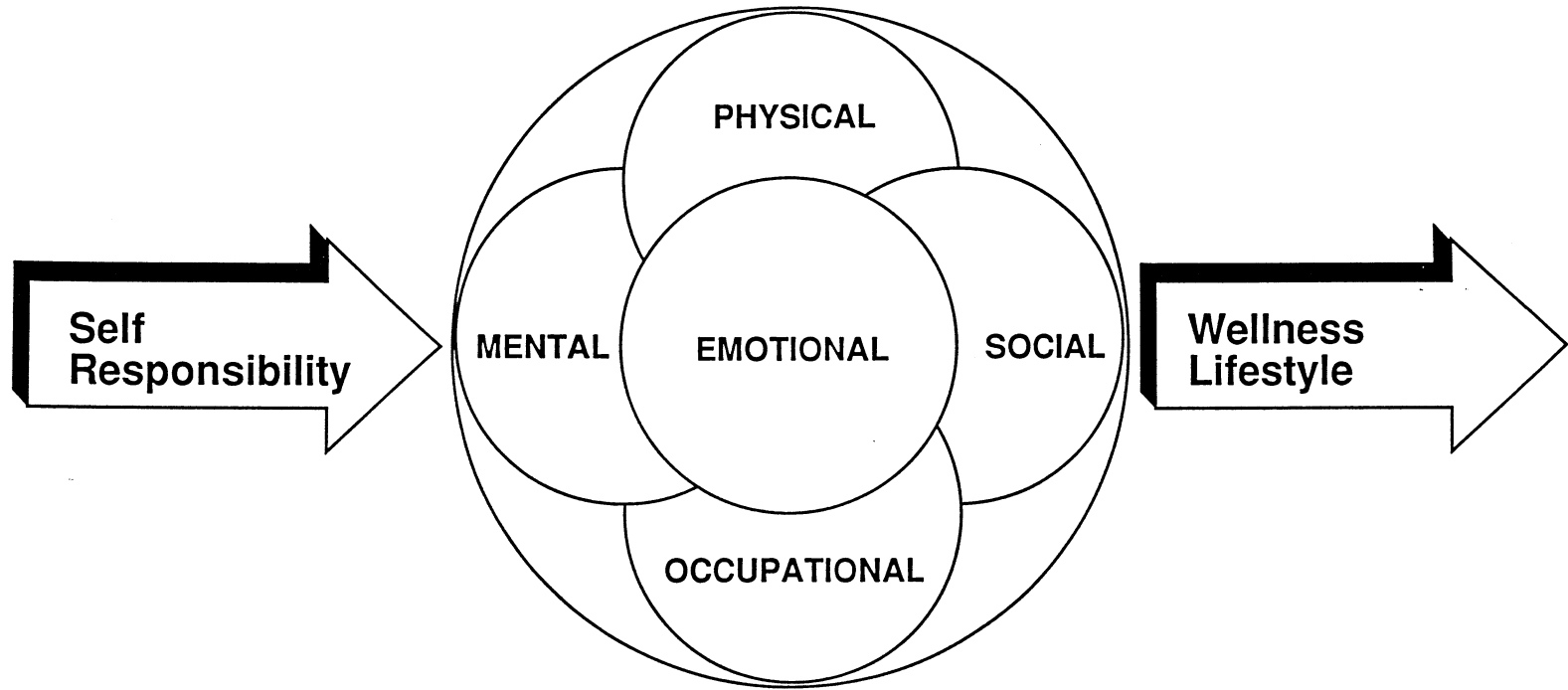


Figure 4. Wellness Lifestyle, System-Subsystem Relationship

closely the output of the system satisfies the purpose for which it exists." The systems approach can be applied to human endeavors, specifically the human endeavor of adopting and maintaining a positive approach to lifestyle management. This is the crux of the concept that is referred to as the concept of wellness.

### Summary

Lifestyle is influenced by a person's goals, values, interests, attitudes, and self-concept. Wurtele, Britcher, and Saslawsky (1985) determined that individuals who most valued their health were reported to participate in a greater number of health-promoting behaviors than were those who valued their health less. Because personality is consistent, behavior is, to some extent, predictable. At the same time, maturation may cause modification of behavior, resulting in changes in lifestyle. These changes may be either positive or negative. Shertzer and Stone (1980) found that personality patterns seem to correlate with certain behaviors.

In order to minimize destructive behavior, many individuals must affect change in their lifestyles. Pellatier (1981) stated that it is more effective to maintain and enhance health than to treat disease and disability after it has occurred. One of the ways this might be done is to make exercise and good nutrition important considerations. Mitchell's (1984) research discovered that value preferences may be learned. However, the outcome of that learning, actual preferences, may be related to the person's personality. Some continue to seek a shortcut to quality living.

Personality traits represent dimensions by which we measure personality. A person might use certain traits when assessing his/her own or

other people's behavior, or to make statements about their personalities. Psychologists and researchers use personality scales to measure these personality traits.

Pellatier (1981, p. xi) remarked that "Culture is based on a view of the human species and environment as a unity of interacting and inseparable components." Our culture is in a state of transition and will continue to change as more emphasis is placed on prevention rather than cure. No more will the youth of today enjoy a lifetime of passing the responsibility for their wellness on to others, but must take charge and formulate their own opinions, adjust their own attitudes, and take responsibility for their own actions. This is the concept of wellness.

## CHAPTER III

### METHODS AND PROCEDURES

The purpose of this study was to identify the personality profiles in a Student Wellness Pilot Program at Oklahoma State University. The researcher was interested in identifying personality traits or combinations of personality traits that might be indicative of positive behaviors and that tended to show an active interest in a wellness lifestyle.

#### Preliminary Procedures

The procedures that occurred prior to the actual process of data collection have been termed "preliminary procedures." They are: (1) selection of the instrument, (2) selection of the treatment group, and (3) selection of the control group.

#### Selection of the Instrument

Cattell's Sixteen Personality Factor Questionnaire was selected as the most appropriate instrument for this study. An instrument was needed that was easy to administer and score, not time-consuming, nonthreatening to the subjects, as comprehensive as possible, and designed for a normal population. According to the Institute for Personality and Ability Testing (IPAT), (1987-88), after extensive factor-analytic research, certain characteristics are the basic building blocks of a personality theory developed by Cattell over the last 45 years. By segmenting the 16 scales

into the standard 10 (STEN) scores, psychologists can describe more than 10 quadrillion (10 to the 16th power) personality categories.

There are several forms of this instrument for various age groups and reading abilities. It was decided that Form A was the most appropriate for this study since it was designed for the normal adult population over the age of 16 and contains 187 items, is untimed, and requires 45 to 60 minutes to complete. In checking for validity, the researcher found that the nonredundant contributions of each scale are high, averaging nearly 49% across the 16 scales (IPAT, 1986, p. 15), and the average short-interval reliability for Form A was .80 (IPAT, 1986).

#### Selection of the Treatment Group

The treatment group for this study were male and female participants who had volunteered and were included in the Student Wellness Pilot Program at Oklahoma State University during the academic year of 1987-88, and who volunteered to complete a questionnaire for this study. There were 59 individuals who participated; these subjects were designated as Group 1.

A letter was mailed to the 145 pilot program members who had been chosen at the time this study began (Appendix A). This letter explained the study and solicited volunteers. Potential subjects were assigned a day of the week and a time of day to appear in order to complete Form A of the questionnaire. This was done in six groups, spaced one and one-half hours apart, on two consecutive days. Room 118 of the Colvin Physical Education Center had been reserved for this purpose.

The second call for subjects was a note mailed to those who had not responded and was sent as a reminder that they could still participate (Appendix B). The procedure for these few subjects differed slightly, as

they were given the packet of materials on an individual basis and could answer the questions at their own convenience and then return the completed form to the researcher. A list of these subjects was kept and was used in checking out the questionnaire.

### Selection of the Control Group

The control group was composed of students at Oklahoma State University who were not part of the Student Wellness Pilot Program. It was determined that the control group should approximate as closely as possible the typical university student. The researcher decided to use students in several sections of leisure activity courses; however, a careful selection had to be made because many leisure activity courses are geared toward health and wellness and would have produced a biased control group.

After careful deliberation, six sections of beginning and intermediate golf were chosen to complete the questionnaire. These students seemed to be a good cross-section of the entire student population. They were involved with several different fields of study, there was a variety of grade classifications and ages represented, and they contained both males and females. This control group was designated as Group 2.

### Operational Procedures

Those procedures which occurred during and after the collection of data have been termed "operational." They are: (1) testing procedures, (2) scoring procedures, and (3) treatment of the data.

### Testing Procedures

As a subject came into the testing area, he/she was given a number



two pencil, the test booklet, an answer sheet, and an informed consent form. The consent form was dated and signed by the participant, the researcher, and another subject who acted as a witness (Appendix C). As an incentive for helping with the study, the subjects were promised a copy of their personality profile. The subjects were asked to write his/her name, age, and gender on the answer sheet. They could then begin the questionnaire and were allowed to leave when it was completed. The subjects were cautioned not to deliberate too long on any one question but to give the first answer that came to them and to mark the answer spaces firmly and completely.

#### Scoring Procedures

The answer sheets were hand-scored by the researcher using the Key for Answer Sheet (16PF Test, Form A). After determining the raw scores and prior to converting these scores to STEN scores, the answers were checked for distortion using the Key for Validity Scales (16PF, Form A, 1967-68 Edition). This validity key was a check for faking good or faking bad.

The raw scores on each of the 16 primary personality traits were converted to STEN scores according to male and female norms for college students and based on the age of 20 years (IPAT, 1985). Age factor corrections were not computed.

#### Treatment of the Data

Each subject's personal information was recorded on a code sheet in columnar form so that it could easily be entered into the computer. This information was composed of the student's assigned number, gender, age, and the 16 primary factor STEN scores. Since the information would be

numerically transferred to the mainframe computer, the researcher read it onto audio tape, then listened to herself recite numbers while entering them into the data base. The data were computed using the WYLBUR subsystem of the IBM mainframe located at the Computer Center at Oklahoma State University. The statistical program used was SPSSx.

A simple frequencies program was run to determine that the data was entered correctly and that all factors were used. A group frequencies program was run on Group 1 (treatment group), and Group 2 (control group) as a record of central tendency and variability.

A 2 x 2 Analysis of Variance was run to determine if there was a significant difference in the personality traits between males and females in the treatment group and males and females in the control group on the 16 factors.

Discriminant analysis was used to determine which factors of the 16 personality factors from Cattell's 16PF Questionnaire significantly discriminated between the participants in the Student Wellness Pilot Program and those students who did not participate in the Student Wellness Pilot Program. The analysis was completed in a step-wise manner so that the most discriminating variables were listed first on the computer printout.

According to Borg and Gall (1983), discriminant analysis is similar to multiple regression in that both statistical techniques involve two or more predictor variables and a single criterion variable. They stated that discriminant analysis is limited to the special case in which the criterion is a person's group membership. The discriminant-analysis equation uses a person's scores on the predictor variables in an attempt to predict the group of which the person is a member. "Discriminant analysis, then, is useful whenever the criterion variable is in the form of categories reflecting discrete groups. If the criterion variable is

in the form of a continuous variable, multiple regression would be used instead of discriminant analysis (Borg and Gall, 1983, p. 603).

## CHAPTER IV

### RESULTS AND DISCUSSION

The purpose of this study was to identify personality profiles in a Student Wellness Pilot Program at Oklahoma State University. Cattell's Sixteen Personality Factor Questionnaire was used to determine if there was a difference on the 16 personality traits between the students in the treatment group (Group 1) who participated in the Student Wellness Pilot Program, and the students in the control group (Group 2) who did not participate in the Student Wellness Pilot Program. Additionally, these investigations compared the personality traits between male and female participants of both groups to determine if significant differences existed between the sexes. An investigation was also done to discover if a significant difference existed between the two groups (treatment group and control group) on their personality profiles.

Capsule descriptions of the 16 primary personality factors are as follows:

Factor A - cool, reserved, impersonal, detached, formal, aloof versus warm, outgoing, kindly, easygoing, participating, likes people;

Factor B - concrete-thinking, less intelligent versus abstract-thinking, more intelligent, bright;

Factor C - affected by feelings, emotionally less stable, easily annoyed versus emotionally stable, mature, faces reality, calm;

Factor E - submissive, humble, mild, easily led, accommodating versus dominant, assertive, aggressive, stubborn, competitive, bossy;

Factor F - sober, restrained, prudent, taciturn, serious versus enthusiastic, spontaneous, heedless, expressive, cheerful;

Factor G - expedient, disregards rules, self-indulgent versus conscientious, conforming, moralistic, staid, rule-bound;

Factor H - shy, threat-sensitive, timid, hesitant, intimidated versus bold, venturesome, uninhibited, can take stress;

Factor I - tough-minded, self-reliant, no-nonsense, rough, realistic versus tender-minded, sensitive, over-protected, intuitive, refined;

Factor L - trusting, accepting conditions, easy to get along with versus suspicious, hard to fool, distrustful, skeptical;

Factor M - practical, concerned with "down to earth" issues, steady versus imaginative, absent-minded, absorbed in thought, impractical;

Factor N - forthright, unpretentious, open, genuine, artless versus shrewd, polished, socially aware, diplomatic, calculating;

Factor O - self-assured, secure, feels free of guilt, untroubled, self-satisfied versus apprehensive, self-blaming, guilt-prone, insecure, worrying;

Factor Q1 - conservative, respecting traditional ideas versus experimenting, liberal, critical, open to change;

Factor Q2 - group-oriented, a "joiner" and sound follower, listens to others versus self-sufficient, resourceful, prefers own decisions;

Factor Q3 - undisciplined self-conflict, lax, careless of social rules versus following self-image, socially precise, compulsive;

Factor Q4 - relaxed, tranquil, composed, has low drive, unfrustrated versus tense, frustrated, overwrought, has high drive.

The raw scores obtained on Cattell's Sixteen Personality Factor Questionnaire were converted to STEN scores using separate scales for males and females. They were determined from IPAT's Tabular Supplement No. 1 and utilized Table 7: Norms for College Students, Female, Form A; and Table 10: Norms for College Students, Male, Form A. These were both based on an age of 20 years.

STEN scores are distributed over 10 equal-interval standard score points, from 1 through 10. The population mean for a STEN distribution is 5.5 and the standard deviation is 2.0 STEN scores. The exact limits of STENS 5 and 6 (4.5 - 6.5) extend a half standard deviation below and above the mean. This is the center of the population, while the outer limits for STENS 1 and 10 are 2-1/2 standard deviations below and above the mean. STEN scores of 4 through 7 are considered average, since they fall within one standard deviation of the population mean and represent approximately two thirds of all scores. STEN scores of 1, 2, 3 and 8, 9, 10 are considered to be more important for profile interpretation. These scores are extreme and occur far less frequently in a normal population. Personality factors on the 16PF are bipolar, with the low score toward one type of personality trait and the high score toward the opposite personality trait.

The analyses of data in this chapter represent responses from 30 male and 29 female participants in the Student Wellness Pilot Program (treatment group) and 49 male and 29 female students who did not participate in the Student Wellness Pilot Program (control group).

## Results

The statistical procedure utilized for analysis of data pertaining to group differences on the 16 factors, analysis of data pertaining to gender differences on the 16 factors, and the analysis pertaining to the interactional differences was a 2 x 2 analysis of variance.

### Group Differences

The first of Cattell's Sixteen Personality Factors which revealed significance ( $F=6.12$ ,  $df=1,133$ ,  $p<.05$ ) was Factor A (cool versus warm). The mean for both groups was well within the average range, since they fell within one standard deviation of the population mean. The mean for the treatment group (4.78) was less than the average of 5.5, and showed a tendency for those students to be more cool, reserved, impersonal, detached, formal, and aloof. The mean for the control group (5.68) was slightly above average and showed a tendency for those students to be more warm, outgoing, kindly, easy going, inclined to participate, and liked people.

The second factor which revealed significance ( $F=26.15$ ,  $df=1,133$ ,  $p<.05$ ) was Factor M (practical versus imaginative). The mean for the treatment group (5.58) fell slightly above the the average of 5.5 and showed a slight tendency for those students to be more imaginative, absent-minded, absorbed in thought, and impractical. The mean for the control group (4.05) was more than one standard deviation below the mean

and revealed that those students were more practical, concerned with "down to earth" issues, and steady.

The third factor which revealed significance ( $F=17.05$ ,  $df=1,133$ ,  $p<.05$ ) was Factor Q2 (group-oriented versus self-sufficient). The mean for the treatment group (6.81) fell more than one standard deviation above the mean. This showed that those students were more self-sufficient, resourceful, and preferred their own decisions. The mean for the control group (5.58) was only slightly above the mean, indicating that those students were more toward the opposite pole and were slightly more group-oriented, "joiners" and sound followers, and listened to others. These results are shown in Figure 5.

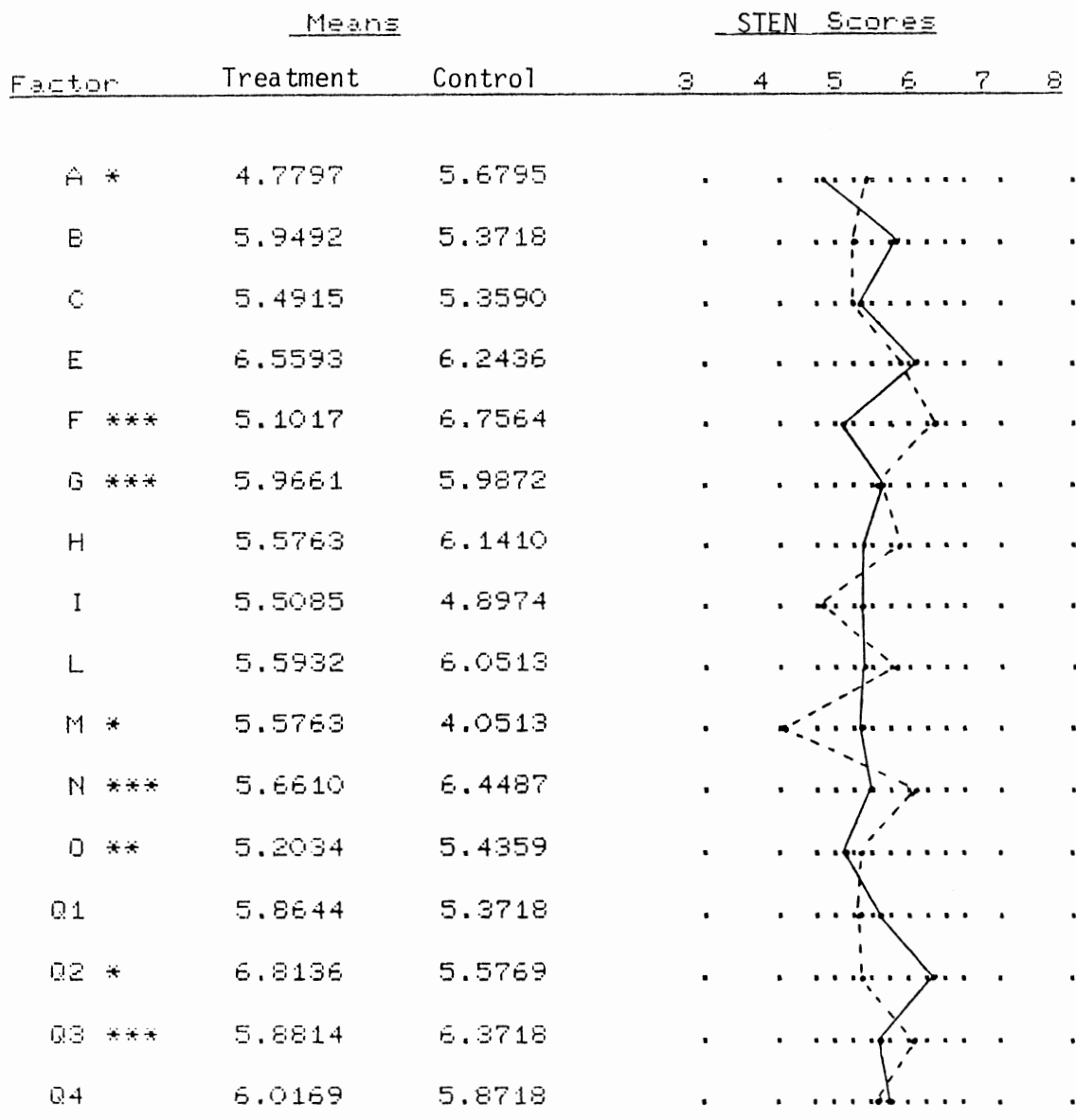
#### Gender Differences

The only factor which revealed significance ( $F=4.00$ ,  $df=1,133$ ,  $p<.05$ ) on differences according to gender was Factor 0 (self-assured versus apprehensive). There was very little difference found between the means of males and females. The mean for the male treatment group was 4.70, and the mean for the male control group was 5.29. Both were slightly below the mean. This indicated that the males were slightly more self-assured, secure, untroubled, self-satisfied, and felt freer of guilt. The mean for the female treatment group was 5.72, and the mean for the female control group was 5.69. Both were slightly above the mean. This indicated that the females were somewhat more apprehensive, self-blaming, guilt-prone, insecure, and inclined to worry more. These results are shown in Figure 5.

#### Interactional Differences

The first factor which revealed interactional differences with group





\_\_\_\_\_ Treatment Group (N=59)

- - - Control Group (N=78)

Note: \*Group Differences (.05 level of significance); \*\*Gender Differences; \*\*\* Interactional Differences

Figure 5. Personality Profile Comparisons on Cattell's Sixteen Personality Factors for the Treatment Group and the Control Group in the Student Wellness Pilot Program

membership and gender identification at a significant level ( $F=4.17$ ,  $df=1,133$ ,  $p<.05$ ) was Factor F (sober versus enthusiastic). The mean for the male treatment group was 4.83, and the mean for the female treatment group was 5.38. The mean for the male control group was 7.06; the female control group mean was 6.24. This indicated that members of the treatment group, both males and females, tended to be slightly more sober, restrained, prudent, taciturn, and serious. The control group, both males and females, tended to be more enthusiastic, impulsive, heedless, expressive, and cheerful. Figure 6 illustrates the fact that male and female treatment group members are essentially the same, and the male and female control group members are also essentially the same. The male and female treatment group members and the male and female control group members, as groups, are different. These results are shown in Figure 5 and Figure 6.

The second factor which revealed interactional differences with group membership and gender identification at a significant level ( $F=5.62$ ,  $df=1,133$ ,  $p<.05$ ) was Factor G (expedient versus conscientious). The means for the male treatment group was 6.33, and the female treatment group mean was 5.59. The mean for the male control group was 5.71, and for the female control group the mean was 6.45. All means fell well within the average range, with both groups slightly above the mean, showing that both groups tended to be conscientious, persistent, moralistic, staid, and rule-bound. On this factor an analysis of variance showed that there was a significant difference in variances between the four factors. However, the mean square differences were similar. Using the post hoc statistical measure (the Newman-Kuels), it was determined that there was no significant difference and no interactional effect. These results are shown in Figure 5 and Figure 7.

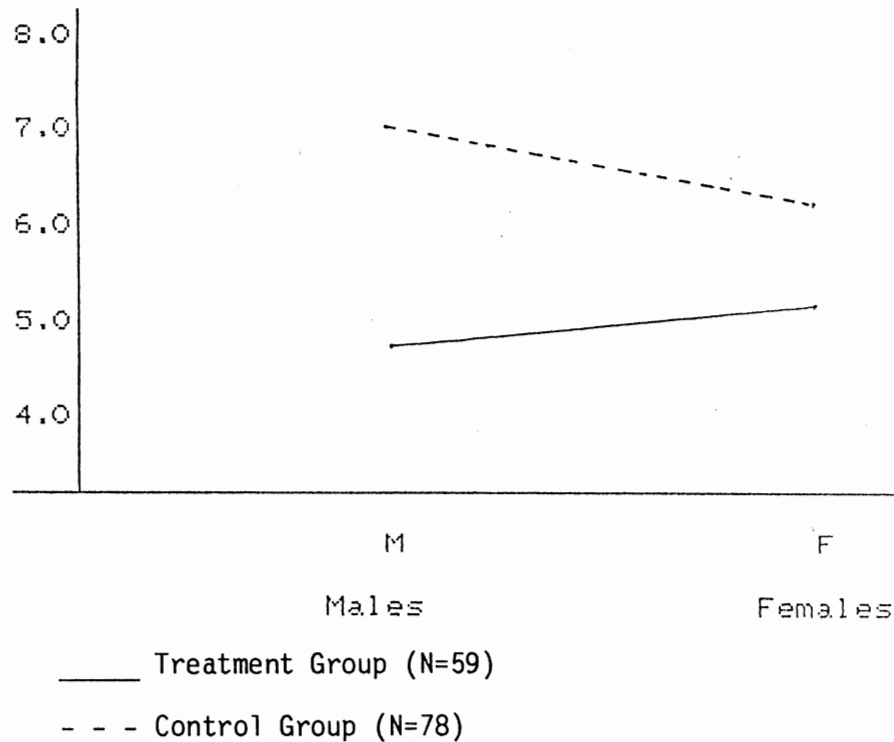


Figure 6. Interactional Effects With Group Membership and Gender Identification on Factor F, Sober Versus Enthusiastic

The third factor which revealed interactional differences with group membership and gender identification at a significant level ( $F=5.65$ ,  $df=1,133$ ,  $p<.05$ ) was Factor N (forthright versus shrewd). The mean for the male treatment group was 6.23, and the female treatment group mean was 5.07. The mean for the male control group was 6.22, and the female control group mean was 6.83. The means for the male treatment group, the female treatment group, and the male control group were well within the average range, with the mean for the female control group being slightly above average, showing them to be slightly more shrewd, polished, socially aware, diplomatic, and calculating. On this factor, a post hoc evaluation was also done using the Newman Kuels test for significance.

It was determined that there was a significant difference between female treatment group members and male control group members, and also between female treatment group members and female control group members. These results are shown in Figure 5 and Figure 8.

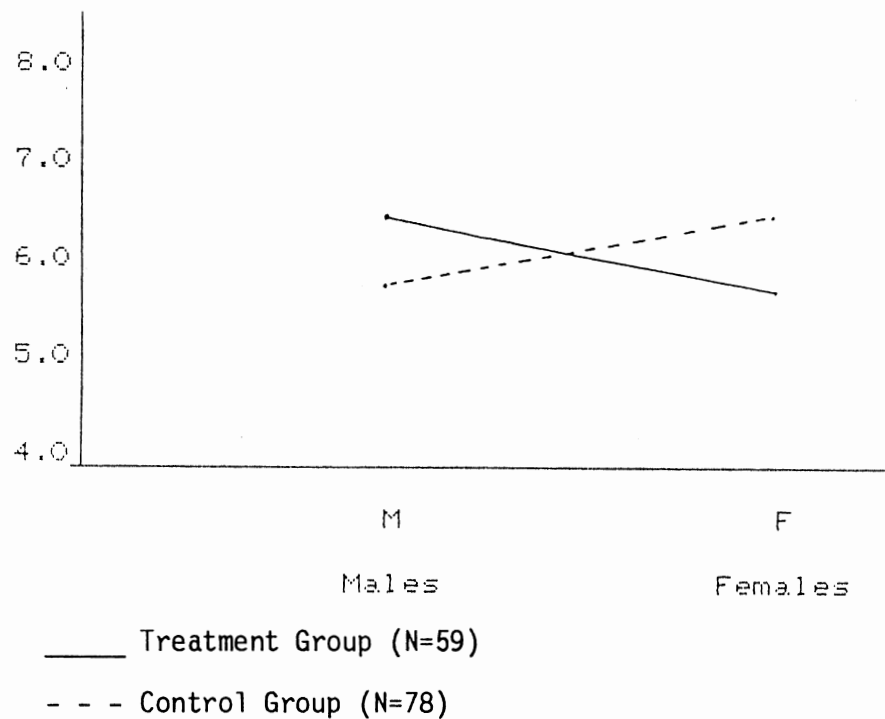


Figure 7. Interactional Effects With Group Membership and Gender Identification on Factor G, Expedient Versus Conscientious

The fourth factor which revealed interactional differences with group membership and gender identification at a significant level ( $F=5.28$ ,  $df=1,133$ ,  $p<.05$ ) was Factor Q3 (undisciplined self-conflict

versus following self-image). The mean for the male treatment group was 6.20, and for the female treatment group the mean was 5.55. The mean for the male control group was 6.04, and for the female control group the mean was 6.93. The means for the male treatment group, the female treatment group, and the male control group were well within the average range. The mean for the female control group was above the mean, showing that they were more controlled, self-respecting, socially precise, and compulsive. Using the results of the Newman-Kuels post hoc test for significance, it was determined that the only significant difference was between female treatment group members and female control group members. These results are shown in Figure 5 and Figure 9.

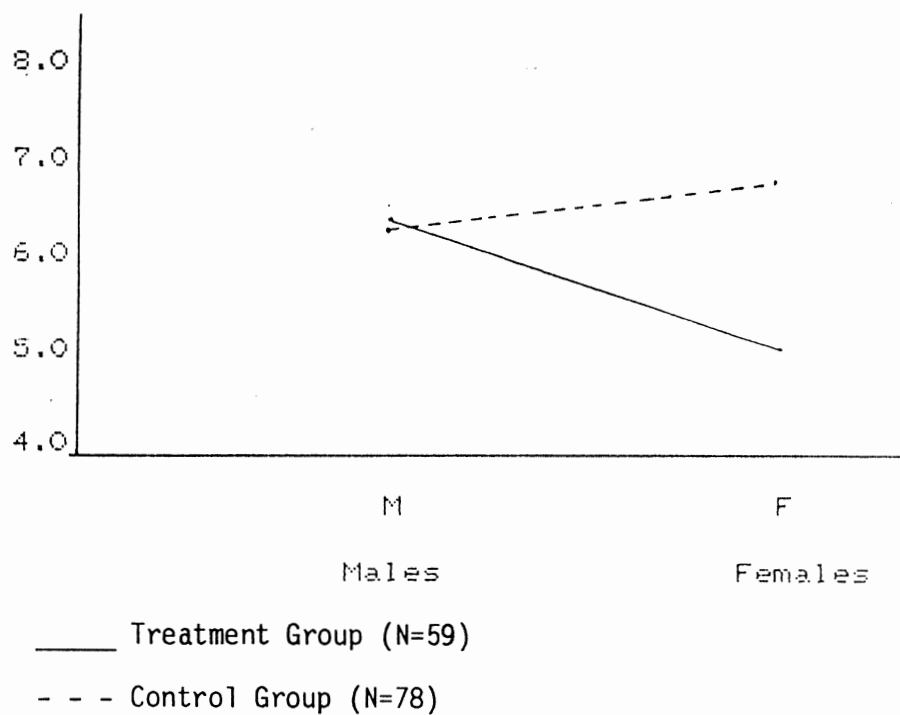


Figure 8. Interactional Effects With Group Membership and Gender Identification on Factor N, Forthright Versus Shrewd

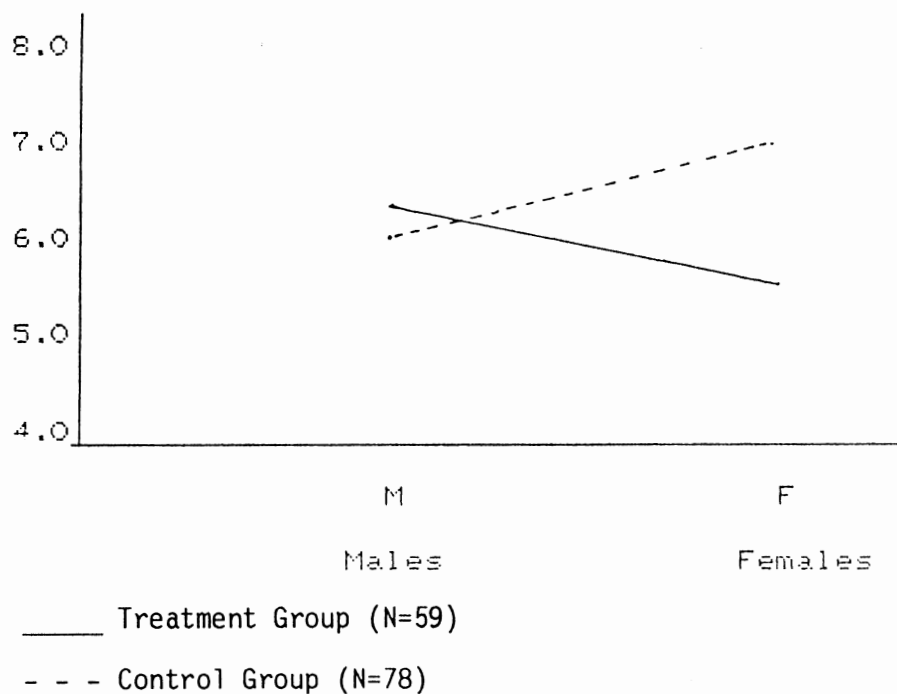


Figure 9. Interactional Effects With Group Membership and Gender Identification on Factor Q3, Undisciplined Self-Conflict Versus Following Self-Image

#### Predicted Group Membership

Discriminant analysis was used to determine how well the primary personality traits on Cattell's Sixteen Personality Factor Questionnaire discriminated between Oklahoma State University students who participated in the Student Wellness Pilot Program (treatment group) and Oklahoma State University students who did not participate in the Student Wellness Pilot Program (control group). The Wilks' Lambda method listed the factors in the order of significance. This procedure used a stepwise

variable selection with nine steps needed to determine the significant factors which discriminated between the groups.

When the 16 factors from Cattell's Sixteen Personality Factor Questionnaire were entered as independent variables, nine were able to significantly discriminate between the two groups ( $\Delta = .6384$ ,  $\chi^2=58.553$ ,  $p<.05$ ). The primary factors and standardized coefficients are: Factor A (cool versus warm, .2649), Factor B (concrete-thinking versus abstract-thinking, -.1798), Factor F (sober versus enthusiastic, .7156), Factor I (tough-minded versus tender minded, -.2831), Factor M (practical versus imaginative, -.3997), Factor N (forthright versus shrewd, .4415), Factor O (self-assured versus apprehensive, .3927), Factor Q1 (conservative versus experimenting, -.2072), and Factor Q4 (relaxed versus tense, -.2005). These factors and coefficients are shown in Table I.

The classification results showed that membership in a group, either the treatment group or the control group, could be correctly classified in 78.10% of the cases. These results are shown in Table II.

#### Discussion of Results

The purpose of this study was to identify personality profiles in a Student Wellness Pilot Program at Oklahoma State University. Cattell's Sixteen Personality Factor Questionnaire was used to determine if there was a difference on the 16 personality traits between the students in the treatment group who participated in the Student Wellness Pilot Program, and the students in the control group who did not participate in the Student Wellness Pilot Program. Additionally, these investigations compared the personality traits between male and female participants of both groups to determine if significant differences existed between the sexes. And, an investigation was done to determine whether or not a significant

TABLE I  
 STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS  
 OF CATTELL'S 16PF FACTORS FOR PARTICIPANTS  
 AND NONPARTICIPANTS IN THE STUDENT  
 WELLNESS PILOT PROGRAM

Factor	Discriminant Function Coefficient
A	.2649
B	-.1798
F	.7156
I	-.2831
M	-.3997
N	.4415
O	.3927
Q1	-.2072
Q4	-.2005

TABLE II  
 CLASSIFICATION RESULTS

Actual Group	No. of Cases	Predicted Group Membership*	
		1	2
Group 1	59	42 71.2%	17 28.8%
Group 2	78	13 16.7%	65 83.3%

\*Percentage of "grouped" cases correctly classified was 78.10%.



difference existed between the two groups (treatment and control) on their personality profiles.

After analyzing the data derived from Cattell's Sixteen Personality Factor Questionnaire, the researcher found differences on approximately half of the personality traits. Scores indicated an identification with one pole of the bipolar arrangement.

In examining the results of the discriminant analysis, the researcher found that all factors were not equally weighted. Some factors contributed more heavily to the group identification process than others. For example, Factor F (sober versus enthusiastic) was weighted at approximately .72, as opposed to the other factors which were weighted less than .45, with most in the .20 and .30 range. This multivariate approach was helpful in using factors in combination to make a meaningful comparison.

On the factors that were found to be significant, the treatment group scored nearer one pole of the bipolar arrangement of personality traits and exhibited a personality profile related to the following factors:

Factor A - cool, reserved, impersonal, detached, formal, aloof;

Factor F - sober, restrained, prudent, taciturn, serious;

Factor G - neither more expedient nor conscientious;

Factor M - imaginative, absent-minded, absorbed in thought,  
impractical;

Factor N - forthright, unpretentious, open, genuine, artless;

Factor O - self-assured, secure, feels free of guilt, untroubled,  
self-satisfied;

Factor Q2 - self-sufficient, resourceful, prefers own decisions;

Factor Q3 - undisciplined self-conflict, lax, careless of social rules.

The control group scored neared the opposite pole of the bipolar arrangement on the same factors and exhibited a personality profile showing:

Factor A - warm, outgoing, kindly, easygoing, participating, likes people;

Factor F - enthusiastic, impulsive, heedless, expressive, cheerful;

Factor G - neither more expedient nor conscientious;

Factor M - practical, concerned with "down to earth" issues, steady;

Factor N - shrewd, polished, socially aware, diplomatic, calculating;

Factor O - apprehensive, self-blaming, guilt-prone, insecure, worrying;

Factor Q2 - group-oriented, a "joiner" and sound follower, listens to others;

Factor Q3 - controlled, self-respecting, socially precise, compulsive.

It is the opinion of the researcher, after reviewing the analyses of data, that there are personality profiles that can be identified with both the treatment and control groups in the Student Wellness Pilot Program at Oklahoma State University.

## CHAPTER V

### FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Countless numbers of psychologists, counselors, physicians, and researchers have attempted to identify certain personality types with specific behaviors. Correlations have been found which link combinations of personality traits with certain behaviors of a destructive nature. This study examined how well the 16 primary personality traits, as measured by Cattell's Sixteen Personality Factor Questionnaire, could identify a personality profile for those students who participated in the Student Wellness Pilot Program and those students who did not participate in the Student Wellness Pilot Program. Further, an attempt was made to discover if there was a difference between the two groups and between the two genders on each of the 16 primary personality factors.

Fifty-nine students who participated in the Student Wellness Pilot Program and 78 students enrolled in six sections of Beginning and Intermediate Golf classes were given Form A of Cattell's Sixteen Personality Factor Questionnaire. The raw scores on each of the 16 primary personality traits were converted to STEN scores according to male and female norms for college students and based on an age of 20 years.

The statistical procedure used to analyze the data for group and gender differences on the 16 factors was a 2 x 2 Analysis of Variance. A Discriminant Factorial Analysis was used to determine which factors of the 16 personality factors from Cattell's 16PF Questionnaire

significantly discriminated between the treatment group and the control group on their group profiles.

It was found that the treatment group differed from the control group on three of the factors by group membership, on one factor by gender, and on four factors due to interactional effects of both group and gender. The results of discriminant analysis determined that 9 of the 16 factors were able to discriminate between membership in groups.

### Findings

The problem of this study was to identify the personality profiles in a Student Wellness Pilot Program. Based on the hypotheses stated and the results of this study, the following findings were ascertained:

Hypothesis No. 1: The hypothesis stating that there would be no significant difference between students who participated in the Student Wellness Pilot Program and students who did not participate in the Student Wellness Pilot Program on each of the 16PF scales was rejected.

The analysis of data found a significant difference at the .05 level in 8 of the 16 factors. These factors were: Factor A (cool versus warm), Factor F, (sober versus enthusiastic), Factor G (expedient versus conscientious), Factor M (practical versus imaginative), Factor N (forthright versus shrewd), Factor O (self-assured versus apprehensive), Factor Q2 (group-oriented versus self-sufficient), and Factor Q3 (undisciplined self-conflict versus controlled).

Hypothesis No. 2: The hypothesis that there was no significant difference in the personality types between male and female students who participated in the Student Wellness Pilot Program and students who did not participate in the Student Wellness Pilot Program was rejected.

Results indicated a significant difference at the .05 level on 1 of the 16 factors. This factor was Factor O (self-assured versus apprehensive).

Hypothesis No. 3: The hypothesis that there was no significant difference between the two groups (participants in the Student Wellness Pilot Program and nonparticipants) on their personality profiles was rejected.

The results of Discriminant Analysis showed a significant difference at the .05 level and that 9 of the 16 factors were able to significantly discriminate between the two groups. These factors were: Factor A (cool versus warm), Factor B (concrete-thinking versus abstract-thinking), Factor F (sober versus enthusiastic), Factor I (tough-minded versus tender-minded), Factor M (practical versus imaginative), Factor N (forthright versus shrewd), Factor O (self-assured versus apprehensive), Factor Q1 (conservative versus experimenting), and Factor Q4 (relaxed versus tense).

### Conclusions

The specific conclusions drawn from this study were:

1. Students who participated and students who did not participate in the Student Wellness Pilot Program were different on personality traits. Students in the treatment group tended to be more cool, sober, imaginative, forthright, self-assured, self-sufficient, and showed undisciplined self-conflict. Students in the control group tended to be more warm, enthusiastic, practical, shrewd, apprehensive, group-oriented, and controlled.

2. Male and female participants in the Student Wellness Pilot Program and those who did not participate were of different personality

types. The males of both groups tended to be somewhat more self-assured and the females tended to be more apprehensive.

3. Personality profiles could be used to place students into either the treatment group or the control group. Membership in a group could be correctly classified in 78.10% of the cases.

The general conclusion was that a personality profile was identified for the treatment group and a personality profile was identified for the control group in the Student Wellness Pilot Program at Oklahoma State University.

### Recommendations

In future studies, the control group used might be a different segment of the student population. Golf classes were chosen because the researcher felt that they were good samples of students from all grade levels and fields of study.

The raw data from Cattell's Questionnaire was changed to STEN scores according to norms for college students based on an average age of 20 years. Analysis of the data collected on the subjects found the mode to be age 20, but the mean was found to be age 23.2, with an extremely wide range in ages. Future studies might adjust STEN scores according to age adjustment formulas.

No grade classification restrictions were placed on participants in the Student Wellness Pilot Program. There was a mix of undergraduate and graduate students. In the future, research might be limited to either graduate students or undergraduate students.

Most of the members of the Student Wellness Pilot Program who completed the questionnaire did so at an assigned time and date. Data collection was done near the end of the fall semester and shortly before

final examination week. In future studies, the researcher would suggest that more thought be given to setting up and administering the questionnaire in a way that would make it more convenient for the participants.

Further research might be done using Cattell's Sixteen Personality Factor Questionnaire and students (either graduate or undergraduate) that are involved in similar pilot programs or wellness programs at two or more universities.

In addition to interpreting the basic 16 primary traits, several other scores are obtainable from various combinations of the primary scales. Future research might examine these second-order factors which explain personality in terms of fewer, more general, traits.

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53

APPENDIX A

LETTER TO STUDENT WELLNESS PILOT  
PROGRAM VOLUNTEERS

Dear Student,

As a volunteer in the Student Wellness Pilot Program, you are invited to participate in a research study. This study will look for a wellness-prone personality.

As a participant, you will be asked to fill out a standard personality questionnaire. This will take approximately 45 minutes and you will receive a copy of the results. The information you obtain from this questionnaire should help you in your quest for a wellness lifestyle.

If the following time is not satisfactory, please call 624-2259 to be rescheduled. Thank you for your help with this study.

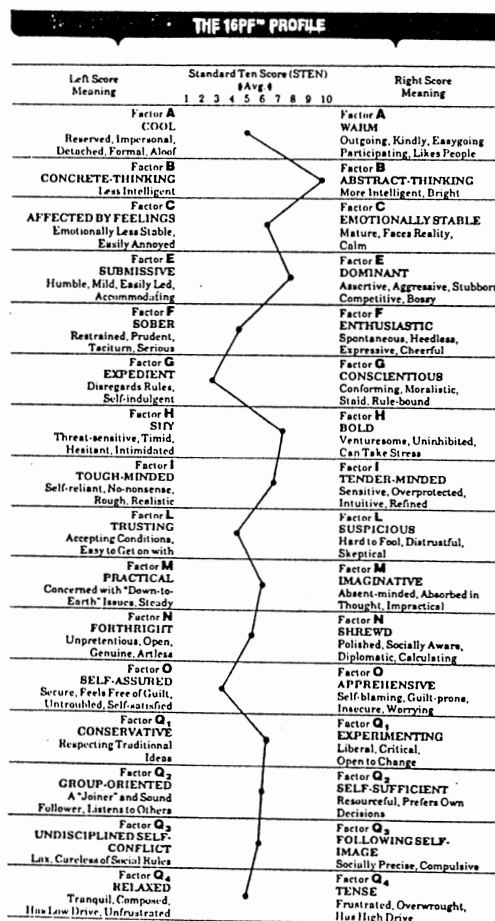
I look forward to seeing you on

\_\_\_\_\_, \_\_\_\_\_, at \_\_\_\_\_

Room \_\_\_\_\_, in the Colvin Physical Education Center.

Vel Perry, M.S.  
Doctoral Student

Sample profile.  
Your individualized  
profile may differ  
from this sample.



Dear Participant:

Please read, sign, and have witnessed, the Consent Form. If you would like a copy, I will include one with your profile.

Please do not mark on the test booklet.

Please put your name, gender, and age on the answer sheet, then answer every question. Completely fill in only one of the spaces provided beside each question. I am the only person who will see your answer sheet, so answer as truthfully as possible. Do not spend too much time thinking over each question, just give the first natural answer as it comes to you.

As soon as I have your score, I will let you know when and where you may pick up your profile sheet. Thank you for filling out this questionnaire and helping with my research.

Vel Perry

APPENDIX B

REMINDER NOTE

A SECOND CHANCE---for those of you who would still like to participate in my resaerch study and receive a copy of your personality profile. This time you may fill out the questionnaire at your convenience. I have a box located in Office 103, Colvin Center, where you may pick up, complete, and return the form. I will score it and place the results there in a couple of days. Please call 624-2259, identify yourself as a participant in the Student Wellness Pilot Program, leave your name, and I will place a copy there for you. Thanks again for your help.

Vel Perry



APPENDIX C  
INFORMED CONSENT FORM

## CONSENT FORM

I, \_\_\_\_\_, do hereby voluntarily agree to participate in this study entitled "Identification of a Personality Profile Associated With Wellness Prone University Students," sponsored by the School of Health, Physical Education, Leisure, at Oklahoma State University.

I understand that this study involves research and will be carried out under the supervision of Vel Perry, M.S. The purpose of this study is to satisfy the research component for, and will be included in, a Doctoral Dissertation done in partial fulfillment of the requirement for an Ed.D. degree.

I understand that this study will require me to fill out Cattell's Sixteen Personality Factor Questionnaire (16PF) and that this instrument is often used in the study of personality types and will cause me no adverse effects.

I understand that I will be selected at random from the pool of student volunteers for the Student Wellness Pilot Program. Further, I understand that this questionnaire will be given to me one time only and that it will take approximately one hour to complete.

The benefits to me are that I will have the knowledge gained from participating in a research study and that I will become aware of my particular personality type after it is charted on my 16PF Test Profile.

By signing this consent form, I acknowledge that my participation in this study is voluntary. I also acknowledge that I have not waived any of my legal rights or released this institution from liability for negligence.

I may revoke my consent and withdraw from this study at any time without penalty or loss of benefits. My treatment by the staff at Oklahoma State University, now and in the future, will not be affected in any way if I refuse to participate, or if I enter the program and withdraw later.

Records of this study will be kept confidential with respect to any written or verbal reports making it impossible to identify me individually.

If I have any questions about the research procedures, I will contact the principal investigator, Vel Perry, at 624-2259. If I have any questions about my rights as a research subject, I may take them to the Office of University Research Services, Oklahoma State University.

I have read this informed consent document. I understand its contents and I freely consent to participate in this study under the conditions described in this document. I understand that I will receive a copy of this signed consent form if requested.

\_\_\_\_\_

Date

\_\_\_\_\_

Signature of Subject

\_\_\_\_\_

Date

\_\_\_\_\_

Signature of Witness

\_\_\_\_\_

Date

\_\_\_\_\_

Signature of Investigator

APPENDIX D

PERSONALITY PROFILE

PLEASE NOTE:

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

These consist of pages:

60, Appendix D

62-65, Appendix E

U·M·I



### 16 PF™ TEST PROFILE

Sten Score  
 FB \_\_\_\_\_  
 FG \_\_\_\_\_

Name: \_\_\_\_\_  
 Second Orders: Extraversion \_\_\_\_\_ Anxiety \_\_\_\_\_ Tough Poise \_\_\_\_\_ Independence \_\_\_\_\_

FACTOR	Raw Score			Standard Score	MEANING OF SCORE ON LEFT	STANDARD TEN SCORE (STEN)										MEANING OF SCORE ON RIGHT	
	Form A/C/E	Form B/D	Total			1	2	3	4	5	6	7	8	9	10		
A					Cool, Reserved, Impersonal, Detached, Formal, Aloof	.	.	.	.	.	A	.	.	.	.	.	Warm, Outgoing, Kindly, Easy-going, Participating, Likes People
B					Concrete-thinking, Less Intelligent	.	.	.	.	.	B	.	.	.	.	.	Abstract-thinking, More Intelligent, Bright
C					Affected by Feelings, Emotionally Less Stable, Easily Annoyed	.	.	.	.	.	C	.	.	.	.	.	Emotionally Stable, Mature, Faces Reality, Calm
E					Submissive, Humble, Mild, Easily Led, Accommodating	.	.	.	.	.	E	.	.	.	.	.	Dominant, Assertive, Aggressive, Stubborn, Competitive, Bossy
F					Sober, Restrained, Prudent, Taciturn, Serious	.	.	.	.	.	F	.	.	.	.	.	Enthusiastic, Impulsive, Heedless, Expressive, Cheerful
G					Expedient, Disregards Rules, Self-indulgent	.	.	.	.	.	G	.	.	.	.	.	Conscientious, Persistent, Moralistic, Staid, Rule-bound
H					Shy, Threat-sensitive, Timid, Hesitant, Intimidated	.	.	.	.	.	H	.	.	.	.	.	Bold, Venturesome, Uninhibited, Can Take Stress
I					Tough-minded, Self-reliant, No-nonsense, Rough, Realistic	.	.	.	.	.	I	.	.	.	.	.	Tender-minded, Sensitive, Over-protected, Intuitive, Refined
L					Trusting, Accepting Conditions, Easy to Get on with	.	.	.	.	.	L	.	.	.	.	.	Suspicious, Hard to Fool, Distrustful, Skeptical
M					Practical, Concerned with "Down to Earth" Issues, Steady	.	.	.	.	.	M	.	.	.	.	.	Imaginative, Absent-minded, Absorbed in Thought, Impractical
N					Forthright, Unpretentious, Open, Genuine, Artless	.	.	.	.	.	N	.	.	.	.	.	Shrewd, Polished, Socially Aware, Diplomatic, Calculating
O					Self-assured, Secure, Feels Free of Guilt, Untroubled, Self-satisfied	.	.	.	.	.	O	.	.	.	.	.	Apprehensive, Self-blaming, Guilt-prone, Insecure, Worrying
Q <sub>1</sub>					Conservative, Respecting Traditional Ideas	.	.	.	.	.	Q <sub>1</sub>	.	.	.	.	.	Experimenting, Liberal, Critical, Open to Change
Q <sub>2</sub>					Group-oriented, A "Joiner" and Sound Follower, Listens to Others	.	.	.	.	.	Q <sub>2</sub>	.	.	.	.	.	Self-sufficient, Resourceful, Prefers Own Decisions
Q <sub>3</sub>					Undisciplined Self-conflict, Lax, Careless of Social Rules	.	.	.	.	.	Q <sub>3</sub>	.	.	.	.	.	Controlled, Self-respecting, Socially Precise, Compulsive
Q <sub>4</sub>					Relaxed, Tranquil, Composed, Has Low Drive, Unfrustrated	.	.	.	.	.	Q <sub>4</sub>	.	.	.	.	.	Tense, Frustrated, Overwrought, Has High Drive

A sten of 1 2 3 4 5 6 7 8 9 10 is obtained by about 2.3% 4.4% 9.2% 15.0% 19.1% 19.1% 15.0% 9.2% 4.4% 2.3% of adults

APPENDIX E  
DESCRIPTION OF THE 16 PRIMARY  
PERSONALITY FACTORS

## Capsule Descriptions of the 16 Primary Personality Factors

### FACTOR A

*Low Score Direction*

*High Score Direction*

**Cool, Reserved, Impersonal, Detached, Formal, Aloof** *vs.* **Warm, Outgoing, Kindly, Easygoing, Participating, Likes People**

People who score low (sten of 1 to 3) on Factor A tend to be stiff, cool, skeptical, and aloof. They like things rather than people, working alone, and avoiding compromises of viewpoints. They are likely to be precise and "rigid" in their way of doing things and in their personal standards. In many occupations these are desirable traits. They may tend, at times, to be critical, obstructive, or hard.

People who score high (sten of 8 to 10) on Factor A tend to be goodnatured, easygoing, emotionally expressive, ready to cooperate, attentive to people, softhearted, kindly, adaptable. They like occupations dealing with people and socially impressive situations, and they readily form active groups. They are generous in personal relations, less afraid of criticism, and better able to remember names of people.

### FACTOR B

**Concrete-thinking, Less Intelligent**

*vs.* **Abstract-thinking, More Intelligent, Bright**

The person scoring low on Factor B tends to be slow to learn and grasp, dull, and given to concrete and literal interpretation. This dullness may be simply a reflection of low intelligence, or it may represent poor functioning due to psychopathology.

The person who scores high on Factor B tends to be quick to grasp ideas, a fast learner, intelligent. There is some correlation with level of culture, and some with alertness. High scores contraindicate deterioration of mental functions in pathological conditions.

### FACTOR C

**Affected by Feelings, Emotionally Less Stable, Easily Annoyed**

*vs.* **Emotionally Stable, Mature, Faces Reality, Calm**

The person who scores low on Factor C tends to be low in frustration tolerance for unsatisfactory conditions, changeable and plastic, evading necessary reality demands, neurotically fatigued, fretful, easily annoyed and emotional, active in dissatisfaction, having neurotic symptoms (phobias, sleep disturbances, psychosomatic complaints, etc.). Low Factor C score is common to almost all forms of neurotic and some psychotic disorders.

The person who scores high on Factor C tends to be emotionally mature, stable, realistic about life, unruffled, possessing ego strength, better able to maintain solid group morale. This person may be making a resigned adjustment\* to unsolved emotional problems.

\*Shrewd clinical observers have pointed out that a good C level sometimes enables a person to achieve effective adjustment despite an underlying psychotic potential.

### FACTOR E

**Submissive, Humble, Mild, Easily Led, Accommodating**

*vs.* **Dominant, Assertive, Aggressive, Stubborn, Competitive, Bossy**

Individuals scoring low on Factor E tend to give way to others, to be docile, and to conform. They are often dependent, confessing, anxious for obsessional correctness. This passivity is part of many neurotic syndromes.

Individuals scoring high on Factor E are assertive, self-assured, and independent-minded. They tend to be austere, a law unto themselves, hostile or extrapunitive, authoritarian (managing others<sup>1</sup>), and disregarding of authority.

## FACTOR F

*Sober*, Restrained, Prudent,  
Taciturn, Serious

vs.

*Enthusiastic*, Spontaneous,  
Heedless, Expressive, Cheerful

Low scorers on Factor F tend to be restrained, reticent, and introspective. They are sometimes dour, pessimistic, unduly deliberate, and considered smug and primly correct by observers. They tend to be sober, dependable people.

High scorers on this trait tend to be cheerful, active, talkative, frank, expressive, effervescent, and carefree. They are frequently chosen as elected leaders. They may be impulsive and mercurial.

## FACTOR G

*Expedient*, Disregards Rules,  
Self-indulgent

vs.

*Conscientious*, Conforming,  
Moralistic, Staid, Rule-bound

People who score low on Factor G tend to be unsteady in purpose. They are often casual and lacking in effort for group undertakings and cultural demands. Their freedom from group influence may lead to antisocial acts, but at times makes them more effective, while their refusal to be bound by rules causes them to have less somatic upset from stress.

People who score high on Factor G tend to be exacting in character, dominated by sense of duty, persevering, responsible, planful, "fill the unforgiving minute." They are usually conscientious and moralistic, and they prefer hard-working people to witty companions. The inner "categorical imperative" of this essential superego (in the psychoanalytic sense) should be distinguished from the superficially similar "social ideal self" of  $Q_3+$ .

## FACTOR H

*Shy*, Threat-sensitive, Timid,  
Hesitant, Intimidated

vs.

*Bold*, Venturesome, Uninhibited,  
Can Take Stress

Individuals who score low on this trait tend to be shy, withdrawing, cautious, retiring, "wallflowers." They usually have inferiority feelings and tend to be slow and impeded in speech and in expressing themselves. They dislike occupations with personal contacts, prefer one or two close friends to large groups, and are not given to keeping in contact with all that is going on around them.

Individuals who score high on Factor H are sociable, bold, ready to try new things, spontaneous, and abundant in emotional response. Their "thick-skinnedness" enables them to face wear and tear in dealing with people and grueling emotional situations, without fatigue. However, they can be careless of detail, ignore danger signals, and consume much time talking. They tend to be "pushy" and actively interested in the opposite sex.

## FACTOR I

*Tough-minded*, Self-reliant,  
No-nonsense, Rough, Realistic

vs.

*Tender-minded*, Sensitive, Over-  
protected, Intuitive, Refined

People who score low on Factor I tend to be tough, realistic, "down to earth," independent, responsible, but skeptical of subjective, cultural elaborations. They are sometimes unmoved, hard, cynical, and smug. They tend to keep a group operating on a practical and realistic "no-nonsense" basis.

People who score high on Factor I tend to be emotionally sensitive, day-dreaming, artistically fastidious, and fanciful. They are sometimes demanding of attention and help, impatient, dependent, temperamental, and not very realistic. They dislike crude people and rough occupations. In a group, they often tend to slow up group performance and to upset group morale by undue fussiness.



## FACTOR L

*Trusting, Accepting Conditions,  
Easy to Get on with*

*vs. Suspicious, Hard to Fool, Distrustful,  
Skeptical*

The person who scores low on Factor L tends to be free of jealous tendencies, adaptable, cheerful, uncompetitive, concerned about others, a good team worker. They are open and tolerant and usually willing to take a chance with people.

People who score high on Factor L tend to be mistrusting and doubtful. They are often involved in their own egos and are self-opinionated and interested in internal, mental life. Usually they are deliberate in their actions, unconcerned about other people, and poor team members.

N.B. This factor is *not* necessarily paranoia. In fact, the data on paranoid schizophrenics are not clear as to typical Factor L value to be expected for them.

## FACTOR M

*Practical, Concerned with  
"Down to Earth" Issues, Steady*

*vs. Imaginative, Absent-minded,  
Absorbed in Thought, Impractical*

Low scorers on Factor M tend to be anxious to do the right things, attentive to practical matters, and subject to the dictation of what is obviously possible. They are concerned over detail, able to keep their heads in emergencies, but are sometimes unimaginative. In short, they are responsive to the outer, rather than the inner, world.

High scorers on Factor M tend to be unconventional, unconcerned over everyday matters, self-motivated, imaginatively creative, concerned with "essentials," often absorbed in thought, and oblivious of particular people and physical realities. Their inner-directed interests sometimes lead to unrealistic situations accompanied by expressive outbursts. Their individuality can cause them to be rejected in group activities.

## FACTOR N

*Forthright, Unpretentious, Open,  
Genuine, Artless*

*vs. Shrewd, Polished, Socially Aware,  
Diplomatic, Calculating*

Individuals who score low on Factor N have a lot of natural warmth and a genuine liking for people. They are uncomplicated, sentimental, and unvarnished in their approach to people.

Individuals who score high on Factor N tend to be polished, experienced, and shrewd. Their approach to people and problems is usually perceptive, hard-headed, and efficient—an unsentimental approach to situations, an approach akin to cynicism.

## FACTOR O

*Self-assured, Secure, Feels Free of Guilt,  
Untroubled, Self-satisfied*

*vs. Apprehensive, Self-blaming,  
Guilt-prone, Insecure, Worrying*

Persons with low scores on Factor O tend to be unruffled and to have unshakable nerve. They have a mature, unanxious confidence in themselves and their capacity to deal with things. They can, however, be secure to the point of being insensitive to the feedback of others.

Persons with high scores on Factor O have a strong sense of obligation and high expectations of themselves. They tend to worry and feel anxious and guilt-stricken over difficulties. Often they do not feel accepted in groups or free to participate. High Factor O score is very common in clinical groups of all types (see Handbook).

### FACTOR Q<sub>1</sub>

**Conservative**, Respecting Traditional Ideas

vs. **Experimenting**, Liberal, Critical, Open to Change

Low scorers on Factor Q<sub>1</sub> are confident in what they have been taught to believe, and accept the "tried and true," even when something else might be better. They are cautious and compromising in regard to new ideas. Thus, they tend to oppose and postpone change, are inclined to go along with tradition, are more conservative in religion and politics, and tend not to be interested in analytical "intellectual" thought.

High scorers on Factor Q<sub>1</sub> tend to be interested in intellectual matters and to have doubts on fundamental issues. They are skeptical and inquiring regarding ideas, either old or new. Usually they are more well informed, less inclined to moralize, more inclined to experiment in life generally, and more tolerant of inconvenience and change.

### FACTOR Q<sub>2</sub>

**Group-oriented**, A "Joiner" and Sound Follower, Listens to Others

vs. **Self-sufficient**, Resourceful, Prefers Own Decisions

Individuals who score low on Factor Q<sub>2</sub> prefer to work and make decisions with other people and like and depend on social approval and admiration. They tend to go along with the group and may be lacking in individual resolution. They are not necessarily gregarious by choice; rather they might need group support.

Individuals who score high on Factor Q<sub>2</sub> are temperamentally independent, accustomed to going their own way, making decisions and taking action on their own. They discount public opinion, but are not necessarily dominant in their relations with others (see Factor E); in fact, they could be hesitant to ask others for help. They do not dislike people, but simply do not need their agreement or support.

### FACTOR Q<sub>3</sub>

**Undisciplined Self-conflict**, Lax, Careless of Social Rules

vs. **Following Self-image**, Socially Precise, Compulsive

People who score low on Factor Q<sub>3</sub> will not be bothered with will control and have little regard for social demands. They are impetuous and not overly considerate, careful, or painstaking. They may feel maladjusted, and many maladjustments (especially the affective, but not the paranoid) show Q<sub>3</sub>.

People who score high on Factor Q<sub>3</sub> tend to have strong control of their emotions and general behavior, are inclined to be socially aware and careful, and evidence what is commonly termed "self-respect" and high regard for social reputation. They sometimes tend, however, to be perfectionistic and obstinate. Effective leaders, and some paranoids, are high on Q<sub>3</sub>.

### FACTOR Q<sub>4</sub>

**Relaxed**, Tranquil, Composed, Has Low Drive, Unfrustrated

vs. **Tense**, Frustrated, Overwrought, Has High Drive

Individuals who score low on Factor Q<sub>4</sub> tend to be sedate, relaxed, composed, and satisfied (not frustrated). In some situations, their oversatisfaction can lead to laziness and low performance, in the sense that low motivation produces little trial and error.

Individuals who score high on Factor Q<sub>4</sub> tend to be tense, restless, fretful, impatient, and hard driving. They are often fatigued, but unable to remain inactive. Their frustration represents an excess of stimulated, but undischarged, drive. Extremely high tension level may disrupt school and work performance.

## VITA

Vel Hodgson Perry

Candidate for the Degree of

Doctor of Education

Thesis: IDENTIFICATION OF PERSONALITY PROFILES IN A STUDENT WELLNESS  
PILOT PROGRAM

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Education: Graduated from Marietta High School, Marietta, Oklahoma, 1951; received Bachelor of Science in Education degree from East Central University in 1959; received Master of Science degree from Oklahoma State University in 1985; completed requirements for the Doctor of Education degree at Oklahoma State University in July, 1988.

Professional Experience: Junior High School Science Teacher, Borger, Texas, 1961; High School Substitute Teacher, Houston, Texas, 1974-75; Mid-High and High School Substitute Teacher, Bartlesville, Oklahoma, 1983; Recreation Supervisor, Phillips Petroleum Company, Bartlesville, Oklahoma, 1980-83; Director, Nautilus Fitness Center, Bartlesville Family YMCA, Bartlesville, Oklahoma, 1983-84; Graduate Teaching Assistant, School of Health, Physical Education and Recreation, Oklahoma State University, Aquatic Director, National Youth Sports Program, Oklahoma State University, 1987.

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