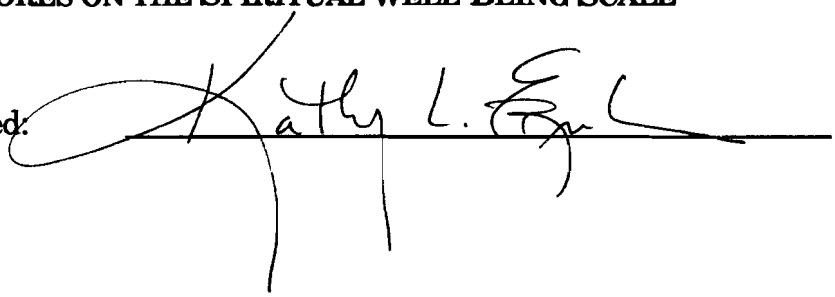
An Abstract of the Thesis of

JOAN RENE EASTON for the Degree of MASTER OF SCIENCE in Physical Education presented on July 15, 1992.

THE DIFFERENCE AMONG THREE METHODS OF ASSESSING EXERCISE ATTENDANCE AND SCORES ON THE SPIRITUAL WELL-BEING SCALE

Abstract Approved: 

The purpose of this study was to determine if an individual's level of spiritual well-being was a factor in that person's ability to adhere to an exercise program. The subjects of this study were Emporia State University students, staff, and faculty (N= 57) ages 17 to 32, who enrolled in an aerobics dance program offered through the Recreational Sports Center during the 1991 fall semester. Attendance of the participants was recorded throughout the program and participants were grouped by percent of attendance (high, medium, low, and dropout), attendance patterns (regular, sporadic, and never) and exact percentage of total attendance. Subjects were selected by a stratified random sampling and contacted by the researcher to fill out a survey and questionnaire. The survey was used to identify exerciser characteristics of the groups, and the questionnaire used was Ellison's (1983) Spiritual Well-Being Scale. Data were analyzed through the use of analysis of variance to determine if differences existed among attendance groupings and the scores on the Spiritual Well-Being scale. Also, a chi-square analysis was utilized to determine if certain characteristics of exercisers differed with attendance groupings. All data were analyzed at the $p < .05$ level of significance. No significant differences were found

between attendance groups and Spiritual Well-Being scores. Also, no significant differences were found between attendance groups and the characteristics of the exercisers.

THE DIFFERENCE AMONG THREE METHODS OF ASSESSING EXERCISE ATTENDANCE AND SCORES ON THE SPIRITUAL WELL-BEING SCALE

A THESIS

PRESENTED TO

THE DIVISION OF HEALTH,

PHYSICAL EDUCATION, RECREATION

EMPORIA STATE UNIVERSITY

In Partial Fulfillment

of the Requirements for the Degree

MASTER OF SCIENCE

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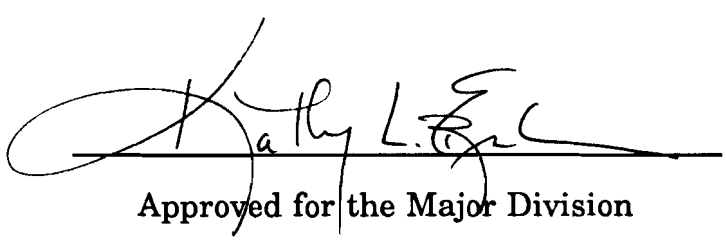
by

Joan Rene Easton

July 1992



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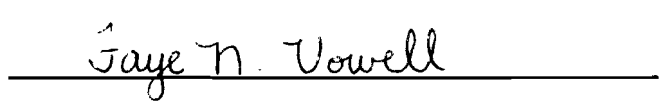

Approved for the Graduate Council

THE DIFFERENCE AMONG THREE METHODS OF ASSESSING EXERCISE ATTENDANCE AND SCORES ON THE SPIRITUAL WELL-BEING SCALE

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CHAPTER I

INTRODUCTION

In the past years the United States has been experiencing a fitness boom. This boom has its roots in the health clubs of the big cities and has gradually expanded across the nation. Information on and about this fitness craze spread rapidly. Individuals were bombarded with advertisements on the ways exercise could increase energy, improve self-image, and lead to a more productive lifestyle. These messages also attempted to convince the American people that exercise could reduce illness and stress, and, above all, add years to their lives. Many Americans started exercise programs with hopes of attaining these highly valued health benefits. Unfortunately, the majority of these motivated exercisers ended up dropping out or attending the program inconsistently after investing time, energy and money into a seemingly worthwhile endeavor (Dishman, 1988).

What happened to these motivated exercisers? What prevented them from continuing their health-enhancing exercise programs? Although beginning exercisers could initiate an exercise program, they did not or could not maintain their programs for a variety of reasons. It seems as though the American people are caught in the middle of a dilemma. On the one hand, people are told to exercise in order to increase the quality of their lives. Yet, on the other hand, the American lifestyle emphasizes and reinforces a sedentary lifestyle. However, as Dishman indicated (1982), for exercise to have a beneficial effect on a person's psychological and physical health, it must be maintained consistently over a significant period of time.

In order for exercise to become an enduring habit, an individual's overall style of life must be taken into consideration when designing an exercise program. This comprehensive approach to exercise prescription is based on the wellness concept. Wellness is an integrated approach to lifestyle that attempts to develop an optimally functioning individual (Dunn, 1961). Hettler (1980) viewed wellness in six dimensions. These dimensions include the physical, emotional, intellectual, occupational, social, and spiritual dimensions. According to Hettler, these six dimensions are integrated and interdependent; (i.e. if one dimension is affected, then the total health of an individual is affected).

Exercise can be classified under the physical dimension of wellness. However, in order for an individual to initiate and maintain exercise as a lifelong habit, the exercise program that is developed must take the other five dimensions into consideration. One of the dimensions that is consistently neglected in exercise programs is spiritual wellness. The spiritual dimension of wellness can be defined as the philosophical or religious pursuit of personal meaning or purpose in life (Archer, Probert, & Gage, 1987). Spiritual wellness can serve as a reflection of one's sense of meaning or purpose in life; (i.e., the greater sense of meaning and purpose one has, the higher the degree of spiritual wellness) (Ellison, 1983). In order for an individual to change exercise behaviors, there must be some sort of meaning or purpose for that change. The meaning basis that is attached to exercise is a result of the spiritual dimension of wellness.

Statement of the Problem

Research in the area of exercise has focused only on five dimensions of wellness; physical, social, occupational, emotional, and intellectual (Dishman, 1988). Currently, there is limited research that has focused on spirituality and exercise behavior. By integrating spiritual wellness with the five other dimensions of wellness, it may be possible to develop a more comprehensive understanding of exercise behavior and a more complete program of over-all wellness can be developed. One factor in the high dropout rate from exercise programs may be the exercise program's emphasis on only the physical dimension of wellness to the exclusion of the other five dimensions. In order for a person to make exercise a part of his/her lifestyle, all dimensions of wellness including spiritual wellness must be integrated into the exercise program.

The purpose of this study was to determine if a difference exists among the scores on Ellison's Spiritual Well-Being Scale (1983) and the attendance rates, the attendance patterns, and exact percentages of attendance in a college aerobic dance class. Additionally, characteristics of exercisers were compared to attendance patterns and attendance rates to identify possible differences among exercisers.

Hypotheses

The following hypotheses served as a basis for this investigation:

1. There is no significant difference among the attendance rate groups and the scores on the spiritual well-being scale.

2. There is no significant difference among the attendance rate groups and the scores on the existential and religious sub-scales.
3. There is no significant difference among the attendance pattern groups and the scores on the spiritual well-being scale.
4. There is no significant difference among the attendance pattern groups and the scores on the existential and religious sub-scales.
5. There is no significant relationship between the scores on the spiritual well-being scale and exact percentage of attendance.
6. There is no significant difference among demographic characteristics of exercisers in relation to rates of attendance.
7. There is no significant difference among demographic characteristics of exercisers in relation to patterns of attendance.
8. There is no significant relationship among the attendance rate groups and the attendance pattern groups and the ranked reasons for exercising.
9. There is no significant relationship among scores on the spiritual well- being scale and the ranked reasons for exercising.

Definitions

The following terms are defined in order to clarify terms used throughout this study:

Exercise Adherence- Exercise activity that is habitual across the life span or sustained in a program.

Attendance - A record of one's participation in an exercise program.

Attendance Pattern- The number of days a person attended each week were divided into three categories (non-attender, sporadic, and regular).

Non-attender- An individual who signed up and paid to participate in the aerobics class and never attended.

Sporadic attender- An individual who signed up and paid to participate in the aerobics class and did not attend on a weekly basis (i.e. missed three or more weeks of classes).

Regular attender- An individual who signed up and paid to participate in the aerobics class and attended at least once a week throughout the semester.

Attendance Rates- The percentage of days a person attended the aerobics class divided into four categories (high, medium, low and dropout).

High attender- An individual who attended 60% or more of the total classes offered.

Medium attender- An individual who attended 41-59% of the total classes offered.

Low attender- An individual who attended 11-40% of the total classes offered.

Dropout- An individual who attended 10% or less of the total classes offered.

Exact Percentage- The number of days attended compared to total days class was offered.

Wellness- An integrated lifestyle approach that attempts to develop an optimally functioning individual.

Spiritual Wellness- The philosophical or religious pursuit of personal meaning or purpose in life (Ellison, 1983).

Significance of Study

Exercise has been identified as a necessary factor in reducing the risk of many lifestyle diseases. However, most people do not exercise frequently enough or at high enough intensities to obtain the health benefits of exercise. Research in the area of exercise adherence has not provided an effective approach to changing and maintaining exercise behaviors. This may be due to the lack of a comprehensive approach to exercise adherence. To date, research in the area of exercise adherence has focused on the intellectual, emotional, social, physical, and occupational dimensions of wellness. However, no research has been completed relating the spiritual dimension of wellness to exercise behavior. By examining the relationship of the spiritual dimension of wellness to exercise adherence, it may be possible to develop a more comprehensive understanding of exercise adherence.

Delimitations

The subjects of this study were Emporia State University students, staff, and faculty (N= 57) ages 17 to 32, who enrolled in an aerobics dance

program offered through the Recreational Sports Center during the 1991 fall semester.

Limitations

The findings of this study were limited by the following:

1. Volunteers were used for the study.
2. Only one of the two aerobics instructors was certified as an aerobics instructor.

Assumptions

This study was based on the assumption that subjects were honest and candid in their response to the Spiritual Well-Being Scale and demographic survey.

Summary

The purpose of this study was to determine if a difference exists among scores on the Spiritual Well-Being Scale and attendance groupings. This chapter included a brief review of the need for exercise to be implemented in an individual's lifestyle and the significance this study could provide in the application of the concept of spiritual wellness to exercise adherence. By first identifying if a difference exists between exercise behavior and spiritual well-being, programs can be modified and devised to increase the likelihood of individuals attending exercise programs more regularly.

Chapter II includes a review of literature. This review focuses on exercise adherence and spiritual wellness. Chapter III, Methodology, explains the procedures of the study, the selection of subjects, the types of exercise programs, the instrumentation, collection and treatment of data. Chapter IV, Results, discusses the results of the statistical analyses in order to determine if a significant difference exists among attendance rates or patterns and the scores on the spiritual well-being scale. Chapter V, Discussion and Recommendations offers an interpretation of the results and makes recommendations for future studies in the area of exercise adherence. The appendices include copies of the Spiritual Well-Being Scale, demographic survey, informed consent form and permission from the Human Subjects Committee to implement study.

CHAPTER II

REVIEW OF LITERATURE

Wellness

The concept of wellness is not a new idea. Wellness originated in the ancient civilizations of Greece and China. The ancient Greeks 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 were often perceived as being polar opposites, they were complimentary and a part of the whole (Allison, 1989).

While wellness had its beginnings in ancient western and eastern civilizations, the modern usage of the term wellness developed from humanistic philosophy and psychology. The dualistic ideas of western philosophers, (e.g. Plato and Descartes, established the mind as a separate entity from the body). However, pragmatists such as Dewey and James and existentialists such as Sartre argued that the dualistic view was an impractical approach to understanding man since the mind and body are embodied or bound together. "The idea that all knowledge is based on the experience of a person suggests an integration of mind and body. This testifies to the value of the body as the source of knowledge" (Thomas, 1983, p. 33). Both the mind and the body are integral parts of a person's being or existence.

This concept of viewing a person as an integrated whole was developed further by humanistic psychologists. The humanistic movement validated human significance and being. As a result of this validation, individuals were considered active agents who had the freedom to make

decisions about who and what they were. These decisions could help or hinder the individual in reaching his/her optimal potential which can be considered an individual's state of being healthy, productive and self-understood. Maslow's (1968) concept of self-actualization viewed human nature positively and considered individuals as capable of achieving their potential. Roger's (1961) person-centered approach to counseling focused on the individual's ability to make responsible decisions that directed his/her life. Humanistic psychology focused on human potential and emphasized the integration of mind/body. Maslow's (1968) model of self-actualization and Roger's (1961) person-centered therapy helped to redirect human thinking toward an embodied rather than a dualistic perspective of the mind/ body issue.

The main focus of the humanistic movement was to look at a person as an integrated being instead of separating and analyzing the specific components of the person. For example, to study an individual's behavior only neglects the cognitive processes of that person. This approach assumes that appetite is triggered and controlled by external stimuli. Also, to study the physiology of thought processes only neglects the effects of the environment surrounding the individual. To study the neural transmissions of the brain without considering the external surroundings limits the understanding of thought processes. All the components of an individual needs to be considered for personal growth and self-development.

With its emphasis on wholeness and unity, humanistic psychology provided the theoretical underpinnings of the wellness movement. One of the first individuals to use the term wellness was Dunn (1961). Dunn looked at the individual as an interrelated and interdependent whole (a humanistic viewpoint) and believed that individuals need to search for

personal satisfaction and meaning or purpose to achieve a state of well-being or wellness within one's environment. Travis applied Dunn's theoretical concept and developed a wellness based medical center (Ardell, 1984). This center was based on Travis' wellness continuum. One end of the continuum represents illness and premature death and the other end of the continuum represents optimal wellness. The middle of the continuum represents the absence of illness but no noticeable wellness. Traditional medicine treats the symptoms of illness and works to return a person to the middle of the continuum. To go beyond this point, people need to practice wellness behaviors. Travis believed that all people are responsible for their own health and well-being and each person needs to take control of his/her life to make the appropriate choices for a wellness lifestyle (Ryan & Travis, 1981).

Ardell (1977) developed a wellness model that included five dimensions. These dimensions were self-responsibility, nutritional awareness, stress awareness and management, physical fitness, and environmental sensitivity. Self-responsibility refers to the individual's ability in taking charge of his/her own lifestyle and making choices that could lead to health, happiness, and an actualization of potential. Nutritional awareness is the educated selection of foods and diet patterns to help the body function more efficiently. The stress management dimension involves the awareness of potential stressors and the ways to control stress levels. Physical fitness refers to the incorporation of movement activities that assist an individual in meeting the demands of daily living. Lastly, environmental sensitivity is an individual's ability to understand his/her environment and how the individual affects and is affected by the environment. This model was the first attempt to introduce wellness as a

structure for self-understanding by integrating wellness with components of behavior.

Since the introduction of the wellness concept, many models have been developed. All of these models have as their foundation the belief that a human being is a holistic entity. In order for a person to achieve a state of wellness, s/he must integrate the body, mind, and spirit. The most recent and complete model of wellness was developed by Hettler (1980). His model included six dimensions. These dimensions are intellectual, emotional, physical fitness, social, occupational, and spiritual. The physical dimension of Hettler's model included nutrition, exercise, sleep, and safety. Emotional wellness included awareness, expression of feelings, 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 (Archer, Probert, & Gage, 1987).

It must be emphasized that, although the dimensions of wellness are divided into categories, these categories should not be considered independent and unrelated. Each dimension affects and is affected by the other dimensions. Wellness is the process of balancing, developing and integrating various dimensions of an individual. A human is a holistic entity; if one dimension is affected, then total health is affected (Greenberg, 1985). For example, if an individual wants to improve his/her stress level (the emotional dimension), s/he must become aware of various stressors which may be affecting this stress level. Stressors can occur in all dimensions. Physical stressors may include such things as the lack of sleep, poor nutritional habits, and environmental conditions. Social

stressors may be peer pressure, family expectations, and cultural influences. Occupational stressors may be workload, interpersonal conflicts, and poor workplace conditions. Intellectual stressors may be boredom, lack of mental challenge, and limited learning experiences. Lastly, spiritual stressors can be lack of personal meaning or value conflicts. Awareness, itself, is not enough to decrease high stress levels. A comprehensive plan that takes into consideration all aspects of the individual is necessary in order for a stress management plan to be successful.

Exercise Adherence Research Relating to Wellness

Exercise, when engaged in a systematic manner, can improve the health of an individual. People exercise in order to obtain a variety of demonstrated health benefits. These health benefits include the prevention of coronary heart disease, an increase in high density lipoprotein cholesterol (HDL), a decrease in body fat, and an improvement in mental health and well- being (Dishman, 1988). However, health benefits will only be obtained if exercise is maintained over the course of a person's life.

It has been estimated that forty percent of the population do not exercise during leisure time and another forty percent do not exercise frequently enough, or at a high enough intensity, to obtain significant health benefits (Stephens, Jacobs, & White, 1985). Additionally, fifty percent of the people who start exercise programs quit within the first six months (Carmody, Senner, Malinow, & Matarazzo, 1980; Dishman, 1981; Morgan, 1977; Oldridge, 1977). It appears that while people are aware of the health benefits, many individuals cannot initiate or maintain exercise in their daily routine. It is imperative that exercise specialists and instructors

develop strategies that increase the individual's ability to adhere to exercise (Dishman, 1982; Martin & Dubbert, 1982). Exercise adherence is a term that refers to exercise activity as being habitual across the life span. Powell defined habitual exercise as being "the regular and planned performance of physical activity with the final or intermediate objective of improving or maintaining levels of physical fitness" (As cited in Dishman, 1988, p. 17).

Research in the area of exercise adherence has been extensive and broad based. The studies can be organized around Hettler's six dimensions of wellness. While many of the dimensions (physical, social, emotional, occupational, intellectual) have been explored, there is a dearth of research in the spiritual dimension.

Research in the physical dimension focused on the relationships of percent body fat, smoking, and perceived intensity of exercise to exercise adherence. Studies have shown that a higher percent body fat correlates strongly with low exercise levels and low adherence rates to exercise programs (Dishman, 1981; Epstein, Koeske & Wing, 1984; Mirotznik, Speedling, Stein, & Bronz, 1985; Young & Ismail, 1977). Studies on smoking and exercise have found inconsistent relationships between smoking habits and exercise behavior (Blair, Jacobs, & Powell, 1985; Massie & Shephard, 1971). However, it has been shown that people who are involved in high-frequency and high-intensity exercise programs tend to be nonsmokers (Blair, Jacobs, & Powell, 1985). A study by Hughes, Crow, Jacobs, Mittlemark, & Leon (1984) on smokers and fatigue indicated that smokers tend to complain more about exertional fatigue. This experience of fatigue may negatively affect participation in exercise programs. Studies on perceived intensity of exertion have determined that a person's perception of how hard s/he is exercising may be negatively related to that

person's ability to maintain an exercise program (Dishman, Sallis, & Orenstein, 1985).

Research on the social dimension of wellness focused on the effects of location of the exercise setting, the type of exercise group, and the social support systems of the exerciser. It appears that a person's perception of the convenience or accessibility of the exercise setting can affect exercise adherence (Andrew et al., 1981; Wankel, 1985; Wanzel, 1978). Many dropouts of exercise programs have reported they discontinued exercise programs because the program was scheduled at inconvenient times and the location was inaccessible. Research in this area examined the type of exercise settings individuals prefer. Specifically, these studies tried to distinguish whether individual or group settings affected exercise adherence. Results have indicated that individual exercise programs have shown poorer adherence than group settings (Carron, Widmeyer, and Brawley, 1988; Clifford, Tan, & Gorsuch, 1991; Massie & Shephard, 1971). Heinzelman and Bagley (1970) surveyed adult exercisers and discovered that approximately 90% of these exercisers preferred group programs over exercising alone. Research on social support systems has shown that exercisers with supportive spouses tend to continue exercise programs longer than exercisers without supportive spouses (Andrew et al., 1981; Heinzelmann & Bagley, 1970; Kau & Fischer, 1974; Martin, 1984; Wankel, 1985).

Research in the emotional dimension focused on the relationship of self-motivation, locus of control, and attitudes to exercise adherence. Self-motivation is a general disposition to maintain a habitual behavior without extrinsic reinforcement (Dishman, 1981). By measuring self-motivation, it is possible to predict the individuals who will adhere to an exercise

program and those individual's who will dropout. Adherers score higher on the self-motivation scale than dropouts (Dishman, 1982; Dishman & Ickes, 1981). Other factors that may predict an individual's involvement in an exercise program is a person's locus of control and attitude toward exercise. Dishman and Gettman (1980) found that people with positive attitudes towards exercise and people who believed that they were in control of their health (internal locus of control) seemed to adhere to exercise more than people with negative attitudes and low feelings of control over health (external locus of control).

Research relating exercise to the occupational dimension of wellness focused on socioeconomic status of workers and the relationship of this status to exercise adherence. A study by Oldridge (1979) found a significance difference between blue-collar and white-collar workers' adherence to a post myocardial infarction exercise program. Patients classified as blue-collar workers were more likely to dropout of exercise programs than white-collar workers. Unfortunately, this study only focused on individuals in a clinical setting and cannot be generalized to a non-clinical setting of healthy adults (Gale, Eckhoff, Mogel, & Rodnick, 1984). Stephens, Jacobs, & White (1985) identified blue-collar workers' leisure activities and found they were not very active during their "free" time.

Research relating exercise to the intellectual dimension looked at the general educational background and knowledge of exercise of the individual and exercise adherence. In Oldridge's (1979) study on post-heart attack patients, adherers had more of a formal education than non-adherers. Also, adherers tended to know more about exercise and health than nonadherers. Sallis et al. (1986) found that men and women who

exercised on a regular basis had a more extensive health and exercise knowledge base than nonadherers.

Historically, spiritual wellness has been overlooked as an area to do empirical studies on exercise adherence. For instance, in a study that surveyed college student's perceptions of the six dimensions of wellness, the spiritual dimension was found to be the least understood by college students (Archer, Probert, & Gage 1987). Chapman (1986) further addressed the need for spiritual wellness in order to advance from a neutral state of health to a more positive state of health or well-being. Bensley (1991b) stated that "exploration of the spiritual aspect presently does not exist at the same level or intensity as with the other dimensions of health" (p. 287). Banks (1980) assessed health educators' perceived need for spiritual wellness in the curriculum and concluded that spiritual wellness should be the unifying factor or central core for the other dimensions. Other studies support this view by considering the spiritual dimension as the avenue for the integration of the other dimensions (Banks, Poehler, & Russell, 1984; Eberst, 1984).

Spiritual Wellness

Ellison (1983) believed that spirituality "enables and motivates us to search for meaning and purpose in life, to seek the supernatural or some meaning which transcends us, to wonder about our origins and our identities, and to require morality and equity. It is the spirit which synthesizes the total personality and provides some sense of energizing direction and order" (pp. 331-332). Spirituality does not exist on its own, it is united with the mind and body. Beck (1986) characterized spirituality as a holistic and integrative outlook of mind, body and spirit. This approach

requires that a person become aware of the interconnectedness of the many parts of the whole. This approach also requires that a person develop a degree of self-understanding. Spirituality is usually related to religious beliefs and affiliations, but it can also be referred to as basic human experience and personal growth. A person who can be considered spiritual is one who has developed a certain level of understanding and sensitivity to self and has developed the ability to care for self and others (Beck, 1986). Spirituality provides direction, meaning and purpose in one's life. Hence, the choices one makes and behaviors one exhibits are related to one's spiritual understanding.

Spiritual wellness is the reflection of one's spirituality (Ellison, 1983). In other words, spiritual wellness is the measurement of one's spiritual health, "much like the color of one's complexion and pulse rate are expressions of good health" (Ellison, 1983, p. 332). Many people have attempted to develop a precise definition of spiritual wellness (Banks, 1980; Bellingham, R., Cohen, B., Jones, T., & Spaniol, L., 1989; Chapman, 1986; Ellison, 1983; Greenberg, 1985). To date, a commonly accepted definition of spiritual wellness is not available (Bensley, 1991a). Bensley (1991a) reviewed the currently used definitions and found that the common elements of spiritual wellness were: "(a) a sense of fulfillment in life, (b) values and beliefs of community and self, (c) wholeness in life, (d) a factor in well-being, (e) a controlling higher power or "godlike" force, and (f) the human/spiritual interaction"(p. 287).

For purposes of this study, Ellison's (1983) definition of spiritual wellness is utilized. Ellison defined spiritual wellness or well-being as the philosophical or religious pursuit toward personal meaning or purpose in life.

In order to better understand the spiritual dimension of wellness, it was necessary to develop an instrument that is capable of measuring spiritual well-being (Ellison, 1983). Moberg (1979) was the first to investigate a way of measuring spiritual well-being. He identified spiritual well-being as having two components. These two components consisted of a relationship with God and a sense of life purpose and satisfaction. The questionnaire measured attitudes, beliefs, social activities, feelings about one's life, religious activities and interests, and demographic and personal characteristics. Moberg's work on spiritual well-being resulted in the ability to study spiritual well-being in a more scientific context.

Since Moberg's effort in the 70's, Ellison developed and validated a Spiritual Well-Being scale (Ellison & Smith, 1991). This questionnaire consisted of two subscales. Ten of the items measured religious well-being (RWB) or a person's belief in God. The ten other items measured existential well-being (EWB) or a person's sense of satisfaction and purpose in life.

Studies validating spiritual well-being as a measure of health and well-being have shown some positive results. When considering physical well-being, a positive correlation exists between self-ratings of health and Spiritual Well-Being scores. Also, people who scored higher on the Spiritual Well-Being scale and the existential well-being sub-scale were closer to their ideal body weight (Hawkins & Larson, 1984).

Research relating spiritual well-being to adjustment to physical illness such as cancer found that spiritual well-being was negatively correlated to social isolation and despair. Patients with higher spiritual well-being tended to participate more in religious activities and viewed religious beliefs as being helpful in coping with cancer (Bonner, 1988).

Kaczorowski (1989) found that people with cancer who had higher spiritual well-being scores have less anxiety in coping with the cancer diagnosis. In the area of psychological health, research on depression in college students showed a negative correlation between depression and spiritual well-being (Fehring, Brennan, & Keller, 1987). A study on elderly patients by Koenig, Moberg, and Kvale (1988) found that religious beliefs and practices were related to physical and mental health. This study used items from other measures, as well as some existential well-being items from the Spiritual Well-Being Scale. While these studies have related spiritual wellness to certain aspects of health more research needs to be completed in various areas of health to consider the spiritual well-being as an integrative measure of health. One area of health to consider integrating with spiritual wellness is exercise adherence. In order for an individual to change exercise behaviors, there must be some sort of meaning or purpose for that change.

Summary

Wellness is an integrated approach to lifestyle that attempts to develop an optimally functioning individual (Dunn, 1961). Hettler (1980) viewed wellness in six dimensions. These dimensions include the physical, emotional, intellectual, occupational, social, and spiritual dimensions. According to Hettler, these six dimensions are integrated and interdependent; if one dimension is affected, then the total health of an individual is affected.

Exercise can be classified under the physical dimension of wellness. However, in order for an individual to initiate and maintain exercise as a lifelong habit, the exercise program that is developed must take the other

five wellness dimensions into consideration. One of the dimensions that is consistently neglected in exercise programs is spiritual wellness. The spiritual dimension of wellness can be defined as the philosophical or religious pursuit of personal meaning or purpose in life (Archer, Probert, & Gage, 1987). Spiritual wellness serves as a reflection of one's sense of meaning or purpose in life; the greater sense of meaning and purpose one has, the higher the degree of spiritual wellness (Ellison, 1983). In order for an individual to change exercise behaviors, there must be some sort of meaning or purpose for that change. This meaning basis that is attached to exercise is addressed by the spiritual dimension of wellness.

Chapter III

METHODOLOGY

Aerobic dance was a program offered through the Recreational Sports Center at Emporia State University. Advertisements for the program were displayed around campus during the first week of classes. People interested in the program purchased a membership card for $10.00. This card admitted them into a scheduled aerobic dance program for the semester. The sessions were offered four days a week (Monday through Thursday) from 6-7pm. Classes followed the school calender. The instructors were two female college students who had previous experience in aerobics, dance, and/or related fields. In general, each instructor taught two times per week for an hour each session. The classes were conducted within a gym located in the Health, Physical Education, and Recreation (HPER) building on the college campus.

Subjects

Subjects were individuals who enrolled in the aerobics dance class during the 1991 fall semester (N = 57). The subjects were men (n = 1) and women (n = 56), ages 17 - 32 years, who were students, faculty, and staff at Emporia State University.

Procedures

Permission to conduct this study was obtained from the Institutional Review Board for Treatment of Human Subjects of Emporia State University (see Appendix A). During the first week of fall classes, advertisements (see

Appendix B) were displayed for people interested in participating in the aerobics dance class. Membership cards (see Appendix C) were purchased through the Recreational Sports office located in the Health, Physical Education, and Recreation (HPER) building on campus. When the card was purchased, the study was explained to the participants and consent forms were signed (see Appendix D). An attendance sheet was developed in order to keep a daily record of the people who attended each class. At the beginning of each class, the participants were required to present their aerobics membership card. Attendance was taken every day the aerobics program was offered. The class was held for twelve weeks.

After the twelve weeks, the attendance sheets were tallied and attendance records were grouped using three different methods. One method grouped individuals according to the percentage of time they attended the class during the 12 weeks (rate of attendance). The rate groups were: high attender (a person who attended 60% or more of the total classes), medium attender (a person who attended 41-59% of the total classes), low attender (a person who attended 11-40% of the total classes), and dropout (a person who attended 10% or less of the total classes). The second method grouped individuals according to the number of classes they attended on a weekly basis (pattern of attendance). The pattern groups were: regular attenders (a person who attended once a week throughout the semester), sporadic attenders (a person who did not attend on a weekly basis and/or missed three or more weeks), and non-attenders (a person who signed up for class but never attended). The third method calculated the exact percentage of attendance of individuals during the 12 weeks of class.

Once the population was grouped according to attendance rates (4 groups) subjects were selected using a stratified random sample method to participate in this study. Selections were made from each of the four attendance rate groups until representative samples were obtained. The size of the groups varied (10 subjects from the high and medium attender groups and 20 subjects from the low attender and dropout groups). Varied groupings were used in order to provide samples which would represent each of the attendance rate groups. From this sample, the pattern group sampling was determined with 20 regular attenders, 31 sporadic attenders, and 9 nonattenders. Subjects were contacted by phone and asked to meet with the researcher to fill out a survey and questionnaire. Out of the 60 subjects selected, 57 responded. All subjects were assigned a code number to be used when filling out the survey and questionnaire. This number was assigned to assure the confidentiality of the subjects' responses. The questionnaire was the Spiritual Well-Being Scale (see Appendix E) and the survey was developed by the researcher (see Appendix F).

Instrumentation

Ellison's (1983) Spiritual Well-Being (SWB) Scale was developed to provide a simple paper and pencil measure of spiritual wellness. The scale consists of 20 items. Each item is rated on a six point Likert-like scale ranging from strongly agree to strongly disagree. This questionnaire consisted of two subscales. Ten of the items measured religious well-being (RWB) or a person's belief in God. The ten other items measured existential well-being (EWB) or a person's sense of satisfaction and purpose in life.

The reliability of the SWB and its subscales was determined by (Ellison, 1983) using a test-retest procedure on 100 college students. The test-retest reliability was .93 for the total SWB, .96 for RWB, and .86 for EWB. Internal consistency was measured by coefficient alphas and were .89 for SWB, .87 for RWB, and .78 for EWB.

The validity of the SWB scale was determined by correlating this scale with other theoretically related scales. Results showed predictive correlations with other scales. The scale was negatively correlated with the UCLA Loneliness Scale and positively correlated with the Purpose in Life Test, Intrinsic Religious Orientation, and self-esteem (Ellison, 1983). Permission to use the Spiritual Well-Being Scale was granted by Dr. Craig Ellison (see Appendix G).

Analysis of Data

The differences in the SWB scores as well as the existential and religion subscale scores among attendance rate and attendance pattern groups were analyzed by Oneway ANOVA and repeated measures analysis of variance (Hypotheses 1 through 4). The relationship of the SWB scale to the exact percentage of attendance was analyzed by a Pearson product moment correlation (Hypothesis 5). Exerciser characteristics and attendance rates and patterns were compared using a Chi square analysis (Hypotheses 6 and 7). The relationship of the reasons people attended exercise classes to attendance rates, attendance patterns, and SWB scores was analyzed by Spearman correlation (Hypotheses 8 and 9). All data were analyzed at the $p < .05$ level of significance.

Summary

In summary, the purpose of this study was to determine if a difference exists in Spiritual Well-Being scores based on attendance rates or attendance patterns. In addition, this study examined the relationship between characteristics of exercisers and their attendance to an exercise program. The subjects were Emporia State University students, faculty and staff who participated in the aerobics dance program offered through the Recreation Department on campus. Data were analyzed using ANOVAs, Pearson product moment correlations, Chi Square analyses, and Spearman correlations.

CHAPTER IV

RESULTS

The differences between Spiritual Well-Being (SWB) scores and attendance rates and attendance patterns were analyzed through the use of analysis of variance. The relationship between exact percentage of attendance and SWB scores was analyzed using the Pearson product-moment correlation method. Additionally, chi-square analysis was utilized to identify characteristics of particular groups of exercisers. All data were analyzed at the $p < .05$ level of significance.

Tables 1 through 5 give a general description of the subjects' characteristics. Tables 1 and 2 summarize the sample characteristics of; gender, age, year in school, grade point average, residence, and previous experience with aerobic dance. Table 3 reports the characteristics of subjects who reported exercising outside of class (N=41). These subjects then reported their frequency, intensity by target heart rate (THR), and duration of exercise sessions outside of class. Table 4 identifies the subjects' participation in other activities. Table 5 reports the subjects participation in leisure activities. In general, the subjects which participated in this study were mostly female freshman between the ages of 17-20 years.

Table 1

Demographic Characteristics

	Frequency	Percent
GENDER		
Female	56	98.2
Male	1	1.8
AGE IN YEARS		
17-20	40	70.2
21-24	14	24.6
25-28	1	1.8
29-32	2	3.5
YEAR IN SCHOOL		
Freshman	23	40.4
Sophomore	9	15.8
Junior	9	15.8
Senior	12	21.1
2nd yr. Senior	1	1.8
Graduate	1	1.8
Faculty	2	3.5

Table 2

Demographic Characteristics Continued

	Frequency	Percent
GRADE POINT AVERAGE		
4.0-3.6	12	21.1
3.5-3.1	24	42.1
3.0-2.6	15	26.3
2.5-1.1	5	8.8
Missing Values	1	1.8
RESIDENCE		
On-campus	28	49.1
Off-Campus	28	49.1
Missing Values	1	1.8
PREVIOUS EXPERIENCE WITH AEROBIC DANCE		
Have signed-up and not attended regularly	7	12.3
Have signed-up and attended regularly	20	35.1
With a videotape	10	17.5
None	10	17.5
Missing Values	10	17.5

Table 3

Characteristics of Exercising Outside of Class

	Frequency	Percent
EXERCISE OUTSIDE OF CLASS?		
Yes	41	71.9
No	16	28.1
HOW OFTEN?		
1X per week	14	24.6
2X per week	18	31.6
3X per week	7	12.3
4X per week	2	3.5
5 or more times per week	1	1.8
HOW INTENSE?		
Above Target Heart Rate	4	7.0
Within Target Heart Rate	23	40.4
Below Target Heart Rate	6	10.5
Do not know	9	15.8
LENGTH OF EXERCISE SESSION?		
1-15 minutes	5	8.8
16-30 minutes	21	36.8
31-45 minutes	12	21.1
1 hour or more	4	7.0

Table 4
Participation in Other Activities

ACTIVITIES

	WORK	SORORITY	FRATERNITY	CLUBS	ATHLETICS	PERFORMING ARTS	OTHER
YES	34	12	0	29	2	2	8
NO	23	45	57	28	55	55	49
TOTAL	57	57	57	57	57	57	57

Table 5
Participation in Leisure Activities

ACTIVITIES PER WEEK

	Go Out	Nap	Exercise
0-1 Times	32	32	29
2-3 Times	20	17	25
4-5 Times	4	6	3
Missing Values	1	2	0

Hypothesis 1 states there is no significant difference among the attendance rate groups based on their scores on the Spiritual Well-Being Scale. This hypothesis was not rejected at the .05 level of significance. While the data in Table 6 presents the Spiritual Well-Being scores for each attendance rate group as being somewhat different, these scores are not significantly different (Table 7).

Hypothesis 2 states there is no significant difference among the attendance rate groups based on their Existential and Religious Well-Being subscale scores. This hypothesis was not rejected at the .05 level of significance. While the data in Table 6 presents the Existential and Religious subscale scores for each attendance rate group as being somewhat different, these scores are not significantly different. A 2 (Tests: Existential and Religion) by 4 (Groups: High, Medium, Low, or Dropout) mixed factor analysis of variance was performed on the data. Table 8 presents the results of the ANOVA. Neither the main effect nor the interaction was statistically significant.

Table 6
Means and Standard Deviations
By Attendance Rate Groups

Attendance Rate	n	Religious Well-Being Mean	Religious Well-Being SD	Existential Well-Being Mean	Existential Well-Being SD	Spiritual * Well-Being Mean	Spiritual * Well-Being SD
High	10	43.9	102	46.8	5.9	90.7	15.0
Medium	8	52.6	5.3	51.5	6.6	104.1	9.1
Low	19	50.4	8.6	48.6	6.0	99.1	12.5
Dropout	20	50.6	9.3	50.7	9.0	101.1	16.8
TOTAL	57	49.6	9.0	49.4	7.3	99.0	14.5

* The Spiritual Score is determined by adding the Religious and Existential Scores

Table 7
Analysis of Variance for *Attendance Rate* and Spiritual Well-Being Scores

Source of Variation	DF	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	987.26	329.09	1.62	.19
Within Groups	53	10749.72	202.83		
Total	56	11736.98			

Table 8

Analysis of Variance for Attendance Rate, Existential and Religious Well-Being Scores

Tests of hypotheses for between subjects effects

Source of Variation	df	SS	Mean Squares	F Value	Prob.
Between Subjects	3	493.63	164.54	1.62	.19
Error	53	5374.86	101.41		

Within Subjects

Tests	1	0.05	0.05	0.00	.97
Tests by Groups	3	77.06	25.69	0.87	.46
Error	53	1566.07	29.55		

Hypothesis 3 states there is no difference among the attendance pattern groups and their scores on the Spiritual Well-Being Scale. This hypothesis was not rejected at the .05 level of significance. While the data in Table 9 presents the Spiritual Well-Being scores for each attendance pattern group as being different, these scores are not significantly different (Table 10).

Hypothesis 4 states there is no significant difference among the attendance pattern groups based on their Existential and Religious Well-Being subscale scores. This hypothesis was not rejected at the .05 level of significance. While the data in Table 9 presents the Existential and Religious subscale scores for each attendance pattern group as being somewhat different, these scores are not significantly different. A 2 (Tests: Existential and Religion) by 3 (Groups: Regular, Sporadic, or Never) mixed factor analysis of variance was performed on the data. Table 11 presents the results of the ANOVA. Neither the main effect nor the interaction was statistically significant.

Table 9
Means and Standard Deviations
By Attendance Pattern Groups

Attendance Pattern	n	Religious Well-Being Mean	Religious Well-Being SD	Existential Well-Being Mean	Existential Well-Being SD	Spiritual * Well-Being Mean	Spiritual * Well-Being SD
Regular	17	48.0	9.5	48.4	6.6	96.4	14.1
Sporadic	31	49.8	9.1	48.8	8.3	98.5	15.8
Never	9	52.0	8.1	53.4	2.2	105.4	8.6
TOTAL	57	49.6	9.0	49.4	7.3	99.0	14.5

* The Spiritual Score is determined by adding the Religious and Existential Scores

Table 10

Analysis of Variance for *Attendance Pattern* and Spiritual Well-Being Scores

Source of Variation	DF	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	2	493.09	246.55	1.18	.31
Within Groups	54	11243.89	208.22		
Total	56	11736.98			

Table 11

Analysis of Variance for Attendance Pattern, Existential and Religious Well-Being Scores

Tests of hypotheses for between subjects effects

Source of Variation	df	SS	Mean Squares	F Value	Prob.
Between Subjects	2	246.56	123.27	1.18	.31
Error	54	5621.94	104.11		

Within Subjects

Tests	1	1.95	1.95	0.07	.80
Tests by Groups	2	24.47	12.23	0.41	.67
Error	54	1618.65	29.98		

Hypothesis 5 states there is no significant relationship between scores on the spiritual well-being scale and exact percentage of attendance. The analysis indicates that no significant relationship existed between SWB scores and exact percentage of attendance with a Pearson product-moment correlation coefficient of negative .17. This hypothesis was not rejected at the .05 level of significance.

Hypotheses 6 and 7 state there is no significant difference among the attendance rate and attendance pattern groups based on their demographic characteristics. This comparison was completed by analyzing answers on the questionnaire according to different groupings. A chi-square analysis of both of the research questions reveals that no significant differences exist in rates and patterns of attendance in relation to the characteristics of the exercisers. These hypotheses were not rejected at the .05 level of significance.

Hypothesis 8 states there is no significant relationship between the reasons people attend exercise classes and their attendance rates and patterns. This hypothesis was not rejected at the .05 level of significance when considering attendance rates (Table 12). However, the analysis in Table 13 reveals a significant relationship between attendance patterns and an individual's ranking of flexibility. Regular exercisers ranked improving flexibility as a more primary reason for joining the exercise program than non-attenders.

Hypothesis 9 states there is no significant relationship between the reasons people attend exercise classes and their scores on the Spiritual Well- Being Scale. A Spearman rank correlation showed a significant relationship between SWB scores and joining the program for relaxation (Table 14). Subjects who scored higher on the SWB scale ranked relaxation

as a more primary reason for joining the exercise program than subjects with lower SWB scores.

Summary

The analyses for this study were divided into three broad categories; spiritual well-being, demographics and attendance, and reasons for exercise. Hypotheses 1 through 5 focused on the Spiritual Well-Being Scale compared to three different classifications of exercise adherence; rates, patterns, and exact percentage of attendance. In all three of these classifications no significant difference or relationship was found among attendance groupings and Spiritual Well-Being Scores. Also, the religious and existential subscales showed no significant differences among the exercise classifications. Hypotheses 6 and 7 focused on demographic characteristics in comparison to attendance rates and attendance patterns. Both of these hypotheses reveal that no significant differences exist among attendance groupings and exerciser characteristics. Hypothesis 8 focused on reasons for exercising and attendance rates and attendance patterns. Results indicate that a relationship exists between regular exercisers and the ranking of flexibility as a primary reason for exercising. Hypothesis 9 focused on reasons for exercising and Spiritual Well-Being Scores. Results indicate that a relationship exists between those who scored higher on the Spiritual Well-Being Scale and the ranking of relaxation as a primary reason for exercising. Chapter 5 will further discuss and provide recommendations for future study from the results of this study.

Table 12

Spearman Correlations Between Rankings of Reasons for Signing Up for an Exercise Program and Attendance Rate

Reasons	R	Significance
lose weight	-.06	.34
tone muscles	.08	.28
relaxation	.04	.39
be with friends	-.14	.15
for fun	-.12	.18
improve flexibility	-.11	.20
another's advice	-.17	.11
cardiovascular benefits	.09	.23
be in an organized program	.15	.14
other	.21	.18

* $p < .05$

Table 13

Spearman Correlations Between Rankings of Reasons for Signing Up for an Exercise Program and Attendance Pattern

Reasons	R	Significance
lose weight	-.08	.28
tone muscles	.02	.45
relaxation	.02	.46
be with friends	.0003	.49
for fun	-.13	.18
improve flexibility	-.26	.03 *
another's advice	-.13	.17
cardiovascular benefits	.18	.09
be in an organized program	.13	.17
other	.29	.11

* $p < .05$

Table 14

Spearman Correlations Between Rankings of Reasons for Signing Up for an Exercise Program and Spiritual Well-Being Scores

Reasons	R	Significance
lose weight	.10	.23
tone muscles	.02	.45
relaxation	-.24	.04 *
be with friends	.20	.07
for fun	-.09	.26
improve flexibility	.10	.23
another's advice	.02	.45
cardiovascular benefits	-.13	.16
be in an organized program	-.05	.37
other	-.17	.24

* $p < .05$

CHAPTER V

DISCUSSION AND RECOMMENDATIONS

The purpose of this study was to determine if an individual's level of spiritual well-being is a factor in that person's ability to adhere to an exercise program. Based on the results of the study, it appears that spiritual well-being is not a significant factor in exercise adherence. In addition, a subproblem attempted to identify various characteristics that were common among exerciser's attendance rates and patterns. It appears that individuals who rated the importance of flexibility as a primary reason for exercise attended the exercise program on a more regular basis than those who did not rate the improvement of flexibility as a primary reason for exercise. Also, it appears that individuals who rated the importance of relaxation as a primary reason for exercise scored higher on the Spiritual Well-Being Scale. The following chapter will discuss these conclusions and offer recommendations for future study.

Discussion

Although these results may indicate that one's spiritual well-being is not related to exercise adherence, several factors may have influenced the results of this study. These factors include the aerobic dance program, characteristics of the subjects, and concerns with the Spiritual Well-Being scale.

The atmosphere of the exercise program may have influenced attendance. The class was conducted in a large gymnasium with music from a portable stereo which created a distortion in the sound of the music and the

instructor's voice. Also, high dropout rates at the beginning of the program may be attributed to the instructors starting the program at a level of intensity which may have discouraged participants from continuing the program. Participants also reported that the time of the program was too close to the scheduled dining hall hours.

Subject demographic characteristics may have contributed to the similarities between groups. From the demographic characteristics collected, 98.2% of the subjects were female, 94.7 % of the subjects were between 17-24 years old, and 40.4 % of the subjects were freshmen. Furthermore, even though the subjects were randomly selected, these characteristic similarities may have influenced the results. The sample size of 57 subjects out of a population of 231 who signed up for the class was selected. A larger sample may have produced different results in this study. Included in the survey were questions asking the subjects whether they exercised outside of class. An analysis of this showed that the subjects did not have any significant differences between attendance groupings and whether or not they exercised outside of class.

The Spiritual Well-Being Scale used for this study may not have been an effective instrument for use with this population. One concern in using Ellison's (1983) Spiritual Well-Being Scale is its reliance on God-oriented questions. This orientation assumes that the subjects in this study have developed a meaningful concept of God. Because of this focus on a meaningful concept of God, the scale may not have been truly representative of the subjects' spiritual well-being. Unfortunately, the scale used is the only scale measuring spiritual well-being which is a valid and reliable measure of spirituality. Although college populations have been used to test for validity and reliability of this scale, no large-scale norms have been developed for

college students and the Spiritual Well-Being scale. This kind of information is essential for better understanding of the results for this study. The range of scores on the Spiritual Well-Being scale for this sample was between 56 and 120 which further indicates that this sample is similar in spiritual well-being. Also, it should be noted that subjects who were categorized as never attending the exercise program seemed to have higher Spiritual Well-Being scores than the sporadic and regular attenders.

Individuals who rated the importance of flexibility as a primary reason for exercise attended the exercise program on a more regular basis than those who did not rate the improvement of flexibility as a primary reason for exercise. One possible explanation for this result may be that the subjects filled out the surveys after the aerobic dance program. Regular exercisers may have realized the importance of flexibility due to their own feelings of a change in flexibility or due to a program bias towards flexibility.

Also, individuals who rated the importance of relaxation as a primary reason for exercise scored higher on the Spiritual Well-Being Scale. This result may be due to the subjects filling out the survey and questionnaire according to what they perceive to be the desired response rather than their actual feelings. Another explanation for this is the possibility of people with higher spiritual well-being desiring a program to produce relaxation.

In summary, the purpose of this study was to determine if an individual's level of spiritual well-being was a factor in one's ability to adhere to an exercise program. No such indicators relating spiritual well-being to exercise adherence were discovered. Explanations for the results of this study include program characteristics such as instructor, location and workout intensity, subjects' characteristics such as age, gender, and school classification, and Ellison's scale characteristics for the Spiritual Well-Being

Scale. These factors may explain the differences between exercisers' attendance records and the similarities in Spiritual Well-Being scores. Further research is necessary in order to determine whether this scale is applicable in the field of exercise adherence.

Recommendations for Future Research

Recommendations for future research include:

1. the testing of college students in general to develop norms for the Spiritual Well-Being scale.
2. the testing of various exercise programs to determine if spiritual well-being is related to exercise adherence.
3. the testing of various age groups in exercise settings to determine if spiritual well-being is a factor in exercise adherence.
4. the development of another questionnaire which measures spiritual wellness without an emphasis on God-oriented questions.
5. determining college students' attitudes towards spiritual wellness.
6. determining the reasons or the meaning-orientation for exercising within various population groups in the exercise setting.
7. modifying this study by handing out the questionnaires at the beginning of the exercise program.
8. modifying the questionnaires to ask more open-ended questions in order to find out the subject's perceptions of the program and the Spiritual Well-Being scale.

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EMPORIA STATE UNIVERSITY
1200 COMMERCIAL EMPORIA, KANSAS 66801-5087 316/343-1200
RESEARCH AND GRANTS CENTER EXT. 5351

August 26, 1991

Joan Easton
1107 Cottonwood, #3
Emporia, KS 66801

Dear Ms. Easton:

The Institutional Review Board for Treatment of Human Subjects has evaluated your application for approval of human subject research entitled, "Relapse Prevention: An Application Towards an Exercise Program." The review board approved your application which will allow you to begin your research with subjects as outlined in your application materials.

Best of luck in your proposed research project. If the review board can help you in any other way, don't hesitate to contact us.

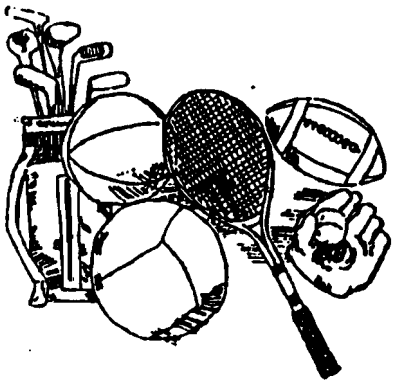
Sincerely,

James L. Wolfe
Acting Dean of Liberal Arts
and Sciences

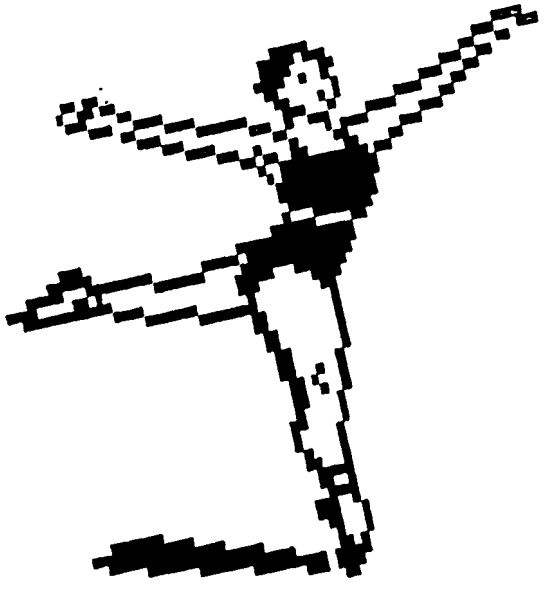
JW:pf

cc: Kathy Ermler

Recreational Sports
mporia State University



AEROBICS

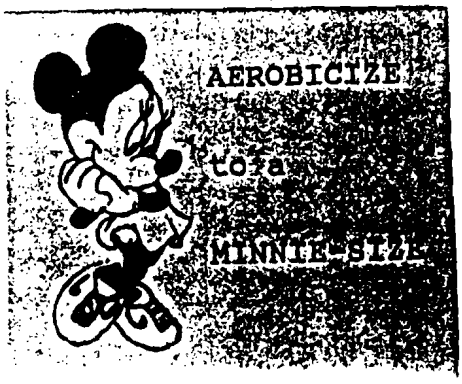


CLASS

WHEN: CLASS WILL START ON TUESDAY, JANUARY 22, 1991 AND WILL RUN THROUGH THURSDAY, MAY 2. THE CLASS WILL MEET MONDAY THROUGH THURSDAY EVENING FROM 6 TO 7 P.M.

WHERE: GYM A

ADDITIONAL INFORMATION: PURCHASE YOUR AEROBICS PASS CARD FOR $10 IN FRONT OF GYM A BETWEEN 5 AND 6 P.M. ON JANUARY 22. FACULTY, STAFF OR STUDENT ID REQUIRED TO PURCHASE CARD. NO CHECKS ACCEPTEI


AEROBICIZE
to a
MINNIE-SIZE

INFORMED CONSENT DOCUMENT

The Department/Division of HPER & A supports the practice of protection for human subjects participating in research and related activities. The following information is provided so that you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time, and that if you do withdraw from the study, you will not be subjected to reprimand or any other form of reproach.

1. Procedures to be followed in the study, as well as identification of any procedures which are experiment.

Each subject will be given two questionnaires to answer before the intervention and at the end of the intervention. Interventions will be applied during the course of the study. All questionnaires will be kept confidential by an assignment of a code number for each subject.

2. Description of any attendant discomfort or other forms of risk involved for subjects taking part in the study.

N/A

3. Description of benefits to be expected from the study or research.
To gain knowledge of Relapse Prevention used as an intervention technique towards exercise.

4. Appropriate alternative procedures that would be advantageous to the subject.
N/A

"I have read the above statement and have been fully advised of the procedures to be used in this project. I have been given sufficient opportunity to ask any questions I had concerning the procedures and possible risks involved. I understand the potential risks involved and I assume them voluntarily. I likewise understand that I can withdraw from the study at any time without being subjected to reproach."

_____ _____

Subject and/or authorized representative Date

SWB Scale

For each of the following statements circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience:

SA = Strongly Agree
MA = Moderately Agree
A = Agree
D = Disagree
MD = Moderately Disagree
SD = Strongly Disagree

1. I don't find much satisfaction in private prayer with God.	SA MA A D MD SD
2. I don't know who I am, where I came from, or where I am going.	SA MA A D MD SD
3. I believe that God loves me and cares about me.	SA MA A D MD SD
4. I feel that life is a positive experience.	SA MA A D MD SD
5. I believe that God is impersonal and not interested in my daily situations.	SA MA A D MD SD
6. I feel unsettled about my future.	SA MA A D MD SD
7. I have a personally meaningful relationship with God.	SA MA A D MD SD
8. I feel very fulfilled and satisfied with life.	SA MA A D MD SD
9. I don't get much personal strength and support from my God.	SA MA A D MD SD
10. I feel a sense of well-being about the direction my life is headed in.	SA MA A D MD SD
11. I believe that God is concerned about my problems.	SA MA A D MD SD
12. I don't enjoy much about life.	SA MA A D MD SD
13. I don't have a personally satisfying relationship with God.	SA MA A D MD SD
14. I feel good about my future.	SA MA A D MD SD
15. My relationship with God helps me not to feel lonely.	SA MA A D MD SD
16. I feel that life is full of conflict and unhappiness.	SA MA A D MD SD
17. I feel most fulfilled when I'm in close communion with God.	SA MA A D MD SD
18. Life doesn't have much meaning.	SA MA A D MD SD
19. My relation with God contributes to my sense of well-being.	SA MA A D MD SD
20. I believe there is some real purpose for my life.	SA MA A D MD SD

Demographic/Aerobic Study Survey

Please check the appropriate responses.

Gender: ____Male ____Female

Age: ____17-20 ____ 21-24 ____25-28 ____29-32
____33-36 ____37-40

Year in school: ____1 ____2 ____3 ____4 ____5
____Graduate ____Faculty ____Staff

Estimated G.P.A. ____4.0-3.6 ____3.5-3.1 ____3.0-2.6
____2.5-1.1 ____1.0 or below

Do you live: ____On-campus ____Off-campus

---

1)Rank order the reasons for signing up for this aerobics class(1= most important; 10= least important).

____ lose weight
____ tone muscles
____ to relax or relieve stress
____ to be with friends
____ for fun or excitement
____ to improve flexibility
____ because of another person's advice
____ to improve cardiovascular fitness
____ to be in an organized fitness program
____ other _____(please specify)

2) Previous experience with an aerobics class before this class:

____ Have signed up but did not attend regularly.
____ Signed up and attended regularly.
____ Worked out by myself with a videotape.
____ None

3) What do you think was the percentage of time you attended this class this semester?

____ 60% or more ____ 41-59% ____ 11-40%
____ less than 10%

4) Did you exercise outside of this aerobic class this semester?

____Yes ____No (If no, skip to # 9- If yes, go to #5)

5) How often did you exercise outside of this class?

___1x per week ___2x per week ___3x per week

___4x per week ___5 or more x per week

6) How intense did you exercise outside of class?

___Above target heart rate ___Within target heart rate

___Below target heart rate ___Don't know

7) How long was each exercise session outside of class?

___ 1-15 minutes ___ 16-30 minutes ___31-45 minutes

___1 hour or more

8) What type of exercise?

____ Stretching for flexibility

____ Jogging

____ Swimming

____ Weightlifting

____ Intramurals

____ Racquetball/Tennis/Badmitton

____ Walking

____ Other _____(Please specify)

9) In what other activities do you participate?

____ Work

____ Sorority

____ Fraternity

____ School sponsored clubs

____ Athletics

____ Performing arts

____ Other _____(Please specify)

10) How much time do these activities require per week?

___ less than 1 hr ___1-5 hrs ___6-10 hrs ___11-15 hrs

___16-20 hrs ___21 or more hrs

11) On the average, how often do you believe you attended your college classes this semester?

___100% ___90% ___80% ___70% ___60% ___50%

___40% ___30% ___20% ___10%

12) How many times per week do you go out socially with friends?

___0-1x ___2-3x ___4-5x ___6 or more

13) How often do you take naps per week?

___0-1x ___2-3x ___4-5x ___6 or more

14) Are you involved in a personal relationship?

___Yes ___No

15) How often do you attend church?

____Every week _____ Once a month ____Never

16) With what church are you affiliated ?

___ Catholic ___ Methodist

___ Baptist ___ Lutheran

___ Presbyterian ___ Universalist

___ Adventist ___ Apostolic

___ Mormon ___ Jewish

___ Other _____(Please specify)

17) Do you want to be in college? _____Yes _____No

18) How sure are you of this decision?

____1 ____ 2 ____3 ____4 ____5 ____6 ____7 ____8 ____9 ___10

not very

sure sure

19) Have you identified a major? _____Yes _____No

20) How sure are you of this decision?

____1 ____ 2 ____3 ____4 ____5 ____6 ____7 ____8 ____9____10

not very

sure sure

21) How many of the courses in which you are currently enrolled do you feel are relevant to you?

___None ___1-2 ___3-4 ___5-6

___All of them

22) Do you feel like you are doing things in all aspects of your life for: _____Yourself ____Others

LIFE ADVANCE, INC.
81 Front Street
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December 18, 1991

Ms. Joan R. Easton
G.A. HPERA
Emporia State University
Box 13 1200 Commercial
Emporia, KS 66801

Dear Ms. Easton:

Thank you for your order of the Spiritual Well-Being Scale. We have enclosed a research summary form for you to return when your study is completed. If you will be sure to do that we will be able to continue compiling research findings and providing periodic published updates of current research.

We wish you well in your study. We are delighted to be of assistance to you.

Sincerely,

Craig W. Ellison, Ph.D.
President

I, Joan Easton, hereby submit this thesis/report to Emporia State University as Partial fulfillment of the requirements for an advanced degree. I agree that the Library of the University may make it available for use in accordance with its regulations governing materials for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, or other reproduction of this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential financial gain will be allowed without written permission of the author.

Joan K. Easton
Signature of Author

July 24, 1992
Date

The Difference Among Three Methods of Assessing Exercise Attendance and Scores on the Spiritual Well-Being Scale.

Title of Thesis/Research Project

Signature of Graduate Office Staff Member

July 27, 1992
Date Received