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RELATIONSHIPS BETWEEN THE EDWARDS PERSONAL PREFERENCE
SCHEDULE AND THE KENYON ATTITUDE INVENTORY

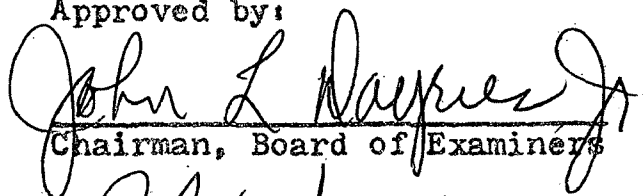
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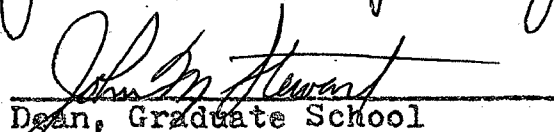
William H. Dietz

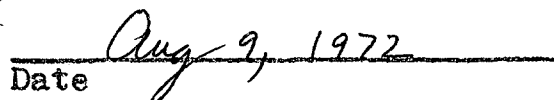
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the degree of
Master of Science
UNIVERSITY OF MONTANA
1972

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Chapter 1

INTRODUCTION

The construct, attitude, has been a topic of central interest in the socio-psychological sciences for more than a century. But only recently has the importance of attitude and its relationship to the learning process been acknowledged. The concept, attitude, plays an important role in all areas of education. Educational psychologists contend that what is learned depends, to some degree, on the attitudes of the learner. If the learner exhibits a positive attitude toward the school environment, that is, the instructor, class, subject or activity, it is almost inevitable that the student will experience success. However, if an unfavorable attitude toward the same environmental factors exists, the student will aim his energies in other directions and resist any attempt toward a positive outcome (7). Thus, it may be assumed that a positive or negative attitude can influence the student's capability of achieving success in an educational situation.

Physical educators, like all educators, are concerned with the individual's educational development and thus are interested in the individual's attitude toward the physical education program and each of its components. It would seem appropriate, in any study of attitudes toward

physical education, to begin by assessing attitudes toward the basis of the entire discipline, namely "physical activity".

In the past, insufficient attention has been given to the proper characterization of physical activity as a domain of its own. Recently, Kenyon (30,31) developed a scale for assessing attitudes toward physical activity. Kenyon characterized physical activity as possessing six dimensions; namely, physical activity perceived as (1) a social experience, (2) health and fitness, (3) the pursuit of vertigo, (4) an aesthetic experience, (5) catharsis, and (6) an ascetic experience. Scales representing each of the dimensions of the multidimensional model for characterizing physical activity were developed. Items held to be representative of the dimensions and evaluated on the basis of factor and item analysis procedures have generated Hoyt reliabilities ranging from .72 to .89 for the six scales. Comparative measures of central tendency, variability and reliability between two similar populations indicate instrument stability. However, since attitude, as a behavioral disposition, is nonobservable, validity cannot be determined directly. An attempt was made to infer the validity of each scale by using preferred type of activity as a criterion. It was postulated that subjects expressing a strong preference for a particular type of activity would possess a positive attitude toward that type of activity.

Scale scores differentiated between strong and weak preference groups in the predicted direction for all scales except "catharsis". However, as Edwards (18,p.21) notes,

There is another approach to the understanding of the variables being measured by an inventory. This approach involves the investigation of the relationship between the variables of the inventory and other variables which should, in theory, be related to the inventory variables in specified ways.

Numerous studies (i.e. Thune (48), Flanagan (20), and many others (3,4,8,11,14,15,21,23,25,27,28,29,36,37,38, 41,43,44,45,51)) have indicated that personality plays an important role in the selection of physical activities. If participation indicates a positive attitude toward that type of physical activity and participation is influenced by personality, then personality must logically be associated with attitudes.

But, how is personality associated with attitudes toward physical activity and, what, if any, is the relationship between personality variables and specific attitudes toward physical activity?

Kenyon (30,p.98-101), when characterizing physical activity in six subdomains, noted that elements such as, group physical activity, participant control, expressive movements, hostility, aggression and achievement are expressed through various physical activities. These elements are clearly personality variables and, by Kenyon's admission, appear to influence some of the subdomains.

PROBLEM

Statement of the Problem

It was the purpose of this study to examine the relationship between personality variables, as expressed on the Edwards Personal Preference Schedule, and attitudes toward physical activity, as expressed on the Kenyon Attitude Inventory.

Significance of the Problem

Since the attitude of the individual may greatly influence the learning situation, it behooves the concerned educator to examine attitudes toward his educational area.

The basis of the physical education program is physical activity. But, until recently, physical educators have been handicapped by the lack of an appropriate instrument to assess attitudes toward physical activity.

According to Kenyon (31,p.566),

An adequate characterization and assessment of attitudes in this domain would open the door to numerous studies, the findings from which would contribute to a greater understanding of social reality, and thus aid in the development of a socio-psychological theory of sport.

The Kenyon Attitude Inventory is the only published instrument measuring these attitudes toward physical activity. Before widespread use and/or misuse of such a new instrument is initiated, it would be wise to examine the instrument's relationship to other established psychological measures. In this case, since no other measure of attitude

toward physical activity exists, one may follow the theoretical link between personality and attitude to examine this relationship.

It was with this in mind that this study was undertaken to determine the relationship of personality variables and attitudes toward physical activity.

HYPOTHESIS

There will be no relationship between the personality variables of the Edwards Personal Preference Schedule, either individually or collectively, and the individual categories of the Kenyon Attitude Inventory.

LIMITATIONS AND WEAKNESSES

1. The selection of subjects was determined by class enrollment. Therefore, it was an incidental sample and not a random sample.

2. Because of the length of the two written inventories, the testing covered two class periods. Therefore, the test conditions were not held constant from group to group, although they were held constant within each group.

3. The study was limited to attitude toward physical activity as measured by the Kenyon Attitude Inventory.

4. The study was limited to personality variables as measured by the Edwards Personal Preference Schedule.

DEFINITIONS

The following terms are defined as they were used in this study.

Attitude

Latent or nonobservable, complex, but relatively stable behavioral disposition reflecting both direction and intensity of feeling toward a particular object, whether it be concrete or abstract (31,p.567).

Personality

The unique organization of factors which characterizes an individual and determines his pattern of interaction with the environment (34,p.9).

Personality variable

A trait designated by one of the categories of the Edwards Personal Preference Schedule.

Physical activity

organized ..., nonutilitarian ..., gross human movement, usually manifested in active games, sports, calisthenics and dance (30,p.97).

Chapter 2

REVIEW OF LITERATURE

This chapter presents literature relative to the investigation in this study. Experimental studies, surveys and articles dealing with personality characteristics of athletes, personality characteristics of physical activity groups, attitudes toward physical education and attitudes toward physical activity of college or adult males were reviewed.

PERSONALITY CHARACTERISTICS OF ATHLETES

Much of the literature dealing with personality characteristics of physical education groups concerns itself with a special group, namely athletes.

Differences between the scores of athletes and non-athletes on personality scales measuring extroversion, ascendance, masculinity and social responsibility have been reported by Booth (8) and Sperling (44).

Hunt (26) administered the Gordon Personal Profile to Negro and white athletes and to Negro and white non-athletes. He found that Negro and white varsity athletes had similar personality profiles as did Negro and white non-athletes. Also, the athletes, regardless of ethnic background, differed from the non-athlete.

Keogh (32) attempted to differentiate between the terms motor ability and athletic participation in their relationship to some measurable aspects of personality. He found no significant relationship between athletic participation and the 18 separate scales of the California Personality Inventory..

Thune's (48) research on weightlifters indicated that weightlifters differed from non-weightlifters on such items as needs, interests and personality. Generally, weightlifters have feelings of masculine inadequacy and inferiority, withdrawal and the desire to become dominant. Harlow (23) using similar groups and two projective tests arrived at similar conclusions.

Behrman (3) noted significant personality trait differences between non-swimmers and swimmers and between non-learners and learners in a male college freshman population. Utilizing the Guilford-Zimmerman Temperament Survey, non-swimmers were shown to be more restrained, more shy and more seclusive than swimmers. The degree of swimming competence was positively correlated with the score on the ascendance variable. Non-learners were shown to be more emotionally unstable, hypersensitive and self-centered, with the degree of swimming competency correlating negatively with the friendliness variable.

LaPlace (38) administered the Minnesota Multiphasic Personality Inventory to distinguish the personality traits

of major league baseball players from those of minor league players. The major league players were better able to apply their strong drive toward a definite objective by exercising self-discipline. In addition they were better able to adjust to occupations requiring social contact. Finally, the major league players were better able to exercise initiative.

Singer (45) noted differences between baseball and tennis players on such personality characteristics as achievement, intraception and dominance.

Husman (27) compared boxers and wrestlers on the trait of aggression and found boxers to be less outwardly aggressive than wrestlers. The boxers also tended to direct their aggressive feelings inward.

Johnson and Hutton (28) tested eight college wrestlers with a personality test under three conditions. The first was before a wrestling season, the second four to five hours before the first intercollegiate match of the season, and the third the morning after the competition. Several group tendencies revealed were decrement of functioning intelligence, increased aggressive feelings and increased neurotic signs in the before-match condition.

Berger and Littlefield (4) compared football athletes and non-athletes on personality characteristics. After controlling for scholastic aptitude, there were no significant differences between the two groups.

Kroll and Petersen (36) compiled personality factor profiles of collegiate football teams. The teams, which represented private schools, state colleges and universities, were compared on the social variable. It was found that the winning teams rated lower on the social variable than did losing teams. The private schools rated highest, the state colleges were in the middle and the universities were lowest.

Lakie (37) used five scales of the Omnibus Personality Inventory and conducted his research among several institutions and several sports. He found that specific groups of athletes at one school possessed characteristics that differentiated them not only from athletes participating in other sports but also from athletes that participate in the same sport at another school.

Werner and Gottheil (51) studied cadets entering the United States Military Academy. On the basis of their past athletic participation, the entering cadets were classified as athletes or athletic non-participants. The Cattell 16 P-F test was administered shortly after entrance and again shortly prior to graduation. Entering cadet athletes were significantly different from non-participants on 7 of the 16 P-F scales. The proportion of athletes who graduated from the academy was significantly greater than the proportion of non-participants who graduated. Also, despite four years of

regular athletic participation, the designated non-participant group was not found to change in personality structure as measured by the 16 P-F test.

Johnson, Hutton and Johnson (29) examined a group of champion athletes for significant personality similarities. They noted that athletes possessed these outstanding traits: extreme aggression, emotions lacking strict controls, high and generalized anxiety, a high level of intellectual aspiration and self-assurance.

Ogilvie (43) similarly noted the following psychological consistencies within the personality of high-level competitors: aggression, ambition, organization, deference, dominance and endurance.

PERSONALITY CHARACTERISTICS OF PHYSICAL ACTIVITY GROUPS

Brunner (11) studied the personality factors that influenced adult participation in vigorous physical activity. Participants in vigorous physical activity scored significantly higher on: intraception, defensiveness, achievement, dominance and self-confidence. The non-participants scored higher on succorance and counseling readiness.

Morgan (41) examined the interrelationships of depression to age, height, weight, percent of body fat, strength of grip and physical work capacity in 67 normal adult males. None of the correlations were statistically

significant. The subjects chose one of six exercise groups (control, circuit training, jogging, swimming, treadmill running and bicycle ergometry) for a six week training period. It was found that the six weeks of exercise did not produce a significant reduction in depression for any of the groups. However, a significant reduction in depression was observed in those subjects who were depressed initially.

Cavanaugh (14) concluded that emotionally well adjusted students tend to participate in more recreational activities than do their less well adjusted fellow students.

Flanagan (20), in an effort to determine the influence of personality on activity selection, examined the personality traits of selected physical activity groups. A personality inventory was assembled which measured ascendance-submission, masculinity-femininity, extroversion-introversion and emotional stability-emotional instability. Among the results were the following: (1) fencers were found to be more feminine than basketball players; (2) badminton players were the most extroverted; (3) basketball players were the most masculine, and swimmers and boxers scored higher in masculinity than did badminton and volleyball players; (4) volleyball players were more submissive, more introverted and less emotionally stable than members of the other groups.

Fletcher (21) administered the Edwards Personal Preference Schedule and an information check list to male

freshman students enrolled in the required physical education courses at Texas A & M University. He found: (1) a low degree of high school activity participation was related to the traits of achievement, deference and endurance; (2) a high degree of high school activity participation was related to the traits of dominance and heterosexuality; (3) the low intramural participant was higher on the trait of dominance than the high intramural participant; (4) athletes scored higher than non-athletes on dominance and aggression; (5) non-athletes scored higher than athletes on order.

ATTITUDES TOWARD PHYSICAL EDUCATION

A review of the literature indicated that the development of the Wear Attitude Inventory (49,50), an instrument which assesses the individual's attitude toward physical education as an activity class, was the major factor influencing attitudinal measurement in the field of physical education.

Keogh (33), using the Wear Attitude Inventory, noted that male and female college students did not differ significantly in their attitudes toward physical education. The students responded most favorably to those categories gauging the social, emotional and physical values of physical education.

Brumbach and Cross (10), utilizing the Wear Attitude

Inventory, studied attitudes toward physical education of freshman males at the University of Oregon. Students who had participated in interscholastic programs indicated a more positive attitude than those students who had not participated. The study also revealed that the more physical education participation in high school, the more favorable the attitude toward physical education. And, finally, the smaller the high school enrollment, the higher the inventory score.

Campbell (12), in a similar study, endeavored to determine whether or not student attitudes toward physical education, as measured by the Wear Attitude Inventory, differed as a result of the size of high school attended, the physical education program experiences or the nature of academic interest. No significant variations in attitude toward physical education were correlated with the size of high school attended, area of academic interest or preference of physical activities.

In another study, Campbell (13) examined the relationship between scores on the Wear Attitude Inventory and selected physical fitness scores. He found no significant relationship between attitudes toward physical education and ability to perform selected physical fitness items.

Brumbach (9) conducted a study to determine the effect of a special conditioning class upon students'

attitudes toward physical education at the University of Oregon. The university employed a developmental physical education course for those students that scored low on an initial physical fitness test. The students completed the Wear Attitude Inventory at the beginning of the course and again at the completion of the course. A more favorable attitude toward physical education was developed during the quarter.

ATTITUDES TOWARD PHYSICAL ACTIVITY

Kenyon (30,31) recently characterized physical activity as possessing six dimensions and developed an attitude scale representing each of the six dimensions. A separate but similar scale was devised for each sex. The scale, known as the Kenyon Attitude Inventory, has proven to be moderately reliable and valid for assessing attitude toward physical activity.

Alderman (1), employing the Kenyon Attitude Inventory, assessed the attitudes of a selected group of male and female championship athletes. The subjects in the study represented ten different athletic events. In a comparison of the male and female data, a significant difference was discovered in social experience, pursuit of vertigo and aesthetic experience. Both groups affirmed that physical activity as an aesthetic experience was most meaningful to them. Social experience and catharsis ranked

second and third, respectively.

Dotson (17), using the Kenyon Attitude Inventory and a background questionnaire, assessed the attitudes of freshman male students and compared their perceived values of physical activity with the size of high school attended, personal record of achievement in athletics and non-athletic activities, and elected physical activity course. Dotson concluded that : (1) selection of physical activity is based upon intensity and perceived value for the expressed activity; (2) with regard to the size of high school attended, there was no significant variation in attitude toward physical activity; (3) the perceived value of physical activity as an ascetic experience was more highly related to achievement in athletics; and (4) there was no significant relationship between attitude toward physical activity and non-athletic extracurricular activities.

Cunningham (16), using the Kenyon Attitude Inventory, investigated the attitudes toward physical activity of male and female freshman and sophomore students enrolled in the required physical education activity program at North Texas State University. Cunningham concluded that the female students perceived physical activity primarily as a source of health and fitness, while the male students perceived physical activity primarily as providing vertigo experiences.

SUMMARY

The majority of the studies reviewed noted that participants in organized physical activity differed in personality structure from non-participants. Several studies indicate that these differences are not caused by the participation but exist independently of activity participation. In the case of attitude assessment, each study revealed a positive attitude toward some portion of the physical education program.

No study relating personality to attitudes toward physical activity was uncovered by this investigator.

Chapter 3

PROCEDURE

This chapter describes the subjects involved in the study, the instruments used for assessing personality and attitude in the study, the selection and testing procedure that was followed in the investigation and the preliminary treatment of data.

SUBJECTS

The subjects in this study were members of the following men's physical activity classes at the University of Montana: basketball (n=15), physical conditioning (n=22), volleyball (n=15) and weight training (n=34) during the 1972 winter quarter; archery (n=26), golf (n=26), softball (n=16), swimming (n=15) and tennis (n=21) during the 1972 spring quarter. A total of 200 males were studied, 96 during the winter quarter and 104 during the spring quarter.

TESTS AND MEASUREMENTS

Edwards Personal Preference Schedule (EPPS)

The Edwards Personal Preference Schedule (18) was designed primarily as an instrument for research and counseling purposes, to provide quick and convenient

measures of a number of relatively independent normal personality variables. The statements in the Edwards Personal Preference Schedule and the variables that these statements purport to measure have their origin in a list of manifest needs presented by H.A. Murray and others (42). The names and a brief description of each variable follows:

Achievement (ACH). Doing one's best, succeeding with the difficult, accomplishing something outstanding.

Deference (DEF). Following rather than leading, accepting and praising others.

Order (ORD). Need for neatness, order, organization, advanced planning and a systematic approach.

Exhibition (EXH). Need to be the center of attention and use verbal statements and appearance to achieve that end.

Autonomy (AUT). Independent, unrestricted, unconventional, critical of authority, avoidance of obligations.

Affiliation (AFF). Friend centered, loyal, helpful, gregarious.

Intracception (INT). Analytic of others' behavior and motives, understanding through analysis of self and others.

Succorance (SUC). To be helped, encouraged, and liked by others. To be the recipient of sympathy and attention if things go wrong.

Dominance (DOM). To assume leadership, mediate arguments, supervise, direct, influence, make decisions for others.

Abasement (ABA). Blame accepting, feelings of timidity and inferiority, need for punishment, need to confess errors.

Nurturance (NUR). To help friends and unfortunates, to forgive, to be generous and sympathetic, show affection.

Change (CHG). To do new and different things including travel, fads, experimenting, breaking routine, and meeting new people.

Endurance (END). To work hard, finish jobs, to stay up late and work long hours, to avoid interruptions, not to be distracted.

Heterosexuality (HET). Participation in all levels of activity with opposite sex. To be interested and active in matters involving sex.

Aggression (AGG). To disagree, criticize openly, get revenge, blame others, make fun of others, to become angry.

In addition to the above personality variables, the Edwards Personal Preference Schedule provides a measure of test consistency (CON) and a measure of profile stability.

Split-half reliability coefficients ranging from .60 (DEF) to .87 (HET) were determined for the 15 personality variables. Test -retest reliability coefficients ranging from .74 (ACH & EXH) to .88 (ABA) were also determined.

Intercorrelations of the variables measured by the Edwards Personal Preference Schedule are, in general, quite low. The largest coefficient is .46 between Affiliation and Nurturance. The next largest is -.36 between Autonomy and Nurturance. The low values of the intercorrelations indicate that the variables being measured by the Edwards Personal Preference Schedule are relatively independent.

KENYON ATTITUDE INVENTORY (KAI)

The Kenyon model (30) consists of six dimensions or scales for assessing attitude toward physical activity. The six scales, described in detail by Kenyon (31), are as follows:

Physical activity as a social experience (SOCIAL).

A characterization of those activities whose primary purpose is to provide a medium for social intercourse, i.e., to meet new people and to perpetuate existing relationships.

Physical activity for health and fitness (HEALTH & FITNESS). A characterization of those activities in which participation is designed to improve one's health and fitness.

Physical activity as the pursuit of vertigo (VERTIGO). A characterization of those activities or experiences providing, at some risk to the participant, an element of thrill and excitement through the mediums of speed, acceleration, sudden change of direction, or exposure to dangerous situations, with the participant remaining in control.

Physical activity as an aesthetic experience (AESTHETIC). A characterization of those activities which are thought of as possessing beauty or certain artistic qualities such as ballet, gymnastics or figure skating.

Physical activity as catharsis (CATHARSIS). A characterization of those activities which provide, through some vicarious means, a release of tension precipitated by frustration.

Physical activity as an ascetic experience (ASCETIC). A characterization of those activities that are conceived of as requiring long, strenuous, and often painful training and stiff competition, and which demand a deferment of many

other gratifications.

TESTING PROCEDURE

Initially, each physical education activity class to be included in the study was contacted. At this time the nature of the study was explained and the students' cooperation was requested. Only those individuals willing to cooperate and having no objection to taking a personality and attitude inventory were permitted to be subjects. Those subjects that indicated a willingness to participate in the study were administered the attitude inventory and the personality inventory during two scheduled class periods. Those individuals that preferred to take both inventories at one testing session were allowed to do so. The total number of participants was two hundred.

TREATMENT OF DATA

Following the return of the attitude inventory and the personality inventory, the data were analyzed and a score for each variable was determined. Steps were then taken to determine if any relationship existed between the personality variables and the six subdomains of the attitude inventory.

In order to determine the degree of relationship between the personality variables and the six subdomains of the attitude inventory, the general hypothesis was stated

operationally. (i.e., There will be no relationship between scores on the SOCIAL category and scores on the EPPS variables.) Each operational hypothesis in turn was restated in the form of a statistical hypothesis. (i.e. There will be no correlation between the scores on the SOCIAL category and the scores on the Achievement variable.) Pearson product-moment correlation coefficients were computed; the .01 level of significance (using a two-tailed test) was selected as being sufficient to warrant the rejection of each statistical hypothesis.

In the second stage of the treatment of the data, attention was given to determining the nature of the relationship between the personality variables and the attitude categories. By means of multiple correlation analysis, a method of examining the correlation between a group of variables, known as independent variables, and a single factor, known as the dependent variable, the data were analyzed for multiple relationships between the personality variables and the attitude categories.

Chapter 4

RESULTS

This chapter presents the statistical results of the investigation and a discussion of these results.

DEGREE OF RELATIONSHIP

Table 1 shows correlations of the Edwards Personal Preference Schedule scores with the Kenyon Attitude Inventory scores. The correlations of .238 (END & ASCETIC), .226 (INT & AESTHETIC), .201 (AUT & VERTIGO), .197 (END & HEALTH and FITNESS), .188 (CHG & AESTHETIC), .184 (CHG & VERTIGO), -.365 (DEF & VERTIGO), -.248 (AUT & ASCETIC), -.201 (SUC & ASCETIC), -.185 (AUT & SOCIAL), -.184 (SUC & HEALTH and FITNESS) and -.184 (AGG & AESTHETIC) were significant at the .01 level.

Table 1
Correlations of EPPS Scores and KAI Scores

		Kenyon Attitude Inventory					
		SOCIAL	HEALTH & FITNESS	VERTIGO	AESTHETIC	CATHARSIS	ASCETIC
Edwards Personal Preference Schedule	ACH	-.153	-.034	.102	-.079	-.120	.085
	DEF	.053	.087	-.365 ^a	.176	.010	.109
	ORD	.050	.127	-.142	-.041	.078	.161
	EXH	.137	-.022	.099	-.053	.092	.066
	AUT	-.185 ^a	-.155	.201 ^a	.016	-.089	-.248 ^a
	AFF	.090	-.084	-.040	.049	-.119	-.126
	INT	.071	.062	-.155	.226 ^a	-.009	-.033
	SUC	-.169	-.184 ^a	-.137	-.153	-.004	-.201 ^a
	DOM	.085	.075	.130	-.026	.040	.148
	ABA	-.005	.029	-.080	-.007	.153	-.017
	NUR	.014	-.003	-.043	.068	-.058	-.049
	CHG	.117	-.003	.184 ^a	.188 ^a	-.045	-.066
	END	-.011	.197 ^a	.123	-.165	.051	.238 ^a
	HET	-.038	-.105	.011	-.011	-.045	-.057
	AGG	-.055	-.016	.148	-.184 ^a	.073	.083
	CON	-.120	-.060	.003	.034	-.052	-.110

^a Correlation significant at the .01 level (2).

NATURE OF RELATIONSHIP

Tables 2-11 depict the largest coefficient of multiple correlation obtained between the dependent variable and the independent variables. Two different multiple correlation models were analyzed. Tables 2-7 show the results of the model in which the attitude categories served as the dependent variable. Tables 8-11 show the results of the model in which the personality variables acted as the dependent variable. Only those models in which the coefficient of multiple correlation was greater than the product-moment correlation were included in the tables.

The multiple correlation coefficient indicates the correlation of the independent variables as a group with the dependent variable. The coefficient of determination represents the proportion of the total variation of the dependent variable that can be explained by all the independent variables in the equation. The partial correlation coefficient of each of the independent variables indicates the correlation between that independent variable and the dependent variable, with the effects of the other independent variables being partialled out or excluded.

Table 2

Dependent Variable:

ASCETIC

 MULTIPLE CORRELATION COEFFICIENT ... 0.4469

COEFFICIENT OF DETERMINATION 0.1997

VARIABLE	TYPE	PARTIAL CORRELATION COEFFICIENT
ASCETIC	DEPENDENT	-----
Achievement	Independent	.133
Deference	Independent	.144
Order	Independent	.126
Exhibition	Independent	.154
Autonomy	Independent	-.014
Affiliation	Independent	.077
Intracception	Independent	.097
Succorance	Independent	.044
Dominance	Independent	.137
Abasement	Independent	.122
Nurturance	Independent	.167
Change	Independent	.112
Endurance	Independent	.179
Heterosexuality	Independent	.123
Aggression	Independent	.148
Consistency	Independent	-.077

Table 3
Dependent Variable:

VERTIGO

=====

MULTIPLE CORRELATION COEFFICIENT ... 0.4456

COEFFICIENT OF DETERMINATION 0.1986

VARIABLE	TYPE	PARTIAL CORRELATION COEFFICIENT
VERTIGO	DEPENDENT	-----
Achievement	Independent	.137
Deference	Independent	-.192
Order	Independent	-.035
Exhibition	Independent	.042
Autonomy	Independent	.074
Affiliation	Independent	.024
Succorance	Independent	-.017
Dominance	Independent	.038
Abasement	Independent	.069
Nurturance	Independent	.059
Change	Independent	.133
Endurance	Independent	.121
Heterosexuality	Independent	.044
Aggression	Independent	.040
Consistency	Independent	-.093

Table 4

Dependent Variable:

AESTHETIC

=====

MULTIPLE CORRELATION COEFFICIENT ... 0.4189

COEFFICIENT OF DETERMINATION 0.1755

VARIABLE	TYPE	PARTIAL CORRELATION COEFFICIENT
AESTHETIC	DEPENDENT	-----
Deference	Independent	.153
Exhibition	Independent	.029
Autonomy	Independent	.047
Affiliation	Independent	-.014
Intracception	Independent	.125
Succorance	Independent	-.177
Abasement	Independent	-.024
Nurturance	Independent	.067
Change	Independent	.143
Endurance	Independent	-.131
Heterosexuality	Independent	.071
Aggression	Independent	-.087
Consistency	Independent	-.023

Table 5

Dependent Variable:

SOCIAL

 MULTIPLE CORRELATION COEFFICIENT ... 0.4125
 COEFFICIENT OF DETERMINATION 0.1701

VARIABLE	TYPE	PARTIAL CORRELATION COEFFICIENT
SOCIAL	DEPENDENT	-----
Achievement	Independent	-.148
Deference	Independent	-.031
Order	Independent	-.046
Exhibition	Independent	.129
Autonomy	Independent	-.239
Affiliation	Independent	.051
Succorance	Independent	-.236
Abasement	Independent	-.041
Nurturance	Independent	-.049
Change	Independent	.027
Endurance	Independent	-.081
Heterosexuality	Independent	-.035
Aggression	Independent	-.065
Consistency	Independent	-.107

Table 6

Dependent Variable:

HEALTH & FITNESS

=====

MULTIPLE CORRELATION COEFFICIENT ... 0.3318

COEFFICIENT OF DETERMINATION 0.1101

VARIABLE	TYPE	PARTIAL CORRELATION COEFFICIENT
HEALTH & FITNESS	DEPENDENT	-----
Achievement	Independent	-.107
Deference	Independent	-.063
Order	Independent	-.067
Exhibition	Independent	-.070
Autonomy	Independent	-.148
Affiliation	Independent	-.115
Intracception	Independent	-.076
Succorance	Independent	-.131
Dominance	Independent	-.062
Abasement	Independent	-.076
Nurturance	Independent	-.044
Change	Independent	-.073
Endurance	Independent	-.019
Heterosexuality	Independent	-.095
Aggression	Independent	-.085
Consistency	Independent	-.032

Table 7
Dependent Variable:

CATHARSIS

MULTIPLE CORRELATION COEFFICIENT ... 0.2977
COEFFICIENT OF DETERMINATION 0.0886

VARIABLE	TYPE	PARTIAL CORRELATION COEFFICIENT
CATHARSIS	DEPENDENT	-----
Achievement	Independent	-.080
Order	Independent	.071
Exhibition	Independent	.120
Autonomy	Independent	-.053
Affiliation	Independent	-.040
Intracception	Independent	.054
Succorance	Independent	.071
Dominance	Independent	.094
Abasement	Independent	.158
Nurturance	Independent	.020
Change	Independent	.018
Endurance	Independent	.064
Aggression	Independent	.075
Consistency	Independent	-.015

Table 8

Dependent Variable:

Deference

=====

MULTIPLE CORRELATION COEFFICIENT ... 0.4045

COEFFICIENT OF DETERMINATION 0.1637

VARIABLE	TYPE	PARTIAL CORRELATION COEFFICIENT
Deference	DEPENDENT	-----
VERTIGO	Independent	-.392
ASCETIC	Independent	.186

Table 9

Dependent Variable:

Autonomy

MULTIPLE CORRELATION COEFFICIENT ... 0.3497

COEFFICIENT OF DETERMINATION 0.1223

VARIABLE	TYPE	PARTIAL CORRELATION COEFFICIENT
Autonomy	DEPENDENT	-----
VERTIGO	Independent	.254
ASCETIC	Independent	-.292

Table 10
Dependent Variable:

Endurance

=====

MULTIPLE CORRELATION COEFFICIENT ... 0.3019

COEFFICIENT OF DETERMINATION 0.0911

VARIABLE	TYPE	PARTIAL CORRELATION COEFFICIENT
Endurance	DEPENDENT	-----
AESTHETIC	Independent	-.192
ASCETIC	Independent	.257

Table 11
Dependent Variable:
Change

MULTIPLE CORRELATION COEFFICIENT ... 0.2783
COEFFICIENT OF DETERMINATION 0.0774

VARIABLE	TYPE	PARTIAL CORRELATION COEFFICIENT
Change	DEPENDENT	-----
VERTIGO	Independent	.209
AESTHETIC	Independent	.212

DISCUSSION

Degree of Relationship

The magnitude of the correlation coefficients shown to be statistically significant may be considered low, but they indicate definitely some relationship between the variables of the study. If one returns to the definitions of the variables, as presented by Kenyon (31) and Edwards (18), the significant correlations may be logically explained.

The SOCIAL category characterizes activities whose purpose is to socialize and perpetuate existing relationships. The Autonomy variable, on the other hand, characterizes the independent, unconventional, unrestricted individual. Logically these variables should work somewhat opposite of each other. That is to say, the individual high on the Autonomy variable cherishes his independence and would not appear to favor those activities that force him to socialize or work in groups. Hence, the correlation of $-.185$ (Autonomy and SOCIAL) is reasonable.

The HEALTH and FITNESS category characterizes activities whose primary goal is improved health and fitness. The Endurance variable characterizes the hard working, persistent individual. Since the maintenance of health and fitness is a never ending task, it is logical that a positive correlation between Endurance and HEALTH & FITNESS should appear. The Succorance variable characterizes

that individual who likes to be helped, encouraged and sympathized with when things go wrong. The $-.184$ (Succorance and HEALTH & FITNESS) correlation may be partially explained as a function of the existing negative Succorance-Endurance relationship. Also, the physical activity necessary for maintenance of health and fitness must be done by the individual, thereby severely limiting the individual who needs someone else to help him.

The VERTIGO category characterizes those activities that provide thrills, danger and excitement, with the participant remaining in control. The Deference variable characterizes the individual who prefers to follow rather than lead. Since participant control is an important factor in VERTIGO, the resulting correlation $-.365$ (Deference and VERTIGO) is not unexpected. For the same reason, the $.201$ (Autonomy and VERTIGO) correlation is logically sound. The Change variable characterizes that individual who enjoys travel, fads, experimental ideas and, as the label implies, change. Since the thrills and excitement of the VERTIGO category are created by rapid changes in direction and speed, it should follow that the $.184$ (Change and VERTIGO) correlation is reasonable.

The AESTHETIC category characterizes those activities providing sensations of gracefulness or possessing artistic qualities. Since none of the personality variables assess artistic abilities, one must closely examine the results of

the investigation. The .226 (Intracception and AESTHETIC) correlation indicates that those individuals who perceive beauty in human movement also tend to seek the "inner beauty" of their fellowman. The $-.184$ (Aggression and AESTHETIC) correlation indicates that those individuals who openly criticize or make fun of others fail to perceive beauty in human movement. The .188 (Change and AESTHETIC) correlation implies that those individuals that enjoy changes in their daily routine also perceive beauty in human movement.

The ASCETIC category characterizes those activities requiring long, strenuous and often painful training and stiff competition. The .238 (Endurance and ASCETIC) correlation, based on the information presented before, should be logical. The correlation of $-.201$ (Succorance and ASCETIC) is also straightforward, if one remembers that the training mentioned in the ASCETIC category is unaffected by adversity. The final correlation of $-.248$ (Autonomy and ASCETIC) is appropriate when one recalls that the training called for in the ASCETIC category is based on a regular schedule, that is, a restricted, conventional training schedule.

Although the above correlations are not very high, they are not unusual for work in the area of socio-psychological assessment. If one recalls the theoretical framework of the study, it was postulated that since

personality factors influence activity participation and attitudes influence activity participation, then personality factors must be related to attitudes. However, the degree of such relationship had not been established in the literature. It is the belief of this investigator that these correlation coefficients truly depict the degree of the relationship between personality factors and attitudes toward physical activity.

Nature of Relationship

While the multiple correlation coefficient represents the linear relationship between the dependent variable and the independent variables collectively, a more meaningful picture is presented by the coefficient of determination. The coefficient of determination indicates the proportion of variance associated with the dependent variable that can be explained or accounted for by the independent variables.

The models in which the attitude categories acted as the dependent variable are listed in tables 2,3,4,5,6, and 7. For these models, the coefficients of determination ranged from .0886 to .1997. The models in which the personality variables acted as the dependent variables are listed in tables 8,9,10 and 11. For these models, the coefficients of determination ranged from .0774 to .1637. Considering the large number of independent variables used in the regression equation, these coefficients are rather

low.

Essentially this indicates that there is very little predictive power, in either direction, associated with the relationship of personality variables and attitude categories, as defined by the study instruments.

Chapter 5

SUMMARY

This chapter presents a summary of the problem, an analysis of the results, conclusions and recommendations based upon the results of the study.

The study was designed to investigate the relationship between personality variables, as measured by the Edwards Personal Preference Schedule, and attitudes toward physical activity, as assessed by the Kenyon Attitude Inventory.

Data for determining whether or not a significant relationship existed between the personality variables and the attitude categories were obtained from the administration of the two inventories to 200 male students enrolled in the physical education activity program at the University of Montana during the 1972 winter and 1972 spring quarters.

The data were then analyzed for the degree of linear relationship by computation of the Pearson product-moment correlation coefficients for each pair of variables. The nature of the relationship was investigated through multiple correlation analysis.

CONCLUSIONS

Based upon the results of this investigation the following conclusions appear to be justified:

1. There was a significant positive relationship between Autonomy and VERTIGO, Intraception and AESTHETIC, Change and VERTIGO, Endurance and HEALTH & FITNESS, and Endurance and ASCETIC.

2. There was a significant negative relationship between Deference and VERTIGO, Autonomy and SOCIAL, Autonomy and ASCETIC, Succorance and HEALTH & FITNESS, Succorance and ASCETIC, and Aggression and AESTHETIC.

3. The coefficients of determination associated with the multiple correlation analyses were quite low. Therefore, the predictive power, in either direction, of the relationship is severely limited.

RECOMMENDATIONS

As a result of this investigation, the following recommendations seem appropriate:

1. A similar study be conducted to examine the relationship of personality to attitude toward physical activity in the general student population at the University of Montana.

2. Similar studies be conducted at other universities using different personality instruments.

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