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ABSTRACT

One hundred and fifty-one college women, 88 non-physical education majors, and 63 physical education majors were given a 75-item Q-sort of statements on motives for participation in physical activity and a background questionnaire that elicited demographic data and information on sports activity experience. The Q-sort data for each major group were treated by means of an inverse factor analysis to establish factor types representing groups of people with similar motives for participation. Findings indicate that differences can be discerned among women regarding motives for playing. Five significant activity types were established for the nonmajors, including (a) the appearance conscious, (b) the skill developers, (c) the fitness fadists, (d) the healthy long-livers, and (e) the groupies. Four significant activity types were established for the physical education majors, including (a) the straight arrows, (b) the show-offs; (c) the groupies, and (d) the givers. On the basis of this study the author draws the following conclusions: (a) physical education majors are distinguishable from the nonmajors in terms of their experience in intramural and varsity sports on both the high school and college level and by their participation in sports in leisure time and (b) college and junior high school girls are alike in participation in physical activities for the group association it provides. (A 23-item bibliography is included.) (Author/PD)

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MOTIVES OF COLLEGE WOMEN FOR
PARTICIPATING IN PHYSICAL ACTIVITIES

Herberta Lundegren

INTRODUCTION

Sport is purported to answer the questions, Who am I? and Who is best? Champions have said, it provides togetherness, it is uplifting, it represents the ideal of the sound body and the sound mind, it blows off steam and it provides a glimpse of reality while providing an escape from reality. What of the lesser skilled level of players, do they perceive the same reasons for playing sports? Physical education experts (2, 23) cite objectives of physical activity which include physical fitness, motor skill acquisition, social efficiency, recreation, neuromuscular development and cultural demand. Furthermore, they propose that whatever the personal motive of the subject for playing initially, benefits in these areas would accrue anyway. Kretchmar and Harper (15) said that man will defy all rational, logical attempts of researchers to define his motives and he will play anyway, even if he does not know why. Still teachers, researchers, curriculum planners, recreation leaders and coaches seek answers to the question so that they may be guided in offering the public what it wants in

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our leisure oriented society. Perhaps, in the long run, the view should be that of Vanderzwaag (21) who said that the individual participant is the key to the answer. Of the many general and complex reasons extant for playing, the individual at different times in his or her life may be attracted to different motives. Maybe at varying points in the life cycle a factor may have a different weighting than it does at another time. If these things are so, it would be important to attempt to substantiate objectives with authoritative opinion of the specific expressed motives of the participants when they choose to play and to ascertain whether or not these motives are constant for progressively older age groups.

A method of deriving motives is simply to ask, why do you participate in physical activity? This approach yields data of an open ended variety that can only be dealt with on an individual basis. Stephenson (19) has provided rationale for generating statements regarding motives by the above mentioned technique and then putting them into a Q-Sort and asking the participants to sort the statements thus provided into a pre-determined normal distribution. A factor analysis of these data yields activity type clusters grouped according to motives. This technique can be applied to large groups and has been used in similar studies by Gorlow, Farrell, Hamm and Heinhold. It was with the intent of substantiating purported motives for physical activity participation, to provide a guide to curriculum planners in terms of the expressed needs of those who play and to see whether or not social and activity experience backgrounds differ for those whose motives differ that this study was undertaken.

Statement of the Problem

The purpose of this study was to determine motives for participation in physical activities of college women at The Pennsylvania State University.

A sub-problem of the study was to determine if there was a relationship between motives for participation and social and activity experience background. An empirical comparison was made with similar data for junior high school girls.

PROCEDURES

Subjects

A total of 151 subjects participated in this study, 63 physical education majors and 88 non-majors. Subjects ranged in age from 17 to 27 for the non-major group and 18 to 23 for the majors. The class range for the total group was from freshman through senior years.

Development of the Q-Sort

Statements utilized in the Q-Sort were originally generated by 93 junior high school girls (ages 12 to 14) studied by Hamm and were revised or reworked for use with a college population. The final 75 item Q-Sort was designed to offer a choice of statements representative of the basic objectives of a physical education program as well as a life time sports program. The factor categories represented were: 1) Physiological and Health, 2) Physical Fitness and Weight Control, 3) Integrative, 4) Competitive, 5) Enjoyment and Leisure Time, 6) Skill Development, and 7) Achievement. The statements were generated in answer to the open ended question, "What does physical activity mean to me?" in the manner suggested by Gorlow and Stephenson. The answers received were put in the infinitive form and supplemented by other statements to assure that all factor categories were represented.

Background Questionnaire

A personal background questionnaire was devised by the investigator for use in this study in order to collect socio-economic and activity experience data and data regarding family models for activity from the subjects. These data were used to profile the subjects grouping in the factor types identified by the Q-Sort. The occupation variable was further coded according to the Dictionary of Occupational Titles for ease of interpretation and statistical treatment.

Analysis of the Data

The data in this study were analyzed to identify physical activity motive factor groups, to establish activity and socio-economic factor profiles and to determine the relationship between activity motive groups and background profiles and between physical education major and non-major groups on these factors.

Q-Sort. A principle components inverse factor analysis utilizing varimax rotation was calculated on the Q-Sort data in order to identify factor types on the basis of motives for participation in physical activity. These data were submitted for computation to the IBM-OS/360 computer at The Pennsylvania State University through an external program titled QUANAL. The following options offered by the program were selected for use in this analysis:

- a. An eigenvalue limit of 2.0 was set to control the factoring process and to assure that each factor would contribute more than 10 percent to the total variance as suggested by Harman.
- b. Compute commonalities or factor loadings in order to identify each subject with a factor type.

- c. Identify consensus items, that is those statements which do not vary more than one standard deviation throughout the Q-Sorts of all subjects.
- d. Submit the data to the WRAP Phase in order to compute typical arrays of z-scores, arrange statements in descending order of z-scores by factor types and show those statements which each type chose more than or less than all others.

Background Questionnaire

Frequencies and percentages were computed for all categories on the background questionnaire. Chi square analyses were made as a test of significance between major and non-major groups between appropriate categories on the background questionnaire where the expected frequencies met the basic assumptions of chi square.

Comparison with the Junior High Group

An empirical comparison between activity motive types identified by each of the college women's groups and those professed by the junior high school girls in the Hamm study were made and discussed.

FINDINGS

On the basis of the factor analysis made of the Q-Sort data from the subjects, and a chi square analysis of the background data, the following findings are presented.

Identification of Activity Types

Non-physical education majors. Five activity types were identified for this group (N=80), accounting for 54.5 percent of the variance. The five

types were named by the investigator after the nature of the statements loading highest on each factor and were as follows:

<u>Types</u>	<u>Number</u>
Appearance Conscious	13
Skill Developers	5
Fitness Fadists	28
Healthy Long Livers	18
Groupies	24

Intercorrelations between types were low between type two and all others and moderate between types four and five, but higher between all others indicating an overlap which might be expected. These correlations ranged from 0.175 to 0.792.

Physical education majors. Four activity types were identified for this group (N=63), accounting for 60.2 percent of the variance. The four types were:

<u>Types</u>	<u>Number</u>
Straight Arrows	
Show-offs	12
Groupies	21
Givers	12

Intercorrelations between types ranged from 0.582 to 0.751, which were fairly high. Possible reasons for this were discussed earlier.

Nineteen consensus items were identified out of the 75 item sort. It is suggested that these items would need to be revised or dropped when this sort is used with physical education major groups.

Background Characteristic Profiles Between Groups and Types

Between study groups. The findings related to social and activity backgrounds were:

1. The physical education majors were older and in a higher class in college than the non-majors.
2. The occupations of the main family wage earner were similar in the two groups with approximately one-half of them in the professional category.
3. Subjects came from similar population areas with the majors tending to a rural backg. and the non-majors to a large city background.
4. More than 70 percent of both groups had someone in the family who played on a sports team.
5. Ten percent of the total group had mothers who were models for activity.
6. The majors had significantly greater activity participation than the non-majors in intramurals and varsity programs on both high school and college level. Majors chose physical activity for leisure time participation significantly more than the non-majors.

Within study groups between activity types. The findings here were as follows:

1. Non-major
 - a. The Appearance Conscious and The Fitness Fadists were older than the members of the other types.
 - b. The Skill Performers were significantly different from the other groups in that none of them participated in

high school intramurals. The Healthy Long Livers were significantly different because 83 percent of them did participate in high school intramurals.

2. Physical education major
 - a. The Groupies had significantly more members who played college varsity sports. The Show-offs had significantly less who played.
 - b. The Givers were significantly different from the other types in participation in high school intramurals. The Show-offs had the smallest number in this category.
3. None of the other factors distinguished between activity types.

Comparisons of College Women with Jr. High School Girls

The results of an empirical comparisons of the college and junior high group showed the following:

1. All three groups studied identified an activity type named The Groupies.
2. Junior high school girls and college non-physical education majors both identified activity type groups named The Appearance Conscious and The Healthy Long Livers.
3. Junior high school girls and college physical education majors both identified an activity type named the Show-offs.
4. Junior high school girls differed from the college women by identifying an activity type named The Grade Conscious.
5. The non-physical education college women identified a stronger fitness motive than the other two groups.
6. The physical education majors were alone in identifying a motive groups named The Straight Arrows and The Givers.

CONCLUSIONS

On the basis of the findings of this study, the following conclusions seem justified.

1. There are many motives for participating in physical activities. These motives may be clustered into factor categories which subjects may use to classify themselves into activity types according to motives for participation. These types are 1) The Appearance Conscious, 2) The Skill Developers, 3) The Fitness Fadists, 4) The Healthy Long Livers, 5) The Groupies, 6) The Straight Arrows, 7) The Show-Offs and 8) The Givers.
2. The physical education majors are distinguishable from the non-majors in terms of their experience in intramural and varsity sports on both the high school and college level and by their participation in sports in leisure time.
3. College and junior high school girls are alike in participating in physical activities for the group association it provides.

Discussion

It is apparent from the findings presented in this analysis, with particular reference to the intercorrelation between types, that activity types do not identify exclusively with one factor category. Some statements do identify motives for one category alone, but on the other hand, some statements appear in several categories, but in combination with a variety of different statements, thus putting a different interpretation on the factor taken as a whole. In addition, for some factors only one statement had a significant z-score, and if that is looked at alone and not in combination with the other supporting statements, an erroneous slant is given to the character of that factor. These insights should be taken into account when interpreting the results of the factoring.

In comparing the results of QUANAL for the non-physical education majors with those for the majors it can be seen that the only comparable type is the one labeled, Groupies. That is, members of both study groups chose to participate in physical activity because they were group oriented, liked to be with others and meet people. It is interesting to note that the statement, To be physically fit, appears significantly higher in several factors in both groups, and the statement, To make an impression on people appears significantly low in several factors in both groups. On the whole, most people tend to play sports for their physical and mental health, fitness, and to satisfy people orientation needs and also as a means of meeting people. In terms of differences between groups, non-majors do activity to develop their sports skills, to resist disease and to develop a good figure. These motives are not key to the physical education majors. The majors on the other hand, pursue physical activity to show off their skills and impress people. They also want to use skills to learn to work with people and to help others learn skills. Furthermore, they want to help their community through sports. The non-majors were not keyed into these motives. It is interesting to note that no group expressed strong competitive motives for participation.

IMPLICATIONS

Physical education literature abounds with objectives for participation in physical activity and many theorists propound the meaning it does or should have to the participants. Few studies have actually been conducted to determine whether or not these meanings or objectives are actually the ones subscribed to by the persons engaged in sports. The results of this

study helps to substantiate these objectives and focus on the order of importance to the participants of the categories of reasons for physical play established by the experts. In interpreting a factor analysis study, care must always be taken to remember that nothing can come out of the data that was not originally put into it. For example, if items on physical fitness were never included in the input, they would never be identified in the final factoring. For this reason, an attempt was made in this study to insure inclusion of statements for all common motives in relation to activity.

Application of the findings of the activity typing may be seen in terms of counseling the girl looking for a future vocation in physical education. In talking with her, an attempt may be made to ascertain what her motives are for sports participation. On the basis of this study, we would expect her to show special interest in giving of her knowledge of skill to others, to be aware of the benefits of a sound mind in a sound body and perhaps enjoy showing her skills to others in team membership and playing in front of spectators.

Of interest to the teacher is the implication from the background data that those girls who have strong intramural as well as varsity experiences are more interested in sports participation in leisure time. This fact can give support to a broad program of extracurricular activities on the high school as well as the college levels.

Also pertinent to the teacher-planner is the fact that non-physical education majors profess to participate in physical activities to improve their appearance, feel better, be fit, develop their skills and be with others, and therefore, be guided in planning their programs so that their students may meet these objectives.

It is recommended that the Q-Form given here be administered to girls on the senior high school level to get a better picture of the development of interest in physical activities from the junior high to the college years and, in a sense, round out these present findings.

ADDENDUM

DEFINITION OF TYPES

Non-Majors

Type I -- The Appearance Conscious: Those students loading highest in this category can be described as being concerned with their appearance, to be aware of having a good figure, of losing weight and of being entertained and relaxed by sport activity. They are not interested in developing or demonstrating sport skills, learning sports for carryover or playing for the challenge of the competition or even in competing at all.

Type II -- The Skill Developers: Members of this group participate in activity to learn new sports which will carryover to later life, to feel important and confident in knowledge of their sport achievement and to be able to show others what they can do. These skills oriented people are not interested in sport for health or appearance reasons.

Type III -- The Fitness Fadists: This group is noted for its concern for physical fitness, staying in shape, being in good condition and being most concerned about keeping from getting fat and lazy. They do not participate just to fill up the time or keep busy. Theirs is a definite focus and that is "be fit".

Type IV -- The Healthy Long Livers: Of concern to these women is exercise to build resistance to disease, keep the blood circulating, and assure a longer life. They want to feel better and stay younger. They are least interested in sport for its group or team values and do not care particularly about winning in games or getting good grades in physical education.

Type V -- The Groupies: These group oriented people join activity groups to be with others to meet people and make friends and to be part of something. They are not interested in muscle building, showing off their skills or losing weight. Members of this group may well be identified as the friendly, social type who use sport as the vehicle for enjoying others.

Physical Education Majors

Type I -- Straight Arrows: Members of this group participate in physical activity to be physically fit, to be mentally fit and alert and stable and to feel better. They are not particularly interested in sports as a means to meet new people, work with them, or be a part of something.

Type II -- The Show-Offs: Here is a group whose members participate in sports as a means to get known by people, show off their skills and make an impression. They also are keen on winning. These women are not interested in using sports for relaxation, mental stability or as a means of taking their minds off things.

Type III -- The Groupies: The Groupies are those who participate in physical activity in order to be part of something and feel included. They also are interested in sports to take their minds off things.

Their motivation does not come from a desire to be physically fit or have health, well poised bodies.

Type IV -- The Givers: This group wants to learn to work with people and help their communities through sports participation. They would like to help others learn sport skills and be good sports. They have little interest in feeling important or playing just to keep busy and having something to do.

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