ATTITUDES TOWARD DISABLED PERSONS: A COMPARATIVE STUDY OF ADAPTIVE PHYSICAL EDUCATION AND PHYSICAL THERAPY MAJORS

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by

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ABSTRACT

The purpose of this study was to compare the attitudes of Adaptive Physical Education and Physical Therapy majors toward the disabled.

The subjects used were composed of 58 student assistants involved in the Motor Development/Recreation Program for the disabled and handicapped at the University of Wisconsin - LaCrosse. The testing device used was the Attitude Toward Disabled Persons Scale which measures attitudes toward disabled persons in general.

The statistical device used was a T-Test run between the scores of the 30 Adaptive Physical Education majors and the 28 Physical Therapy majors. The results of the T-Test showed that there was no difference in attitudes of the Adaptive Physical Education majors and Physical Therapy majors toward the disabled at the .05 level of significance.

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CHAPTER I

INTRODUCTION

Purpose and Scope

The purpose of this study is to investigate one main area of concern. This area is to study the attitudes of Adaptive Physical Education (APE) majors as compared with those of Physical Therapy majors (PT) towards the disabled. This study should give the reader valuable insight into which group (APE vs. PT) has more positive attitudes toward disabled persons. A cause and effect relationship cannot be determined through such a study, but groundwork for such a study in the future can be performed and some significant answers can be attained.

Once the comparison between the two groups is made some intelligent conclusions can be made and answers can be attained. A wide discrepancy between the two groups at the University of Wisconsin - LaCrosse in their attitudes toward the disabled can be related to many causes, but if such a discrepancy is present then action to find answers to these questions can be taken.

This study can help construct a more beneficial program for APE and PT students. One example of the benefits of such a study is its use in the Motor Development/Recreation Program

presently underway at the University of Wisconsin - Lacrosse. The respondents involved within this study are directly involved with this program and the resulting information can, undoubtedly provide that program with very positive insight. Finding out which students have more positive attitudes toward the disabled would provide the program with much needed feedback and influence the program in a positive manner.

Statement of the Problem

In this study the problem was to compare the attitudes of Adaptive Physical Education majors and Physical Therapy majors toward the disabled.

Review of Related Literature

The review of related literature is divided into two parts; one on the instrumentation used in this study and other scales for measuring attitudes, and the second section deals with related attitude studies and their results.

Development of Instrumentation

A review of the literature shows instrument development to be a major concern of attitude studies concerned with the disabled. It is critical to use a good instrument whenever performing a study. The simple reason for this is that the entire study and resulting data will depend upon the validity and reliability of the attitudinal survey used.

Another supporting reason for using a widely accepted, well known survey is that it serves as a means of being able to compare data on other surveys using the same scale in a sequential, organized manner.

It is only in the past 30 years that instruments measuring attitudes toward disabilities have received much attention. The early instruments lacked sophisitication and frequently presented no evidence of reliability or validity as researched by Yuker, Block and Younng (1966). The instruments oriented toward disabilities in general are a very recent development.

Research of the literature indicates that studies of attitude measurement may be organized into four general categories; i.e., non-scored instruments, attitude scales, simple scored instruments and other specialized scorable techniques. The author will concern himself only with the study of attitude scales in the following pages.

The first and simplest attitude scale was the Bogardus Social Distance Scale originally published in 1925. In 1929, Thurstone described the method of paired comparisons and the method of equal appearing intervals for scaling and scoring attitude items. In the early 1930's the Likert technique of summated ratings was developed (1932). Recently complex and specialized statistical techniques for attitude measurement have been published by Yuker (1966).

The Attitude Toward Disabled Persons scale (ATDP) was first reported at the 1959 American Psychological Association meeting and published in 1960 by Yuker, Block and Campbell (1960). At approximately the same time Roeher (1959) developed a 22-item, 5-point Likert scale of attitudes toward the physically disabled similar to the ATDP. In 1961, Szuhay developed the Adult Attitude Toward the Physically Disabled Scale. All of these attitude scales appear to be further refinements of the Thurstone and Likert techniques for scaling and scoring.

The ATDP was designed to provide an adequate positive-negative scaled measure of attitudes toward the disabled with evidence of reliability and validity; an instrument that could be used both with the disabled and non-disabled (Yuker, Block and Younng, 1966). One major advantage of the ATDP is that it attempts to measure attitudes toward disabled persons in general. Shaw and Wright (1967) report in their critical review of the ATDP and numerous other scales for the measurement of attitudes, that the ATDP has very good content validity, better than the scales they reviewed, and that it seems more then adequate for research purposes.

The procedures used in selecting the items for the ATDP scale were first used in the original ATDP scale, Form O. As a first step a large repertoire of statements describing

disabled persons was obtained from a review of the literature. These items were then screened by several psychologists to determine their pertinence for use in the scales. Some items were immediately discarded as lacking face validity. Some were retained in their original form. In other cases, wording was changed so that a statement originally pertaining to a specific disability category was made applicable to disabled persons in general. In some cases an item was changed from implying positive attitudes to one which implied negative attitudes. As a result of this screening and review, an initial pool of approximately 300 items was narrowed down to preliminary scales of 40 to 60 items.

Each of the items on the scale was expressed as a statement with which a person might agree or disagree. Instructions given to the respondents indicated that they should rate the extent of their agreement or disagreement with each item. That is, the items were used to form a Likert-type scale on which the respondent is asked to indicate his reaction in terms of a response category ranging from +3 to indicate "I agree very much", to -3 to indicate "I disagree very much". There is no neutral or zero point on the scale. The subject (S) is forced to make either a positive or a negative response.

The ATDP scale is relatively short, easy to administer, score, and interpret and was deemed most suitable for use

in investigations of relationship of attitudes toward the disabled in general. The emphasis using this scale is placed upon the differences between the disabled and the non-disabled.

A high score on the ATDP scale would indicate that the respondent perceives disabled persons to be quite similar to non-disabled persons, whereas, a low score would indicate that the respondent perceives disabled persons to be "different" from the non-disabled persons. Yuker, Block and Younng (1966) contend that the majority of the items on the ATDP suggest that where there is a difference perceived, this difference has negative connotations. Therefore, investigators may desire to extend the interpretation to suggest that a low score not only reflects the fact that the respondent perceives disabled persons to be different, but also to some degree "inferior" or "disadvantaged". Thus, the scores on the ATDP can indicate the degree of positive or negative stereotype in the non-disabled person's attitudes toward the disabled.

On the above assumptions that disabled persons may be viewed by both the disabled and non-disabled as either different from non-disabled persons or as essentialy the same, the authors of the ATDP collected a series of items each describing disabled persons as either "different from" or "similar to" non-disabled persons. Some of the items

referred to some of the characteristics disabled persons have, and others referred to how they should be treated. Twenty items were selected in the original form of the ATDP scale, Form C. The scale was presented in Likert format and was administered to over 3,000 subjects. The initial results suggested that the scale was reliable for one of its type and length, and that it correlated highly with a number of meaningful criterion measures (Yuker, Block and Campbell, 1960). Two alternate forms of the ATDP scale were developed (Forms A and Forms B) and correlated highly with the original Form C.

Response to single items should not be interpreted since no evidence for item validity was studied. The possibility of fakeability was studied by Yuker, Block and Younng (1966) and they found that the answers could not be faked in favor of the respondents. A class of 62 psychology students took the ATDP scale under different conditions. First the scale was administered under normal conditions. Then the class was instructed to take the test again writing "FAKE" at the top and simply trying to make a good impression without having to respond honestly. The mean score for the first test administered was 76.1 with a standard deviation of 14.00. The mean score for the second testing was 79.2 with a standard deviation of 16.00. A T Test computation of 1.17 was not significant at the .05

level. A correlation between the scores on the two administrations was +.22. The relatively low correlation, and the fact that the difference between means was not statistically significant, suggests that the test is not fakeable. The students were unable to make their responses appropriate to earn higher scores.

The ATDP has been correlated with several other scales. Significant correlations were found between the ATDP and Semantic Differential scores (-.27), scores on a job satisfaction scale (+.47), and the Edwards Personal Preference Schedule (+.25). Nonsignificant correlations were found between the ATDP and the following: Attitude Toward Intellectualism, the F Scale, the Machiavellianism Scale, the ITAP Self Analysis Forms, and the Attitudes Toward Old People Scale (Shaw and Wright, 1967). Normative data has been collected at the Human Resources Center, Long Island, New York, with respect to attitudes of males and females toward the disabled. Many studies have been done researching the attitudes of males versus females. Some of these studies will be covered in the next section of the related literature.

Attitude Studies

Attitude studies may be classified in terms of the relative frequency of occurrence in the literature as indicated by a review of Psychological Abstracts from 1957 through 1967 (Saunders, 1969). Of all the attitude studies done,

studies related to religious, ethnic and cultural groups constitute approximately 80% of the total. Investigations of attitudes toward specific disability groups (e.g. blind or mentally retarded) make up nearly 5% of the studies. But attitude studies which are concerned with the disabled in general make up less than 1.5% of the total. The need for present study may be justified in part by the lack of knowledge in relation to attitudes toward the disabled in general, and the lack of agreement of results in those few studies which are available (Yuker, et al., 1966).

The report of an investigation by Ladt (1957) indicated that students misunderstood the disabled and were disinclined to be their teachers. The questionnaire method was used to investigate attitudes of two groups of students at the University of Illinois. The students were grouped as education and non-education majors. The investigation concerned their attitudes toward disabled children and toward providing educational services.

The results showed that the education students were just as unwilling to teach special classes as other respondents were. They showed less acceptance of the disabled children than did the non-education students. The non-education students were openly hostile toward mentally retarded, maladjusted and disabled children. The education students expressed unfavorable attitudes which were based

upon attitudes that these children should be segregated (Saunders, 1967).

Hussen and Barker (1944) devised a rating scale to assess the opinions of college students toward behavior characteristics of disabled persons. The ratings included 24 personality characteristics ranging from favorable to unfavorable. Ratings of the college students regarding their attitudes toward the disabled were generally unfavorable. A more powerful instrument and different design could produce results which would further substantiate the findings of Hussen and Barker, or indicate a need for reconsideration of the study.

Barker, Wright and Gerson (1953), in a very thorough review of the literature, summarized the characteristics of the attitudes that other individuals have toward the disabled and the attitudes the disabled have toward themselves. These findings were based mainly on studies of attitudes toward special groups such as the blind or deaf. The summary indicates that the attitudes of other individuals toward disabled persons are mostly unfavorable, as are the attitudes of the disabled towards themselves.

In a study performed by Himes (1958) he concludes that disabled persons may be perceived as "different" from the physically normal and reacted to in much the same way as members of a minority group. Further, it was assumed that for some persons, being "disabled" in <u>any</u> form may connote

inadequacy. Thus, a measure which would focus on the general concept of disabled was considered to be a potentially fruitful device for a program of research dealing with the relationship individuals who work with the disabled have.

Yuker, Block and Younng (1966) provide a comprehensive report on numerous studies that have used the ATDP scale in research. The report which combined several past studies of the attitudes of males versus females towards the disabled, showed that females were more accepting than males (Auvenshine, 1962). In a study performed by Lazar, Orpet and Revie (1972) it was discovered that a sex difference favoring the females as more accepting was present. In a more recent study by Skrtic (1973) there was no significant difference between male and female trainable mentally retarded teacher's attitudes toward their students. There is a wide degree of conflicting research and it is evident that additional research is needed in this area to attempt to achieve an answer which can be accepted by the authorities in this field.

Another area where there has been little research performed with regard to attitudes toward the disabled is in different age and grade levels. In a study performed by Siller (1964) it was found that college students (n=238) had more favorable attitudes on the ATDP scale than either junior high school students (n=235) or senior high school student (n=229), but junior high school students had more

positive attitudes towards the disabled than senior high school students.

In a study done by Auvenshine (1962) using his Attitude Toward Severly Disabled College Students scale with a sample of 316 college students, he found that underclassmen (freshman and sophomores) who were males (n=16) were less accepting then junior and senior (upperclassmen) males (n=61) and graduate students (n=82). However, no significant difference was found between females at these grade levels.

Most of the studies seem to indicate that the present grade level of students is related to their attitude toward the disabled, but, as with age the direction of the difference depends on other factors. Taking this into consideration, the majority of the research performed in this area suggests that attitudes toward the disabled are less favorable with increasing grade levels through the elementary grades, but that trend reverses at the high school and college level so that increasing grade levels are related to more favorable attitudes. This statment does not allow for the difference in experiences of working with the disabled.

The attitudes that non-disabled persons have toward the disabled would be a function of their past experiences with disabled persons. Among these experiences would be the extent of their contact with disabled individuals, and also

the extent to which they have had specific "educational" experiences designed to provide them with information about disabled persons.

Considering the relationship between attitude and behavior from another point of view, one would predict that a person's attitude would be manifested in his present behavior. Thus, one would predict that non-disabled persons with positive attitudes toward disabled persons would behave differently from non-disabled persons with negative attitudes. Unfortunately, there have been few, if any, studies which have investigated this particular relationship, but it is clear that they are essential to a complete understanding of the role of attitudes toward the disabled.

One contributing factor of the evaluation of the validity of the ATDP involves the correlation of the scale with the degree of contact the respondent has had with the disabled. Yuker, Block and Campbell (1960) hypothesized that a person with a relatively high degree of contact with disabled persons would tend to be more accepting of them than one with less contact. This is consistent with Homans' (1950) hypothesis which states that contact results in increased positive attitude.

In a cross-cultural study in Costa Rica, Felty (1965) adapted the ATDP scale according to Guttman's procedures and revised the scale's scoring system so that the ATDP

scores of this study are comparable to those of other studies using the conventional scoring system. Yelty observed significant mean score differences between combined rehabilitation and special education personnel, and "low income" groups; and also observed significant differences between combined rehabilitation and special education personnel and business and professional groups. In both instances, the rehabilitation and special education groups scored significantly higher than other subject groups. No significant differences were found between the ATDP scores of rehabilitation and special education personnel. These results suggest that training in rehabilitation and special education tends to be related to increased acceptance of the disabled, as judged by ATDP scores.

In relation to the adverse effects of negative attitudes towards the disabled, Skrtic (1973) has done exhaustive research and has come to the following conclusions. Negative attitudes toward disabled children can be more harmful and crippling than any mental or physical state inherent to the disabled child. Furthermore, negative attitudes influence both the concerned professional in terms of self-actualization, and the services they will render to the population they serve, as well as the expectancy and motivation of the child concerned.

In closing, it was concluded by Haring, Stern and

Cruickshank (1958) that the research was grossly limited with regard to attitudes toward disabled persons. However, they pointed out that it was obvious from the few existing studies that disabled individuals are accepted to a lesser degree than persons who are not disabled. Although very little research had been conducted on the attitudes of teachers, Haring (1958) assumed that teachers, too, felt less accepting toward the disabled than toward normal children. In a final study performed by Lazar (1971) he concluded that there is a direct relationship between well adjusted individuals and their greater willingness to accept the disabled.

Assumptions

In this study it was assumed that all ARL and PT students filling out the ATDP scale did so honestly and to the best of their ability.

Hypothesis

The null hypothesis that the attitudes of ARL and PT majors towards the disabled would not be statistically significant at the .05 level of significance will be tested using a T-Test.

Definition of Terms

Adaptive Physical Education Majors (APE): those students who are enrolled at the University of Wisconsin - LaCrosse, on the undergraduate level, in the physical education department with a concentration in the field of physical education for the handicapped.

Attitudes: an evaluative reaction based upon evaluation concepts which are closely related to other cognitions and to our behavior (Shaw and Wright, 1967).

Attitude Toward Disabled Persons Scale (ATDP): the testing device used in this study to determine attitudes toward the disabled. Designed by Yuker, Block and Campbell in 1959 at the Human Resources Center in Long Island, New York.

Disabled person: any person, who, by either intern or acquisition during life, has been placed in a situation where he cannot lead a normal life; socially, physically, emotionally or psychologically (Yuker et al., 1960).

Fakeability: the ability of the subjects to attain higher scores on the ATDP Scale by answering questions with the sole purpose of achieving a better score on the ATDP Scale without answering the questions honestly.

Motor Development/Recreation Program D/H: the federally funded program under the supervision and direction of Dr. Jane Goodwin held each Saturday in Mittich Hall on the campus of the University of Wisconsin - LaCrosse. The program's purpose is to provide professional services in

the areas of physical education, maintenance therapy, and corrective therapy for the disabled and handicapped and to serve as professional preparation training experience for those students interested in working with the disabled and/or handicapped.

Physical Therapy Majors (PT): those students who are enrolled at the University of Wisconsin - LaCrosse, on the undergraduate level, whose major field of study is physical therapy.

CHAPTER II

METHODS

Setting and Sample

The subjects involved in this study consisted of 58 undergraduate students enrolled at the University of Wisconsin - LaCrosse. All 58 of these students were volunteers involved in the Motor Development/Recreation Program for the disabled and handicapped. This program meets every Saturday and has approximately 90 disabled and handicapped clients ranging in age from 3 years to almost 60 years of age. The volunteers work with each of the clients on a one to one, and sometimes two to one teacher to student ratio.

Of the entire group of volunteers who work with the clients every Saturday a total number of 30 student volunteers majored in Adaptive Physical Education and 28 majored in Physical Therapy. It is these two groups, APE and PT majors, that participated in the survey concerning the Attitudes Toward Disabled Persons.

Procedures

The Motor Development/Recreation Program meets every Saturday from 9:00am until 11:30am. On the Saturday of

Jan. 31, 1976 before any of the clients had arrived for the program, it was announced that those volunteers who were undergraduate students majoring in the areas of Adaptive Physical Education or Physical Therapy would fill out the Attitudes Toward Disabled Persons Scale at 11:30am in the Gymnastics Gymnasium of Mittich Hall. In order to assure that none of the subjects would forget to fill out the scale, signs were posted at each of the exits from Mittich Hall and an announcement was made within each of the three activity areas during the final 5 minutes of the program reminding the students about the attitude scale which was to be filled out.

Once the entire group of 58 subjects were up in the Gymnastics Gymnasium of Mittich Hall, each subject was given an Attitude Toward Disabled Persons Scale and a pencil (See Appendix A). Before any writing was permitted the following instructions were given to the subjects: "Please fill out, on the top of the questionnaire sheet, in the appropriate spaces the following information, your name, present major in college, the number of semesters (present semester included) involved in the Motor Development/Recreation Program, your sex, present year in college, and age." Once this was completed the following instructions concerning the filling out of the attitude were read to the subjects: "In the space provided next to each statement place the number +3 if you agree with the statement very much;

+2 if you agree pretty much; +1 if you agree a little; -3 if you disagree with the statement very much; -2 if you disagree pretty much; and -1 if you disagree a little."

It was explained to the subjects that their answers on the scale would be kept confidential and would not influence their evaluations with regard to their participation in the Motor Development/Recreation Program in any way. The final results of the study would also be open to any of the subjects to inspect, and the author would be available to explain and discuss any aspects of the study which were unclear.

After the subjects filled out the questionnaire they were brought up to the author and the subjects were allowed to leave. An interesting fact to note is that many comments were received which were concerned with the wording of the questionnaire and the fact that many of the questions did not only pertain to disabled individuals, but could be understood as characteristics of normal populations also. This statement by many of the subjects is not only true, but is the entire purpose of giving such a survey; to see if the subject feel that the disabled are similar or dissimilar to the normal population.

A list of all those APE and PT majors was obtained to make sure that the entire group of subjects had filled out the questionnaire. This list was cross checked with the

questionnaire sheets which had been handed in by the subjects and there were no discrepancies within either the ART majors group of 30 subjects, or the PT majors group of 28 subjects.

In the ATDP Scale all of the statements with the exception of statement numbers 2, 5, 6, 11, and 12 implied negative aspects toward the disabled. The reason these statements were placed in the positive form was so that the halo-effect would not take place and the subjects would not form an early impression from the scale which might influence his ratings for the entire scale. Therefore, in order for the entire scale to have negative statements implied the algebraic signs of statement numbers 2, 5, 6, 11, and 12 were changed before any computations were performed. Once this was done the total sum of the 20 statements was found and this scores algebraic sign was reversed so that the entire scale would imply the positive attitudes toward the disabled. Then, the constant of +60 was added to this total so that the final score provided a range in the positive scale of 0 to 120, instead of -60 to +60 (see Appendix I for example). This is the prescribed method of scoring as determined by the originators of this scale; Yuker, Block and Campbell. The higher the score attained on the scale of 0 to 120 the more positive an attitude the subject has toward the disabled; whereas, the lower the score is on the scale of 0 to 120 the more negative an

attitude the subject has toward the disabled.

Development of Instrumentation

The Attitude Toward Disabled Persons Scale (ATDP) was used to assess the attitudes of the subjects involved in this study toward the disabled. Once the total scores on each on the scales of each of the subjects were calculated, the two groups of subjects' scores were placed in the computers at the computer center extension in Mitchell Hall at the University of Wisconsin - LaCrosse. A T-Test was run between the ARE and PT majors to determine if the results were significant at the .05 level of significance or not.

CHAPTER III

RESULTS AND DISCUSSION

Results

The scores of the Adaptive Physical Education (APE) and Physical Therapy (PT) majors who were subjects in this study were placed in the computers at the Computer Center's Extension in Mitchell Hall, in order to determine the results of this study. The computers were programmed to run a T-Test on the scores attained by each of the groups of subjects and the following results were obtained: the null hypothesis that there is no difference in the attitudes of APE majors and PT majors towards the disabled is accepted at the .05 level of significance (See Table I).

Discussion

As the related literature has pointed out, attitudes toward the disabled are similar within related educational fields, this studies results also concurr with those past studies and upholds that research. Although the mean of the PT subjects was slightly higher than the mean of the APE subjects (84.0 vs. 82.4) this difference is not great enough to be of any significance and could be attributed to many extraneous variables.

TABLE I

ATLP SCALE RESULTS

S	APE	PT	S	APE	PT
1.	100	112	16.	84	82
2.	99	105	17.	82	82
3.	98	96	18.	81	82
4.	95	96	19.	80	80
5.	94	95	20.	79	78
6.	93	94	21.	79	76
7.	92	93	22.	76	73
8.	90	91	23.	75	71
9.	90	90	24.	74	71
10.	89	86	25.	72	69
11.	88	86	26.	69	69
12.	87	86	27.	68	69
13.	86	85	28.	65	66
14.	85	84	29.	59	-
15.	85	84	30.	58	-

Group	Mean	S.D.
APE	82.4	11.3033
PT	84.0	10.8374

*T = -.559642 with
58 Degrees of Freedom

*n.s. at the .05 level

Some of the extraneous variables which were unable to be measured were previous contact and experience of working with the disabled outside of the Motor Development/Recreation Program on Saturdays; and positive or negative experiences of working with the disabled in the past. Such variables are very difficult to measure and even more difficult to control.

The purpose of this study was not to perform a cause and effect experimental study, but to determine the attitudinal levels of two specific groups of students involved in work with the disabled. A future study which should not be overlooked is a study of these same two groups (APE and PT majors) at the beginning of the school year (fall semester) to determine their attitudes toward the disabled before they are exposed to the Motor Development/Recreation Program and then to determine their attitudinal levels toward the disabled once they have been involved in the program for a year.

A wide range in mean scores between the APE students and the PT students would provide the Motor Development/Recreation program with somewhat of a problem. In this case, one group of students would feel that the disabled are very much inferior to normal individuals whereas the other group would see them as being equals. If a situation was to arise where two of these students were placed together to work with one of the clients on Saturdays, then there could be

some very serious personality differences and the person who would suffer the most in such an occurrence would be the client. Since it is the job of the Motor Development/ Recreation Program to help every disabled person as much as possible, the above conditions would make this task most difficult.

With the results appearing as they do it can be stated that as far as attitudinal levels are concerned of those APE and PT students involved in the Motor Development/ Recreation Program; this program provides unbiased, consistent treatment of those disabled and handicapped clients involved within it.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The problem of this study was to compare the attitudes of APE and PT majors towards the disabled. All of the subjects involved in this study were involved in the Motor Development/Recreation Program for the disabled and handicapped at the University of Wisconsin - LaCrosse. The attitudinal testing device used was the Attitudes Toward Disabled Persons Scale designed by Yuker, Block and Campbell in 1959. Once the data was collected a T-Test was performed on the two sets of scores and a comparison between the two was made.

The results of the T-Test show that the null hypothesis that there will be no difference between the attitudes of APE and PT majors toward the disabled is accepted at the .05 level of significance. The highest score achieved on the ATDP Scale was attained by a PT major. Out of a possible 120 points the PT major scored 112 points. In contrast the lowest score on the ATDP Scale was 58 points, by an APE major.

Although the mean score of the PT majors is 84.0 and the mean score of the APE majors is 82.4 this difference is not great enough to be significant at the 5 per cent level

of significance. This shows that the attitudes of those APE majors and PE majors towards the disabled is very evenly matched, and this will have a positive influence on the implementation of the Motor Development/Recreation Program since the attitudes toward the disabled will be consistent within the student help.

Recommendations

It is evident that further research in the area of attitudes toward the disabled is needed. An excellent opportunity to investigate attitudes toward the disabled is by using a pretest-posttest situation with similar subjects and their experience in the Motor Development/Recreation Program. Under such conditions a controlled experiment is very possible; during the first semester of a school year. Under these conditions extraneous variables such as past experience of working in the Motor Development/Recreation Program with the disabled could be controlled and a more scientific study could be performed.

In a more elaborate and extensive study such factors as age, sex, year in college and past experience of working with the disabled could be studied to determine if any of these factors influence the attitudes toward the disabled significantly. Once these factors are determined this information would prove to be very valuable to the administra-

tors of the Motor Development/Recreation Program when assigning student assistants to the disabled clients in the Program. By making the student assistants aware that they have negative attitudes toward the disabled the Program would improve and the student assistants would learn to accept the disabled on a more positive and equal level. This would not only help the students involved in the Program, but would also upgrade the Motor Development/Recreation Program and increase acceptance levels between the students and clients.

Another area that was not covered in this study and has not been researched in the past to any significant level is the study of the attitudes of the disabled individual toward the disabled. The ATDP Scale can also be used for such a study and a comparison of attitudes of disabled persons and non-disabled persons would be a worthwhile and enlightening study. The two groups (disabled and non-disabled) would be able to learn a great deal from each other in the area of attitudes and both groups would benefit from the knowledge gained.

Another very realistic area where attitudinal studies toward the disabled would be useful would be in the early years of a persons college education (freshmen and sophomore); especially if he were interested in going into the area of study where he would be involved with the disabled. Although a negative attitude toward the disabled would not be a reason

for a person to pursue a different career; once this information is learned the person could work towards establishing more positive attitudes toward the disabled.

It is the author's hope that this research has uncovered some pertinent facts concerned with attitudes toward the disabled, which otherwise would have been overlooked. Hopefully this will also provide a starting point for further research in this relatively new field of study.

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APPENDIX A

APPENDIX 2

ATDP SCALE - FORM O

Sample scoring

Sample Response	Item Number	Statement
-2	1.	Parents of disabled children should be less strict than other parents.
+3[a]	2.	Physically disabled persons are just as intelligent as non-disabled ones.
-2	3.	Disabled people are usually easier to get along with than other people.
-3	4.	Most disabled people feel sorry for themselves.
-3[a]	5.	Disabled people are the same as anyone else.
-2[a]	6.	There shouldn't be special schools for disabled children.
-3	7.	It would be best for disabled persons to live and work in special communities.
+1	8.	It is up to the government to take care of disabled persons.
-2	9.	Most disabled people worry a great deal.
+1	10.	Disabled people should not be expected to meet the same standards as non-disabled people.
+2[a]	11.	Disabled people are as happy as non-disabled people.
+2[a]	12.	Severly disabled people are no harder to get along with than those with minor disabliities.
-2	13.	It is almost impossible for a disabled person to lead a normal life.
+1	14.	You should not expect too much from disabled people.

Sample Response	Item Number	Statement
-2	15.	Disabled people tend to keep to themselves much of the time.
+1	16.	Disabled people are more easily upset than non-disabled people.
-3	17.	Disabled persons cannot have a normal social life.
-2	18.	Most disabled people feel that they are not as good as other people.
+1	19.	You have to be careful of what you say when you are with disabled people.
-3	20.	Disabled people are often grouchy.

-27	-	Uncorrected sum of changed scores.
+27	-	Changed sign of sum.
+60	-	Add constant of 60.
+87	-	Total transformed score.

[a] Change algebraic sign of response to this statement.