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ABSTRACT

The attitudes of 26 physically handicapped and 26 nonhandicapped university students were compared in terms of social adjustment, instructional goals desired, and acceptance/rejection of handicap. Ss were administered three instruments: the Is of Identity, a measure of social adjustment; the Preferred Student Characteristic Scale, an evaluation of affective and cognitive attitudes toward instructional goals; and the Attitude Toward Handicapped Individuals, a scale of attitudes of acceptance or rejection. Results indicated that the two groups did not differ in their social adjustment or in their attitude towards the concept of "handicapped". The handicapped students were found to be more cognitive directed and the nonhandicapped, more affective directed. (CL)

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ATTITUDES OF HANDICAPPED AND NON-HANDICAPPED UNIVERSITY STUDENTS ON THREE ATTITUDE SCALES

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Attitude measurement and study has become a vital area of concern in special education. A select review of some sixty attitude studies in special education tends to support the following observations and conclusions: (1) most of the studies focused on specific categorical groups per se, (2) many used what might be called "virgin instruments" in that data about reliability, validity, and norms was often not reported or lacking, and (3) finally many lacked a more sophisticated manner of treating the data beyond simple nose counting and percentages. It is the fond hope of these writers that corrections of these weaknesses in attitude research will become evident.

One area in need of study is comparative work using several instruments with the handicapped and non-handicapped. It is felt that such comparative effort could yield valuable information about the two major groups just cited in several ways: (1) help identify instruments with a body of supporting research beyond the one shot effort (virgin type instrument), (2) help provide decision making information for use in counseling and career education, and (3) provide room for replication studies to assist in instrument development and improvement.

PURPOSE OF STUDY

The purpose of this study was to compare the attitudes of some physically handicapped and non-handicapped students attending a large university in Southern California. Three attitudinal dimensions were identified for investigation: (1) social adjustment, (2) instructional goals desired, and (3) feeling toward the concept of "handicapped" along an accepting/rejection continuum. To assist the research effort the following three null hypotheses were formulated:

1. that there would be no statistically significant mean score difference for social adjustment between the handicapped and non-handicapped groups.

2. that there would be no statistically significant mean score difference in desired instructional goals along an affective/cognitive continuum for the two groups.

3. that there would be no statistically significant mean score difference toward the concept of "handicapped" between the two groups.

PROCEDURE

Sample: Twenty-six physically handicapped students and twenty-six non-handicapped students matched for age and sex comprised

the sample used in this study. Furthermore, all of the physically handicapped subjects required the use of wheel chairs and shared a spinal affliction. Each group consisted of 20 males and 6 females. The mean age for the groups was 25 with a range from 22 to 35 years.

Instruments: Three instruments were used to gather the data related in the three null hypotheses previously cited.

(1) IOI: The Is of Identity test is a 100-item, true, false, or undecided response instrument to measure social adjustment. Weiss (1954) the author of the test reports that the norm range for the average adjusted person is between 40 and 60, with a total range of 0 to 100. Scores higher than 60 tend to indicate more effective social adjustment and, conversely, scores below 40 indicating a problem in social adjustment.

Weiss (1954) reported a .94 coefficient of reliability for his IOI. Lazar and Ernandes (1974) found a rank correlation of .343 between the IOI and the Attitude Toward Disabled Persons scale (ATDP). Stodden and Parker (1975) in a series of correlational studies reported a range from -.03 to .27 between the IOI and ATHI (Attitude Toward Handicapped Individuals) scales for university personnel training in the helping professions. Their finding is similar to that of

of Yamamoto and Wiersama (1967) who reported a correlation of -.02 between the IOI and the ATDP.

(2) PSCS: The Preferred Student Characteristic Scale is a 36-item, forced-choice response scale developed by Nelson (1964) to assess affective and cognitive attitudes toward instructional goals. It is based upon the notion that a cognitive person or student would be primarily concerned with the intellectual, abstract, and content-based objectives for learning. In contrast, the affective student would be more concerned with the emotional aspects of student learning and classroom climate. The PSCS has a score range of 0 to 36, with the lower score indicating the affective end of a continuum, while 36 the cognitive end.

The author of the scale reports reliability measures of .91 (split-half corrected) and .63 (test-retest) for the PSCS.

(3) ATHI: This is a 20-item Likert-type scale that is essentially a modification of the ATDP scale by Yuker, Block, and Younng (1966) but modified by Lazar (1971)(1973). The purpose of the ATHI is to measure attitudes of acceptance or rejection. The possible range of scores is from 0 to 120, the higher scores indicating greater acceptance of the handicapped with the lower scores indicating rejection.

The basic modification between the ATDP and ATHI was the changing of the term "disabled" to read "handicapped" and was based on the assumption that the latter concept was much broader in meaning (Lazar, 1973). Each of the 20 items is rated on a 6-point scale as indicated below:

- 3	I disagree very much
- 2	I disagree pretty much
- 1	I disagree a little
+ 1	I agree a little
+ 2	I agree pretty much
+ 3	I agree very much

Pearson product moment correlations of .83, .80, and .78 have been reported between the ATHI and ATDP (Lazar and Denham, 1974) (Stodden, Graves, & Lazar, 1973) (Sippel, Lazar & D'Alonzo, 1976). A coefficient of stability reliability of .73 (test-retest) after two weeks has been reported by Stodden, Graves, and Lazar (1973). All correlations mentioned were significant at the .01 level.

Procedure: The three instruments were administered to the handicapped group individually because of the wheel-chair and other physical constraints that made group testing unrealistic. The tests to this group were administered by one of the junior authors who was also physically handicapped and in a wheel-chair. The matching sample of non-handicapped were taken from a data bank of several hundred

students tested within the past year as part of a long range attitude study covering a three year period. Uniform procedures for test administration and scoring were followed. Test packets were mixed and randomly distributed to avoid a serial effect. The administration of the mattery required about 50 minutes for the non-handicapped group, whereas, the handicapped group required 70 minutes.

Treatment of Data: A series of independent mean t test were used for the statistical treatment of data along with some Pearson product moment correlations. The .05 level of significance was selected as the basis for rejection of any of the three null hypotheses that were formulated. Table 1 provides the means and standard deviations for the three instruments by sex and group membership. The small ratio between male and female subjects made it inappropriate to run any statistics on the sex variable per se. In Table 2 the results of the independent mean t test are reported. Pearson product moment correlations are shown in Table 3.

RESULTS

No statistically significant differences were found for two of the three questions that were studied, but stated in null hypotheses form. No significant correlations were found.

It was indicated earlier that the small number of matched females prevented any statistical treatment of data concerning the sex variable for either the handicapped and non-handicapped group. Yet, some of the mean differences shown in Table 1 would support the need for a future study using an appropriate size sample group for the sex variable. Yuker and others (1966) in their development of the Attitude Toward Disabled Persons scale found a need and justification for separate norms for both the sex variable and between handicapped and non-handicapped groups. This supports the notion that this might also hold true for the ATHI, since it was derived from the ATDP. Lazar (1976) reports that some initial running of data tends to support this notion. No research has been found where the IOI and PSCS have been used in comparing the handicapped and non-handicapped, or ever used with a handicapped sample per se. Again, this unknown, tends to identify an area for further research.

The first null hypothsis that there would be no significant mean score difference for social adjustment between the handicapped and non-handicapped groups as measured by the IOI for social adjustment was sustained. A study of Table 2 will reveal that the non-handicapped had a mean

score of 77.40 verus 71.84 for the handicapped group. Yet, both groups scored in the well above average adjustment range of 40-60 advocated by Weiss (1954). Reasons for this will be discussed later in this paper.

The second null hypothsis that there would be no significant mean score difference in desired instructional goals along an affective/cognitive continuum is rejected. A significant difference was found between the handicapped and non-handicapped groups on the PSCS as reported in Table 2. The handicapped group's mean score of 19.80 versus 15.52 for the non-handicapped, indicates a stronger cognitive orientation and direction when the two groups are compared along and affectice/cognitive continuum. Since the PSCS has a score range of 0 to 36, the non-handicapped group had an affective orientation and direction. Again, this finding and possible reasons will be discussed later.

No significant difference was found between the two groups toward the concept of "handicapped" per se. Thus, the third null hypothsis that no significant mean scores between the handicapped and non-handicapped as measured by the ATHI is sustained. It is interesting to note that both groups had a mean score of about 70 which was the cut off point for acceptance as established by the author of the ATHI.

DISCUSSION

The finding that both groups, handicapped and non-handicapped, rated high in their social adjustment as measured by the IOI was most interesting. Some might be tempted to question, if not challenge, such a finding. The argument might assert, how can individuals physically disabled within a life space dependent on wheel chairs, supporting others, and having to combat numerous physical and social constraints, rank so high in social adjustment ? How can this finding be explained ? Two avenues of approach might be utilized in offering an explanation: (1) the disabled as a sample, and (2) the nature of the measuring instrument.

There is no doubt that the physically disabled group was comprised of a highly select group of individuals that have had many trying years of learning and acquiring successful adaptive skills. Furthermore, this group was well organized as a peer group on campus with a member of their group as an advocate in an administrative position with influence within the campus power structure. Furthermore, the cultural posture supported by both federal and state legislation has further supported the right of "normalcy" that can reflect the attitudinal change upon the part of many handicapped. All these factors tend to

bias in a positive manner the changing attitudes of both the handicapped and non-handicapped.

The second explanation might focus on the instrument used in this study to measure social adjustment, the IOI. While Weiss (1954) indicated a norm range of 40 to 60 for his instrument, no research could be found to support the rationale and procedure used to ascertain such a range. In a recent study, the range of 40 to 60 has been challenged as maybe being too low, and in serious need of new norms (Lazar, Haughton, & Orpet, 1975). Just as the two groups scored high in this study, so did the experimental and control group in the recent Lazar and others (1975) study. It was also concluded that any future research using the IOI should be correlated with other instruments measuring social adjustment.

Why was there no significant difference between the two groups toward the concept of "handicapped" per se ? No solid reason can be offered specifically. Yet, as just stated, the changing social scene in terms of advocacy movements and legislation might be partially responsible. Also a better educated and informed public about the rights and needs of various handicapped groups can be another factor. Attitudes can be changed by appropriate information and social reinforce-

ment in a more accepting and positive direction (Yuker and others, 1966; Lazar, Gensley, & Orpet, 1971; Lazar, Orpet, & Revie, 1972; Lazar, Gensley, & Gowan, 1972; Lazar, Orpet & Demos, 1976; Sippel, Lazar, & D'Alonzo, 1976).

A significant difference between the handicapped and non-handicapped was found in terms of instructional goals on an affective/cognitive continuum as measured by the PSCS. It was stated earlier that the handicapped group tended toward the cognitive direction, whereas the non-handicapped tended toward the affective direction as indicated by the score range of the PSCS. This might best be explained by clarifying the scoring of results on the instrument of concern. When using Nelson's (1964) method of scoring, the range of zero (affective) to 36 (cognitive) with the mean between the two categories would fall around 18. The handicapped had a mean score of 19.80 which is on the cognitive side of the mean according to Nelson, while the non-handicapped had a mean of 15.52 which is on the affective side of the scale. Lazar and others (1971) modified the scoring method into three categories: 0-12 (affective), 13-24 (affective/cognitive), and 25-36 (cognitive), thus accounting for the regression toward the means affect, as well as the more critical point that many people might not be either/or but rather a blend of both, such as found in the middle category

called affective/cognitive. With this modified approach, despite the mean differences on the PSCS, the handicapped and non-handicapped can be designated as a blend of the two in terms of being affective/cognitive since both mean scores are near the mean for the instrument. This scoring offers a more realistic approach rather than just a simple either/or as offered by Nelson.

Another reason for the handicapped students being more cognitive can be attributed to years of hard work to prove that they can be equal to or better than their non-handicapped peers in academic efforts. This viewpoint offers some serious implications for those concerned with career education and vocational counseling. One other indicator was the notion expressed by several of the handicapped that they might have more time to devote to their studies because of the constraints do to their physical disability.

Finally, the three Pearson product moment correlations between the three criterion instruments were low and not statistically significant. The results are indicated in Table 3. Several other studies reported similar results for the criterion measures (Lazar & Ernandes, 1974; Lazar & Denham, 1974; Haughton, Gorton, & Lazar, 1974; Lazar, 1976).

SUMMARY

This study compared the attitudes of handicapped and non-handicapped university students on three dimensions of attitudes as measured by three separate instruments. These aspects of attitude included social adjustment, feeling toward the concept "handicapped" and, the kind of instructional goal desired on an affective/cognitive continuum. Correlations were made between the three instruments used to assess attitudes.

The handicapped and non-handicapped did not differ in their attitude towards the concept of "handicapped" nor in their social adjustment. They did differ in terms of instructional goals with the handicapped being cognitive while the non-handicapped were affective directed. Low correlations were obtained between the three scales.

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TABLE 1

STANDARD DEVIATIONS AND MEANS BY SEX ON THREE DIFFERENT ATTITUDE INSTRUMENTS

GROUP/TEST/SEX	N	$\bar{X}$	s.d.
Handicapped Group:			
ATHI - males	20	69.65	12.72
ATHI - females	6	74.50	11.62
PSCS - males	20	20.42	6.33
PSCS - females	6	17.83	10.05
IOI - males	20	73.47	16.61
IOI - females	6	66.67	16.21
Non-handicapped Group:			
ATHI - males	20	70.38	11.24
ATHI - females	6	67.33	15.02
PSCS - males	20	15.84	6.93
PSCS - females	6	14.50	6.74
IOI - males	20	73.05	19.90
IOI - females	6	78.50	14.62

TABLE 2

A STUDY OF MEAN DIFFERENCES ON
THREE KINDS OF ATTITUDE SCALES

TEST	GROUP	N	$\bar{X}$	s.d.	t	p
ATHI	Handicapped	26	70.77	12.42	.38	n.s.
	Non-handicapped	26	69.46	12.10		
PSCS	Handicapped	26	19.80	7.23	2.16	.05
	Non-handicapped	26	15.52	6.77		
IOI	Handicapped	26	71.84	16.44	1.34	n.s.
	Non-handicapped	26	77.40	12.56		

TABLE 3

PEARSON PRODUCT MOMENT CORRELATIONS
BETWEEN INSTRUMENTS

INSTRUMENTS	CORRELATION
ATHI & PSCS	-.30
ATHI & IOI	.12
PSCS & IOI	.12