

ATTITUDES TOWARD PHYSICALLY DISABLED PERSONS: DO EDUCATION AND PERSONAL CONTACT MAKE A DIFFERENCE?

VERENA F. GOSSE and GLENN SHEPPARD

Memorial University of Newfoundland

Abstract

This study compared the attitudes toward physically disabled persons held by individuals at three educational levels who had personal contact versus no such contact with the disabled.

Data analyses revealed a significant main effect for education. The higher their educational level the more positive were the students' attitudes with the exception of no significant differences between grade eleven and university students. The main effect for contact indicated that, in general, those who had contact with physically disabled persons were more favorable in their attitudes than those who had had no contact. However, an examination of subgroup means showed no differences between grade XI contact and no-contact groups. The interaction effect between education and contact did not appear to be linear. Various explanations for these results are mentioned with the implication such findings may have for current efforts at educational mainstreaming.

Résumé

Cette étude fit la comparaison des attitudes envers les handicapés physiques chez trois groupes de personnes appartenant à trois niveaux d'éducation différents, dont certains avaient eu des contacts personnels avec les handicapés et d'autres aucun contact du tout.

Des analyses des données obtenues révélèrent un effet très significatif qui provenait de l'éducation. Plus haut le niveau, plus positives les attitudes des étudiants, à l'exception de ceux qui finissaient leurs études secondaires et les étudiants d'université. En général, les attitudes de ceux qui avaient des contacts avec les handicapés se révélèrent plus positives que celles des individus qui n'avaient pas eu de tels contacts. Pourtant un examen des moyennes d'un groupe de contrôle ne révéla aucune différence pour ce qui était des étudiants en grade XI, avec ou sans contact. L'interaction entre éducation et contact ne semblait pas linéaire. Des explications de ces résultats sont présentées avec les implications de tels résultats pour les tentatives courantes d'intégration des handicapés dans le système scolaire normal.

The ultimate goal of rehabilitation is to prepare physically disabled persons for integration into the mainstream of society. Since the attitudes of others toward the disabled are a significant determinant of success in achieving this objective, there exists a pressing need for research in the area of modifying or altering such attitudes (Donaldson & Martinson, 1977). A fuller understanding, then, of the process by which attitudes are formed, reinforced, modified and otherwise effected is indicated.

It is widely assumed that increased familiarity and contact will positively modify the attitudes and expectations of non-disabled persons toward the physically disabled (Allport, 1958; Arnholter, 1963; Higgs, 1972; Homans, 1950; Roether, 1959). Some evidence also supports the hypothesis that there is a positive relationship between educational level and attitudes toward disabled

persons (Auvenshine, 1962; Knittel, 1963; Roether, 1959; Siller, 1944). Both educational level and contact are products of past experience and since experience increases with age, within the restrictions of a particular society, it is reasonable to assume that both these factors interact to influence the attitudes of non-disabled persons toward disabled persons.

The purpose of this study, then, was to determine whether or not educational level and personal contact are related to the measured attitudes of non-disabled persons toward the disabled, and to examine the possibility of an interactive effect.

METHOD

Subjects

The total sample of 696 subjects included 273 grade seven students, 268 grade eleven students,

and 155 second-year university students selected from a number of junior and senior high schools and Memorial University in St. John's, Newfoundland, Canada.

Although the literature is not conclusive about sex differences in attitudes toward disabled persons, some studies have found that females respond more favorably than males to disabled persons (Fischbein, 1962; Siller, 1964; Granskow & Maglione, 1965). Accordingly, a chi-square test for goodness of fit was performed on the sample to determine whether or not the sample selected from each education level was truly representative of both sexes. The results of this test indicated that these samples were not biased with respect to the number of males and females included.

All students in the study volunteered to respond to the various instruments, and in the case of the junior and senior high school samples, parents were informed that the study was being conducted.

Instruments

Form B of the *Attitudes Toward Disabled Persons* (ATDP) scale, designed by Yuker, Block and Campbell (1960), was used to measure the attitudes of subjects in this study. The ATDP invites subjects to respond to 30 relatively short statements about the disabled by expressing agreement or disagreement on a six-point Likert-type scale. A high score (maximum 180) on this scale indicates a favorable attitude towards physically disabled persons and a low score reflects a less favorable attitude.

Extensive analysis of the validity and reliability of the ATDP has been reported (Yuker, Block & Young, 1970). Shaw and Wright (1967) assert in their review of many attitude scales that it has better supporting data than most scales, and that it is quite adequate for research purposes.

Underlying the rationale for the ATDP is the assumption that there are at least two views held in North American culture toward the physically disabled. One is that they are "different" from the

non-disabled persons; suggesting that the disability effects the total personality in some pervasive sense altering all aspects of functioning. The other view is that, although the disabled person may be limited in certain abilities, functioning and abilities in general do not differ significantly from non-disabled persons. The authors of this scale take the latter position to be the favorable one.

Subjects also were given a general information questionnaire to obtain demographic information and to determine previous contact, if any, with physically disabled persons.

Analysis of Data

Data collected from the samples at all three educational levels were separated into two groups: the contact group, consisting of subjects who had experienced previous contact with physically disabled persons, and the no-contact group, consisting of subjects who had experienced no such contact.

A two-factor analysis of variance (ANOVA) was performed on the data in order to determine the main effects of the independent variables and possible interaction between the two independent variables in their relationship to the dependent variable.

In addition, the Scheffé procedure (Roscoe, 1969) for testing all possible comparisons between means was used.

RESULTS

As can be seen from Table 1, the mean ATDP scores, for both the contact group and the total sample, appear to be in the predicted direction with a progression from the lowest score for Grade 7 students to the highest for the university subjects. However, for the no-contact subjects the Grade eleven students appear to have the higher score.

The analysis of variance performed as part of the data analysis showed that there were separate main effects due to personal contact and to educational level related to the measured attitude

TABLE 1
Means and Standard Deviations of ATDP Scores by Educational Level for Contact and No-Contact Groups

	Educational Level											
	Grade 7			Grade 11			University			Total		
	N	\bar{X}	S.D.	N	\bar{X}	S.D.	N	\bar{X}	S.D.	N	\bar{X}	S.D.
Contact	177	106.34	11.2	179	114.70	9.6	121	119.40	10.9	477	112.79	8.0
No Contact	96	101.13	8.6	89	115.21	9.3	34	107.29	12.1	219	107.81	9.3
Total	273	104.5	10.0	268	114.8	10.1	155	117.6	11.6	696	109.60	13.1

towards disabled persons. The analysis also showed that there was an interaction between these two independent variables. The results of this analysis of variance can be seen in Table 2.

TABLE 2

Analysis of Variance of the Relationship Between the Independent Variables (Contact and Educational Level) and the Dependent Variable (ATDP Scores)

Source	df	MS	F
Educational Level (E)	2	6260.17	14.337*
Contact (C)	1	4001.62	9.165*
E x C	2	1697.90	3.889
Within Subjects	690	436.6	

*p < .05

Main Effects of Contact and Educational Level

A comparison was made of ATDP scores (see Table 2) between the total number of subjects who had previously experienced personal contact with disabled persons and subjects who had not experienced such contact. This analysis revealed that subjects who had experienced contact with physically disabled persons held more positive attitudes towards them and therefore can be said to be generally more accepting of the physically disabled persons than subjects who had no such contact.

Comparisons of ATDP scores (See Table 2) between subjects in each of the three educational levels revealed that subjects of both grade eleven and university samples scored higher on the ATDP than subjects in grade seven, indicating that subjects in the higher educational levels tended to be more accepting of physically disabled persons than subjects in the lower educational level. These results support trends found in other studies (Auvenshine, 1962; Knittel, 1963).

Interaction Effects of Contact and Educational Level

Comparisons of ATDP scores between subjects who had previously experienced contact with disabled persons and those who had not experienced such contact, for each of the three educational levels, revealed that the two independent variables, contact and educational level, interact in their relationship to measured attitudes toward disabled persons (Table 2).

The mean ATDP scores for both the grade seven and university contact groups were significantly higher than the no-contact groups for these two educational levels, indicating a more positive attitude toward physically disabled persons held by those who had personal contact. This can be seen in Table 3.

TABLE 3

Summary of Scheffés showing all possible comparisons of Contact and No-Contact Groups for the three Educational Levels

Variable Combination	df=K-1, N-K	F
Grades Seven, Eleven	2,693	17.3**
Grade Eleven, University	2,693	0.89
Grade Seven, University	2,693	21.8**
Grade Seven: Contact, No Contact	1,271	3.87*
Grade Eleven: Contact, No Contact	1,266	0.35
University: Contact, No Contact	1,153	9.2**
No Contact: Grades Seven, Eleven	2,216	10.8**
No Contact: Grade Seven, University	2,216	1.09
No Contact: Grade Eleven, University	2,216	1.8
Contact: Grades Seven, Eleven	2,474	8.08**
Contact: Grade Seven, University	2,474	15.1**
Contact: Grade Eleven, University	2,474	1.06

*p < .05

**p < .01

The mean ATDP scores for both the grade eleven contact and no-contact groups were significantly higher than for the grade seven groups, thus indicating that the grade eleven subjects held more positive attitudes toward physically disabled persons regardless of personal contact. Also, the mean ATDP score of the university contact group was significantly higher than that of the grade seven contact group (Table 3).

There was, however, no statistically significant difference in mean ATDP scores between the grade eleven and university contact groups, nor was there any statistically significant differences in the mean ATDP score between the grade eleven and university no-contact groups (Table 3). This result suggests that there is no difference in expressed attitude toward physically disabled persons between subjects in grade eleven and subjects in university. However, this finding may be explained by the possibility that the approximate two-year span in education level is not wide enough to result in an observable difference in attitudes; or it may be the result of a Type II error.

Further examination revealed that this interaction relationship between contact and educational level was not linear, since subjects in both the contact and no-contact groups of each successive grade level did not score increasingly higher on the ATDP. Also, the contact group of each grade level did not score higher on the ATDP than the no-contact group and neither was there any

statistically significant difference between the mean ATDP score of the university and grade seven no-contact groups.

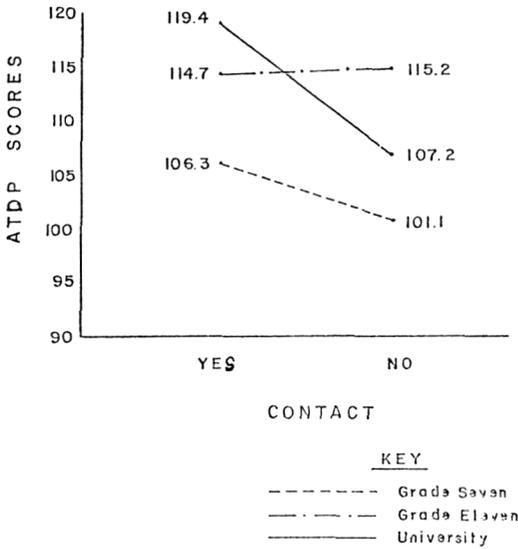


Figure 1. Mean ATDP Scores showing interaction between Educational Level and Contact

This non-linear relationship between educational level and contact in relationship to measured attitudes of non-disabled persons towards disabled persons generally supports the findings of Knittel (1963). Knittel (1963), however, found that junior high school students who had no disabled sibling scored higher on the ATDP-O than senior students, and that senior high school students, with a disabled sibling, showed a more positive attitude toward disabled persons than junior students. Thus, Knittel's (1963) specific results did not correspond to those of the present study, but this might be related to his use of the ATDP-O, rather than the ATDP-B. Also, Knittel's (1963) study involved subjects with disabled siblings, a very select type of relationship.

DISCUSSION

Results of this study indicate that individuals having had contact with physically disabled persons held more favorable attitudes towards the physically disabled than those without such experiences. Furthermore, individuals in the higher educational levels, grade eleven and second-year university, had more favorable attitudes than students in grade seven. An analysis of the possible interactive effects of contact and educational level suggests a non-linear relationship with significant differences in attitudes being revealed between contact and no-contact groups for both grade seven and university

subjects, but no such difference for grade eleven students.

Since all subjects in the study were in various "stages" of adolescence, the results should perhaps be examined within the framework of the social and emotional issues of this developmental period. During adolescence the individual is confronted with many changes, both physical and emotional, as well, new demands of the social environment. Intellectual abilities during this period change from a concrete to an abstract level, allowing the individual to infer beyond the perceptually given.

Since the adolescent is constantly being subjected to new experiences, attitudes may become more liberal (Powell, 1971), and it is conceivable that exposure to new experiences could result in a higher tolerance and greater acceptance of those who are "different". Thus, from this perspective, positive experiences with physically disabled persons during adolescence might generalize to more positive attitudes towards all or most of the physically disabled. This, then, might account for the general findings that with increasing educational level, subjects who have experienced contact with physically disabled persons tend to have more favorable attitudes towards physically disabled persons as a group than subjects who have not experienced such contact.

However, contrary to this speculation is the view that since the adolescent is preoccupied with body image there may be a greater tendency towards stereotypical behavior. If the finding that the grade eleven students had the more favorable attitudes amongst the no-contact subjects is not spurious then this study does not permit further speculation as to possible explanations for such a phenomenon.

The major implication of the study relates to the integration and participation of physically disabled persons in the mainstream of today's society. If contact with physically disabled persons promotes more favorable attitudes, and furthermore, if such contact is differentially effective at varying educational levels, it suggests possibilities for increasing the efficacy of the many programs being developed for mainstreaming such children (Public law 94-142, 1975).

This study has a number of limitations: problem of internal validity because of its ex post facto design; lack of control of possible confounding variables such as, age and cognitive ability; and a non-quantitative definition of contact with physically disabled persons. Nevertheless, the results suggest that the possible positive attitudinal effects of contact with the physically disabled should be pursued as a source of positive strategies to increase the effectiveness of educational models for mainstreaming.

The need for effective integrative approaches is accelerating with the rapid swing away from the traditional self-contained special class. Further research, of an experimental nature, should permit the systematic manipulation of such possible potent independent variables as contact, its duration and quality. In fact, Donaldson and Martinson (1977) in a recent review of the research literature could find only four experimental studies which reported the positive modification of attitudes towards physically disabled persons. It is clear that, without a much more extensive research effort, efficacy studies of our current mainstreaming initiatives may resemble the negative conclusions of those reports on the segregated models of the very recent past.

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