
CHAPTER 13
Students with Physical
Disabilities in
Higher Education:
Attitudes and Beliefs That
Affect Integration

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Attitudes can be a vital ingredient in the success or failure of students with a disability and in the overall success of the mainstreaming effort in post-secondary education. Attitudes of nondisabled students, faculty, the administration, and student services personnel, as well as those of other students who have a disability, can all have profound effects on the social and educational integration of disabled students into the college community (Nathanson, 1979). The purpose of this chapter is to provide a summary of the attitudes of these groups and of the ways in which these attitudes translate into behaviors that facilitate or hamper the integration of college students who have a physical disability. Efforts to change attitudes in the college context are also reviewed. The goal is to summarize the trends and, where possible, draw implications for the successful integration of college students with a disability, rather than to comment on the methodological and statistical adequacy of individual studies.

IMPORTANCE OF COLLEGE EDUCATION FOR PEOPLE WITH A PHYSICAL DISABILITY

A college education for people who have a physical disability is important for the same reasons as it is for nondisabled people: it helps in fulfilling personal goals, allows for effective competition in the job market, and contributes to independence and financial security. There is one difference, however; the data indicate that a college education is *more important* for those who have a disability. Asch (1984) cites 1983 census data indicating that while the employment figures for college graduates with a disability is approximately 60% of that of nondisabled graduates, the corresponding figure for all people with a disability is only about 30%. There is also evidence to show that once people who have a disability enter college, they graduate at approximately the same rate (47%) as do able-bodied students (52%) (Lonnquist, 1979). Lonnquist's study also shows that the employment rate of graduates with a disability (79%) is considerably greater than that of disabled college dropouts (52%). These figures are similar to employment rates of nondisabled college attendees (i.e., 89% and 63%, respectively). But a college education has been shown to meet other than economic goals. For example, Helten's findings (cited in Perry, 1981) indicate that college graduates with a disability experience greater job satisfaction, remain in their positions longer, and spend less time finding employment than do dropouts, who, in turn, fare better than those who never went to college.

While the employment picture for college graduates with a disability is by no means rosy, since at all educational levels the jobless rate for people with a disability is higher than for the nondisabled population, the data on the effects of a college education are encouraging. From society's point of view, having extra taxpayers rather than welfare recipients is desirable.

GROWING NUMBER OF STUDENTS WITH A PHYSICAL DISABILITY

Statistics on the percentage of college students with a disability are notoriously vague. It has been estimated that between 1970 and 1980 anywhere from 1% to 6% of college students had a physical disability (Kirchner & Simon, 1984a; Perry, 1981).

For a variety of reasons, including changes in the law, the civil rights movement, increased public awareness, better public school education, advances in medical technology and rehabilitation engineering, and the growing number of middle-aged and elderly college students, the number

of students with disabilities appears to be increasing in institutions of higher education. Informal statistics, such as those provided by Perry (1981), document the increase. He indicates that the University of North Dakota has experienced a change from 11 known students with a disability in 1970 to 360 such students in 1980. Kirchner and Simon (1984a) cite data showing increases in the number of college students who have a visual impairment, and White, Karchmer, Armstrong, and Bezozo (1983) document increases in the number of students with a hearing impairment. Enrollment statistics from my own institution, Dawson College, show a growth from 24 students with disabilities in 1984 to 50 in 1987. Of course, these enrollment figures cannot be taken at face value. Statistics are more likely to be reported by those institutions that provide good services and facilities for students with a disability and, thus, are likely to host a disproportionate number of such students. Nevertheless, since more institutions are providing services today than 10 years ago, one can assume that the percentage of students with a disability in American and Canadian colleges and universities is, indeed, on the rise.

ATTITUDES OF VARIOUS GROUPS

Attitudes Of Nondisabled Students

This section deals primarily with the attitudes of nondisabled students who are, at best, casual acquaintances of students who have disability. While friendship formation and interaction between students with a disability and their able-bodied friends are among the more important areas that need to be researched in the future, at present there appear to be no studies that have investigated these issues.

There are very few surprises in the data on attitudes of able-bodied college students. Generally, these are somewhat more positive than attitudes of other age groups and certainly more positive than those of high school students (Ryan, 1981). That college students have more liberal attitudes concerning most minority groups, especially when attitudes are measured using paper-and-pencil instruments, is a well-documented finding. Indeed, Minnes and Tsuk (1986), among others, report that scores on a social desirability scale and the Attitudes Toward People with Disabilities scale (ATPD) were positively related. Thus, it is hardly surprising that education and social science students have been found to have more favorable attitudes than business and engineering students (Auvenshine, 1962, cited in Kelly, 1984). As for sex differences, data indicate either no differences (Semmel & Dickson, 1966) or differences that favor females (Stovall & Sedlacek, 1983).

Positivity (Sympathy) Bias and Response Amplification. As Chapter 4 (by Katz, Hass, and Bailey) in this book clearly shows, much of the data can be understood through an appreciation of the positivity or sympathy bias, on the one hand, and of response amplification, on the other. Many studies have shown that students evaluate certain stigmatized others, such as blacks, the elderly, and those with a physical disability, more favorably than nonstigmatized individuals. There are data showing that this holds across a variety of contexts and physical disabilities (Belgrave, 1985; Carver, Glass, & Katz, 1978; Carver, Gibbons, Stephan, Glass, & Katz, 1979; Gibbons, Stephan, Stephenson, & Petty, 1980; Mitchell & Allen 1975; Scheier, Carver, Schultz, Glass, & Katz, 1978; Tagalakis, Amsel, & Fichten, in press).

What distinguishes studies showing positivity bias from those demonstrating response amplification (i.e., the tendency to make more extreme evaluations in both the negative and positive directions) is the personal relevance of the situation. In situations where there are no personally relevant consequences involved, a positivity bias predominates. In those situations where the actions of the person with a disability are relevant and important to the evaluator (Gibbons, Stephan, Stephenson, & Petty, 1980), or where ambivalent attitudes are legitimized for subjects (Carver, Gibbons, Stephan, Glass, & Katz, 1979), response amplification prevails.

But what happens when the favorable or unfavorable consequences to oneself of the disabled person's actions are not "preprogrammed," when he or she is presented in an ambiguous light? The data here are reasonably clear-cut but not nearly as optimistic as the numerous positivity bias studies would suggest.

Social Distance. Data from studies investigating social distance show that for relatively distant or transient situations, attitudes are generally favorable. For closer, more permanent, and intimate situations, attitudes become progressively more negative (Semmel & Dickson, 1966; Stovall & Sedlacek, 1983).

There is currently much debate about the invariance or the situational specificity of preference for people with particular disabilities (Richardson & Ronald, 1977; Yunker, 1983). In the college environment, there appears to be only one study that has attempted to systematically assess students' preferences as a function of situational context. This study shows that the nature of the interaction situation affects attitudes toward people with specific disabilities, with wheelchair users preferred over blind students in academic situations, and blind students favored over wheelchair users in social situations (Stovall & Sedlacek, 1983). Given the multidimensionality of attitudes toward people with disabilities (see Schmelkin, Chapter 10 in this book), this is hardly surprising.

Affect. In the area of affect the data are not encouraging. Generally, the findings show that college students are less comfortable with their disabled than with their nondisabled peers (Fichten, 1986; Fichten, Amsel, Robillard, & Judd, 1987; Robillard & Fichten, 1983). During interaction with a person who has a disability, students experience higher anxiety (heart rate) than during interaction with a nondisabled student (Marinelli & Kelz, 1973).

Interaction Behavior. Again, the findings are not encouraging when one examines actual behavior. Data show that when students are faced with a clear choice—to interact with a student who has a physical disability or one who does not—they feel duty bound to interact with the person who has the disability. However, when it appears as though there is a socially acceptable reason to avoid contact, students will avoid the person with a disability (Snyder, Kleck, Strenta, & Mentzer, 1979). This avoidance of people with a physical disability is also apparent in Eberly, Eberly, and Wright's (1981) study on vocational rehabilitation students; while these students showed the usual positivity bias in their ratings of potential clients with a physical disability, when asked about their preferences concerning which client groups they wanted to work with, they indicated a clear preference for nondisabled clients.

Able-bodied students have also been shown to prefer greater physical distance between themselves and a student who has a disability (Kleck, 1969). While the pioneering work of Kleck and his colleagues (Kleck, 1968; Kleck, Ono, & Hastorf, 1966) on interaction behaviors has shown numerous differences between the behaviors of able-bodied people when they interact with individuals who have a disability and when they interact with nondisabled people, no such behavioral data on college students exist. Clearly there is a need for studies that investigate actual behavior in typical college interaction situations.

Attitudes Uncontaminated by Positivity Bias or Sympathy Effects. What are attitudes toward students with a disability when attitude measurement is not contaminated by positivity bias/sympathy effects? To avoid sympathy effects, four studies used a response prediction paradigm to assess attitudes toward students with a disability. In the study by Babbit, Burbach, & Lutovich (1979) it was found that students' self-reported attitudes are significantly more favorable than their ratings in a response prediction condition, in which they indicate not their own attitudes but those they believe to be the attitudes of other college students. These findings are consistent with the results of the other three studies, in which it was found that the response prediction paradigm overrides the positivity bias and that students with a disability are evaluated considerably more negatively than able-bodied students on a variety of characteristics (Fichten & Amsel,

1986a; Fichten, Amsel, Robillard, & Judd, 1987; Robillard & Fichten, 1983). These data, considered together, suggest that nondisabled students, while denying that they themselves are prejudiced, believe that those around them are.

What Accounts for the Negative Attitudes? If one excludes the positivity bias results from consideration, the data suggest that able-bodied college students have negative attitudes toward their peers who have a physical disability. They also feel uncomfortable with such students and will avoid them if there is a socially acceptable reason for doing so. In order to facilitate integration, it is necessary to examine what factors account for these attitudes. In the research Rhonda Amsel, Claudia Bourdon, and I have been doing for the past five years, the goal has been to understand the reasons for the negative attitudes, social anxiety, and avoidant behavior.

Part of the explanation for the negative attitudes toward students with a disability is that nondisabled students believe that their disabled peers are very different from themselves. For example, Linkowski, Jaques, and Gaier (1969) demonstrate that able-bodied students believe that a physical disability has adverse consequences for self-esteem, independence, and social relationships. Our own studies, as well as that of Weinberg (1976), demonstrate that able-bodied students believe that students with a disability not only possess negatively valued characteristics, but also that in virtually all domains of interpersonal life they are very different from themselves. For example, while able-bodied students are seen as dominant, extraverted, and calculating, students with a disability are seen as being the opposite—submissive, introverted, and unassuming. While able-bodied students are seen as talkative and sociable, students with a disability are seen as helpless and dependent (Fichten & Amsel, 1986a). Able-bodied students are also quite uncertain about the sociability of students with a disability (Fichten, Compton, & Amsel, 1985). In addition, they believe that male students with a disability are less masculine and females less feminine than their able-bodied counterparts, and that students who have a disability are more socially anxious and less likely to be dating than nondisabled students (Robillard & Fichten, 1983).

In other words, students with a disability are seen as very different in areas important for college-age students. Given the impressive data on the effects of similarity on liking and attraction (Byrne, 1969), it is hardly surprising that able-bodied students do not generally seek out students with a disability as prospective friends and acquaintances. But this explains only part of the problem. The rest—that is, lack of comfort and avoidance of students with a disability—must also be accounted for.

What accounts for lack of comfort and avoidance? While studies from a variety of theoretical orientations have been carried out (Siller, 1984a; 1984b), most do not deal directly with college students. Our own research,

conducted from a cognitive-behavioral perspective, has tried to examine the effects of two factors found to cause anxiety and avoidance: poor social skills and faulty cognitive appraisals.

The first topic we explored was the role of social skills, since it was plausible to assume that anxiety in interpersonal encounters between able-bodied and disabled students may be due to able-bodied students' not knowing what to say or do during interaction. Hundreds of subjects and two studies later (Fichten & Bourdon, 1986), we found that able-bodied students *do* know what to say or do in frequently occurring interaction situations. However, we also found that they underestimate the appropriateness of their behaviors, suggesting that negative self-evaluation, self-consciousness, and low self-efficacy expectations may be implicated in the lack of ease that characterizes interaction between able-bodied and disabled students.

These findings prompted us to explore the role of cognitive factors. Results to date show that the thoughts, both about oneself and about the person with a disability, that students have concerning interaction with individuals who have a physical disability and those who do not, are clearly different. This is especially true of negative thoughts about the other person, which are also strongly related to lack of comfort during interaction (Fichten, 1986; Fichten & Amsel, in press). Research that further explores the nature of the thoughts that influence comfort during interaction is presently in progress in our laboratory. In this current investigation we intend to examine the nature and content of thoughts that are associated with high and low anxiety. Our study of self-efficacy expectations also suggests that cognitive factors constitute an important dimension (Fichten, Bourdon, Amsel, & Fox, in press). That study reported that weak expectations of being able to interact effectively with people who have a physical disability are related to discomfort, lack of knowledge about appropriate behavior, and negative attitudes toward disabled people.

Attitudes of Professors

There is relatively little research on attitudes of professors toward students with a physical disability. What little research exists suggests that professors have moderately favorable attitudes toward disabled students on campus, but their attitudes are somewhat less positive about having such students in their own department. Experience teaching students with a disability, however, generally results in more positive attitudes and greater comfort with disabled students.

Admission Policy. One way of inferring professors' attitudes is to examine their views on the admission of students with a disability to their institutions and departments. A study by Newman (1976), which sampled a large

number of professors, shows that 78% of them said the university should have an unrestricted admission policy. However, when admission to their own departments was at issue, only 60% said that an unrestricted admission policy was desirable. In other words, as with the able-bodied students, the greater the social distance, the more favorable the attitudes, while the lesser the social distance, the more negative the attitudes.

Why do professors not favor an unrestricted admission policy? Newman's (1976) study showed that 48% of professors indicate that there would be problems with the admission of students with a disability to their departments. While they believe that orthopedic problems, including amputations, cerebral palsy, and paralysis, would cause some difficulties, a hearing impairment is considered to be moderately handicapping, and blindness is seen as the most serious disability for academic work. The assumption that a visual impairment constitutes a major handicap for scholarly work is similar to the beliefs of the able-bodied students in Stovall and Sedlacek's (1983) study. In our own studies (Fichten, Amsel, Bourdon, & Creti, in press; 1986) it was also found that professors have a clear hierarchy of preference, orthopedically impaired students being most preferred. The ratings of visually impaired, cerebral palsied, and hearing-impaired students are different, however, for professors who have not taught students with the disability in question; they believe that hearing impairment and cerebral palsy were the most undesirable disabilities for academic work. Interestingly, professors who have experience teaching students with the disabilities in question believe that a hearing impairment is less of an academic handicap than a visual impairment or cerebral palsy. We also found that professors, especially those who have not taught disabled students, are uncomfortable with students who have a disability.

Effects Of Contact and Experience Teaching Students with a Disability.

Given professors' lack of ease with students who have a physical disability, it is important to know what can be done to alleviate discomfort and make professors more interested in teaching disabled students. The available research on this topic focuses on the effects of contact and experience. Three investigations (Fichten, Amsel, Bourdon & Creti, in press; Fonosch & Schwab, 1981; McQuay, 1978) show that professors with contact or experience with disabled students have more favorable attitudes than those who have no such experiences. The study by Fonosch and Schwab also found that female professors and those in education and social science programs hold more positive attitudes. The study by Fichten and colleagues found that experienced professors are more willing to teach students with a disability in the future and more comfortable with disabled students in general.

Another study (Walker, cited in Emerton & Rothman, 1978) found that

experience with hearing-impaired students resulted in more negative attitudes among Rochester Institute of Technology (RIT) professors, contradicting the results of the studies described above, even though one of these (McQuay, 1978) focused exclusively on professors' attitudes toward hearing-impaired students. Perhaps the methodology of the Walker study, which assessed pre-post changes, and the design of the other investigations, in which differences between groups were evaluated, can explain the discrepancy. Or perhaps professors who elected to teach at RIT, an institution with a large hearing-impaired population, were idealistic about students with a hearing impairment before they started teaching. As suggested by Emerton & Rothman (1978), with time they might have revised their attitudes from idealism to realistic classroom practice. Whatever the reason for the discrepancy, more studies are needed to evaluate the effects of experience teaching students with various physical disabilities.

Attitudes of Student Services Personnel

In general, findings from noncollege contexts suggest that while clients with a physical disability are rated favorably when it comes to behavior, people with a disability are not preferred clients (Eberly, Eberly, & Wright, 1981). In the college context, a study by Kelly (1984) evaluated the attitudes of coordinators of services to students with disabilities. She found that the attitudes of these individuals are more favorable than those of other populations, that female coordinators and those under age 40 are more positive, and that frequency of daily contact is unrelated to the favorability of attitudes. Palmerton and Frumkin (1969) found that while amount of contact makes no difference, more favorable attitudes are held by those counselors who find it difficult to avoid contact with disabled students and also enjoy the experience. Thus, expected future interaction coupled with pleasant experiences may contribute to favorable attitudes.

Attitudes of Students with a Disability

The findings concerning attitudes of disabled students are not clear-cut. On the one hand, students generally minimize problems related to their disability and wish no prominence as a disabled student (Newman, 1976). On the other hand, they believe attitudes toward them held by others are negative.

Attitudes Toward Able-Bodied Students. Data on attitudes of disabled students toward their peers suggest that they are comfortable with nondisabled students and have as many nondisabled friends as do their able-bodied peers (Fichten & Bourdon, 1986). However, they also believe that

the greatest obstacles to integration on campus are others' values and lack of knowledge and that social isolation is a serious and significant problem (Penn & Dudley, 1980). Students with a disability also believe that able-bodied students hold more negative attitudes toward them than they themselves do or than able-bodied students appear to hold (Babbit, Burbach, & Iutcovich, 1979; Schroedal & Schiff, 1972).

The situation is not clear. Do students with a disability experience a misconception about the attitudes of other students, or do they perceive the situation accurately? I tend to believe the latter, that students who have a disability are accurate in their assessment of the beliefs their able-bodied peers hold, especially where interpersonal behavior is concerned and the positivity bias no longer operates.

Attitudes Toward Self and Other Students with a Disability. Data on disabled students' attitudes toward other students who have a disability reveal many ambiguities. Some studies found that attitudes both about oneself (Fichten, Amsel, Robillard, & Judd, 1986; Weinberg-Asher, 1976) and about others with a disability are quite favorable—as favorable as are able-bodied students' attitudes, which presumably include the positivity bias (Babbit, Burbach, & Iutcovich, 1979). Other studies, however, show that disabled students' attitudes are more negative (Fichten & Bourdon, 1986; Schroedal & Schiff, 1972).

The inconsistent results in this area may be due to methodological factors, such as the nature of the measurement instruments used, the duration of the disability, and whether attitudes toward oneself, others who have the same disability, others who have different disabilities, or the disability *per se* are measured. Thus while data show that disabled students are more comfortable with others who have the same disability as they themselves do than with people who have a different disability, and while their self-attitudes are positive, their attitudes toward others with both similar and different disabilities are somewhat negative and stereotyped (Fichten, Amsel, Robillard, & Judd, 1987). It appears the students are caught between adopting the perceived views of the majority and adopting the civil rights movement's ideology.

Attitudes Toward Professors. Another important area of investigation is disabled students' attitudes toward their professors. Data on attitudes toward able-bodied professors show that students with a disability are as comfortable with their professors as the professors are with them and that students are reasonably pleased with the treatment accorded them by their teachers. They also believe that most professor-initiated behaviors toward them are reasonably appropriate; however, they underestimate the appropriateness of student-initiated behaviors (Fichten, Amsel, Bourdon, & Creti, in press). This finding is consistent with results reported by Babbit,

Burbach, and Iutcovich (1979), which show that students with a disability believe that professors hold more negative attitudes toward disabled students than do the disabled students themselves.

There appear to be no data concerning attitudes toward professors with a disability or about the types of professors or professor behaviors that result in favorable attitudes by disabled students. Indeed, the only related data on this topic are provided by Yuker, Block, and Campbell (1960), who report that the attitudes of able-bodied students toward people with a disability are more positive after they have been taught by a disabled professor.

Attitudes Toward Institutional Practices and Student Services Personnel. There are no available data on the attitudes of students who have a disability toward institutional practices or toward coordinators of services to disabled students. The only available data on college professionals show that students with a disability prefer a disabled counselor, but only for educational/vocational counseling (Strohmer & Phillips, 1985).

Institutional Attitudes

Perhaps institutional attitudes are the most important ones. Institutions that discourage students who have a disability from applying, that place insurmountable physical and admissions barriers to them, and that do not provide services needed by the students or by the professors who teach them can cause the most damage by communicating to the college community the message that students with a disability are not welcome on campus.

In both the United States and Canada there are minimal legal safeguards against discriminatory admissions policies. In essence these forbid institutions from asking about the presence of a disability. However, many students who have a disability contact the college prior to application, and a number of departments and faculties have preadmission interviews. In such cases, one can only hope that the spirit of the law prevails.

What about programs that specifically require either sensory or physical abilities? Can a student with a visual impairment become a doctor or an electrical technician? Can a hearing-impaired student or a wheelchair user become a nurse? In spite of numerous documented instances of success, many colleges and universities are struggling with these issues.

Institutional attitudes can be evaluated by examining whether the college or university is providing needed services (e.g., a coordinator of resources for disabled students, assistance with transportation, audiotaping, sign interpreters, note takers, emergency procedures, academic advisors, financial aid), equipment resources (e.g., tape recorders, FM systems, magnifying equipment, computer adaptations), architectural and physical

facilities (e.g., ramps, tables and lab benches appropriate for wheelchair users, amplified telephones, raised lettering on office and classroom doors), and whether there is any attempt to train staff and faculty, conduct sensitization programs, or help set up a student organization (Fichten, Bourdon, Creti, & Martos, 1987). Of course the speed with which needs are met is also vital.

The literature suggests that most institutions have made an effort to accommodate students with disabilities and that various beneficial changes have taken place. A number of studies have reported on available services in post-secondary institutions (e.g., Kirchner & Simon, 1984b; Marion & Iovacchini, 1983). Stilwell, Stilwell, and Perrit's (1983) investigation provides comparative data on policy and on social and architectural barriers in 1971 and 1980. This study shows that there has been some progress, although it has been uneven. The results indicated that while special services such as admissions and orientation programs for students with a disability are now generally being provided, housing for disabled students is still an unmet need and the physical needs of visually and hearing-impaired students have not received adequate attention. There is still work to be done in making colleges and universities fully accessible to students who have a physical disability.

WHAT HAS BEEN TRIED TO MODIFY ATTITUDES?

In the college context attempts to change attitudes fall into four categories: contact alone or in combination with information, sensitization via role play exercises, tips for the student who has a disability, and institutional changes.

Information and Contact

Providing information about disabilities or about the people who have them, by itself, appears to be an ineffective means of changing attitudes (Anthony, 1972). Contact between able-bodied students and people who have a physical disability has variable effects; some studies have found that contact has some beneficial effects on attitudes and behavior, others have found deterioration, while others still have found no relationship between these variables (Anthony, 1972; Antonak, 1981b; Cloerkes, 1979; Emerton & Rothman, 1978; English, 1971; Fichten & Amsel, in press; Fichten, Compton, & Amsel, 1985; Minnes & Tsuk, 1986; Robillard & Fichten, 1983; Semmel & Dickson, 1966; Yaker, Block & Campbell, 1960). Certainly contact *per se* does not appear to be a powerful means of making people more comfortable or reducing prejudice and discrimination.

Several rehabilitation researchers (Anthony, 1972; Bender, 1981; Yaker & Block, 1979) have suggested that the ambiguous results may be attributed to differences in the extent and type of contact studied. They argue that the best means to increase understanding, reduce prejudice, enhance comfort, and facilitate interaction between able-bodied individuals and those who have a disability is to provide able-bodied people with educational information and to have them experience extended close contact, on an equal-status basis, with people who have a disability.

In the college context, findings on the effects of information plus equal-status contact are mixed. While Anthony and Carkhuff (1970) and Rounds and Neubauer (1986) found that advanced students in a rehabilitation counseling program had more positive attitudes than did beginners or those who were not accepted into the program, testimonials to the beneficial effects of information plus contact, Rowlett (1982) found that students in a residence hall who were given information about disabilities and who had contact with disabled students who lived on the same floor did not differ from students who had only contact, although both groups had more favorable attitudes than a no-contact control group. That extended contact, rather than the combination of contact plus information, is the key variable is also suggested by Weinberg's (1978) findings. In her study, students who lived in segregated dormitories, integrated dormitories, or who shared a room with a student who had a disability served as subjects. The results show that as extent of contact increased so did the favorability of attitudes, with students who shared a room with a disabled student having the most positive view. Emerton and Rothman (1978), however, found no difference, at the Rochester Institute of Technology, between hearing students who lived in an integrated residence and those who lived in nonintegrated housing. However, there were communication difficulties between disabled and nondisabled students in this study, since the hearing-impaired students used sign language for the most part.

The contradictory nature of these studies further illustrates the need to evaluate what types of contact are beneficial. As Yaker's chapter in this book suggests, a thorough evaluation of the characteristics of the able-bodied and of the disabled students, as well as of the nature of the situation, is certainly needed. Nevertheless, studies from other areas of prejudice reduction suggest that the following deserve a try: equal-status contact, a relation that is seen to be continuing and that provides opportunities for reciprocal helping, and a "superordinate" group goal that requires cooperation between the student with a disability and other group members.

There appears to be no research on the effects of cooperative work tasks and assignments in post-secondary education. In public school education, the meta-analysis by the Johnsons and their colleagues (Johnson, Ma-

ruyama, Johnson, Nelson, & Skon, 1981; Johnson, Johnson, & Maruyama, 1983) have shown that cooperative working conditions result not only in increased achievement and productivity but also in greater interpersonal attraction and liking. Similarly, in the area of prejudice reduction, Aronson and Asherow (1980) found that cooperative learning results in increased liking across ethnic and racial groups. Certainly the effects of cooperative working conditions are worthy of investigation in the college context.

Sensitization via Role-Play Activities

The popular "wheelchair day" types of role-play, when able-bodied students simulate being blind, deaf, or wheelchair-bound, have been shown not only to be ineffective but also "to contribute to disabling myths about disabilities" (Wright, 1980a, p. 174). As the studies evaluating this type of activity show (Clare & Jeffery, 1972; Wilson, 1971; Wilson & Alcorn, 1969), generally there is little, if any, attitude change. There is a lot of new negative affect, however, with participants learning mainly about the frustrations, difficulties, and limitations of having a disability. Of course, this pity orientation is thoroughly undesirable for the integration of students with a disability.

But other types of role-play, those with a *problem-solving set*, could be effective (Wright, 1978, 1980a). Examples that hold promise are Pastalan's (1974) architecture students who role-played having various sensory disabilities with a focus on how to design helpful environments; Williams's (cited in Wright, 1978) assertive role-play concerning how people with a disability could attain rights denied them, and Wright's (1975a) own work on role-play of helping situations with a problem-solving set, where the task is to discover how the giving and receiving of help could be improved. The problem-solving set approach, and what Langer, Bashner, and Chanowitz (1985) have called teaching "mindfulness" are, at the behavioral level, compatible formulations and should be explored further in the college context.

Tips for Students Who Have a Disability

What can students who have a disability do to promote beneficial attitude change? A series of studies from the social-psychological literature shows that there are a variety of things they can say or do to make interaction more comfortable and more likely to occur. Some of these revolve around how best to acknowledge the disability, while others involve the demonstration of similarity between disabled and nondisabled students.

Acknowledge the Disability. Tactics that have been shown effective include making the other person more comfortable by being the first to acknowledge the disability, legitimizing curiosity, and suggesting that it is appropriate to use terms related to the disability (e.g., *walk, see, hear*). For example, Hastorf, Wildfogel, and Cassman (1979) found that a person with a disability is better liked if he acknowledges the disability than if he does not do so. Belgrave and Mills (1981) and Mills, Belgrave, and Boyer (1984) found that if a person makes reference to his or her disability, this is best done after a request for help, and Bazakas (cited in Siller, 1984a) found that presenting oneself as both coping and openly acknowledging the disability results in more favorable evaluations than either of those components alone. Similarly, Evans (1976) found that disclosures that legitimize the other's curiosity, stress some positive elements of having the disability, and indicate acceptance of terms such as *walk, see, and hear*—all of which suggest what is and is not appropriate behavior—result in favorable outcomes.

Similarity. Another approach is to demonstrate that one has attitudes and values similar to those of nondisabled students. For example, it was shown by Belgrave (1984) that expressing interest in the other person or discussing one's participation in typical college activities (e.g., athletics, buying tickets for a performance, partying, studying for exams) results in favorable impressions.

The results of such studies suggest that if the only available strategy for attitude change is to provide information, this should be done by portraying individuals with a disability who follow the above mentioned tips, that is, make able-bodied students comfortable and demonstrate that they are similar to their nondisabled peers. Indeed, Donaldson and Martinson (1977) found that giving information in the form of a panel discussion by young disabled adults talking about various aspects of their lives was effective in changing attitudes. That this method of providing information was effective may have been due to the type of information conveyed and the means by which it was delivered.

What Institutions of Higher Education Can Do

Institutions can also effect beneficial changes. Not surprisingly, when institutional attitudes are favorable, the attitudes of able-bodied students are also positive. This has been suggested by the results of two studies (Fonosch & Schwab, 1981; Genskow & Maglione, 1965), which showed that attitudes on campuses where there were service programs for students with disabilities were more favorable than on those where no such services

were available. While one would expect that problem-solving workshops for faculty might also be helpful, there appears to have been no empirical investigation of this topic.

CONCLUSIONS

The literature shows some positive trends in the attitudes of various groups in post-secondary education. There are also a number of promising avenues of research and practice: investigation of attitudes toward professors, college professionals, and staff who have a disability; examination of interpersonal behaviors both before and after attempts at attitude change; and the study of the types of contact and experience that facilitate interaction between students with a disability and their nondisabled peers and professors. There is also a need to investigate the dynamics of friendship formation. Studies of attitudes that control for the positivity or sympathy bias also need to be carried out. The effects of different types of problem-solving role-play also deserve exploration. Finally, there is a need for studies that not only recognize that in casual or first encounters the disability is the most salient feature of the person, but that also capitalize on this salience for attitude and behavior change.

Findings on employment and job satisfaction suggest that it is extremely important that people with a disability be encouraged to attend colleges and universities. This includes paying attention to the receptiveness of educational institutions and to the attitudes of people who advise high school students who have a disability.

CHAPTER 14

Attitudes of Health Care Personnel Toward Persons with Disabilities

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The public seems to believe that behaviors can be used to infer attitudes, while researchers have been attempting over the years to identify the extent to which attitudes can be used to predict behavior. For the most part these approaches assume simple models of human behavior and attitudes, that is, that a single attitude, when properly assessed, corresponds to a single behavior and vice versa.

Recent definitions of attitude rely on a multidimensional approach. Attitudes are seen as being comprised of three major components: belief, affect, and behavior. An attitude, then, is a positive or negative reaction to an object, accompanied by specific beliefs that tend to impel the individual in a particular way toward an object (Yuker, 1976). Assuming this, the multidimensional approach broadens the parameters of what constitutes an attitude and necessitates a more complex approach to their assessment.

ATTITUDE MEASURES

Standard attitude measures generally consist of written items representing single statements about feelings, beliefs, or knowledge with respect to a particular object. Verbally oriented measures are seen as tapping either the affective and/or cognitive components of the targeted attitude.

References

- Anthony, W.A. (1972). Societal rehabilitation: Changing society's attitudes toward the physically and mentally disabled. Rehabilitation Psychology, 19, 117-126.
- Anthony, W.A. & Carkhuff, R.R. (1970). The effects of rehabilitation counselor training upon trainee functioning. Rehabilitation Counseling Bulletin, 13, 333-342.
- Antonak, R.F. (1981). Prediction of attitudes toward disabled persons: A multivariate analysis. Journal of General Psychology, 104, 119-123.
- Aronson, E. & Osherow, N. (1980) Cooperation, social behavior, and academic performance: Experiments in the desegregated classroom. In L. Bickman (Ed.), Applied social psychology annual (Vol.1). Beverly Hills, CA: Sage.
- Asch, A. (1984). The experience of disability: A challenge for psychology. American Psychologist, 39, 529-536.
- Babbitt, C.E., Burbach, H.J., & Iutovich, M. (1979). Physically handicapped college students: An exploratory study of stigma. Journal of College Student Personnel, 20(5), 403-407.
- Belgrave, F.Z. (1985). Reactions to a black stimulus person under disabling and nondisabling conditions. Journal of Rehabilitation, April/May/June, 53-57.
- Belgrave, F.Z. (1984). The effectiveness of strategies for increasing social interaction with a physically disabled person. Journal of Applied Social Psychology, 14(2), 147-161.
- Belgrave, F.Z. & Mills, J. (1981). Effect upon desire for social interaction with a physically disabled person of mentioning the disability in different contexts. Journal of Applied Social Psychology, 11, 44-57.
- Bender, L.F. (1981). 1980 Presidential Address to the American Academy for Cerebral Palsy and Developmental Medicine. Developmental Medicine and Child Neurology, 23, 103-108.
- Byrne, D. (1969). Attitudes and attraction. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol.4). New York: Academic Press.
- Carver, C.S., Gibbons, F.X., Stephan, W.G., Glass, D.C. & Katz, I. (1979). Ambivalence and evaluative response amplification. Bulletin of the Psychonomic Society, 13, 50-52.
- Carver, C.S., Glass, D.C. & Katz, I. (1978). Favorable evaluations of blacks and the handicapped: Positive prejudice, unconscious denial, or social desirability? Journal of Applied Social Psychology, 8, 97-106.
- Cloerkes, G. (1979). Determinants of attitudes and behavior toward physically disabled persons: Results of a secondary analysis. International Journal of Rehabilitation Research, 2, 382-383.
- Clore, G.L. & Jeffery, K. (1972). Emotional role playing, attitude change, and attraction toward a disabled person. Journal of Personality and Social Psychology, 23(1), 105-111.
- Donaldson, J. & Martinson, M.C. (1977). Modifying attitudes toward physically disabled persons. Exceptional Children, 43, 337-341.
- Eberly, C., Eberly, B. & Wright, K. (1981). Mental health professionals' attitude toward physically handicapped groups in attributionally ambiguous and non-ambiguous situations. Counseling Psychology, 28, 276-278.
- Emerton, G.R. & Rothman, G. (1978). Attitudes towards deafness: Hearing students at a hearing and deaf college. American Annals of the Deaf, 123, 588-593.
- English, R.W. (1971). Correlates of stigma toward physically disabled persons. Rehabilitation Research and Practice Review, 2, 1-17.
- Evans, J.H. (1976). Changing attitudes toward disabled persons: An experimental study. Rehabilitation Counseling Bulletin, June, 572-579.
- Fichten, C.S. (1986). Self, other and situation-referent automatic thoughts: Interaction between people who have a physical disability and those who do not. Cognitive Therapy and Research, 10, 571-587.
- Fichten, C.S. & Amsel, R. (1986). Trait attributions about physically disabled college students: Circumplex analyses and methodological issues. Journal of Applied Social Psychology, 16, 410-427.

- Fichten, C.S. & Amsel, R. (in press). Thoughts concerning interaction between college students who have a physical disability and their nondisabled peers. Rehabilitation Counseling Bulletin, Scheduled for 1988.
- Fichten, C.S., Amsel, R., Bourdon, C.V. & Creti, L. (in press). Interaction between college students with a physical disability and their professors. Journal of Applied Rehabilitation Counseling.
- Fichten, C.S., Amsel, R., Robillard, K. & Judd, D. (1987). College students with a physical disability: Myths and realities concerning self-esteem, social anxiety, dating behavior and stereotypes. Manuscript submitted for publication.
- Fichten, C.S. & Bourdon, C.V. (1986). Social skill deficit or response inhibition: Interaction between wheelchair user and able-bodied college students. Journal of College Student Personnel, 27, 326-333.
- Fichten, C.S., Bourdon, C.V., Amsel, R. & Fox, L. (in press). Validation of the College Interaction Self-Efficacy Questionnaire: Students with and without disabilities. Journal of College Student Personnel, 1987, 28(5), 449-458.
- Fichten, C.S., Bourdon, C.V., Creti, L. & Martos, J.G. (1987). Facilitation of teaching and learning: What professors, students with a physical disability and institutions of higher education can do. In H. I. Day and R.I. Brown (Eds.), Natcon: Special Edition - Vocational counselling in rehabilitation (Vol. 14, pp.45-69). Ottawa, Canada: Employment and Immigration Canada.
- Fichten, C.S., Compton, V. & Amsel, R. (1985). Imagined empathy and attributions concerning activity preferences of physically disabled college students. Rehabilitation Psychology, 30, 235-239.
- Fonosch, G.G. & Schwab, L.O. (1981). Attitudes of selected university faculty members toward disabled students. Journal of College Student Personnel, 22, 229-235.
- Genskow, J.K. & Maglione, F.D. (1965). Familiarity, dogmatism and reported student attitudes toward the disabled. Journal of Social Psychology, 67, 329-341.
- Gibbons, F.X., Stephan, W.G., Stephenson, B. & Petty, C.R. (1980). Reactions to stigmatized others: Response amplification vs. sympathy. Journal of Experimental Social Psychology, 16, 591-605.
- Hastorf, A.H., Wildfogel, I. & Cassman, T. (1979). Acknowledgment of handicap as a tactic in social interaction. Journal of Personality and Social Psychology, 37, 1790-1797.
- Johnson, D.W., Johnson, R.T. & Maruyama, G. (1983). Interdependence and interpersonal attraction among heterogeneous and homogeneous individuals: A theoretical formulation and a meta-analysis of the research. Review of Educational Research, 53(1), 5-54.
- Johnson, D.W., Maruyama, G., Johnson, R., Nelson, D. & Skon, L. (1981). Effect of cooperative, competitive, and individualistic goal structures on achievement: A meta-analysis. Psychological Bulletin, 89(1), 47-62.
- Kelly, B.A. (1984). Attitudes toward disabled persons of selected collegiate coordinators for disabled students. Journal of College Student Personnel, May, 255-259.
- Kirchner, C. & Simon, Z. (1984). Blind and visually handicapped college students - Part I: Estimated numbers. Journal of Visual Impairment and Blindness, 78(2), 78-81.a
- Kirchner, C. & Simon, Z. (1984). Blind and visually handicapped college students - Part II. Settings and Services. Journal of Visual Impairment and Blindness, 78(4), 164-168. (b)
- Kleck, R. (1969). Physical stigma and task oriented interactions. Human Relations, 22, 53-60.
- Kleck, R.E. (1968). Physical stigma and non-verbal cues emitted in face-to-face interaction. Human Relations, 21, 19-28.
- Kleck, R., Buck, P.L., Goller, W.L., London, R.S., Pfeiffer, J.R. & Vukcevic, D.P. (1968). Effect of stigmatizing conditions on the use of personal space. Psychological Reports, 23, 111-118.
- Kleck, R.E., Ono, H. & Hastorf, A.H. (1966). The effect of physical deviance upon face-to-face interaction. Human Relations, 19, 425-436.

- Langer, E.J., Bashner, R.S. & Chanowitz, B. (1985). Decreasing prejudice by increasing discrimination. Journal of Personality and Social Psychology, 49, 113-120.
- Linkowski, D.C., Jaques, M.C. & Gaier, E.L. (1969). Reactions to disability: A thematic analysis. Journal of Social Psychology, 77, 201-214.
- Lonnquist, D.E. (1979). Employment rates among severely physically disabled and nondisabled college graduates and dropouts. Journal of Applied Rehabilitation Counseling, 10(1), 24-27.
- Marinelli, R.P. & Kelz, J.W. (1973). Anxiety and attitudes toward visibly disabled persons. Rehabilitation Counseling Bulletin, 16(4), 198-205.
- Marion, P.B. & Iovacchini, E.V. (1983). Services for handicapped students in higher education: An analysis of national trends. Journal of College Student Personnel, 24, 131-137.
- McQuay, S.L. (1978). Attitudes of community college faculty toward the deaf: A Guttman facet theory analysis. Dissertation Abstracts International, 38 (11-A), 6650-6651.
- Mills, J., Belgrave, F.Z. & Boyer, K.M. (1984). Reducing avoidance of social interaction with a physically disabled person by mentioning the disability following a request for aid. Journal of Applied Social Psychology, 14(1), 1-11.
- Minnes, P.M. & Tsuk, K. (1986). Attitudes toward the limb deficient: The effect of prosthesis type. Presentation at the Canadian Psychological Association annual convention, Toronto, Ontario.
- Mitchell, J. & Allen, H. (1975). Perception of a physically disabled counselor in a counselling session. Journal of Counseling Psychology, 22(1), 70-73.
- Nathanson, R.B. (1979). Campus interactions, attitudes and behaviors. Personnel and Guidance Journal, December, 39-62.
- Newman, J. (1976). Faculty attitudes toward handicapped students. Rehabilitation Literature, 37(7), 194-197.
- Palmerton, K.E. & Frumkin, R.M. (1969). Type of contact as a factor in attitudes of college counselors toward the physically disabled. Perceptual and Motor Skills, 28, 489-490.
- Pastalan, L.A. (1974). The simulation of age-related sensory losses: A new approach to the study of environmental barriers. New Outlook for the Blind, 68, 356-362.
- Penn, J.R. & Dudley, D.H. (1980). The handicapped student: Problems and perceptions. Journal of College Student Personnel, 21, 354-357.
- Perry, D.C. (1981). The disabled student and college counseling. Journal of College Student Personnel, 22, 533-538.
- Richardson, S.A. & Ronald, L. (1977). The effect of a physically handicapped interviewer on children's expression of values toward handicap. Rehabilitation Psychology, 1973, 24, 211-218.
- Robillard, K. & Fichten, C.S. (1983). Attributions about sexuality and romantic involvement of physically disabled college students: An empirical study. Sexuality and Disability, 6, 197-212.
- Rounds, Jr., J.B. & Neubauer, N.A. (1986). Individual differences in perceptions of disabilities: An application to rehabilitation counseling students. Presentation at the Annual Meeting of the American Educational Research Association, San Francisco, CA.
- Rowlett, J.D. (1982). Attitudes of peers toward physically limited students in university resident halls. Dissertation Abstracts International, 42, No. 11, 4740-A.
- Ryan, K.M. (1981). Developmental differences in reactions to the physically disabled. Human Development, 24, 240-256.
- Scheier, M.F., Carver, C.S., Schultz, R., Glass, D.C. & Katz I. (1978). Sympathy, self-consciousness and reactions to the stigmatized. Journal of Applied Social Psychology, 8, 270-282.
- Schroedal, J.G. & Schiff, W. (1972). Attitudes towards deafness among several deaf and hearing populations. Rehabilitation Psychology, 19(2), 59-70.
- Semmel, M.I., & Dickson, S. (1966). Connotative reactions of college students to disability labels. Exceptional Children, 32, 443-450.

Siller, J. (1984). Attitudes toward the physically disabled. In R.L. Jones (Ed.), Attitudes and change in special education: Theory and practice. Reston, Virginia: Eric Clearinghouse on Handicapped and Gifted Children. (a)

Siller, J. (1984). The role of personality in attitudes toward those with physical disabilities. In C.J. Golden (Ed.), Current topics in rehabilitation psychology. San Diego: Grune & Stratton. (b)

Snyder, M., Kleck, R.E., Strenta, A. & Mentzer, S. (1979). Avoidance of the handicapped: An attributional ambiguity analysis. Journal of Personality and Social Psychology, 37, 2297-2306.

Stilwell, D.N., Stilwell, W.E. & Perrit, L.C. (1983). Barriers in higher education for persons with handicaps: A follow-up. Journal of College Student Personnel, 24, 337-343.

Stovall, C. & Sedlacek, W.E. (1983). Attitudes of male and female university students toward students with different physical disabilities. Journal of College Student Personnel, 24, 325-330.

Strohmer, D.C. & Phillips, S.D. (1985). Counselor preferences of disabled and disadvantaged college students for personal versus vocational concerns. Rehabilitation Counseling, 28(3), 171-175.

Tagalakis, V., Amsel, R. & Fichten, C.S. (in press). Job interview strategies for people with a visible disability. Journal of Applied Social Psychology.

Weinberg, N. (1978). Modifying social stereotypes of the physically disabled. Rehabilitation Counseling Bulletin, 22, 114-124.

Weinberg, N. (1976). Social stereotyping of the physically handicapped. Rehabilitation Psychology, 23, 115-124.

Weinberg-Asher, N. (1976). The effect of physical disability on self-perception. Rehabilitation Counseling Bulletin, 23, 15-20.

White, C.S., Karchmer, M.A., Armstrong, D.F. & Bezozo, C.E. (1983). Current trends in high school graduation and college enrollment of hearing-impaired students attending residential schools for deaf persons. American Annals of the Deaf, 128(2), 125-131.

Wilson, E.D. (1971). A comparison of the effects of deafness simulation and observation upon attitudes, anxiety, and behavior manifested toward the deaf. Journal of Special Education, 5(4), 343-349.

Wilson, E.D. & Alcorn, D. (1969). Disability simulation and development of attitudes toward the exceptional. Journal of Special Education, 3(3), 303-307.

Wright, B.A. (1983). Physical disability: A psychosocial approach (2nd ed.) New York: Harper & Row.

Wright, B.A. (1980). Developing constructive views of life with a disability. Rehabilitation Literature, 41, 274-279.

Wright, B.A. (1978). The coping framework and attitude change: A guide to constructive role playing. Rehabilitation Psychology, 25, 177-183.

Wright, B.A. (1975). Sensitizing outsiders to the position of the insider. Rehabilitation Psychology, 22, 129-135.

Yuker, H.E. (1983). The lack of a stable order of preference for disabilities: A response to Richardson and Ronald. Rehabilitation Psychology, 28(2), 93-103.

Yuker, H.E. & Block, J.R. (1979). Challenging barriers to change: Attitudes toward the disabled. N.Y.: Human Resources Center.

Yuker, H.E., Block, J.R. & Campbell, W.J. (1960). A scale to measure attitudes toward disabled persons. Human Resources Study # 5. Albertson, N.Y.: Human Resources.