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College Students with Physical Disabilities: Myths and Realities

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ABSTRACT: This investigation (1) explored affect concerning interaction between nondisabled individuals and people with various disabilities, (2) examined stereotyping by both disabled and nondisabled students, (3) compared aspects of the self-concepts of nondisabled and disabled persons, and (4) evaluated nondisabled individuals' beliefs about these. Results show that nondisabled college students were less comfortable with disabled than with able-bodied peers. Students with disabilities, although equally comfortable with nondisabled individuals and with those who have the same disability as they do, were as uncomfortable as able-bodied individuals with peers who have a disability different from their own. Wheelchair user, visually impaired, and nondisabled college students had similar self-esteem, social anxiety, dating anxiety, and dating behavior. When predicting the responses of others, nondisabled students scored both able-bodied and disabled peers lower on most dimensions of self-concept than the actual scores of these groups indicate. Differences were greatest, however, between the self-concepts of people with disabilities and nondisabled individuals' beliefs about these. Furthermore, students with disabilities shared the myths believed by their nondisabled peers.

As the number of individuals with disabilities enrolled in colleges and universities is increasing (Fichten, 1988), it has become increasingly important to facilitate their integration. To do this, a better understanding of the attitudes that nondisabled students and students with different disabilities have about themselves and about each other is needed.

Research on attitudes of nondisabled individuals regarding people who have a physical disability suggest that both sympathy and aversion are commonplace. Numerous studies have shown that nondisabled persons evaluate individuals with disabilities more favorably than their able-bodied counterparts (e.g., Belgrave, 1985; Tagalakis et al.,1988). Data also indicate that attitudes can be polarized in either direction when the performance of the individual with a disability is of consequence to the evaluator or when ambivalent attitudes are legitimized (Carver et al., 1979; Gibbons et al., 1980). Despite this, studies demonstrating the existence

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of aversion and negative attitudes are fewer than those showing positive attitudes and sympathy (Katz & Glass, 1979).

Notwithstanding the prevalence of positive evaluations of individuals with disabilities, nondisabled people are less comfortable with disabled than with able-bodied peers and will avoid an individual who has a disability if there are socially and personally acceptable reasons for doing so (Fichten, 1986; Snyder et al., 1979). This suggests that the prevalence of positive descriptions of individuals with disabilities may be due to social desirability, sympathy, or self-presentation biases.

To avoid these biases, some researchers have employed a modified response prediction paradigm where participants are asked to report the beliefs of similar others, rather than their own views. Three studies using this instructional set have found that students with disabilities are evaluated more negatively than nondisabled students (Babbitt et al., 1979; Fichten & Amsel, 1986; Robillard & Fichten, 1983).

Students with disabilities are cognizant of the negative attitudes toward people with disabilities held by their nondisabled peers (Babbitt et al., 1979; Schroedal & Schiff, 1972). This would be expected to lead to feelings of inferiority and low self-esteem. Certainly both the symbolic interactionist and the social comparison formulations of the development of self-esteem and self-concept would suggest poorer self-attitudes by disabled than by nondisabled individuals (Rosenberg & Kaplan, 1982b). Although some investigations have found that people with disabilities are less well adjusted than nondisabled individuals (e.g., Crandell & Streeter, 1977; Meighan, 1971), the majority of studies have shown that people with disabilities describe themselves the same way as do their nondisabled peers (e.g., Kriegsman & Hershenson, 1987; Weinberg-Asher, 1976).

One purpose of this article is to explore similarities and differences between the self-concepts of individuals with and without a disability. Such an investigation must compare members of both groups on valid measures of personality and social functioning that are relevant to the age and social situation of individuals in both groups. Another objective is to speculate on the mechanism by which self-esteem develops in people with disabilities. This requires that the self-esteem of people with disabilities be compared with their *beliefs* about how others see them as well as with how others *actually* see people who have disabilities, and that the attitudes of people with disabilities toward others who have a similar disability be explored.

Specifically, this study (1) investigated feelings about interaction between nondisabled individuals and their wheelchair user and visually impaired peers, (2) examined stereotyping of people with disabilities by both disabled and nondisabled students, (3) compared various aspects of the self-concepts of nondisabled and disabled students, and (4) evaluated nondisabled individuals' beliefs about these aspects of self-concept.

METHOD

Subjects

Three groups of volunteer college and university students participated: 17 were wheelchair users, 15 had a visual impairment, and 221 had no physical disability. All were part of a larger investigation (Fichten & Amsel, 1988; Fichten et al., 1987). Students with

disabilities were recruited through coordinators of servi
telephone, and face-to-face contact). Nondisabled stude
and geography courses. The mean age of the 11 male an
(range, 19–36); they had been disabled for an average of
and 4 female visually impaired students also participa
19–31) and they had had their disability for an average o
disabled students, 87 were males and 134 were females;
for college students with a disability to be older than th
& Bourdon, 1986)]. The sample of students with disal
sented approximately 30% of the disabled student popu

Measures

General Information Form. This measure inclu
absence or presence of a physical disability. Ease with
use a wheelchair, and students who have a visual impair
(e.g., "In general, how comfortable are you with stude
uncomfortable; 6, very comfortable).

Social Activity Questionnaire (SAQ). This eigl
by Glasgow and Arkowitz (1975). It is scored on an ite
frequency and self-report of comfort and satisfaction
Three items that deal with the number of dates during
satisfaction with current dating frequency were used (3-
item was also included. It read: "I am presently dating
answers: "no one," "a physically disabled person," an

Social Avoidance and Distress Scale (SAD).
tionnaire that measures anxiety or distress experienced
of the most widely used measures of general social fun
good reliability and validity (Arkowitz, 1981). Watson
the scale, reported a mean score of 9 (SD = 8) with a

College Student Trait Checklists. This meas
socially undesirable traits. Included are five socially d
traits commonly attributed to male and female whe
college students and five socially desirable and five u
to able-bodied students (but not to wheelchair users).[1]
list that best describe a stimulus person. Three score
Total "Handicapped" Stereotyping. Data show that
"handicapped" traits, both desirable and undesirable, t
and that scores on the measure are logically related t
& Amsel, 1986).

Coopersmith Self-Esteem Inventory (SEI)—A
SEI has been shown to be a valid instrument for the ev

[1] The five socially desirable traits commonly attribu
softhearted, nonegotistical, undemanding. Socially undesi
are: nervous, unaggressive, insecure, dependent, unhapp
nondisabled students are: sociable, optimistic, humorous,
attributed to nondisabled students are: demanding, argumen

udes are fewer than those showing positive attitudes
, 1979).
evalence of positive evaluations of individuals with
le are less comfortable with disabled than with able-
n individual who has a disability if there are socially
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airment, and 221 had no physical disability. All were
1 & Amsel, 1988; Fichten et al., 1987). Students with

disabilities were recruited through coordinators of services for disabled students (mailings, telephone, and face-to-face contact). Nondisabled students were recruited from psychology and geography courses. The mean age of the 11 male and 6 female wheelchair users was 26 (range, 19–36); they had been disabled for an average of 15 years (range, 6–29). Eleven male and 4 female visually impaired students also participated; their mean age was 23 (range, 19–31) and they had had their disability for an average of 19 years (range, 5–27). Of the nondisabled students, 87 were males and 134 were females; their mean age was 20 [it is common for college students with a disability to be older than their nondisabled classmates (Fichten & Bourdon, 1986)]. The sample of students with disabilities, although quite small, represented approximately 30% of the disabled student population at the institutions sampled.

Measures

General Information Form. This measure includes questions about gender, age, and absence or presence of a physical disability. Ease with nondisabled students, students who use a wheelchair, and students who have a visual impairment is assessed using 6-point scales (e.g., "In general, how comfortable are you with students who use a wheelchair?" 1, very uncomfortable; 6, very comfortable).

Social Activity Questionnaire (SAQ). This eight-item questionnaire was developed by Glasgow and Arkowitz (1975). It is scored on an item-by-item basis and evaluates dating frequency and self-report of comfort and satisfaction with one's current dating situation. Three items that deal with the number of dates during the past month, dating anxiety, and satisfaction with current dating frequency were used (3-point scales). An additional "dating" item was also included. It read: "I am presently dating" and gave the following as possible answers: "no one," "a physically disabled person," and "an able-bodied person."

Social Avoidance and Distress Scale (SAD). The SAD, a 28-item true–false questionnaire that measures anxiety or distress experienced in a variety of social situations, is one of the most widely used measures of general social functioning. The scale has demonstrated good reliability and validity (Arkowitz, 1981). Watson and Friend (1969), the developers of the scale, reported a mean score of 9 (SD = 8) with a median of 7 for college students.

College Student Trait Checklists. This measure lists 10 socially desirable and 10 socially undersirable traits. Included are five socially desirable and five socially undesirable traits commonly attributed to male and female wheelchair user (but not to able-bodied) college students and five socially desirable and five undesirable traits commonly attributed to able-bodied students (but not to wheelchair users).[1] Subjects select five traits from each list that best describe a stimulus person. Three scores are derived: Positive, Negative, and Total "Handicapped" Stereotyping. Data show that nondisabled students attribute more "handicapped" traits, both desirable and undesirable, to disabled than to nondisabled students and that scores on the measure are logically related to relevant criterion variables (Fichten & Amsel, 1986).

Coopersmith Self-Esteem Inventory (SEI)—Adult Form. Coopersmith's (1981) SEI has been shown to be a valid instrument for the evaluation of self-esteem (Demo, 1985).

[1] The five socially desirable traits commonly attributed to disabled students are: quiet, honest, softhearted, nonegotistical, undemanding. Socially undesirable traits attributed to disabled students are: nervous, unaggressive, insecure, dependent, unhappy. Socially desirable traits attributed to nondisabled students are: sociable, optimistic, humorous, popular, dependable. Undesirable traits attributed to nondisabled students are: demanding, argumentative, overconfident, phony, complaining.

It lists 25 statements that subjects indicate are "like me" or "unlike me." The scale was slightly modified to permit subjects to complete it in three ways: "me as I see myself" (Real Self), "me as I would like to be" (Ideal Self), and "me as others see me" (Reflected Self).

Procedure

Nondisabled, wheelchair user, and visually impaired college student subjects completed measures individually. Large print and audiotaped versions were prepared for those visually impaired subjects who needed these, and a volunteer student helped wheelchair users who needed assistance.

Visually impaired participants completed the Background Information Form, SAD, SAQ, and the three versions (Real Self, Ideal Self, Reflected Self) of the Coopersmith SEI. They also completed the College Student Trait Checklists stereotyping measure concerning both nondisabled and visually impaired students.

Wheelchair user subjects were administered the same measures with two exceptions. They completed the College Student Trait Checklists concerning nondisabled and wheelchair user students. Due to the requirements of the larger study in which they were participating, these subjects completed only the Real Self scale of the SEI.

Nondisabled subjects were randomly assigned to the Own or to the Predicted Response experimental condition. All completed the Background Information Form. Sixty-seven subjects completed the SAD, SAQ, and all three versions of the SEI concerning themselves (Own experimental condition). To evaluate nondisabled students' beliefs about disabled and able-bodied students, the 154 nondisabled subjects in the Predicted Response experimental condition were randomly assigned to one of three hypothetical Stimulus Person conditions; these subjects completed the College Student Trait Checklists concerning nondisabled, visually impaired, or wheelchair user students of the same sex as the respondent. For all other measures, subjects in the Predicted Response condition responded as "typical" college students of their own sex and, from that viewpoint, predicted the answers of the hypothetical stimulus person on the SAD, SAQ, and the SEI Real Self scale.[2]

RESULTS

All analysis of variance was performed using the SPSS-X package ANOVA procedure with the regression method option selected to give tests of the partials for all effects.

Ease

Comfort levels of members of the various groups with each other were examined in a two-way mixed design ANOVA comparison [3 Group (Nondisabled/Visually Impaired/Wheelchair User Subjects) X 3 Ease (with Nondisabled/Visually

[2] Sample instructions for the predicted response conditions for males: "Pretend that you are a 'typical' male student at your college. As a 'typical' student, predict how the average male wheelchair user student at your college would complete the questions that follow about himself. Remember, on these questionnaires you, as a 'typical' male student, must predict the answers of the average male wheelchair user student."

Although the task is seemingly complex, few students had difficulty with the instructions. For those who did have problems, the following explanation was given: "You are a typical student here. OK? Now, how do you think a wheelchair user would answer these questions about himself?"

Table 1. Ease with Students Who Have Different Disabiliti Ranges

Participants		Ease with S: Nondisabled	Visually
Nondisabled	*M*	5.05	4
	SD	1.14	1
	range	1–6	1
Visually Impaired	*M*	5.07	5
	SD	1.21	0
	range	2–6	3
Wheelchair User	*M*	5.29	4
	SD	1.05	1
	range	3–6	2

Maximum score = 6; the higher the score, the more comfort

Impaired/Wheelchair User Students)]. Results sh main effects, F (2, 170) = 4.13, $p < .05$; F (2, 340) well as a significant interaction, F (4, 340) = 3.68 in Table 1, and post hoc Tukey hsd tests show n groups on Ease with Nondisabled Students. O Students, visually impaired subjects' scores are si nondisabled subjects, and on Ease with Wheelchair scores are higher than those of nondisabled subjec Within the nondisabled group, results show that comfortable with visually impaired than with no were least comfortable with wheelchair users (p <

To explore comfort scores of disabled stu different, or no disabilities, a two-way mixed d made on the scores of disabled subjects [2 Groups User) x 3 Ease (with Nondisabled/Own Group/O show only a significant interaction, F (2, 58) = comparisons on the interaction show that although scores did not differ significantly from Ease with both groups were significantly more at ease with th disabled group, F (1, 58) = 9.74, $p < .01$.

Self-Esteem (Real Self/Ideal Self/Reflect

Possible differences between nondisabled Real Self, Ideal Self, and Reflected Self scores w design ANOVA comparison [2 Groups (Nondisal Esteem (Real/Ideal/Reflected)]. Results show

cts indicate are "like me" or "unlike me." The scale was ects to complete it in three ways: "me as I see myself" (Real " (Ideal Self), and "me as others see me" (Reflected Self).

ıser, and visually impaired college student subjects completed ınt and audiotaped versions were prepared for those visually ıese, and a volunteer student helped wheelchair users who

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ɛrs of the various groups with each other were ɛsign ANOVA comparison [3 Group (Nondisabled/ Jser Subjects) X 3 Ease (with Nondisabled/Visually

dicted response conditions for males: "Pretend that you are a s a 'typical' student, predict how the average male wheelchair plete the questions that follow about himself. Remember, on male student, must predict the answers of the average male

omplex, few students had difficulty with the instructions. For ving explanation was given: "You are a typical student here. air user would answer these questions about himself?"

Table 1. Ease with Students Who Have Different Disabilities: Means, Standard Deviations, and Ranges

Participants		Ease with Students Who Are		
		Nondisabled	*Visually Impaired*	*Wheelchair User*
Nondisabled	*M*	5.05	4.46	4.22
	SD	1.14	1.25	1.17
	range	1–6	1–6	1–6
Visually Impaired	*M*	5.07	5.53	4.67
	SD	1.21	0.83	1.50
	range	2–6	3–6	1–6
Wheelchair User	*M*	5.29	4.77	5.24
	SD	1.05	1.35	0.97
	range	3–6	2–6	3–6

Maximum score = 6; the higher the score, the more comfortable.

Impaired/Wheelchair User Students)]. Results show significant Group and Ease main effects, F (2, 170) = 4.13, $p < .05$; F (2, 340) = 3.43, $p < .05$, respectively, as well as a significant interaction, F (4, 340) = 3.68, $p < .01$. The means presented in Table 1, and post hoc Tukey hsd tests show no significant differences among groups on Ease with Nondisabled Students. On Ease with Visually Impaired Students, visually impaired subjects' scores are significantly higher than those of nondisabled subjects, and on Ease with Wheelchair Users, wheelchair user subjects' scores are higher than those of nondisabled subjects ($p < .05$ for all comparisons). Within the nondisabled group, results show that subjects were significantly less comfortable with visually impaired than with nondisabled students and that they were least comfortable with wheelchair users ($p < .01$).

To explore comfort scores of disabled students with peers having similar, different, or no disabilities, a two-way mixed design ANOVA comparison was made on the scores of disabled subjects [2 Groups (Visually Impaired/Wheelchair User) x 3 Ease (with Nondisabled/Own Group/Other Disabled Group)]. Results show only a significant interaction, F (2, 58) = 5.38, $p < .01$. Two planned comparisons on the interaction show that although Ease with Nondisabled Students scores did not differ significantly from Ease with Own Group scores, subjects in both groups were significantly more at ease with their own group than with the other disabled group, F (1, 58) = 9.74, $p < .01$.

Self-Esteem (Real Self/Ideal Self/Reflected Self)

Possible differences between nondisabled and visually impaired students' Real Self, Ideal Self, and Reflected Self scores were explored in a two-way mixed design ANOVA comparison [2 Groups (Nondisabled/Visually Impaired) x 3 Self-Esteem (Real/Ideal/Reflected)]. Results show only a Self-Esteem main effect,

F (2, 92) = 7.94, $p < .001$; all scores differ significantly ($p < .05$) with Ideal Self greater than Reflected Self greater than Real Self. There were no significant differences between the two groups of subjects.

Stereotypes

Nondisabled participants' trait ratings were evaluated in a two-way mixed design ANOVA comparison [3 Stimulus Person (Nondisabled/Visually Impaired/Wheelchair User) x 2 Valence (Positive/Negative Traits)]. Results show a significant Valence main effect, with Negative stereotyping being more frequent than Positive, F (1, 79) = 23.73, $p < .001$ [higher negative than positive "handicapped" stereotyping of all groups is normative for the measure (Fichten & Amsel, 1986)]. The Stimulus Person main effect was also significant, F (2, 79) = 5.67, $p < .01$. Means in Table 2 and post hoc Tukey hsd tests show that nondisabled participants attributed more "handicapped" stereotypes to wheelchair user and visually impaired students than to nondisabled students ($p < .05$); stereotyping of wheelchair user and visually impaired students did not differ.

Stereotypes of disabled people held by individuals with the disability in question were compared to those held by nondisabled subjects in two-way mixed design ANOVA comparisons [2 participants (Disabled/Nondisabled) x 2 Valence (Positive/Negative Traits)] made separately on stereotypes of wheelchair user and of visually impaired students. Results show no significant differences between nondisabled and disabled subjects' scores. Disabled participants' stereotypes of nondisabled students and of members of their own group were also compared. A three-way mixed design NOVA [2 Participants (Visually Impaired/Wheelchair User) x 2

Table 2. "Handicapped" Stereotyping of Students with Different Disabilities: Means, Standard Deviations, and Ranges

		"Handicapped" Stereotypes of:					
		Nondisabled Students		*Visually Impaired Students*		*Wheelchair User Students*	
Participants		*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*
Nondisabled	*M*	2.24	2.72	2.64	3.84	2.69	3.91
	SD	1.67	1.49	0.95	1.31	1.09	1.28
	range	0–4	0–5	1–5	0–5	1–4	2–5
Visually	*M*	2.27	3.25	2.39	3.62	N/A	N/A
Impaired	*SD*	1.12	0.92	1.04	0.96	N/A	N/A
	range	0–4	1–4	1–5	2–5	N/A	N/A
Wheelchair	*M*	1.61	3.00	N/A	N/A	2.01	3.27
User	*SD*	1.06	1.18	N/A	N/A	1.23	1.22
	range	0–4	1–5	N/A	N/A	0–4	1–5

Maximum score = 5; the higher the score the more "handicapped" stereotypes attributed.

Valence (Positive/Negative Traits) X 2 Stimulus P
shows a significant main effect for Valence, F (1
dicating higher Negative than Positive scores.
main effect, F (1, 24) = 7.00, $p < .05$, shows that
"handicapped" stereotypes to their Own Groups

Relationships Among Variables

Pearson product–moment correlations we
subjects to ascertain the relationships among mea
how personality variables are related to stereotyp
types of students.

Results in Table 3 show that scores on the
(i.e., social anxiety, dating anxiety, and self-est
direction for all three groups of subjects. Real Sel
strongly and significantly related for both nondi
subjects with disabilities, scores on the personalit
with Nondisabled students. In the nondisabled sa
ables are consistently related to Ease with students
Age, and Duration of Disability are not consi
variables for any of the subject groups.

Own Versus Predicted Responses

Similarities and differences between nor
wheelchair user subjects' Own scores on the v
subjects' beliefs about these (Predicted Respons
between-groups ANOVA comparisons [2 Experi
Response) x 3 Scores (Nondisabled/Visually Imp
comparisons on the three subject groups' Own s
differences among groups. Nondisabled subject
three experimental conditions were also compa
bodied and disabled students.

Self-esteem. Comparisons on the SEI I
scores were lower in the Predicted Response co
F(1, 138) = 11.64, $p < .001$. There were no si
various groups' Own scores or between the pr
subjects in the nondisabled, visually impaired,
conditions.

Social anxiety. This construct was asse
SAQ item that asks about anxiety with a memb
presented in Table 4.

Results of the two-way ANOVA comparis
social anxiety in the Predicted Response conditi
187) = 8.24, $p < .01$. A significant Experiment

scores differ significantly ($p < .05$) with Ideal Self
eater than Real Self. There were no significant
oups of subjects.

' trait ratings were evaluated in a two-way mixed
Stimulus Person (Nondisabled/Visually Impaired/
Positive/Negative Traits)]. Results show a signifi-
Negative stereotyping being more frequent than
.001 [higher negative than positive "handicapped"
mative for the measure (Fichten & Amsel, 1986)].
ct was also significant, F (2, 79) = 5.67, $p < .01$.
Tukey hsd tests show that nondisabled participants
tereotypes to wheelchair user and visually impaired
lents ($p < .05$); stereotyping of wheelchair user and
ot differ.
ople held by individuals with the disability in ques-
by nondisabled subjects in two-way mixed design
ants (Disabled/Nondisabled) x 2 Valence (Positive/
y on stereotypes of wheelchair user and of visually
v no significant differences between nondisabled
Disabled participants' stereotypes of nondisabled
ir own group were also compared. A three-way
pants (Visually Impaired/Wheelchair User) x 2

of Students with Different Disabilities: Means, Standard

	"Handicapped" Stereotypes of:			
	Visually Impaired Students		*Wheelchair User Students*	
tive	*Positive*	*Negative*	*Positive*	*Negative*
2	2.64	3.84	2.69	3.91
9	0.95	1.31	1.09	1.28
5	1–5	0–5	1–4	2–5
5	2.39	3.62	N/A	N/A
2	1.04	0.96	N/A	N/A
1	1–5	2–5	N/A	N/A
)	N/A	N/A	2.01	3.27
3	N/A	N/A	1.23	1.22
	N/A	N/A	0–4	1–5

: the more "handicapped" stereotypes attributed.

Valence (Positive/Negative Traits) X 2 Stimulus Person (Nondisabled/Own Group)] shows a significant main effect for Valence, F (1, 24) = 66.86, $p < .001$, again indicating higher Negative than Positive scores. The significant Stimulus Person main effect, F (1, 24) = 7.00, $p < .05$, shows that disabled subjects attributed more "handicapped" stereotypes to their Own Groups than to nondisabled students.

Relationships Among Variables

Pearson product–moment correlations were computed for each group of subjects to ascertain the relationships among measures of personality and to explore how personality variables are related to stereotyping and to comfort with different types of students.

Results in Table 3 show that scores on the various measures of personality (i.e., social anxiety, dating anxiety, and self-esteem) are related in the expected direction for all three groups of subjects. Real Self and Reflected Self scores are also strongly and significantly related for both nondisabled and disabled subjects. For subjects with disabilities, scores on the personality variables are also related to Ease with Nondisabled students. In the nondisabled sample, none of the personality variables are consistently related to Ease with students who have a disability. Stereotyping, Age, and Duration of Disability are not consistently related to the personality variables for any of the subject groups.

Own Versus Predicted Responses

Similarities and differences between nondisabled, visually impaired, and wheelchair user subjects' Own scores on the various measures and nondisabled subjects' beliefs about these (Predicted Response) were examined using two-way between-groups ANOVA comparisons [2 Experimental Condition (Own/Predicted Response) x 3 Scores (Nondisabled/Visually Impaired/Wheelchair User)]. Planned comparisons on the three subject groups' Own scores were made to evaluate actual differences among groups. Nondisabled subjects' Predicted Response scores in the three experimental conditions were also compared to evaluate beliefs about able-bodied and disabled students.

Self-esteem. Comparisons on the SEI Real Self scale indicate only that scores were lower in the Predicted Response condition than in the Own condition, $F(1, 138) = 11.64$, $p < .001$. There were no significant differences between the various groups' Own scores or between the predicted Responses of able-bodied subjects in the nondisabled, visually impaired, and wheelchair user experimental conditions.

Social anxiety. This construct was assessed by the SAD scale and by the SAQ item that asks about anxiety with a member of the opposite sex. Means are presented in Table 4.

Results of the two-way ANOVA comparisons on SAD scores indicate greater social anxiety in the Predicted Response condition than in the Own condition, F (1, 187) = 8.24, $p < .01$. A significant Experimental Condition X Scores interaction,

Table 3. Correlations Among Scores for Three Groups of Students: Nondisabled, Visually Impaired, and Wheelchair User

Measures	Subjects	SAQ Dating Anxiety	Age	Duration of Disability	SEI *Real Self*	SEI *Ideal Self*	SEI *Reflected Self*	Ease with: *Nondisabled Students*	Ease with: *Wheelchair User Students*	Ease with: *Visually Impaired Students*
	Nondisabled	.38*	−.15	N/A	−.43**	.17	−.43**	−.27	−.28†	−.09
SAD	Visually Impaired	.73**	.04	.35	−.76***	.32	−.59*	−.71**	−.53*	.28
	Wheelchair User	.74***	.29	−.13	−.90***	N/A	N/A	−.46†	−.33	−.50*
Dating	Nondisabled		.15	N/A	−.39*	−.08	−.50**	−.20	−.24	.05
Anxi-	Visually Impaired		−.13	−.14	−.76**	.38	−.70**	−.72**	−.53*	.31
ety	Wheelchair User		.12	.11	−.66**	N/A	N/A	−.20	−.20	−.25
	Nondisabled			N/A	−.11	.02	−.19	−.01	−.08	−.12
Age	Visually Impaired			.46†	.02	−.37	−.09	.12	−.05	−.35
	Wheelchair User			−.06	−.25	N/A	N/A	−.08	−.21	−.20
Duration	Nondisabled				N/A	N/A	N/A	N/A	N/A	N/A
of	Visually Impaired				−.42	−.46	−.34	−.49†	−.32	−.48†
Disability	Wheelchair User				.26	N/A	N/A	−.01	−.20	−.07
SEI	Nondisabled					−.04	.76***	−.01	−.03	−.12
Real	Visually Impaired					−.28	.87***	.88***	.26	−.15
Self	Wheelchair User					N/A	N/A	.58*	.50*	.69**
SEI	Nondisabled						−.14	−.46*	−.36†	−.31†
Ideal	Visually Impaired						−.17	−.19	.26	.59*
Self	Wheelchair User						N/A	N/A	N/A	N/A
SEI	Able-Bodied							.16	.02	.11
Reflected	Visually Impaired							.78**	.12	−.28
Self	Wheelchair User							N/A	N/A	N/A
Ease	Nondisabled								.26***	.34***
with	Visually Impaired								.27	.04
Able-Bodied	Wheelchair User								.66**	.76***
Ease	Nondisabled									.45***
with Wheel-	Visually Impaired									.15
chair User	Wheelchair User									.71***

Pearson product–moment correlation coefficients. The *n*s values for the visually impaired sample range from 13 to 15; *n*s for the wheelchair user sample from 11 to 17; *n*s for the nondisabled sample from 28 to 41 (except for Ease scores, where *n*s range from 142 to 193).

†$p < .10$
*$p < .05$
**$p < .01$
***$p < .001$

$F(2, 187) = 3.06, p < .05$, suggests relatively greater social anxiety in the Predicted Response condition than in the Own experimental condition for disabled students; the Tukey hsd test shows that the difference is significant for wheelchair users ($p < .05$). There were no significant differences between the various groups' Own Scores. Results on nondisabled subjects' Predicted Response scores were marginally

Table 4. Social Anxiety and Dating Behavior Scores in Conditions: Means, Standard Deviations, and Ranges

Experimental Condition		Nondisabled
		SAI
Own	*M*	8.71
	SD	5.78
	range	1–25
Predicted	*M*	8.82
Response	*SD*	5.28
	range	2–20
		SAC
Own	*M*	1.32
	SD	.52
	range	1–2
Predicted	*M*	1.43
Response	*SD*	.54
	range	1–3
		SAQ: Number
Own	*M*	7.28
	SD	8.66
	range	0–30
Predicted	*M*	5.13
Response	*SD*	6.57
	range	0–15

The higher the score, the greater the anxiety; maximum SAQ.

significant ($p < .10$), with higher scores for dis

On the SAQ social anxiety item the two vealed a significant Experimental Condition m with greater anxiety in the Predicted Respon nonsignificant planned comparison on Own sc participants in the three groups experience simil on Predicted Responses show that nondisable impaired and wheelchair user students experie the opposite sex than do nondisabled students

Dating behavior. Two questions of th past month, satisfaction with dating frequenc about current dating partners pertain to this th

r Three Groups of Students: Nondisabled, Visually Impaired,

	SEI			Ease with:		
Duration of Disability	*Real Self*	*Ideal Self*	*Reflected Self*	*Nondisabled Students*	*Wheelchair User Students*	*Visually Impaired Students*
N/A	−.43**	.17	−.43**	−.27	−.28†	−.09
.35	−.76***	.32	−.59*	−.71**	−.53*	.28
−.13	−.90***	N/A	N/A	−.46†	−.33	−.50*
N/A	−.39*	−.08	−.50**	−.20	−.24	.05
−.14	−.76**	.38	−.70**	−.72**	−.53*	.31
.11	−.66**	N/A	N/A	−.20	−.20	−.25
N/A	−.11	.02	−.19	−.01	−.08	−.12
.46†	.02	−.37	−.09	.12	−.05	−.35
−.06	−.25	N/A	N/A	−.08	−.21	−.20
	N/A	N/A	N/A	N/A	N/A	N/A
	−.42	−.46	−.34	−.49†	−.32	−.48†
	.26	N/A	N/A	−.01	−.20	−.07
		−.04	.76***	−.01	−.03	−.12
		−.28	.87***	.88***	.26	−.15
		N/A	N/A	.58*	.50*	.69**
			−.14	−.46*	−.36†	−.31†
			−.17	−.19	.26	.59*
			N/A	N/A	N/A	N/A
				.16	.02	.11
				.78**	.12	−.28
				N/A	N/A	N/A
					.26***	.34***
					.27	.04
					.66**	.76***
						.45***
						.15
						.71***

The *ns* values for the visually impaired sample range from 13 to 15; *ns* r the nondisabled sample from 28 to 41 (except for Ease scores, where

; relatively greater social anxiety in the Predicted vn experimental condition for disabled students; lifference is significant for wheelchair users ($p <$ differences between the various groups' Own jects' Predicted Response scores were marginally

Table 4. Social Anxiety and Dating Behavior Scores in the "Own" and Predicted Response Conditions: Means, Standard Deviations, and Ranges

Experimental Condition		Scores: Nondisabled	Visually Impaired	Wheelchair User
		SAD: Social Anxiety		
Own	*M*	8.71	8.93	5.53
	SD	5.78	7.68	5.90
	range	1–25	1–26	1–20
Predicted Response	*M*	8.82	11.73	10.71
	SD	5.28	5.69	5.95
	range	2–20	4–26	2–25
		SAQ: Dating Anxiety		
Own	*M*	1.32	1.43	1.41
	SD	.52	.76	.62
	range	1–2	1–3	1–3
Predicted Response	*M*	1.43	1.52	1.79
	SD	.54	.51	.59
	range	1–3	1–2	1–3
		SAQ: Number of Dates During Past Month		
Own	*M*	7.28	2.69	4.92
	SD	8.66	2.90	5.26
	range	0–30	0–10	0–16
Predicted Response	*M*	5.13	2.04	2.16
	SD	6.57	2.18	3.10
	range	0–15	0–10	0–20

The higher the score, the greater the anxiety; maximum score is 28 for the SAD and 3 for the SAQ.

significant ($p < .10$), with higher scores for disabled than for nondisabled students.

On the SAQ social anxiety item the two-way ANOVA comparison also revealed a significant Experimental Condition main effect, $F\ (1, 187) = 4.37, p < .05$, with greater anxiety in the Predicted Response than in the Own condition. The nonsignificant planned comparison on Own scores suggests that in dating situations participants in the three groups experience similar levels of anxiety. The comparisons on Predicted Responses show that nondisabled subjects believe that both visually impaired and wheelchair user students experience more anxiety with a member of the opposite sex than do nondisabled students ($p < .05$).

Dating behavior. Two questions of the SAQ (number of dates during that past month, satisfaction with dating frequency) and the "dating" item which asks about current dating partners pertain to this theme.

The two-way ANOVA between groups comparison on the number of dates during the past month yielded a significant Scores main effect, F (2, 173) = 6.47, $p < .01$; Tukey hsd test results show more dates for nondisabled students than for visually impaired students ($p < .05$) when Own and Predicted Responses are combined. The comparison on Own scores revealed no significant differences among the groups. On Predicted Responses, the analysis was significant and shows that nondisabled students were believed to have more dates in the past month than either wheelchair user or visually impaired students ($p < .05$). Means for these analyses are presented in Table 4.

Results of the two-way ANOVA comparison on satisfaction with dating frequency revealed a significant Experimental Condition main effect, F (1, 186) = 5.53, $p < .05$, indicating greater dissatisfaction with current dating frequency inthe Predicted Response than in the Own condition. Neither the Own nor the Predicted Response between-groups comparison was significant.

The "dating" question asked whether one is dating a nondisabled person, a disabled person, or no one. To evaluate the relationships between Own and Predicted Response scores, χ^2 tests were made separately on nondisabled, visually impaired, and wheelchair user frequencies. The results were significant only for nondisabled frequencies; subjects in the Predicted Response condition believed that nondisabled students were more likely to be in a dating relationship than was actually the case $\chi^2(2, n = 100) = 9.45, p < .01$; there was no overestimation of the number of visually impaired or wheelchair user students who are currently involved in dating relationships.

On Own scores of the three groups, the χ^2 test was not significant. On Predicted Response scores the significant results, $\chi^2(4, n = 119) = 21.53, p < .001$, are due primarily to nondisabled subjects' overestimates of the frequency of dating a disabled person by disabled students. Parenthetically, whereas 3% of subjects with a disability indicated that they were dating a disabled person, 16% of nondisabled subjects believed that disabled students dated others who have a disability.

DISCUSSION

Nondisabled Students' Beliefs

The results show that the nondisabled students believed that their disabled peers were different from able-bodied students in a variety of negative ways: they believed that students with disabilities were more socially anxious, that they were uneasy about dating, and that they date less frequently (although disabled students were not seen as being dissatisfied with this), that they were more likely to date partners who had a disability, and that they fit a "handicapped" stereotype. It was therefore not surprising to find that nondisabled students were more ill at ease with students who have a disability than with able-bodied peers.

The importance of perceived similarity in influencing attraction and liking has been well documented (Byrne, 1969). Given the importance of socializing, friendship formation, and dating for most college students, the beliefs held by nondisabled individuals may constitute a serious barrier to social interaction.

Beliefs of Students with Disabilities Cc Disability

Students who have a disability were foun disabilities that are similar to those of nondisab assertions made by others (e.g., Kemp & Rutter, disabilities stereotyped members of their own c did nondisabled students. Also, they were just as students with peers who had a disability diffe members of one's own group and discomfort wi ferent from one's own can not only hamper inte disabilities but can also prevent the formation of and social adjustment of people with disabiliti

Realities Concerning Students with a I

How "accurate" are the beliefs shared by The results show that nondisabled students and significantly on any of the measures administ Self, Reflected Self), social anxiety, dating an individual dated, and satisfaction with dating fr show that the constellations of related persona and disabled students are the same.

Nor did students with disabilities differ fr with able-bodied students. Indeed, they were as dents as they were with students who had t Consistent with previous findings (Fichten & 1986; Fichten et al., 1987), the results indicate th do not prefer to be with "their own kind."

Of course, self-ratings are not immune fr biases. Also, the sample sizes in the present inve the consistency of the nonsignificant results sug interaction between disabled and nondisabled discomfort on the part of students with disabili

Implications for the Formation of Self

Most theories about the development o based on interaction with the social world. Acc with disabilities should have lower self-este (Rosenberg, 1979; Rosenberg & Kaplan, 1982

The theory of reflected appraisals holds formed by adopting the views of others. In the disabled individuals were found to hold negative In addition, students with disabilities have been views of others (Babbitt et al., 1979; Schroedal &

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Beliefs of Students with Disabilities Concerning Others Who Have a Disability

Students who have a disability were found to hold beliefs about others with disabilities that are similar to those of nondisabled students; this is consistent with assertions made by others (e.g., Kemp & Rutter, 1986). For example, students with disabilities stereotyped members of their own disability group in the same way as did nondisabled students. Also, they were just as uncomfortable as were nondisabled students with peers who had a disability different from their own. Stereotyping members of one's own group and discomfort with people who have a disability different from one's own can not only hamper interaction between students who have disabilities but can also prevent the formation of groups that promote the integration and social adjustment of people with disabilities.

Realities Concerning Students with a Disability

How "accurate" are the beliefs shared by nondisabled and disabled students? The results show that nondisabled students and those with disabilities did not differ significantly on any of the measures administered: self-esteem (Real Self, Ideal Self, Reflected Self), social anxiety, dating anxiety, dating frequency, the type of individual dated, and satisfaction with dating frequency. Correlational results also show that the constellations of related personality characteristics for nondisabled and disabled students are the same.

Nor did students with disabilities differ from their nondisabled peers on ease with able-bodied students. Indeed, they were as comfortable with nondisabled students as they were with students who had the same disability as themselves. Consistent with previous findings (Fichten & Amsel, 1986; Fichten & Bourdon, 1986; Fichten et al., 1987), the results indicate that college students with disabilities do not prefer to be with "their own kind."

Of course, self-ratings are not immune from self-enhancing or self-deceptive biases. Also, the sample sizes in the present investigation were small. Nevertheless, the consistency of the nonsignificant results suggests that the problematic nature of interaction between disabled and nondisabled students is not caused primarily by discomfort on the part of students with disabilities.

Implications for the Formation of Self-Concept

Most theories about the development of self-concept and self-esteem are based on interaction with the social world. According to these formulations people with disabilities should have lower self-esteem than nondisabled individuals (Rosenberg, 1979; Rosenberg & Kaplan, 1982b).

The theory of reflected appraisals holds that self-image and self-esteem are formed by adopting the views of others. In the present study both able-bodied and disabled individuals were found to hold negative beliefs about people with disabilities. In addition, students with disabilities have been shown to be aware of the prejudiced views of others (Babbitt et al., 1979; Schroedal & Schiff, 1972). Yet, the self-images

and self-esteem of disabled and nondisabled students were not found to differ.

The social comparison view (Festinger, 1954; Rosenberg & Kaplan, 1982a) holds that self-concept is formed through comparisons with "similar" others. If people with a disability compared themselves to nondisabled individuals, their self-images would be poorer, because the most salient characteristics of those labeled "handicapped" are generally defined in terms of limits, inabilities, and inadequacies (Wright, 1983). If the reference group were to consist of thers who have a disability, one would not expect such a difference.

A systematic evaluation of the reference group for college students with physical disabilities is beyond the scope of this investigation. Indeed, there may be multiple reference groups depending on age and on the aspect of the self-concept evaluated. Nevertheless, it is unlikely that individuals with disabilities constituted the reference group for the students in this sample. First, college students with disabilities have many more nondisabled than disabled friends and acquaintances (Fichten & Bourdon, 1986). Second, the self-images of students with congenital and long-term disabilities (who have probably had more exposure and socializing experiences wtih others who have disabilities in special schools and facilities) did not differ from the self-images of students who have acquired their disability more recently.

Nor can the nature of the present sample (i.e., college students) account for the results. Data from non-college samples that show no or few differences between individuals with and without disabilities (e.g., Cameron et al., 1973; McCann, 1967; Weinberg & Williams, 1978) suggest that this is not the most likely explanation.

Why, then, do people with disabilities have positive self-images? Rejection of the "group identity" (Beail, 1983; Rosenberg, 1979) and reliance on overly favorable feedback from nondisabled individuals (Kleck et al., 1966; Hastorf et al, 1979) are likely possibilities. First, characterizations of specific persons with disabilities and of disabled people in general differ considerably (Ravaud et al., 1987). Second, although the present study did not address the issue of the development of self-esteem and self-concept directly, the results do suggest that negative beliefs about people with disabilities may not be accepted as characteristic of the self. For example, students with a disability were found to hold views about others in their disability group that were similar to beliefs held by nondisabled students. Despite this, they believed that others viewed *them* as favorably as they saw themselves, even though this may not have been the case. It is, perhaps, not society's *actual* views but their *perceived* views, about *oneself* rather than about *"the handicapped,"* which defines the self-image of people who have a disability.

Methodological Issues

The modified response prediction paradigm used in this investigation attempted to eliminate sympathy, social desirability, and self-presentation biases. It may have induced other biases, however, since predicted responses were consistently more negative than subjects' own scores.

That actors' and observers' perceptions and causal attributions for behavior differ has been well documented, as has the tendency for actors to make self-serving attributions (Fichten, 1984). People have also been shown to make more optimistic

evaluations of their own behavior than the sit
1987; Gotlib & Meltzer, 1987; Lewinsohn et al.
Brown, 1988). Such self-enhancing, self-decept
self-evaluations. Predicting the responses of ot
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In evaluations by able-bodied individual
what, then, is the appropriate comparison grou
evaluations of individuals who have a disabil
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compares disabled actors' evaluations with al
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disabled individuals. In this respect, the "typica
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CONCLUSIONS

The results show that nondisabled stu
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What is then required is attitude change
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evaluations of their own behavior than the situation warrants (Alloy & Ahrens, 1987; Gotlib & Meltzer, 1987; Lewinsohn et al., 1980; Roth et al., 1986; Taylor & Brown, 1988). Such self-enhancing, self-deceptive biases result in overly favorable self-evaluations. Predicting the responses of others, an observer rating procedure not influenced by actors' self-serving biases can result in less favorable evaluations than actor ratings.

In evaluations by able-bodied individuals of people who have disabilities, what, then, is the appropriate comparison group? Is it legitimate to compare self-evaluations of individuals who have a disability with nondisabled individuals' evaluations of them, as much of the literature has done? Because this process compares disabled actors' evaluations with able-bodied observers' ratings, the difference in focus might confound the meaning of the results. Clearly, two types of comparisons are needed: self-ratings by all concerned individuals and observer ratings, made by nondisabled people, of the characteristics of both able-bodied and disabled individuals. In this respect, the "typical similar other" response prediction format appears to be particularly useful in eliminating the effects of sympathy, social desirability, and self-presentation biases (Fichten & Amsel, 1986). The method does not purport to produce ratings more "accurate" than self-evaluations, but, rather, attempts to address the issue of evaluations when social desirability and sympathy effects are likely to distort ratings. Also, although a single individual's beliefs about the views of others do not constitute an accurate assessment of that person's own attitudes or perceptions, such ratings made by many subjects probably do provide an accurate picture of commonly held views.

CONCLUSIONS

The results show that nondisabled students believe numerous myths, in domains important to young adults, about their peers who have a disability. They are also ill at ease with their disabled peers. Students with disabilities share these myths, even when the myths concern others with disabilities similar to their own, and they, too, are uncomfortable with individuals who have a disability if it is different from their own. Although the negative beliefs do not seem to influence the self-concepts of individuals with disabilities, the very existence of these beliefs can seriously hamper integration, whether into institutions of higher education or into society at large.

What is then required is attitude change programming to dispel such myths. Extended equal status contact, the realization of which is possible at colleges and universities, could prove effective in modifying stereotyped beliefs and in fostering problem-free interaction between nondisabled individuals and their disabled peers (Fichten, 1988). To the extent that the potential for such contact is realized, those with disabilities will be enabled to participate fully and without discrimination in our society.

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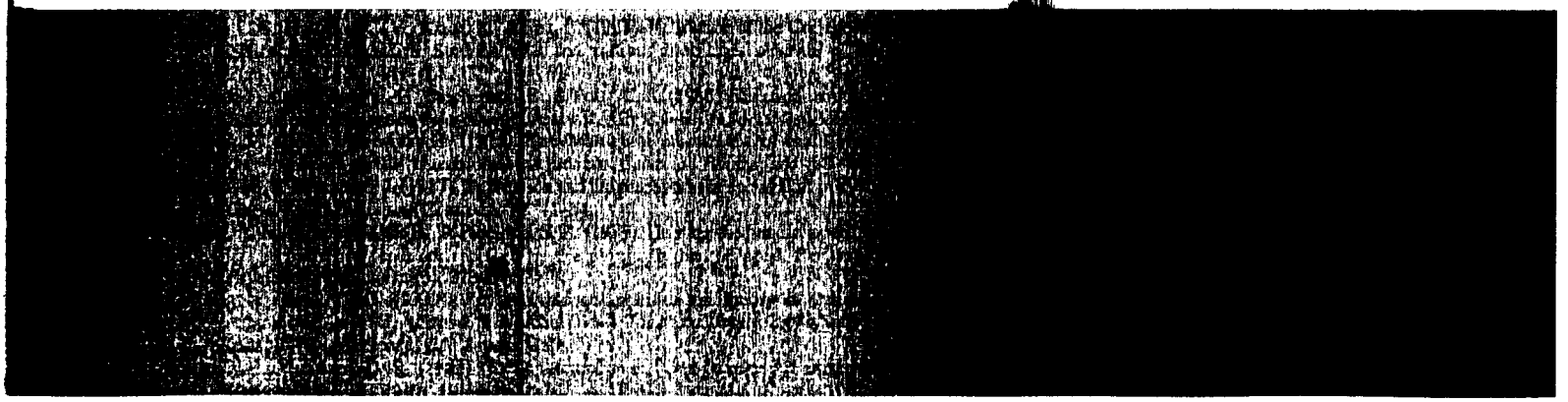

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