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Norma J. Walters R.N., Ph.D.
Auburn University

S. Tracy Trussell Ph.D.
University of Georgia

James Noel Wilmoth Ph.D.
Auburn University

Fred T. Walters
Brevard Community College

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ATTITUDES OF EXPERIENCED HEALTH OCCUPATIONS TEACHERS TOWARD DISABLED PERSONS

Norma J. Walters¹

S. Tracy Trussell

James Noel Wilmoth

Fred T. Walters

Abstract: The purpose of the research was to study the effects of different instructional strategies and selected demographic variables on experienced health occupations teachers* attitudes toward disabled persons using **three** groups: independent study, lecture, and **film**, in a pre/post experimental design. MANOVA revealed no significant group effects for instructional strategies. A sequential partitioning of the sum of squares in **univariate** analyses revealed differences in years **of** occupational

¹Norma J. Walters, R.N., Ph.D., is Assistant Professor and Coordinator of Health Occupations at Auburn University; S. Tracy **Trussell**, Ph.D., is Assistant Professor, Vocational and Adult Education, University of Georgia; James Noel **Wilmoth**, Ph.D., is Associate Professor, Foundations of Education, Auburn University; and Fred T. Walters is Adjunct Professor, Brevard Community **College** and Instructor **with Brevard** County, Florida School Board.

experience, number of courses studied, years of teaching experience, and highest degree earned. Special **coursework** to teach the handicapped was found to contribute **to** a positive attitude toward disabled students. This finding suggests that states should require special preparation **for all** teachers.

Public Law 94-142 calls for handicapped children to be educated whenever appropriate with non-handicapped children. This policy depends **on** local educators, administrators, and the child's parents to make the determination **of** appropriate placement. The education of administrators and teachers must prepare them to participate meaningfully in this process.

Gearhart and **Weisha** (1976) attest to the need **for** improvement of inservice vocational development in the area **of** serving handicapped youth. To date, most states have provided special inservice, workshops, or other means to provide **training** for teachers in this problem area. In 1983, **Lakin** and **Reynolds** reported that approximately 70% of **all** children identified as handicapped spend some portion of their school day in regular classrooms. However, insufficient studies have been conducted to determine teacher attitudes toward **the** handicapped or to evaluate **the** best means to provide inservice education about the handicapped in the regular school setting.

Given proper information and training, teachers may develop a more positive attitude toward **the** handicapped student. Furthermore, **preservice** teachers' attitudes **toward** handicapped students may be improved by exposing the teachers while **they** are in training to **situations** involving disabled students.

Bruwelheide (1979) wrote: "The greatest barriers may be those which are not immediately seen, those of administrator and teacher attitude, anxiety,

and non-understanding of the handicapped individual" (p. 5). Traditionally, health care professionals have been prepared for engaging in treatment of medical needs of clientele groups that **may** have included handicapped persons. This study focused on health care professionals engaged in providing education and training to handicapped students preparing for entry into health careers. In particular, this study was concerned with attitude toward handicapped students.

Since public education was opened only recently for health occupations courses and since the teachers of these courses may not be **well** prepared to serve handicapped students **who** have chosen these programs, a study of attitudes may be helpful for understanding classroom environments **in** health occupations courses available to handicapped students. Should those environments be less **than** desirable, such a study might also suggest areas for additional professional preparation for health occupations teachers. Moreover, among other studies, the International Association for Evaluation of Achievement in Education study of classroom environments has demonstrated that the teacher is a very important contributor to variance in student achievement (Regan and Anderson, 1984) .

Purpose of Study

The primary purpose was **to** apply a popular measure of attitude toward handicapped persons to experienced secondary health occupations teachers and **to** determine whether those attitudes were **malleable** under different limited instructional strategies. The secondary purpose was to determine what relationships existed between selected demographic variables and observed differences **in** teacher attitude toward handicapped persons.

Methodology

Secondary school health occupations teachers employed in vocationally reimbursed programs as instructors in allied health cluster curriculum (multiple-competency) programs were participants in this study. These experienced health occupations teachers, with educational backgrounds in medical technology, pharmacy, respiratory therapy, dental assisting, and registered nursing, were randomly assigned to three groups. The groups were randomly assigned treatment in a one-hour session which consisted of self-paced independent study (n = 15), lecture with discussion (n = 14) and film (n = 15), all with identical conceptual content dealing with problems and needs of physically disabled persons.

Conceptual content for the three sessions was controlled by the film, The Invisible Barrier (Disability Research Information Center) which was used unedited. A self-paced instructional module for independent study was constructed from the verbal and visual conceptual content of the film. A narrative transcription of the film for traditional lecture was developed with supplemental verbal descriptions of those concepts visually presented.

Three weeks prior to an annual summer professional development workshop for all high school health occupations teachers, pretests were mailed to the teachers with a request for their participation. Sixty-two percent of the teachers volunteered to be included as a part of their three-day workshop. This was the only session addressing the handicapped student population.

The three groups were treated in regular classrooms at the workshop site. The three treatments occurred simultaneously under supervision of three professional educators. Educators in the film and independent study groups assured that participants attended to the task. The educator in the lecture

group presented the lecture. There was a prior meeting of the three educators who facilitated the treatments to discuss procedures that would ensure effective control **for** the three presentations to be as identical as possible.

Posttest data collection was completed immediately following the one-hour treatment session. After the data were collected, the purpose of the study was explained to all participants.

In order to guide the study, four null hypotheses were generated and tested:

Ho ₁ The scores of health occupations teachers will not differ significantly from neutral (item means equal to 3 on a five-point Likert scale) on the three scales of the Attitudes Toward Disabled Persons (ATDP) instrument.

Ho ₂ The **premeasure/postmeasure** scores on the three scales will not differ significantly.

Ho ₃ There will **not** be a significant difference between the three methods of instructional strategies (independent study, lecture, and **film**) **in** causing modification of health occupations teachers' attitudes toward the disabled as measured by the scales of the ATDP instrument.

Ho ₄ The ATDP scores among health occupations teachers **will** not differ statistically for selected demographic variables.

Instrumentation

A validated attitude assessment, "Attitudes Toward Disabled Persons" (ATDP) was selected for the study (Yuker, Block and Campbell, 1960). Content validity has been established by comparisons with other studies (Trussell, N. J. Walters, Davis, Avery, F.T. Walters, and Williams, 1984). The original instrument contained 30 items in **two** sub-scales. Five items relating to

vocational education were added to the ATDP instrument by Iverson and Davis (1981) in order to clarify views of the teachers toward specific educational situations. The revised 35-item ATDP instrument has three sub-scales. The Personality Characteristics Sub-scale has 19 items specifically referring to similarities or differences in personality characteristics of disabled persons. Sub-scale scores of 57 were considered neutral. The Special Treatment Sub-scale has 11 items (thus neutral would be a score of 33) dealing with the special treatment of disabled persons. The Disabled in School Sub-scale consists of five items that refer to special treatment in educational situations and would have a neutral score value of 15. The ATDP instrument used a 1-5 Likert scale, with 1 being strongly disagree and 5 being strongly agree. The sense of scaling for some of the Likert items was reversed as recommended by the ATDP authors before those items were accumulated into sub-scale scores for multivariate analyses. Missing data from individual response categories were eliminated in the data analysis by listwise deletion in the GLM procedure of SAS. Listwise deletion resulted in the loss of seven cases for a final n of 81. Reliabilities of the ATDP instrument ranged from .93 for all 35 items to .78 for the five-item Disabled in School Sub-scale using Cronbach's Coefficient Alpha.

Results and Discussion

MANOVA procedures for Personality Characteristic, Special Treatment, and Disabled in School Sub-scales by Type of Score (observed vs. chance or neutral) indicated a difference in location for the two types. On the premeasure, Wilk's Lambda was .44 ($p < .05$) and on the postmeasure Wilk's Lambda was .45 ($p < .05$). The univariate analysis revealed a significant F value for each of the three sub-scales. Therefore, null hypothesis one was

rejected.

Table 1 presents results of MANOVA on the three sub-scales simultaneously. It should be observed that no source is significant at the .05 level, Hypotheses 2, 3, and 4 therefore were not rejected for the multiple dependent variable model.

Table 1

MANOVA for Personality, Special Treatment and Disabled in School Subscales

Source	Wilk's Lambda	F _a	Numerator df	Denominator df	P
Pretest/Posttest	.96	.24	3	18	.87
Group Teaching Strategy	.74	.97	6	36	.46
Handicapped Family Member	.99	.05	3	18	.98
Years of Occupational Experience	.83	.40	9	43	.93
Special Coursework	.85	1.03	3	18	.40
Number of Courses (special coursework)	.61	.82	12	47	.63
Years of Teaching Experience	.86	.31	9	43	.97
Experience Teaching Handicapped	.98	.13	3	18	.94
Highest Degree	.81	.45	9	43	.90
Pretest/Posttest by Group	.84	.56	6	36	.76

Table 2

Univariate Analyses of Scores on ATOP by Personality Characteristics, Special Treatment, and Disabled in School

Sub-scales

source	df	Personality Characteristics				Special Treatment				Disabled in School			
		SS	MS	F	P	SS	MS	F	P	SS	MS	F	P
Model	60	1498.13	24.92	2.73	.01*	413.79	6.90	1.87	0.06	729.12	12.15	4.82	0.00*
Error	20	182.30				73.77	3.68			50.43	2.52		
Total	80	1677.43				487.56				779.55			

*Significant at alpha = .05 level

Source	df	Personality Characteristics			Special Treatment				Disabled in School				
		Type I	SS	F	P	Type I	SS	F	P	Type I	SS	F	P
Pretest/Posttest	1		0.12	0.01	0.90		0.05	0.01	0.90		11.56	4.88	0.04*
Group Teaching Strategy	2		12.40	0.68	0.51		22.83	3.10	0.06		0.44	0.09	0.91
Handicapped Family Member	1		1.45	0.16	0.69		3.05	0.83	0.37		8.78	3.48	0.07
Years of Occupational Experience	3		107.01	3.91	0.02*		38.22	3.45	0.03*		84.10	11.12	0.00*
Special Coursework	1		1.87	0.21	0.65		3.50	0.95	0.34		34.80	13.80	0.00*
Number of Courses (special)	8		207.86	2.85	0.02*		69.70	2.36	0.05		205.12	10.17	0.00*
Years of Teaching Experience	3		90.77	3.32	0.04*		25.49	2.30	0.10		2.08	0.28	0.84
Experience Teaching Handicapped	1		0.02	0.00	0.96		3.01	0.82	0.37		0.61	0.24	0.62
Highest Degree	6		158.25	2.89	0.03*		31.40	1.42	0.25		107.08	7.08	0.00*
Pretest/Posttest by Group	2		9.86		0.59		19.87	2.69	0.09		2.14	0.42	0.65
Number (group)	32		905.76	3.11	0.00		196.61	1.67	0.11		272.37	3.38	0.00

*Significant at alpha = 0.05 level

R-Square 0.891

R-square .849

R-Square 0.935

However, **univariate** analyses with general linear model procedures employing selected demographic variables in addition to **Pre/Post** Type and Group indicated that **the models** overall were satisfactory, accounting for between about .85 (for Special Treatment) and .94 (for Disabled in School) of **observed** variabilities (Table 2). However, because of **multicollinearity** in the **data**, the completely martialled variables uniquely did not account for significant proportions of variability. Again, the second, third, and fourth null hypotheses were not rejected for the single dependent variable models.

The procedure of choice for responding to the **multicollinearity** problem with these data was to assign the variability sequentially. **Pre/Post** Type, and Group, were entered first and second because of their potential contributions to the stated purposes of this study. It was reasoned that the presence of a handicapped family member might enhance **favorable** attitudes toward the handicapped. This experience would have preceded **all occupational** and educational experiences; thus, "Handicapped **Family Member**" was entered third.

For health occupations teachers the **usual** mode for entry into the professions **is** through completion of a **health** care training program. Subsequent to this **the** prospective teacher would either enter the teaching profession directly or attain varying levels of educational proficiency, then enter the teaching profession. Therefore, "Years of Occupational Experience" was entered **fourth**. "Courses" (had or did not have special courses for teaching **the** handicapped) and "Number of Courses" (special courses) were then entered **fifth** and sixth into the model.

Teaching **experiential** variables were entered seventh following the special **coursework** because of **the** requirement for **coursework** in the teacher certification process. The possibility of having taught a handicapped student

would be more likely **with** increasing number of years of teaching experience. Finally, "Highest Degree Earned" was added since it is an important variable for determining compensation and status for practicing teachers.

The sequential **univariate** analysis shown in Table 2 indicated **that** years of occupational experience, number of special courses taken to teach handicapped students, years **of** teaching experience, and highest degree earned contributed significantly to the explanation of variance on the Personality Characteristic Sub-scale (Model $F = 2.73$, $p < .05$). On the Disabled in **School** Sub-scale the pretest/posttest effect, years of occupational experience, special **coursework** taken, number of special courses taken, and highest degree earned explained a significant amount of the variance (Model $F = 4.82$, $p < .05$). The model for the univariate analysis on the Special Treatment Sub-scale was **not** significant (Model $F = 1.87$, $p < .06$). However, years of occupational experience was significant ($F = 3.45$, $p < .03$).

A breakdown of means revealed that the **posttest** scores were higher ($m = 19.93$) than the pretest scores ($m = 18.07$) on the Disabled in **School** Sub-scale. **Scheffé** post hoc testing revealed that participants with one to four years of occupational experience responded significantly higher ($m = 21.60$) than teachers with no occupational experience ($m = 15.50$), with five to ten years occupational experience ($m = 17.65$), and with over 10 years occupational experience ($m = 17.94$) on the Disabled in School Sub-scale. In addition, teachers that had taken one special course to teach handicapped students ($m = 18.81$) responded more positively than teachers who had taken two special courses ($m = 17.86$).

On the Personality Characteristic Sub-scale, teachers with five to ten years teaching experience were significantly more positive ($m = 55.22$) than

teachers with over 10 years teaching experience ($m = 49.80$). Also, baccalaureate ($m = 55.20$) and master degree ($m = 54.18$) teachers were more positive than specialist degree teachers ($m = 45.00$). Participants who had other degrees or diplomas (such as the Associate in Science Degree and the diploma nurse program leading to a licensure/certification in health care) responded more positively ($m = 20.30$) than did baccalaureate degree teachers ($m = 16.40$) on the Disabled in School Sub-scale.

While overall effects of the different teaching strategies and the selected demographic variables were not significant, the post hoc analysis has provided results that help in understanding the variance of experienced health occupations teachers' attitudes toward the handicapped. Variances explained ranged between 84.9 and 93.5 percent.

Conclusions and Recommendations

The results of the study indicated that the health occupations teachers who participated responded slightly less than positive to the ATDP instrument. This finding was contrary to the findings of Iverson and Davis (1981) and Trussell, et al. (1984) using the same instrument. Therefore, further study, specifically with health occupations teachers should be conducted. A more broadly based study should be undertaken, perhaps a study involving teachers accessible through an interstate agency.

Selected demographic variables were helpful sequentially for the overall explanation of variance on the attitude of health occupations teachers toward the handicapped. Specifically, the number of years of occupational experience, special coursework taken to teach handicapped students, number of special courses taken, number of years teaching experience, and highest degree earned contributed to understanding of variance on the sub-scales of the ATDP

instrument.

The finding that the health occupations teachers were slightly less positive than expected from chance answering on the Personality Characteristic Sub-scale and the Special Treatment Sub-scale may be explained by the nature of the admission requirements to enter and succeed in health careers. Another factor, which may be considered, is the concept of mainstreaming the handicapped, which has increased the stress on all teachers in achieving successful placement of students regardless of ability. Therefore, it is recommended that health occupations students be assessed for abilities needed to enter and succeed in health occupations programs, However, the Disabled in School Sub-scale scores were on the positive side of chance which may indicate a willingness to provide for handicapped students' educational opportunities appropriate for their abilities.

Other findings revealed that special coursework taken to teach handicapped students contributed to a positive attitude toward the disabled student. Therefore, it is suggested that State Departments of Education continue to require special preparation for credentialing all teachers who teach handicapped students.

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