

ATTITUDES OF FIRST AND SECOND YEAR STUDENT DENTAL
HYGIENISTS TOWARD THE DISABLED IN RURAL VIRGINIA

A THESIS

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BY

PATRICIA MULLINS BRADSHAW, B.S.

DENTON, TEXAS

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TEXAS WOMAN'S UNIVERSITY

June 15, 1993
Date

To the Associate Vice President for Research and Dean of the
Graduate School:

I am submitting herewith a thesis written by Patricia M. Bradshaw, entitled "Attitudes of First and Second Year Student Dental Hygienists Toward The Disabled in Rural Virginia." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the Degree of Master of Science, with a major in Health Sciences Instruction.

Barbara J. Cramer
Barbara J. Cramer, Ph.D., Major Professor

We have read this thesis
and recommend its acceptance:

Nancy R. Gluck

Eileen E. Morrison

William B. Coddle
Chair, Department of Health Studies

Accepted

Ann Uhlir
Dean of College of Health Studies

Leslie M. Thompson
Associate Vice President for Research
and Dean of the Graduate School

DEDICATION

This thesis is dedicated to the memory
of my father

HASKIL STERLING MULLINS

"He passed over . . .
and all the trumpets sounded for him
on the other side."

John Bunyan

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PATRICIA MULLINS BRADSHAW, B.S.

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The purpose of this study was to determine the attitudes of first and second year dental hygiene students toward the disabled, at one educational site in rural Virginia, using the Dental Students' Attitudes Toward the Handicapped Scale (DSATHS) developed by Lee and Sonis. It was hypothesized that no significant difference would be found between first and second year students.

Of the 35 students surveyed, there was a 100% response rate. The data were analyzed using a t-test to determine if significant differences existed between first and second year students. The criterion for statistical significance was $p < .05$.

There was no significant difference between the first and second year dental hygiene students' attitudes toward the disabled. The results revealed that a majority of first and second year students have a favorable attitude toward the disabled.

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CHAPTER 1

THE PROBLEM AND ITS BACKGROUND

On March 14, 1981, Dr. Patricia Cormier was the keynote speaker at conference of the American Association of Dental Schools held in Chicago, Illinois. This conference was entitled "The Role of Dental Hygiene Education in the Care of the Handicapped." During her keynote address, she brought to the audience an awareness of how the disabled are viewed in this country. "In the United States the disabled have been and continue to be the victims of a plethora of labels: 'impaired,' 'dysfunctional,' 'exceptional,' 'vegetable,' 'retarded,' 'dummy,' 'crippled,' 'special,' and so forth, words that characterize the 'public' view of persons who may in some way be physically different from what the average person perceives as normal" (Cormier 1982, 166). The words our society has often used to describe the attitudes toward the disabled include prejudice, ignorance, fear, insensitivity, bigotry, discrimination, dislike, and insensibility (Livneh 1980, 280).

In the 1980s, dental and dental hygiene schools assessed their programs' ability to educate the health care provider about various handicapping conditions. They studied various aspects of the educational design, barrier-

free facilities, and improved treatment modalities. Yet, the question remained concerning the attitude of these students toward the disabled population that they were being educated to treat.

Very little attention has been given to an important area of health concern to the disabled--dentistry. Since the 1970s, when Congress enacted federal legislation, more physically challenged people have entered mainstream America seeking routine dental or dental hygiene care. What have they encountered? What has been the dental or dental hygiene professionals' response to them?

The Problem

Prior to this study, little, if anything, was known about what student dental hygienists', from a rural educational setting, attitude was toward the disabled. The problem of this study was to determine if there is any statistically significant difference in attitudes of first and second year dental hygiene students toward the disabled patients in rural Virginia? The American Association of Dental Schools recommended curricula changes to better facilitate care for the handicapped (AADS 1984, 266). Dental schools and dental hygiene programs began to make changes in their curricula. Upon graduation, were negative attitudes in place? Was there any change in the students'

attitude during their education? Weinbergs' study indicated that, when a group of college students had increased contact with the disabled, a decrease of negative attitudinal responses occurred (1978, 123).

In 1989, a substantial study was undertaken to investigate college students enrolled in a dental hygiene program (Stoltenberg and Walker 1989, 117). This study looked at dental hygiene students in four educational sites in a large north central state. These schools were in urban settings (Stoltenberg and Walker 1989, 117). Stoltenberg and Walker concluded with this statement: "In addition, using this same instrument at dental hygiene educational sites in other parts of the United States will provide for regional cross-sectional comparisons" (1989, 123).

Since Stoltenberg and Walker (1989) urged the use of this instrument in research in other areas of the United States for comparisons, research in Virginia was validated by this challenge. Also, these researchers looked at educational sites that were in a more populated area of the country. In order to obtain this "regional cross-section" of America, investigators needed to explore the attitudes found in students from rural areas.

Statement of the Purposes

There were four purposes of this study: (a) to

determine the attitude of first year dental hygiene students toward the disabled, (b) to determine the attitude of second year dental hygiene students toward the disabled, (c) to profile the first and second year students' attitudes toward the disabled, and (d) to determine if there is a difference between the attitudes of first year and second year student dental hygienists in a two-year, associate degree program in rural Virginia.

Hypothesis

The following hypothesis was used to guide this study: There is no statistically significant difference between first and second year dental hygiene students' attitudes as measured by the Dental Students' Attitudes Toward the Handicapped Scale (DSATHS).

Definition of Terms

The following definition of terms were determined to be beneficial to the understanding of this study:

1. Attitude. An individual's favorable or unfavorable feelings, biases, fears, ideas, or convictions about any specific topic. Synonyms for the words favorable and unfavorable are positive and negative.
2. Attitude Score. The sum total of points for each individual student obtained on the Likert-type instrument

the Dental Students' Attitudes Toward the Handicapped Scale (DSATHS) developed by Lee and Sonis.

3. Disabled. A person who deviates from the average or normal person in mental, neuromuscular or physical characteristics, social or emotional behavior, or multiple impairments to the extent of requiring a modification of dental practices to receive treatment. A synonym for the word disabled is the word "handicapped."
4. First year dental hygiene student. Any student enrolled in the first year of an accredited dental hygiene program.
5. Rural educational setting. An educational setting with a surrounding population of less than 26,000 people per 460 square miles.
6. Second year dental hygiene student. Any student enrolled in the second year of an accredited dental hygiene program.

Assumptions

Four assertions were made before the undertaking of this study. These assumptions were: (a) attitudes are complex, (b) attitudes can be measured, (c) dental hygiene students have attitudes toward the disabled, and (d) the responses by dental hygiene students were truthful indications of their attitudes toward the disabled.

Limitations

The limitations involved in this study, both external and internal factors, were acknowledged by the investigator.

1. Only student dental hygienists from one rural educational setting were included in this study. Other institutions were considered. However, this was the only school that was not in an urban or metropolitan area in Virginia, which agreed to participate, thus satisfying the earlier definition of "rural setting." This sample of convenience may influence generalizability.

2. If a respondent was disabled, this might alter the findings. This external factor was not within the investigator's ability to control.

3. If the respondent was related to or lived with a disabled individual, this might alter the findings. Some research has indicated that an increase in contact with the disabled diminished the negative attitudes.

4. If a respondent was originally from another culture or large urban area, this might have altered the attitudes. Although this was a possibility, this educational site was not geographically close to a larger city. The possibility did exist that a student from another culture or country might have been a participant; however, this educational institution did not have an active

international recruiting strategy.

Significance of the Study

This study concerned the attitudes of student dental hygienists who would graduate after two years of study. These graduates serve the oral health care needs of surrounding communities in Virginia. The dental hygiene professional legally must attend to the needs of all their patients, regardless of disability. However, little was known about what these students' attitudes were toward the disabled. What were their attitudes during their two years of study? Were these student hygienists changed or influenced by their education? Upon licensure, will they be able to provide quality care to disabled patients without prejudice or bias? These issues needed investigation. The starting point seemed to be when these hygienists were still students. If students gained insight into their attitudes on the disabled, then this knowledge may influence the Dental Hygiene curricula.

This study may encourage instructors to convey positive or more favorable attitudes toward the disabled. This research may bring a greater dental hygiene education awareness of the student's attitude toward the handicapped. In the future, if the faculty applies this research to their classroom and clinical settings, support for the development

of a clinical rotation involving patients of different abilities (disabled) might be obtained. As a disabled patient interacts with the hygienist, a favorable attitude toward the handicapped might be developed.

CHAPTER 2

REVIEW OF RELATED LITERATURE

In 1980, the Journal of Dental Education published a Public Health Service report. This document reported that there were more than 27 million physically handicapped persons in the United States, or more than 10% of the population (1980, 126-161). The 1990 United States Census reported that this special population had increased to 35.9 million people (CRS Report 1992, 609). This represented a growth of almost 10 million more disabled Americans in one decade. Several researchers like Livneh (1980), Weinberg (1978), Westbrook and Adamson (1989), for example, have investigated attitudes that our society has toward the disabled population.

Weinberg (1978) conducted research with children to find out at what age these attitudes begin to develop (183). The study investigated whether young children have an understanding of disability and whether their attitudes toward a disabled child differed from those toward an able-bodied child. Negative attitudes toward the disabled had not developed by age five. At five years of age, children favored able-bodied children over the disabled in a forced choice method using drawings. Weinberg concluded that

attitudes of very young children are still flexible (1978, 188).

In another study, this one among college students, Weinberg examined the established theory that the most positive attitudes toward the disabled resulted from contact with them (1978, 114). Persons with the least contact with the disabled were found to perceive them as "less attractive, less happy, more dependent, more self-controlled and more politically conservative" (Weinberg 1978, 123). These students lived in a handicapped integrated dormitory and had more contact with the disabled. Weinberg concluded that this had a modest impact on the college students' perception of the disabled (1978, 122). Where the most contact was found between the able-bodied and the disabled, the stereotype of the disabled diminished (1978, 123).

These investigations assumed that people, of any age, had measurable attitudes toward the handicapped. Upon investigation (Weinberg 1978, 114; Livneh 1980, 280), measured attitudes using a variety of instrument(s) appropriate for the particular study group. Westbrook and Adamson (1989) also supported the idea that every segment of society had measurable attitudes toward the disabled (94).

Speakman, in conjunction with experts in the field of disabilities, has published an instrument for measuring the general populations' attitude toward the disabled (1989,

133). This instrument was published in the International Disability Studies Journal (1989, 133). It was designed to measure attitudes of the general population toward the physically disabled adult. Its international publication was a further indication that the social, political, and academic leaders worldwide have an interest in peoples' attitude toward the disabled.

If society, at large, had measurable attitudes toward this special population, would not health care providers also have measurable attitudes? Health care providers may come in contact with the handicapped more frequently than an average citizen due to the increase in the health needs of this population. Therefore, health care professionals should be able to express a measurable favorable or unfavorable attitude toward the disabled. Indeed, there have been many investigations of various health care professions' attitudes toward the disabled. Although the bulk of the studies have been conducted in the medical and physical therapy areas, some research has been conducted in the field of dentistry.

Finger and Jedrychowski (1989) investigated possible conditions that influenced access to dentistry for people with handicapping conditions. "Almost half the respondents to this survey reported having problems in obtaining dental care for the [handicapped] child or in accessing the

building" (195). The American with Disabilities Act has forced the entire country to comply with certain guidelines that further the disabled citizens' ability to access health care (Virginia Department of Personnel and Training 1992, 2-3).

Societal and Political Impact on Educational Goals

Social and political changes have increased the mainstreaming of the disabled population. Changes in social conscience and the concept of normalization have begun to affect schools of dentistry as well. Stoltenberg and Walker (1989) summarized that because dentistry was influenced by changes in society and political views, dental care for the handicapped had evolved through four stages: (a) supervised neglect, (b) restraints and sedation, (c) specialized equipment, and (d) normalization (118).

In 1974, the Robert Wood Johnson Foundation awarded curriculum development funds to eleven dental schools (Jones 1977, 136). These funds were intended to educate future dentists in the care of disabled patients, anticipating that these dentists would integrate handicapped patients into their general dental practice (Jones 1977, 138). Recommendations for curriculum guidelines for dentistry for the handicapped were developed in 1980 by a joint committee of the American Association of Dental Schools and the

National Foundation of Dentistry for the Handicapped (1980, 126). These were updated in 1984 for dental hygiene and in 1985 for dental school curriculums (Journal Dental Education 1984, 266-269 and 1985, 118-122).

The curricula guidelines for Dental Hygiene Care for the Handicapped stated curricula ". . .should address affective, cognitive, and psychomotor learning; hence, objectives in each area must be developed" (1984, 267). It also stated that the curricula should include experiences in the following areas: psychosocial attitudes/behaviors, and stereotypes, philosophy of care, including attitudes and values (1984, 267). Within the past decade several dental schools and hospital dental programs have provided a variety of classroom and clinical experiences for training in the management of patients with handicapping conditions (Cohen, LaBelle, Singer 1985, 592).

These curricula guidelines from the American Association of Dental Schools and the National Foundation of Dentistry for the Handicapped set forth primary educational goals that the student would be able to do upon completion of the program (Journal Dental Education 1984, 267). One goal was for the student to "assess one's professional attitudes, values, and commitment to providing dental care to handicapped people" (1984, 267). The specific behavioral objectives included: "discuss societal attitudes toward

handicapped people" (1984, 268) and "analyze his/her [the hygienist's] attitudes toward handicapped persons and determine how they might influence provision of care" (1984, 268).

Education's Influence on Student Attitudes

In the past few years, dentistry has made some progress affecting the care of the disabled in the United States. Concurrently, there has been an increase in awareness among dental educators for developing, in students, favorable attitudes toward this special population (Stolenberg and Walker 1989, 117). Many health care providers have been reluctant to treat disabled patients. This reluctance may stem from a variety of reasons: inadequate training, preparation, experience, little understanding, poor communication or negative feelings (Cohen and LaBelle 1985, 592-593). These obstacles can be almost insurmountable for the health care provider and the handicapped patient to overcome (Stiefel and Truelove 1985, 85-90).

In chapter 1, the term attitude was defined as an individual's favorable or unfavorable feelings, biases, fears, ideas, or convictions about any specific topic. Therefore, the curricular guideline set forth in 1984, proposed to do more than just educate students about handicaps or disabling conditions--it intended to provide an

opportunity for personal introspection and evaluations of attitudes. Largely, this area of education has not been fully studied (Gruythusen 1987, 713; Kraemer 1987, 278) nor has the impact of socialization of dental hygiene students in this area been fully examined (Sharp 1981, 24).

Sharp defined socialization as "the process whereby an individual internalize the behavior, characteristics, skills, knowledge and interests of social roles" (1981, 23). Sharp contended that during the early formative years, children were influenced by their parents, relatives, friends, teachers, and others who had contact with them (1981, 24). The socializing process continued into adulthood at which time varied role models became available. Professional socialization was a special kind of adult socialization. Individuals internalized the roles of specialized occupational groups through education and training (Sharp 1981, 25). Teachers and professional practitioners became primary role models and served as professional examples for the student.

Kraemer (1990) conducted a study to identify and assess the degree of influence dental hygiene role models in education and practice have had on the professional socialization of recent graduates (278). This study compared responses on attitudes and values scales of 1985 dental hygiene graduates who indicated they did or did not

identify with a dental hygiene role model in school. Results showed that those respondents who identified with a role model in school held significantly stronger attitudes on the profession (Kraemer 1990, 279). Kraemer (1990) did not find as many significant differences in attitudes between hygienists with and without role models as she had anticipated. From this study, Kraemer (1990) concluded that education may play a major role in affecting students' beliefs and attitudes (279). However, other health occupation professions have conducted research that indicate a limit on the actual influence education has on adult attitude (Cohen and LaBelle 1985, 592).

Kiyak and Brudvik's (1992) research involved dental students' self-assessed competence in Geriatric Dentistry (728). The inquiry measured the self-assessed confidence levels of four classes of dental students exposed to both didactic and clinical training regarding geriatric patients. It was found that after completing a 20 week didactic course in their junior year and a 5 week clinical course with geriatric patients in their senior year, these dental students perceived significant improvements in their abilities to manage geriatric patients in all areas assessed. These areas included: treatment planning, coordinating preventive dentistry programs, referring patients, dental care in alternative settings, and medical

emergencies (Kiyak and Brudvik 1992, 732).

The study examined an increase in self-confidence in technical areas. The preconceived attitudes that the dental students may have had, prior to this additional training, were not measured. It was the researchers' opinion that advanced training programs enhanced students' confidence and perceived competence; therefore, these training programs would more likely produce future dentists with a strong interest in treating older patients (Kiyak and Brudvik 1992, 734). Perhaps, if the researchers had included some investigation about the attitudes of the dental students prior to additional training, it would have given some indication that professional socialization played a role.

Although many researchers have examined topics related to student attitudes, a search of the literature has discovered that more has been written about the disabled in the last few years than in the last two decades. A search of literature during the last 20 years has shown an emphasis on the treatment of this population, not the health care providers' attitude toward them. It was in 1979 that one of the earliest studies focused on the role dental education played in student attitudes and confidence in the care of the disabled (Kinne and Stiefel 1979, 217). The results were similar to that found by Kiyak and Brudvik (1992): heightened confidence levels in disability management and

treatment modalities (729). Once again the emphasis was on the effect education had on the students' attitude and confidence toward operative treatment of the handicapped patient.

Reveal and Lemon (1991), considered dental hygienists' perceptions of their educational preparation regarding oral care for the mentally disabled in the United States (20). Their findings indicated that licensed hygienists who graduated after 1980 were more likely to say that they received sufficient didactic information about this population group during their educational preparation. However, a majority of all graduates agreed that their clinical preparation to treat these patients was not adequate and should be increased (22). Reveal and Lemon stated that their data indicated an increase in awareness of dental hygiene practitioners' attitudes toward their educational preparation in the treatment of this special population (1991, 23). This may indicate that curricula guidelines developed in the mid 1980s have had an impact on the succeeding graduating practitioners.

Instruments used in Measuring Student Attitudes

One instrument that had been used to measure the students' self-confidence early in the 1970s, Attitudes Toward Disabled Persons (ATDP) scale, was discarded by Kinne

and Stiefel (1979, 271). The investigators reasoned that the attitudinal items were not specifically related to providing dental treatment to disabled persons. They designed an eight item nominal attitude scale to assess students' perception of their willingness to include the disabled in their future practices. In 1982, Braff conducted a study using the ATDP instrument with dental hygiene students and the developmentally disabled (709). Braff compared two groups of students, those with additional clinical contact with the disabled, and the control group which had no similar contact. The groups were then compared to each other and also to a normative sample of college students. Both groups of the health care providers were less accepting of the disabled persons than were the college students (Braff 1982, 710). Between the two dental groups, the students exposed to the additional training and contact tended to be more accepting of handicapped people" (709) than the group without the contact.

Braff (1982), however, was concerned with the ATDP instrument. She contended that it had not always produced results that were in agreement and noted that other instruments had attempted to improve on the ATDP. Braff also experimented with the Personal Attribute Inventory, again with negative results. She stated that:

One is left with the feeling, expressed by other researchers, that at least in certain cases the test instrument itself might be at fault. . . . Further study is necessary to clarify the role of the instrument in studies of attitude change toward disabled patients (712).

Braff concluded that the test instruments available had too many flaws and questionable validity and reliability. Lee and Sonis (1983), recognized the need and "importance of a valid, reliable, easily administered instrument to measure attitudes toward the handicapped" (117). Lee and Sonis believed that the then current research studies about the handicapped were not comparable because of the wide variety of scales and instruments used. They contended that a "single, reliable, valid instrument is needed, so that comparisons can be made and studies build on one another" (117). Further, they believed that such an instrument was needed to assess changes in student attitudes toward the handicapped and to be used as a counseling tool for those dental students with negative attitudes (Lee and Sonis 1983, 117). They developed an instrument that measured dental students' attitudes toward the handicapped, easily administered and scored, with reliable and valid results, and was standardized: the Dental Students' Attitudes Toward the Handicapped Scale (DSATHS) (Lee and Sonis 1983, 119).

In 1983, researchers Lee and Sonis developed an

instrument designed to assess the attitudes of dental students toward the handicapped (117-123). The instrument contained items related to dental students' attitudes about their educational training and the perception of their instructors' qualifications in working with the disabled. In addition, the scale measured the students' desire for future and interpersonal relationships with the handicapped. Reliability calculations indicated that the scale was internally consistent and stable. Content validity was empirically established by means of factor and item analyses, and it compared dental students with two groups of dentists known to possess favorable and unfavorable attitudes toward the handicapped (Lee and Sonis 1983, 118-119). Other published instruments would have partially assessed the areas of concern in this research project; however, the DSATHS had a higher content validity and reliability (Duckworth 1988, 503).

Dental Hygienists' Attitudes Toward the Disabled

Upon review of the literature, very few studies have included educational programs in rural areas of the United States. A majority of the literature dealt with medical, nursing, physical therapy and dental students in large urban areas. Although there was a body of information which regarded the attitudes of dental students toward caring for

the disabled and aged, very little was found regarding the dental hygienist.

In 1989, Stoltenberg and Walker completed a study using an instrument developed by Lee and Sonis with dental hygiene students (117). They assessed four educational sites in a large north central state. The purpose of their study was to measure the attitudes of dental hygiene students and dental hygiene educators. They included some questions developed by the University of Michigan. These questions provided some demographic information, respondents' previous experience with handicapped individuals, formal course work in disabilities or special education that respondents may have taken, and respondents' feelings in rendering oral hygiene care to handicapped patients. They concluded that:

. . . for over 40% of students and educators, attitudes toward the handicapped seem to be based on experience with the handicapped rather than on formal coursework. Responses of students with formal course experience, however, suggest that formal instruction in special patient care is of value in facilitating-positive attitudes toward the handicapped (122).

Cohen (1985) stated that one of the most consistent findings related to the dental hygienist' educational preparation, needed to work with special patient groups, concerned the need for additional training in specific content areas (594). Over 90% of the survey respondents stated that there was a need for additional training in

specific educational content areas (595). Cohen (1985), Stoltenberg and Stiefel (1989) have primarily assessed urban areas in the United States. Yet, these investigators agreed in their research conclusions that more research, using similar instruments, was needed to evaluate the effectiveness of current dental hygiene curricula to prepare adequately hygienists to meet the needs of special needs patients.

Other health disciplines have studied the possible effect education may have on its students' attitudes toward special populations. In 1988, Duckworth conducted a study on the effect medical education had on the attitudes of medical students toward disabled people (501). The study published in this British medical journal reported on the influence education had on its students' attitudes. The investigator used the Attitudes toward Disabled Persons Scale (ATDP). Duckworth concluded that 23.8% of the students were resistant to change (505). In another British study, Bickley, examined dental hygienists' attitudes toward dental care for people with a mental handicap and their perceptions of the adequacy of their training (1990, 361). Bickely (1990) concluded that 73.5% of the hygienists surveyed felt that the training they had received, in relation to preparing them to work with mentally handicapped people, was inadequate; 82% felt that special training was

necessary, beyond general hygienist training (363).

However, most hygienists (73.5%) felt more positive about treating people with mental handicaps after a period of post-qualification work experience (Bickley 1990, 364).

Gruythuysen (1987) investigated the possibility that dental hygiene students' self-confidence should be considered along with attitudes in the care of the disabled (713). This study attempted to measure the influence of treating disabled persons during the practical training period on the attitude toward the disabled. Gruythuysen concluded that self-confidence peaks shortly after completion of a course on the care of the disabled (1987, 714). Also noted in this study, nearly all the respondents were women, who tended to adopt a more positive attitude toward disabled persons than men (714). The investigator could not clearly identify a correlation between the factors of attitude and self-confidence (714). Other studies seemed to indicate that with experience, health care providers' attitudes become more positive as their self-confidence was increased (Taylor 1989, 28; O'Brien 1989, 19).

Summary

Because of societal and political changes, individuals with a handicapping condition have been mainstreamed into the general population. This mainstreaming has forced the

disabled population to seek health care, including dental health care, from private practice health professionals rather than institutional and governmental health providers. While there is a body of information regarding the attitudes of medical and dental students toward caring for the aged and handicapped, few studies have dealt with another member of the dental team, the dental hygienist.

CHAPTER 3

PROCEDURES OF THE STUDY

This chapter describes the design of the study, the setting, the population and sample, the instrument, the procedures for data collection, and the methods for analyzing data. This descriptive study employed a survey technique. The research design was a posttest only design.

Setting

The Commonwealth of Virginia has six dental hygiene programs. Of the educational settings which met the rural criteria, a population of less than 26,000 people per 460 square miles, one agreed to participate. This rural educational site had a two-year accredited dental hygiene program.

Population and Sample

The population was defined as all community college student dental hygienists in Virginia. One educational institution consented to participate, so these students were utilized in this study.

A sample of convenience was used. The sample group was composed of 35 dental hygiene students from one educational

setting.

Protection of Human Subjects and Agency Approval

The study complied with the current rules and regulations of the Human Research Review Committee. The investigator was not present in the classroom when the subjects completed the forms. The investigator left the area to ensure anonymity of respondents. The respondent sealed the form in individual envelopes and then placed it in a larger return envelope.

Respondents were requested not to place their names or any other identifying marks on the returned forms. This was to ensure total anonymity of the potential subjects.

The coding strategy consisted of a letter in the upper right corner of the DSATHS form (see Appendix C). The letter designation was to separate freshman students from sophomore students only. The letters used were A (freshman) and B (sophomore). Group A contained 18 students and group B had 17 students. Only group data were used. The return of the questionnaire indicated consent.

The educational site was first contacted by a cover letter that outlined the research (see Appendix A). The agency consented and signed an Agency Permission for Conducting Survey form (see Appendix B). The school did not

want to be identified, therefore, the names of the school and president have been withheld.

Instrument

The research instrument used in the study was the Dental Students' Attitudes Toward the Handicapped Scale (DSATHS) developed by Lee and Sonis (1983, 117). The DSATHS (see Appendix C) consisted of 32 items related to dental students' attitudes about their educational training and perception of their instructors' experiential qualifications in working with the handicapped (Lee and Sonis 1983, 122). In addition, the scale measured the students' desire for future and professional relationships with the disabled (Lee and Sonis 1983, 122). Respondents to the instrument were asked to indicate their level of agreement or disagreement with 32 statements on a 5-point, Likert-type scale.

Validity and Reliability

Content validity was first established by expert opinion, by focusing on those traits cited in the literature as important for a dentist to possess when working with the handicapped, and by means of factor analysis and correlational techniques (Lee and Sonis 1983, 120). Correlations between dentists with known positive attitudes

and students who scored highest on the scale were similar. The correlations between dentists with known negative attitudes and dental students who scored the lowest on the scale were also similar. Those correlations lend support to the validity of the test as a means to measure both favorable and unfavorable attitudes of dental students toward the handicapped.

Reliability calculations indicated that the scale was internally consistent and stable. A Pearson r value of .844 was found (Lee and Sonis 1983, 120). This indicated that there was a relatively high instrument stability (Lee and Sonis 1983, 119).

Scoring

The value of responses to items 1, 3, 5, 7, 10, 11, 12, 14, 15, 17, 19, 21, 23, and 25 were scored: Strongly Agree = SA (5), Agree = A (4), Undecided = U (3), Disagree = D (2) and Strongly Disagree = SD (1). Unfavorable statements were reversed for scoring. Responses to items 2, 4, 6, 8, 9, 13, 16, 18, 20, 22, 24, 26, 27, 28, 29, 30, 31, and 32 were scored: Strongly Agree = SA (1), Agree = A (2), Undecided = U (3), Disagree = D (4) and Strongly Disagree = SD (5). This summated rating scale was treated as an interval scale for the statistical analysis in the study.

Data Collection

The agency was contacted by letter in early November of 1992. The agency granted permission to conduct the research in late November 1992 (see Appendix B). The study was conducted in January of 1993.

The investigator set two dates for the questionnaire to be given to the dental hygiene students. On January 25, 1993 the first year students completed the forms. The second year students completed the questionnaire on January 26, 1993. Both groups completed the forms during an extracurricular activity hour and not during a scheduled class period. Each DSATHS had an attached cover sheet with the investigator's address. This cover sheet contained specific instructions concerning the completion of the survey (see Appendix C).

The investigator read the cover sheet aloud to the potential subjects. It was stressed that any participation in this study was voluntary and not required. After the questionnaire instructions were read, the investigator passed out plain, white envelopes. The students were instructed to place the forms in the envelopes and seal them. If a student chose not to participate, they were asked to return their blank forms in a sealed envelope. The subjects were instructed to place the sealed white envelopes

in the large manila folder left on the instructor's desk. After a brief question and answer session of 5 minutes, the envelopes were passed out, and the investigator then left the area. Twenty-five minutes later, the investigator returned and collected the large manila folder with the individually sealed questionnaires inside. The procedure was repeated for the second group in the same manner.

Treatment of Data

The purpose of this study was to determine if there was a difference between first and second year dental hygiene students' attitudes as measured by the DSATHS developed by Lee and Sonis. The mean score of each group was computed. The type of data was interval. The descriptive data related to instrument were frequency and percentage of each questionnaire item which was calculated. The inferential statistics used was the t -test. The level of significance was $p < .05$. The presentation of the data is presented in narrative and table schemes in chapter 4.

CHAPTER 4

FINDINGS OF THE STUDY

This chapter reports the findings of the research study. It details the responses to the questionnaire and profiled the participants. The chapter also presents and analyzes the data concerning the attitudes of the students' toward the disabled.

Participant Data

There were 18 first year students and 17 second year students. Of the 35 students surveyed, there was a 100% response rate.

Findings by Hypothesis

The data were gathered using the Dental Students' Attitudes Toward the Disabled Scale (DSATHS), which asked respondents to indicate their degree of agreement or disagreement concerning the disabled. After a t -test analysis, the mean scores were found to have a calculated t value of 1.021. The critical t value at the $p \leq .05$ level of significance was 2.921. The calculated t value was less than the critical value (Issac and Michael 1990, 790). The findings indicated that there was no significant difference

between first and second year dental hygiene students' attitudes as measured by the DSATHS. Thus, the null hypothesis was not rejected (Huck, Cormier, and Bounds 1974, 56).

Findings by Frequency and Percentage

Findings by item frequency response and for percentage response of first and second year students are listed in Tables 1 and 2. The sixteen items reversed for scoring were: 2, 4, 6, 8, 9, 13, 16, 18, 20, 22, 24, 26, 27, 28, 29, 30, 31, and 32. For these items a strongly disagree and disagree response was a favorable attitude score. The other 14 statements scored strongly agree and agree as favorable attitudes.

Table 1

Frequency and Percentage of Responses by First Year Dental
Hygiene Students

First Year Students										
Item	SA		A		U		D		SD	
	f	%	f	%	f	%	f	%	f	%
1.	1	6	0	0	10	56	7	39	0	0
2.	0	0	1	6	1	6	6	33	10	56
3.	2	11	5	28	5	28	4	22	0	0
4.	0	0	1	5	1	5	8	45	8	45
5.	2	11	3	17	5	27	6	33	2	11
6.	1	6	0	0	0	0	9	47	8	41
7.	2	11	6	33	3	17	5	28	2	11
8.	0	0	0	0	0	0	5	28	13	72
9.	0	0	0	0	0	0	2	11	16	89
10.	1	6	0	0	11	61	6	33	0	0
11.	13	72	4	22	1	6	0	0	0	0
12.	1	6	0	0	10	56	6	33	1	6
13.	0	0	0	0	0	0	2	11	16	89
14.	0	0	4	22	7	39	6	33	1	6
15.	2	11	3	17	11	61	2	11	0	0
16.	0	0	1	6	2	11	8	41	7	39
17.	0	0	2	11	7	39	7	39	2	11
18.	0	0	5	28	5	28	5	28	3	17
19.	0	0	2	11	6	33	6	33	2	11
20.	0	0	1	6	5	28	4	22	1	6
21.	2	11	5	28	6	33	4	22	1	6
22.	0	0	0	0	5	28	6	33	7	39
23.	0	0	2	11	10	56	3	17	3	17
24.	0	0	3	17	8	41	4	22	3	17
25.	1	6	2	11	8	41	6	33	1	6
26.	2	11	10	56	1	6	5	28	0	0
27.	0	0	0	0	2	11	5	28	11	61
28.	0	0	1	6	4	22	8	41	5	28
29.	1	6	7	39	5	28	2	11	3	17
30.	1	6	1	6	5	28	9	50	2	11
31.	0	0	1	6	5	28	11	61	1	6
32.	4	22	6	33	2	11	3	17	3	17

Table 2

Frequency and Percentage of Responses by Second Year Dental Hygiene Students

Second Year Students										
Item	SA		A		U		D		SD	
	f	%	f	%	f	%	f	%	f	%
1.	0	0	5	30	6	35	4	23	2	12
2.	0	0	0	0	1	6	8	47	8	47
3.	0	0	5	30	5	30	5	30	3	12
4.	0	0	0	0	3	18	6	35	8	47
5.	0	0	7	41	1	6	6	35	3	18
6.	0	0	0	0	2	11	8	47	7	41
7.	1	6	7	41	3	18	3	18	3	18
8.	0	0	1	6	0	0	6	35	10	60
9.	1	6	1	6	0	0	2	11	13	77
10.	0	0	7	41	8	47	1	6	1	6
11.	10	59	7	42	0	0	0	0	0	0
12.	1	6	4	23	6	35	4	23	2	12
13.	0	0	0	0	0	0	5	30	12	71
14.	0	0	5	30	2	12	7	41	2	12
15.	1	6	7	41	8	47	1	6	0	0
16.	0	0	0	0	3	18	9	53	5	30
17.	0	0	4	23	5	30	5	30	3	18
18.	0	0	6	35	3	18	5	30	3	18
19.	0	0	5	30	6	35	5	30	1	6
20.	0	0	0	0	5	25	8	47	5	30
21.	2	12	8	47	5	30	2	12	0	0
22.	0	0	1	6	6	35	7	41	3	18
23.	0	0	2	12	6	35	3	18	6	35
24.	0	0	2	12	5	30	6	35	4	23
25.	1	6	6	35	7	41	3	18	0	0
26.	1	6	4	23	1	6	9	35	2	12
27.	0	0	0	0	0	0	6	35	11	66
28.	0	0	0	0	4	23	8	47	5	30
29.	2	12	1	6	4	23	5	30	5	30
30.	0	0	1	6	6	35	7	41	3	18
31.	0	0	1	6	9	53	3	18	4	23
32.	2	12	3	18	1	6	8	47	3	18

The summative mean score for first year dental hygiene students was 112. The second year students had a slightly higher summative mean score of 116. The highest raw score possible was 160 which according to Lee and Sonis (1983) indicates the most favorable attitude toward the disabled (120). The lowest raw score possible was 32 which would indicate the most unfavorable attitude toward the disabled. Based on Lee and Sonis' instrument parameters, the summative mean scores for both groups indicated that a majority of the students had a favorable attitude toward the disabled.

Both groups responses were similar. However, there were a few survey items that had greater degrees of differences between the two groups. The first year students chose the "undecided" category more often than the second year students. Item numbers 1, 10, 12, 14, 15, 23 (see Appendix C for DSATHS item statements) had a greater number of first year students undecided than second year students. These item statements related to personal contact with the disabled within the scope of their dental hygiene programs' clinical experiences.

Second year students chose "strongly agree" with less frequency than first year dental hygiene students. This was a generalized trend on all items except item numbers 11, 21, and 32 (see Appendix C for full statements in full). The percentage response rate was closer to that of the first

year students. These survey statements were related to past or future contact with the handicapped within the context of clinical experiences. The mean scores of both groups were numerically close. Overall, the interval data were similar between the two groups.

Summary

The interval data expressed in frequency distributions indicated that a majority of the first year students had a favorable attitude toward the handicapped. Second year students had a slightly higher percentage of 64% favorable. The inferential statistics were performed using a t-test on the group means. The alpha level was $p \leq .05$ for the level of significance. There was no significant difference between first and second year dental hygiene students' attitudes toward the disabled, therefore, the null hypothesis was not rejected.

CHAPTER 5

SUMMARY, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Summary

The problem of this study was to determine if there was a significant difference between first and second year student dental hygiene attitudes toward the disabled. This study provided baseline data from a rural two-year community college's dental hygiene program.

It was hypothesized that no significant differences would be found between first and second year student dental hygienists. To determine student dental hygienists' attitude toward the disabled, the Dental Students' Attitudes Toward the Handicapped Scale (DSATHS) developed by Lee and Sonis was used (Lee and Sonis 1983, 117). The t-test analysis was performed to determine if significant differences existed between each class. There was no statistically significant difference between first and second year student dental hygienists' attitude toward the disabled. The results revealed that the null hypothesis was not rejected.

Conclusions

The conclusion of this study was that first and second year dental hygiene students had similar attitudes toward the disabled. Other conclusions were that a majority of students had favorable attitudes toward the handicapped. Item number 11 indicated that 94% of first year and 100% of second year students strongly agreed or agreed with the statement desiring future interpersonal relationships with the disabled. A higher percentage of students seemed to have a positive attitude toward their relationships with the handicapped than toward their educational experience and perceptions of instructors relative to the disabled. Fewer than 50% of the first year students agreed that their educational experiences facilitated enjoyment in working with the handicapped. More than 50% of the second year students agreed that their educational experiences facilitated confidence in working with the disabled, however, more than 50% of the first year students disagreed with this statement.

Discussion

The results of this study have implications for dental hygiene education, dental hygiene educators, and individuals with handicapping conditions. However, caution must be

exercised when examining the implications of these findings. As a cross-sectional study, the data provided information on the attitudes of these students at one point in time. It did not provide information on their attitudes at various time intervals. In addition, despite the proven validity and reliability of the DSATHS, its use has been limited when compared to other measurement instruments. It was chosen because it specifically measures attitudes toward the handicapped in a dental profession closely related to dental hygiene. It should be recognized that regardless of the measurement instrument, an objective determination of attitudes is difficult to achieve.

With these limitations in mind, the results indicated that for over 50% of the students, a favorable attitude toward the disabled is held. However, no information regarding previous exposure to the disabled was obtained. Stoltenberg and Walker's (1989) study gathered information in this area, finding that over 84% had some type of experience with the handicapped prior to dental hygiene school (122). Stoltenberg and Walker concluded that students who have no experience with the handicapped have greater difficulty formulating an opinion about questionnaire items than students who have experience (1989, 122). This might account for the large percentage of undecided responses to the DSATHS survey. Sometimes the

"undecided response category" was used as a forced choice response strategy.

They also found that students without formal course experience had greater difficulty formulating an opinion about questionnaire items. (Stoltenberg and Walker 1989, 122). The first year students seemed to have an overall higher percentage of undecided responses related to their perceptions of education and teachers. This might be explained by the lack of formal course work in special patient population and treatment regimes. The course work might be later in the sequence of courses offered in their dental hygiene program. Stolenberg and Walker suggested that formal instruction in special patient care is of value in facilitating favorable attitudes toward the handicapped (1989, 123). At this educational setting, first year students actual contact with the disabled might not have occurred in their clinical rotations yet, thus giving them very little knowledge upon which to base their opinions. Although these factors might have some impact, students were able to express a measurable attitude toward the disabled.

The majority of students had a favorable attitude toward their desire for future and interpersonal relationships with the handicapped. This finding was consistent with that of researchers Kinne and Stiefel (1979). They found that dental graduates who have received

instruction in disability care will feel more confident and hence will be more likely to treat patients with special needs in the future (1979, 271). Stolenberg and Walker's research suggested that formal instruction in special patient care increased students' confidence in treating patients (1989, 123). Gruythuysen also concluded that an increase in student confidence was seen shortly after formal coursework and clinical experiences. Since the second year students' response percentage was higher on items related to clinical experiences with the disabled, it may support Gruythuysen' (1987, 715), Stolenberg and Walkers' (1989, 123) theories. Regardless of the students' self-confidence levels, however, their attitude toward the disabled remained the central issue.

The respondents to this survey indicated closely related attitudes toward the disabled. Analyzed data indicated that no statistically significant difference existed between first and second year student dental hygienists' attitudes toward the disabled. These results were consistent with Stoltenberg and Walkers' findings (1989, 122).

If the responses of the subjects were true measurements of their attitudes, then some application could be made in their educational institution and program. Since some of the respondents had favorable attitudes toward the

disabled, then any formal coursework or clinical experience would probably not adversely effect their attitudes. Students who did not express a favorable attitude may be somewhat influenced by a provision of exposure to the disabled during their course of study.

Responses of these students may indicate that a need for increased opportunities for student dental hygienists to experience treating the handicapped exists as indicated on the frequency and percentage responses in Tables 1 and 2. Item statements that related to actual clinical treatment of the disabled generally scored lower than other items. For example, 41% of the second year students responded favorably on item number 10: "My educational experiences have helped me to enjoy being with handicapped people." Only 6% of the first year students indicated agreement with this statement. Accordingly, the second year dental hygiene student has had clinical exposure to a greater number of patients. Stoltenberg and Walker suggested that additional experience "with patients who have certain handicapping conditions may increase dental hygienists' comfort in rendering care to these patients (1989, 122)." Such opportunities include both didactic and clinical experience to facilitate the dental hygienists' knowledge, confidence, and ability to interact with the handicapped.

The dental hygiene educators at this site may want to

explore methods of providing experiences and role models that facilitate students' feelings of enjoyment or comfort when providing care to individuals with handicapping conditions. In addition, dental hygiene educators who teach courses in special patient care might want to consider obtaining information regarding students' experience with the disabled at the beginning of the course. This might provide appropriate course experiences for students. The program's instructors may wish to evaluate the effectiveness of their programs for treatment of the disabled from the student, patient, and educator perspectives. However, this study did not specifically measure the need for increased opportunities for student dental hygienists to experience treating the disabled and too little data was available to more fully discuss this area.

Sonis and Lee (1983) developed this instrument to measure dental students' attitudes toward the disabled in conjunction with their education (118). They included questions that related to student perceptions of their education, clinical experiences, and instructors (see Appendix C). This instrument appears to measure more than attitudes toward the disabled; thus making it more difficult to apply the data to other subject groups. If the data from those items had been treated with a separate subscore technique, then it would have been possible to determine if

the students have a more positive attitude toward their relationships with the handicapped than toward their educational experience and perception of instructors relative to the handicapped.

Statements related to education may have influenced subject responses toward the experiment. Some students may not be entirely content with their educational experiences because they have had limited clinical exposure to disabled patients. Table 1 indicated a higher negative response rate with items related to their educational experiences. The frequency and percentage of negative responses for first year students' were greater on item numbers 1, 3, 26, 29, and 32 than for the second year students. Conversely, second year students scored educational and instructor perception items favorably more often. Table 2 indicates that for survey items 1, 3, 7, 21, and 28 through 32 a majority of responses were favorable. Lee and Sonis (1983) may have included these items to assist dental school programs in assessing the effects instructors and education may play on attitudes toward the disabled (118). Although the inclusion of these items may hinder the application of the data to the general population, they could be valuable to the institutions' self-assessment.

Some limitations in generalizations exist because a small sample of convenience was used; however, comparable

research indicates parallel results with larger sample sizes from urban areas. Although no significant difference was found between these two groups, there were some negative attitudes expressed in the survey responses. The findings of this research seem to be substantiated by other studies. However, the small sample size restricts the application of the research findings to the entire dental hygiene student population in Virginia.

Individuals with disabling conditions should be concerned by these findings. Some dental hygiene students seemed to have an unfavorable attitude toward them and reluctance to treat them. Also, negative attitudes were expressed regarding the education they were receiving in learning to treat the disabled patient. However, the results indicated that most students held favorable attitudes toward the disabled and were interested in learning more about this special population.

Recommendations

The Americans With Disabilities Act supported disabled citizens right to find quality dental care in the private dental offices of America. However, little is known about the dental hygiene professional's attitude toward them. Further research of these same students would provide valuable longitudinal data. In addition, using this same

instrument at dental hygiene educational sites in other rural areas of the United States would provide additional data for regional cross-sectional comparisons. Such investigations may provide some understanding of the attitudinal differences which exist between students attending different educational programs.

While this study may have indicated that students had unfavorable perceptions toward their educational experiences, it did not examine the types of didactic and clinical experience students may have had. Cohen, LaBelle, and Singer (1985) believed there is a need for dental hygiene educators and educational institutions to:

. . . evaluate the effectiveness of current dental hygiene curricula to adequately prepare hygienists to meet the needs of special patient groups. Specifically, it appears that both the extent and the quality of educational preparation directed at many special population groups need further improvement (595).

The participating institution's faculty and administrators may or may not find that the data obtained by the DSATHS useful. However, since the students clearly had a higher percentage of negative responses to the items closely related to perceptions of instructors and dental hygiene education, a copy of the finding will be sent to the institution.

The following recommendations would provide more research data which could prove to be very beneficial to the

dental hygiene profession: (a) replicate the study over time--a longitudinal study of the same educational institution, (b) replicate the study using a larger sample that is randomly selected from rural educational settings, (c) correlate attitudes toward the handicapped with clinical experiences, (d) examine the educators' attitudes and perceptions of the disabled, (e) examine the DSATHS survey items related to students' perception of faculty and education separately, and (f) determine the reliability of the DSATHS instrument to dental hygiene students.

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APPENDIXES

APPENDIX A
COVER LETTER TO AGENCY

Patricia Bradshaw
P.O. Box 177

_____, VA _____

November 3, 1992

_____{withheld}_____

Dear Dr. _{withheld} ,

I am currently conducting research pertaining to the field of dental hygiene education. Specifically, measuring the attitudes of dental hygiene students' have toward the handicapped patient.

I would like to include your educational institution in my research by obtaining data with a survey questionnaire. I realize that this is a busy time of year for you and your students. However, I believe this information will be enlightening to our profession, as well as, reflective of the area in which you live.

I have enclosed a copy of an agency approval form. If you decide that your school's program would like to participate, then this form must be reviewed, dated and signed by the appropriate agents. I have enclosed a stamped, self-addressed return envelope for your convenience.

I assure you that complete confidentiality of the students' identity will be maintained. If you wish for the institutional identity to remain protected, please indicate that on the enclosed form. I will be happy to send you an abstract of the completed research, upon your request, for you review.

As a student enrolled in the Texas Woman's University Graduate School in the Health Studies Department, I will use this research to complete my degree in Health Science Instruction. Thank you for your consideration of this matter. I would appreciate a reply to this letter by November 24, 1992.

Once again, thank you for your time and consideration.

Sincerely,

Patricia M. Bradshaw, R.D.H., B.S.

APPENDIX B
AGENCY APPROVAL FORM

AGENCY PERMISSION FOR CONDUCTING SURVEY

57

The President of _____ Community College

GRANTS TO

Patricia Bradshaw

a student enrolled in the master's degree program in Health Sciences Instruction at Texas Woman's University, the privilege of its facilities/data in order to study the following problem:

What are the attitudes of first and second year dental hygiene students toward handicapped patients?

The conditions mutually agreed upon are as follows:

1. The agency (may) (may not) be identified in the final report.
2. The names of consultative or administrative personnel in the agency (may) (may not) be identified in the final report.
3. The agency (wants) (does not want) a conference with the student when the report is completed.
4. Other _____

DATE:

11/23/98

(WITHHELD)

Signature of Agency

Patricia Bradshaw

Signature of Student

Barbara J. Thomas

Thesis Committee Chairman

APPENDIX C

DENTAL STUDENTS' ATTITUDES TOWARD
THE HANDICAPPED SCALE (DSATHS)

Patricia Bradshaw
P.O. Box 177

_____, VA _____

Dear Survey Participant,

Thank you for your willingness to complete this survey.
Your time and honest responses are appreciated.

DSATHS SURVEY DIRECTIONS:

Do NOT write your name on this survey. All the information is confidential and shall be protected. First-year students will use Form A and second-year students Form B. Please check for these letters in the upper left corner of your survey. If you have the wrong form, please have the test administrator correct the letter with a pen.

This survey should be an honest reflection of your beliefs, feelings and opinions. Please circle the response which most closely reflects the degree to which you **agree** with the statement.

Strongly Agree is abbreviated as	SA
Agree is abbreviated as	A
Undecided is abbreviated as	U
Disagree is abbreviated as	D
Strongly Disagree is abbreviated as	SD

Please circle the appropriate response for each of the following statements according to how much you **agree** with it.

Strongly Agree SA
 Agree A
 Undecided U
 Disagree D
 Strongly Disagree SD

- | | | | | | |
|--|----|---|---|---|----|
| 1. My education has taught me to enjoy working with handicapped people. | SA | A | U | D | SD |
| * 2. I am not interested in learning anything else about handicapped people. | SA | A | U | D | SD |
| 3. Educators who teach me seem to be well versed in the psychological, social, and emotional characteristics of the handicapped. | SA | A | U | D | SD |
| * 4. In the private office, a separate waiting room should be provided for disfigured patients. | SA | A | U | D | SD |
| 5. My educational experience has taught me a tremendous amount about the dental needs of the handicapped. | SA | A | U | D | SD |
| * 6. Dental services for the handicapped should only be provided in a hospital. | SA | A | U | D | SD |
| 7. My educational training has helped me to better empathize with handicapped people. | SA | A | U | D | SD |
| * 8. The more severe the handicapped, the lesser the need for restorative dentistry. | SA | A | U | D | SD |
| * 9. When working with the handicapped, I don't care to understand what they are feeling. | SA | A | U | D | SD |
| 10. My educational experiences have helped me to enjoy being with handicapped people. | SA | A | U | D | SD |
| 11. I care about future dental treatment of the handicapped. | SA | A | U | D | SD |
| 12. The educational experiences I have received have really helped me to interact with handicapped people. | SA | A | U | D | SD |
| *13. Very little sensitivity is required when interacting with the handicapped. | SA | A | U | D | SD |
| 14. My teachers really demonstrate enthusiasm about working with handicapped patients. | SA | A | U | D | SD |

15.	Working with the handicapped is a very enjoyable experience.	SA	A	U	D	SD
*16.	I would not particularly desire handicapped patients in my practice.	SA	A	U	D	SD
17.	My teachers have shown me how to enjoy working with handicapped patients.	SA	A	U	D	SD
*18.	Handicapped people make me uneasy.	SA	A	U	D	SD
19.	My educational training has made me confident to work with handicapped people.	SA	A	U	D	SD
*20.	I dislike working with handicapped people.	SA	A	U	D	SD
21.	My educational training has provided me with a positive attitude toward the handicapped.	SA	A	U	D	SD
*22.	Dental treatment of the handicapped is very discouraging.	SA	A	U	D	SD
23.	The program for treatment of the handicapped at my school is really good.	SA	A	U	D	SD
*24.	When working with handicapped people, I find it hard to respond to them.	SA	A	U	D	SD
25.	My educational training has helped me better understand how to treat the handicapped.	SA	A	U	D	SD
*26.	My teachers have not shown me how to respond to the needs of the handicapped.	SA	A	U	D	SD
*27.	My educational experiences have taught me to dislike the handicapped.	SA	A	U	D	SD
*28.	My instructors seem nervous and reluctant to treat the handicapped.	SA	A	U	D	SD
*29.	My educational training has not helped me to understand handicapped people.	SA	A	U	D	SD
*30.	The teachers at my school do not seem to know very much about handicapped people.	SA	A	U	D	SD
*31.	My teachers are not very excited or interested in the treatment of the handicapped.	SA	A	U	D	SD
*32.	My educational experiences have taught me very little about the dental needs of the handicapped.	SA	A	U	D	SD

NOTE Items preceded with an asterisk indicates statements which were reversed when scoring.