

Summer 1980

Vocational Interests of Dental Hygiene Professionals

Renee Johnson
Old Dominion University

Follow this and additional works at: https://digitalcommons.odu.edu/dentalhygiene_etds



Part of the [Dental Hygiene Commons](#)

Recommended Citation

Johnson, Renee. "Vocational Interests of Dental Hygiene Professionals" (1980). Master of Science (MS), Thesis, Dental Hygiene, Old Dominion University, DOI: 10.25777/94v5-8d18
https://digitalcommons.odu.edu/dentalhygiene_etds/80

This Thesis is brought to you for free and open access by the Dental Hygiene at ODU Digital Commons. It has been accepted for inclusion in Dental Hygiene Theses & Dissertations by an authorized administrator of ODU Digital Commons. For more information, please contact digitalcommons@odu.edu.

VOCATIONAL INTERESTS OF DENTAL
HYGIENE PROFESSIONALS

by

Renee Johnson

B.S. May 1977, Idaho State University

A Thesis Submitted
to the Faculty of Old Dominion University
in Partial Fulfillment of the
Requirement for the Degree of

MASTER OF SCIENCE

DENTAL HYGIENE

OLD DOMINION UNIVERSITY
July 1980

Approved by:

~~Carolyn B. Bland (Director)~~

Michele L. Darby

Marcia K. Brand

Walter R. Earl

ABSTRACT

VOCATIONAL INTERESTS OF DENTAL HYGIENE PROFESSIONALS

Renee Johnson
Old Dominion University, 1980
Director: Carolyn B. Bland

This study examined the vocational interests of dental hygienists according to occupational setting and highest level of education. The Strong-Campbell Interest Inventory was used to measure vocational interests of a random cluster sample of licensed dental hygienists.

An ex post facto 2 x 2 factorial research design was used. Occupational setting and highest level of education completed were the attribute independent variables and the Strong-Campbell Interest Inventory scores was the dependent variable.

Two-way analysis of variance revealed significant interest differences between private practice dental hygienists and community practice dental hygienists, and between dental hygienists with a certificate or associate degree and dental hygienists with a baccalaureate degree, $p < 0.05$. No significant interaction effects among occupational settings and levels of education were revealed, $p > 0.05$.

ACKNOWLEDGEMENTS

The investigator wishes to acknowledge the following individuals for their assistance and support during the study.

My parents, Betty and Summer Johnson, for the continued interest in and support of their daughter's education and career.

Dr. Patricia L. Smith, Assistant Professor, Department of Mathematics and Computing Sciences, Old Dominion University; and J. Robert Dawson, Computer Programmer, Old Dominion University Computer Center for their interest in the study and assistance in the statistical analysis of data.

Michele L. Darby, Associate Professor and Marcia K. Brand, Assistant Professor, Department of Dental Hygiene and Dental Assisting, Old Dominion University, for their consistent guidance and personal support throughout the investigation and my graduate education at Old Dominion University.

Sincere thanks to Walter R. Earl, Chairman, Academic Counseling and Testing, Old Dominion University, for his expertise in the area of vocational guidance and his interest in the study.

Special appreciation is extended to Carolyn B. Bland, Assistant Professor, Department of Dental Hygiene and Dental Assisting, Old Dominion University, for her time, patience, and assistance throughout the project; and especially for her friendship and support.

TABLE OF CONTENTS

	Page
LIST OF TABLES	vi
Chapter	
1. INTRODUCTION	1
Statement of the Problem	1
Significance of the Study	2
Definition of Terms	6
Assumptions	10
Limitations	11
Hypotheses	11
Methodology	12
2. REVIEW OF THE LITERATURE	13
The Construct of Vocational Interests	13
Use of the Strong-Campbell Interest Inventory in Vocational Guidance	14
Vocational Interests of Nurses	16
Vocational Interests of Dentists and Dental Assistants	19
Vocational Interests of Dental Hygienists	22
Summary	26
3. METHODS AND MATERIALS	28
Sample Description	28
Research Design	30
Methodology	31

Chapter	Page
3. (Continued)	
Human Subjects	33
Instrumentation	34
Statistical Treatment	43
4. RESULTS AND DISCUSSION	45
Results	49
Discussion	61
5. SUMMARY AND CONCLUSIONS	82
BIBLIOGRAPHY	86
APPENDIXES	
A. BACKGROUND QUESTIONNAIRE	90
B. COVER LETTER FOR FIRST MAILING	92
C. PARTICIPATION POSTCARD	93
D. INSTRUCTIONS FOR COMPLETING THE STRONG-CAMPBELL INTEREST INVENTORY	94
E. STRONG-CAMPBELL INTEREST INVENTORY-- TEST BOOKLET	96
F. POSTCARD REMINDER	100
G. COVER LETTER FOR SECOND MAILING	101
H. STRONG-CAMPBELL INTEREST INVENTORY-- PROFILE FORM	103
I. DESCRIPTION OF HOLLAND'S SIX BASIC OCCUPATIONAL CATEGORIES	105
J. SUMMARY OF BACKGROUND INFORMATION FOR THE FINAL SAMPLE OF DENTAL HYGIENISTS	107
K. ANOVA TABLES	109

LIST OF TABLES

Table	Page
1. Summary of Research Design	29
2. Response to the Strong-Campbell Interest Inventory and Background Questionnaire	46
3. Breakdown of Accepted Responses	48
4. Dental Hygienist (f) Occupational Scale and General Occupational Theme Scores for Dental Hygi- enists According to Occupational Setting	50
5. Basic Interest Scale Scores for Dental Hygienists According to Occupational Setting	51
6. Summary of Results of Analysis of Variance According to Occupational Setting for All SCII Scales	53
7. Dental Hygienist (f) Occupational Scale and General Occupational Theme Scores for Dental Hygienist According to Highest Level of Education	56
8. Basic Interest Scale Scores for Dental Hygienists According to Highest Level of Education	57
9. Summary of Results of Analysis of Variance According to Highest Level of Education for All SCII Scales	59
10. Dental Hygienist (f) Occupational Scale Scores for Dental Hygienist According to Occupational Setting and Highest Level of Education	62

Table	Page
11. General Occupational Theme Scores for Dental Hygienists According to Occupational Setting and Highest Level of Education	63
12. Basic Interest Scale Scores for Dental Hygienists According to Occupational Setting and Highest Level of Education . . .	64
13. Summary of Results of Analysis of Variance According to Interaction Effects of Occupational Settings and Educational Level for All SCII Scales	69

Chapter 1

INTRODUCTION

Vocational interests have been studied to differentiate among people in various occupations according to their interest patterns. Two studies of dental hygienists' vocational interests, conducted in the 1960's, were found in the literature. Major changes in the interest measurement instrument and the employment patterns of women have occurred since these studies were conducted.

The primary purpose of this study was to assess the current vocational interest patterns of dental hygienists using a revised interest measurement instrument. In addition, this study compared the vocational interests among dental hygienists in various occupational settings and with various levels of education.

Statement of the Problem

This research was concerned with answering the following questions:

1. What are the vocational interests of dental hygiene professionals?
2. Are there differences among the vocational interests of dental hygienists working in different professional employment settings?

3. Are there differences among the vocational interests of dental hygienists who have completed various levels of education?

4. What effect does employment setting and level of education have on the vocational interests of dental hygienists?

5. Have the vocational interests of dental hygienists changed from the late 1960's to the present?

Significance of the Study

Women in the labor force have increased from 23.2 percent in 1960 to 40.1 percent in 1977.³⁶ By mid-1977, 49 percent of all women 16 years of age and over were in the labor force.³⁸ Several factors contributing to the increased number of women in the work force are 1) the postponement of marriage, 2) the postponement of child-bearing within marriage and decreased number of offspring per family, 3) increased number of female heads of households, 4) higher levels of education and training for women, and 5) society's acceptance of working women.^{30,35,37,38}

The Bureau of Labor Statistics projects that over 48.5 million women will be in the labor force by 1990, slightly over 50 percent of all women 16 years of age and over.³⁸ As the number of working women increases, specific information to assist them in making educational and vocational decisions becomes necessary. One method utilized by counselors to assist persons in making educational and

vocational decisions is by studying their vocational interests via a vocational interest inventory.

A career choice that has traditionally attracted women is dental hygiene. Ninety-five percent of all licensed dental hygienists are women.³⁹ A limited amount of research has been conducted relating specifically to the vocational interests and educational background of professional women in dental hygiene.

The occupational criterion group for the current Strong-Campbell Interest Inventory (SCII) Dental Hygienist (f) scale was a sample studied by Ishida in 1969.^{2,3} Ishida's sample was composed of 394 licensed practicing dental hygienists with over three years of experience. Scores obtained on the Strong Vocational Interest Blank for Women (SVIB-W) were used to compare the vocational interests of dental hygienists graduating from two and four year dental hygiene curricula. Ishida generally concluded that dental hygienists as a group are people-oriented and like adventure.¹³

An investigation conducted in the late 1960's by Frank and Kirk⁷ studied the SVIB-W scores of 67 dental hygiene graduates who were initially tested as dental hygiene applicants. SVIB-W scores, in conjunction with scores obtained on the California Psychological Inventory and the Dental Hygiene Aptitude Test, were examined to identify attributes of dental hygiene applicants which related to clinic training and performance. Based on the SVIB-W

scores, Frank and Kirk inferred that dental hygienists are more career than domestically oriented. Both the Ishida and the Frank and Kirk studies indicate that dental hygienists' vocational interests include biological sciences and medical service.^{7,13}

The SVIB-W scores obtained by the dental hygienists participating in Ishida's investigation were used to establish a profile for dental hygienists on the Strong-Campbell Interest Inventory (SCII).³ The SCII is the current combined-sex edition of the SVIB. Evaluation of the current SCII Dental Hygienist (f) scale (profile of female dental hygienists) is necessary due to two factors. First, the research which serves as a basis for the current scale is over ten years old. Since the criterion group study was conducted in the late 1960's, social changes, such as the women's movement, have impacted upon American women. Moreover, these sociological changes impacting on American women might also affect persons choosing careers in dental hygiene. Second, the current SCII Dental Hygienist (f) scale is based on scores obtained on the SVIB-W, an earlier version of the SCII.³ The SCII Dental Hygienist (f) scale was developed by using the responses of the 1969 dental hygienist occupation criterion group to the items from the SVIB-W that remain on the SCII and therefore might no longer be an accurate norm reference.

Previous studies have shown that a significant number of dental hygienists may become dissatisfied and

disillusioned with the practice of dental hygiene and may choose to leave the field.^{3,23,43} Simply stated, vocational counseling attempts to assist an individual to choose a personally satisfying career. Interest inventories may be used in vocational counseling to provide information which individuals might consider while making career decisions. Information regarding the vocational interests of dental hygienists is necessary to assist women in selecting a career in dental hygiene and to reduce the attrition rate of the profession.

Results of this investigation will be beneficial in three areas. First, the information found through a comparison of vocational interests of dental hygienists based on occupational setting and highest level of education might have implications for vocational counseling of women considering a career choice. Women with vocational interests similar to those of dental hygienists might be encouraged to consider a career in dental hygiene. In addition, individuals with vocational interests that are not similar to those of dental hygienists might be encouraged to reconsider a decision to select a career in dental hygiene. Second, assistance might be provided to dental hygienists who are considering the type of employment setting in which they would prefer to work. Individuals might compare their vocational interests with those of dental hygienists employed in private practice, community practice, and dental hygiene education to facilitate the

selection of a professional employment setting. Third, information might be provided which would aid dental hygiene educators and leaders in making decisions regarding the future of dental hygiene. Knowledge concerning the vocational interests of dental hygienists with various levels of education might assist educators in making curricular decisions regarding dental hygiene education and in the educational counseling and academic advising of dental hygiene students. Leaders in the dental hygiene profession might consider information regarding the vocational interests of dental hygienists when making recommendations and policies affecting dental hygiene education, licensure, and employment.

Definition of Terms

The following terms are defined for purposes of this study:

Interest

. . . an enduring attitude consisting of the feeling that a certain object or activity is significant and accompanied by selective attention to that object or activity.⁴³

Vocational Interests

Measured patterns of likes and dislikes that have been found experimentally to differentiate successful adults in one occupation from those in other occupations.⁸

Vocational interests will be measured by the Strong-Campbell Interest Inventory (SCII).

Strong Vocational Interest Blank (SVIB)

An interest inventory originally published in 1927 by E. K. Strong. The SVIB was developed as a self-inventory, covering a wide variety of interests and likes-dislikes, to distinguish among persons in various occupations on the basis of similarity/dissimilarity of interest patterns. The SVIB underwent numerous revisions until 1974 when the latest edition, the Strong-Campbell Interest Inventory, was published.^{3,12}

Strong Vocational Interest Blank for Women (SVIB-W)

The first form of the Strong Vocational Interest Blank designed specifically for women was published in 1933. The SVIB-W was revised in 1966. The last revision prior to the Strong-Campbell Interest Inventory was published in 1969. The 1969 SVIB-W form contained 398 items, to which women were generally asked "Like," "Indifferent," or "Dislike."²

Strong-Campbell Interest Inventory (SCII)

The 1974 combined sex edition of the Strong Vocational Interest Blank (SVIB). The SCII is composed of a list of 325 items including occupations, school subjects, activities, amusements, types of people, preference between two activities, and personal characteristics which are used to measure individuals' interest patterns. The major changes introduced in the SCII form of the SVIB are the merger of the men's and women's forms into a single

inventory and the use of Holland's theory as a basis for the General Occupational Themes scale.³

Occupational Criterion Group (OCG)

. . . a general term referring to a single-sex sample which represents the interests of an occupational group. The item responses of this group are contrasted with those of the same-sex reference group to significantly differentiate those items and item weights that constitute the occupational scale. The size of the sample usually ranged from 200 to 400. The sample must meet requirements of job satisfaction, success, age (25 to 55 years), and experience (3-year minimum).²⁵

1969 Female Dental Hygienist Sample (Occupational Criterion Group)

The female dental hygienist criterion group is a random sample of 394 dental hygienists studied by Ishida.¹³ The sample ranged from 22 to 62 years of age, with a majority of subjects in their mid-20's to mid-30's. Years of dental hygiene practice ranged from 3 to 33 years. Dental hygiene education ranged from zero to five years. A majority of subjects had either four years or two years of education. Seventy-eight subjects had four years of education and 299 subjects had two years of education. This sample serves as the occupational criterion group for the SCII Dental Hygienist (f) scale.³

SCII Dental Hygienist (f) Scale

The SCII Dental Hygienist (f) scale contains those items and item weights which differentiated the 1969 dental hygienist occupational criterion group from the 1969 Women-in-General (WIG) sample with at least a 14.6 percent level of difference.³

Dental Hygienist

. . . licensed professional, oral health educator and clinical operator who . . . uses preventive, therapeutic and educational methods for the control of oral diseases to aid individuals and groups in attaining and maintaining optimum oral health.⁴²

Dental Hygiene Private Practitioner (DHPP)

A dental hygienist who is employed for at least twenty hours weekly in a private general or specialty dental office(s).¹⁸

Dental Hygiene Community Practitioner (DHCP)

A dental hygienist who is employed for at least twenty hours weekly in a public health facility, community clinic, school, hospital or other institution.¹⁸

Dental Hygiene Educator (DHE)

A dental hygienist who is employed for at least nine contact hours weekly to instruct dental hygiene students who are in pursuit of a dental hygiene certificate, baccalaureate, or master's degree.¹⁸

No Formal Education

Has not received a certificate or degree from an institution of higher education.

Certificate

An award for completing a particular program or course of study, sometimes given by two-year colleges instead of, or in addition to, an associate degree.²²

Associate Degree

The degree given for completing college programs of at least two but less than four years of study, usually in a two-year institution such as a junior college or community college.²²

Baccalaureate Degree

The degree given for completing undergraduate college programs that normally take four years.²²

Master's Degree

. . . an academic degree of advanced character, usually a second degree, ranking above the bachelor's degree and below the . . . doctoral degree.⁶

Doctoral Degree

The highest academic degree for attainment in graduate study.⁶

Assumptions

The following assumptions were made for this research:

1. The SCII is an appropriate instrument for measuring vocational interests of dental hygienists. Concurrent validity, predictive validity, and reliability have been established for other occupational groups.³

2. Subjects completed the SCII and background questionnaire accurately and truthfully in accordance with the instructions provided.

3. The SCII was scored accurately by National Computer Systems.

4. Individuals tested had no specialized knowledge concerning the SVIB, SCII, or the measurement of vocational interests.

5. The random cluster sample adequately represented the typical occupational settings and educational levels of dental hygienists.

Limitations

Validity and reliability of the results might have been limited by the following factors:

1. The background information questionnaire has no established validity or reliability. Content and face validity were established through evaluation of the questionnaire by selected Old Dominion University faculty.

2. All subjects included in the sample were volunteers.

3. The length of time necessary to complete the interest inventory might have contributed to the low return.

Hypotheses

The null hypotheses tested were:

H_{0_1} . There is no statistically significant difference at the 0.05 level among the vocational interests of dental hygiene private practitioners, dental hygiene community practitioners, and dental hygiene educators as measured by the Strong-Campbell Interest Inventory.

H_{0_2} . There is no statistically significant difference at the 0.05 level among the vocational interests of dental hygienists with various levels of education completed as measured by the Strong-Campbell Interest Inventory.

H_{0_3} . There is no statistically significant interaction effect at the 0.05 level among the various occupational settings and levels of education completed as measured by the Strong-Campbell Interest Inventory.

Methodology

An ex post facto research design was used to determine vocational interests of a random sample of dental hygienists from various states. The sample was obtained through the cooperation of the professional licensure offices in the selected states. Each dental hygienist included in the sample was mailed a copy of the SCII and a questionnaire to determine 1) the type of professional setting in which he/she was employed, and 2) the highest level of education completed. The attribute independent variables were occupational setting and highest level of education completed; the dependent variable, vocational interests, was measured by the SCII scores.

SCII scores were analyzed using the two-way analysis of variance to determine if there was a statistically significant difference among the vocational interests of dental hygienists according to various occupational settings and according to various levels of education completed. In addition, the two-way analysis of variance examined the interaction effects of the various occupational settings and educational levels on dental hygienists' vocational interests.

Chapter 2

REVIEW OF THE LITERATURE

Areas of the literature pertinent to this study include: the construct of vocational interests, the use of the Strong-Campbell Interest Inventory in vocational guidance, vocational interests of nurses, vocational interests of dentists and dental assistants, and the vocational interests of dental hygienists. Vocational interests of individuals in dental hygiene have not been studied extensively.

The Construct of Vocational Interests

Vocational interests are:

Measured patterns of likes and dislikes that have been found experimentally to differentiate successful adults in one occupation from those in other occupations.⁸

In a discussion of the meaning of interest, Kline¹⁷ stated that people voluntarily will perform activities relevant to their interests. His concept of the goal of ideal vocational guidance would be to enable individuals to be paid for performing activities relevant to their personal interests. This concept assumes that performing activities relevant to personal interests will lead to occupational success and happiness.¹⁷

Super and Crites³⁴ developed a classification of interests into four categories according to how they are expressed. These four categories are: 1) expressed, 2) manifest, 3) inventoried, and 4) tested. Expressed interests may include a statement of hopes or expectations. Super and Crites defined expressed interests as verbally stated preferences or interests. Manifest interests differ from expressed interests in that manifest interests are determined by an individual's actions, not merely verbalization.³⁴

Inventoried interests are subjectively measured by responses to a questionnaire estimating preference for activities and occupations. Questionnaires of this type weight responses to yield a score representative of a pattern of interests.³⁴

Tested interests are interests measured by objective tests. The concept of tested interests is based on the premise that individuals will acquire and retain more information about subjects congruent with their own interests than would people-in-general. Tested interests are extremely difficult to measure, therefore emphasis in vocational guidance is placed on inventoried interests.³⁴

Use of the Strong-Campbell Interest Inventory in Vocational Guidance

Vocational guidance counselors use measures of vocational interests along with other types of information, such as aptitude and academic achievement, to assist individuals

in career decision making. An interest inventory functions as a data collection tool to provide a quantitative and objective measure of a person's interests. Interest inventories used in vocational guidance deal with preference for activities.⁵

The desired outcome of a vocational interest inventory is an accurate measure of interests that can be used as a prediction of occupational success and happiness.⁸ Studies conducted by Kuder³³ to determine the accuracy of interest inventories found that persons who chose a line of work incongruous with their measured interests were three times more likely to be dissatisfied with their work than persons whose occupation and measured interests were compatible.

Counselors have been studying interest measurement to assist individuals with vocational selection since the early 1900's.³³ Since this time numerous inventories have been developed in an attempt to assess the vocational interests of various occupational groups.

One of the oldest and most thoroughly researched interest measurement instruments is the Strong-Campbell Interest Inventory (SCII).²⁴ The SCII is empirically or criterion keyed, meaning the items for each scale have been objectively selected as a result of testing groups to determine their responses.^{3,33}

Scores obtained on the SCII are reported in three major scales: General Occupational Themes, Basic Interest

Scales, and Occupational Scales. The three scales provide information regarding general interest tendencies, as well as specific tendencies.³

An individual's SCII scores are compared to the scores of a general criterion sample to identify areas of interest which differentiate the individual from people-in-general. Individuals' scores are also compared with the scores obtained by occupational criterion samples to identify interest similarities and dissimilarities between the individual and the various occupational samples.³

Vocational Interests of Nurses

The SCII includes four occupational scales for nurses. The Licensed Practical Nurse (f) Occupational Scale is based on a national sample, while the Registered Nurse (f) Occupational Scale is based on a sample from Minnesota. The samples which serve as the occupational criterion groups for both female nurse scales were studied in 1967. The female licensed practical nurse scale has been classified as CRI (Conventional, Realistic, and Investigative) according to the General Occupational Themes. An SI (Social and Investigative) classification has been assigned to the female registered nurse scale.³

The two male nurse scales, licensed practical nurse scale and registered nurse scale are based on samples studied in 1973. The General Occupational Themes for the Licensed Practical Nurse (m) Occupational Scale and the

Registered Nurse (m) Occupational Scale are SRC (Social, Realistic, and Conventional) and RI (Realistic and Investigative) respectively.³

An investigation conducted by O'Neil and Madaus²⁹ compared the vocational interests of graduates of three-year diploma programs and graduates of four-year basic collegiate programs in nursing. Diploma nurses scored higher than the degree nurses on the Buyer, Elementary Teacher, Office Worker, Dietician, Housewife, Home Economics Teacher and Nurse Occupational Scales of the SVIB-W. The degree nurses scored significantly higher than the diploma nurses on the Psychologist scale.²⁹

O'Neil and Madaus discussed limitations including differences between the groups in age, marital status, educational programs and their selection policies, experience in nursing practice, types of nursing positions held, and response set patterns of answering which might have influenced the results. No conclusions were made based on these data, however a recommendation for revision of the SVIB-W Nurse Scale was made.²⁹

Several studies have investigated the prediction of nursing school performance and completion. Anderson¹ compared the SVIB-W scores of female nursing graduates with the scores of females who had transferred out of nursing. Anderson predicted that students receiving higher scores than nursing graduates on the Author, Psychologist, and Life Insurance Saleswoman scales, and lower

scores for the Home Economics Teacher scale will transfer out of nursing to some other field.¹

Mowbray and Taylor²⁶ studied the SVIB-W as a predictor of success in a school of nursing. The SVIB-W Occupational Scales which received high scores from the overall sample of nursing students, when compared to women-in-general, were Social Worker, Nurse, Occupational Therapist, and Physical Therapist. Johnson and Leonard¹⁵ found similar results.

Mowbray and Taylor compared the scores received on the SVIB-W Nurse, Social Worker, and Femininity-Masculinity scales of four groups of students: 1) students who had withdrawn from nursing schools, 2) students who remained in nursing, but who had made only a nominal adjustment, 3) students remaining in nursing who had made an outstanding adjustment, and 4) a random sample of nursing students remaining in school. Results showed no significant differences at the 0.10 level among the four groups of students for the Social Worker and the Femininity-Masculinity scales.²⁶

The Nurse scale showed no significant differences at the 0.10 level among the first three groups of students; however, the Nurse scale did differentiate between the students who had withdrawn from nursing and the random sample of nursing students, $p < 0.03$. The students who had withdrawn from nursing school received lower mean scores for the Nurse scale than the random sample of

nursing students. The investigators concluded that the SVIB-W Nurse Occupational Scale discriminated between students withdrawing from nursing school and students who remain however, the nurse scale did not differentiate between students with nominal and outstanding adjustment to nursing school.²⁶

Generally, nurses tend to score higher than women-in-general on the SVIB-W Social Worker, Nurse, Occupational Therapist and Physical Therapist Occupational Scales. In addition, the SVIB-W Nurse Occupational Scale has been found to differentiate between nursing graduates and students who leave nursing.

Vocational Interests of Dentists and Dental Assistants

The SVII scores of dental assistants are based on the results of a study conducted by Harmon and Campbell⁹ in 1966. Harmon and Campbell found the SVIB-W scores of dental assistants to be high for the stenographer-secretary, housewife, and nurse areas. Dental assistants received low scores for English Teacher, and Psychologist.⁹ The SCII profile classifies female dental assistants' primary General Occupational Themes as C (Conventional) and R (Realistic).³

The SCII Dentist (f) Occupational Scale is based on a criterion sample of 195 female dentists tested between 1934 and 1942.³ No references to the vocational interests of female dentists, measured by the SVIB-W or SCII, are

found in the literature from the last fifteen years. The SCII profile classifies female dentists' primary General Occupational Themes as I (Investigative) and R (Realistic).³

A number of studies of the vocational interests of male dentists, measured by the SVIB, have been conducted since the 1960's. Loupe, Meskin and Proshek¹⁹ compared the vocational interests of dental educators, practicing dentists and graduate students. The overall sample scored high on the SVIB Physician, Osteopath, Biologist, and Musician Performer Occupational Scales. The lower Occupational Scale scores for the overall sample included Forest Service Manager, Policeman, Personnel Director, School Superintendent, Minister, Accountant, Sales Manager, and Banker. The Basic Interest Scale receiving the highest score for the entire sample was Medical Service. Low Basic Interest Scale scores were obtained on Business Management, Sales, Merchandising, and Office Practice (secretarial-type activities).¹⁹ Studies conducted by Heist,¹⁰ O'Connor,²⁸ Powell,³¹ and Kirk, Cummings and Hackett¹⁶ have all produced similar findings.

A comparison by Loupe, Meskin and Proshek¹⁹ of dentists' interests according to subgroups found the interests of practicing dentists to closely resemble direct professional practice, service, and business, while theoretical interests, research, and teaching were closer to the interests of dental educators. Master's degree and Ph.D. student groups both received high scores in teaching.

Master's degree students received higher scores in practice and business-oriented areas, while Ph.D. students received higher scores in areas oriented toward research and theoretical or scientific pursuits.¹⁹

O'Connor²⁸ studied the vocational interests of dental students and students' preference for instructional methods. Pre-clinical dental students preferring individualized (self-paced) curricula scored higher on interests in scientific, aesthetic-cultural, and adventuresome activities and on motivation for academic achievement and professional specialization than students preferring traditional curricula. Students preferring individualized curricula resembled biological science and social services on the Occupational Scales, while students preferring traditional curricula were more similar to Occupational Scales involving skills, trades, business and accounting, and sales.²⁸

The I (Investigative) and R (Realistic) Themes are the primary General Occupational Themes for classification of male dentists on the SCII profile.³ The SCII general Occupational Themes are based on Holland's theory of careers.^{3,11} Smith³² applied Holland's theory to present and future models of dentistry and classified current dentists as IRE (Investigative, Realistic, and Enterprising). One of the future models of dentistry Smith discussed viewed the dentist as a manager of a group of expanded duty auxiliaries. Smith suggested that this

model would change the work environment for the dentist to EIR. Smith supports a different future model for dentistry which would make dentistry less technique-oriented and more socially-oriented, changing the Holland code to IRS (Investigative, Realistic, and Social).³²

Vocational Interests of Dental Hygienists

The major study of vocational interests of dental hygienists was conducted by Ishida¹³ in 1969. A nationwide sample of currently practicing licensed dental hygienists with three or more years of work experience was selected and used to develop a dental hygiene scale for the Strong Vocational Interest Blank for Women. In addition, comparisons of interest patterns were made based on length of dental hygiene education and degree of expressed job satisfaction, as determined by a questionnaire which accompanied the SVIB-W.¹³

Based on the SVIB-W response percentages of 394 dental hygienists compared with the response percentages of women-in-general, Ishida concluded that generally, dental hygienists are people-oriented and adventure-oriented. Dental hygienists' positive vocational interests clustered around the health science professions (Bacteriologist, Physician) and the glamorous or adventurous professions (Model, Stewardess).¹³

Based on Occupational Scales, dental hygienists' interests were found to be most similar to the interests of Physical Therapists, Radiologic Technologists,

Registered Nurses, Occupational Therapists, Dieticians, and Physical Education Teachers. Occupational interests were found to differ most from those of Chemists, Mathematicians, and Nun-teachers (nuns who are teachers).¹³

The Biological Sciences and Medical Services areas received the highest scores obtained from dental hygienists in the Basic Interest Scales. These high Basic Interest Scores are a similar finding for most health science professionals. Scores obtained from dental hygienists in all other areas of the basic interest scales were found to be similar to those scores of women-in-general.¹³

Mean scores of dental hygienists were found to be similar to women-in-general in all four areas of the Non-occupational Scales. These areas include: Academic Achievement (a moderately effective scale used to differentiate between "good" and "poor" students, and to predict grades and eventual level of education); Diversity of Interest (a scale used to study breadth of interests); Masculinity-Femininity (scales used to compare the test responses of men and women based on all items common to the SVIB-W and SVIB-M); and Occupation Introversion-Extroversion (a scale used to determine whether individuals prefer to work with "things" or people).¹³

Results of comparison of scores on the occupational scales showed that four-year graduates scored significantly higher than two-year graduates in the more academically oriented professions (such as Teacher, Speech Pathologist,

Librarian, and Physician). Two-year graduates scored significantly higher than four-year graduates in the technical, service-oriented, and clerical occupations (such as Army Enlisted, Dental Assistant, Secretary, and Telephone Operator).¹³

Job satisfaction was also used to compare vocational interests between two and four-year graduates. A self-rating scale to determine the degree of job satisfaction was included on the questionnaire. The results of the self-rating scale showed two-year graduates to be significantly more satisfied with their work than four-year graduates.¹³

A comparison of SCII scores of subjects expressing greater job satisfaction to subjects expressing less job satisfaction revealed specific patterns. Persons expressing greater job satisfaction obtained high scores in the clerical and health science professions at the applied, technical, and service levels (i.e. Accountant, Bankwoman, Dentist, Dental Assistant, and Licensed Practical Nurse). Occupations involving repetitive, routine type of work (i.e. Telephone Operator, Instrument Assembler, and Sewing Machine Operator) also received high scores for those individuals indicating greater job satisfaction. Subjects indicating less job satisfaction obtained high scores in the more academically, verbally oriented professions and professions involving activities not requiring regular

routine (i.e. Language Teacher, Writer, Speech Pathologist, and Psychologist).¹³

Ishida concluded that two-year dental hygiene graduates would likely find clinical dental hygiene more fully satisfying than would the four-year graduate. However, she noted that the trend toward expanding the duties and responsibilities of dental hygienists might make clinical dental hygiene more challenging and satisfying to four-year graduates. Ishida suggested that four-year graduates might be more fully satisfied with employment in the teaching, research, and public health aspects of dental hygiene.¹³

An investigation of pre-admission characteristics of dental hygiene graduates conducted by Frank and Kirk⁷ used the Strong Vocational Interest Blank for Women to measure vocational interests. The SVIB-W scores were obtained when the 67 subjects were tested as applicants to a dental hygiene program. SVIB-W results showed high interest for health sciences at the technical level and low interest for business activities, humanities and purely domestic activities. Based on these scores Frank and Kirk described dental hygienists as ". . . more career than domestically oriented."⁷

SVIB-W results were used in conjunction with results of the California Psychological Inventory, a survey of personal characteristics, and the Dental Hygiene Aptitude Test. From the results of their investigation, Frank and

Kirk concluded that women with high interests in the applied natural sciences at the technical level and low interests in linguistics, sales, and merchandising activities might want to consider a career in dental hygiene.⁷

Summary

The Strong-Campbell Interest Inventory is used in vocational guidance to assess the vocational interest patterns of individuals. The results of the SCII, along with other types of information, assist individuals in making career choices. Studies conducted in nursing and dentistry have used Strong Vocational Interest Blank Scores to predict completion of professional school, and to discriminate among the educational levels and employment settings of nurses and dentists.

Dental hygienists have shown high interests in the SVIB-W health science professions and adventurous professions and appear to be career-oriented. Graduates of two-year dental hygiene curricula have interests similar to those of technical, service-oriented, and clerical occupations. Four-year graduates' interests are similar to academically-oriented professions.

The literature does not examine the vocational interests of dental hygienists in regard to occupational setting. The intention of this study was to provide information regarding dental hygienists' vocational interests based on the current edition of the SCII and to

Chapter 3

METHODS AND MATERIALS

An ex post facto research design was used to assess the vocational interests of dental hygienists according to occupational setting and the highest level of education completed, as measured by the Strong-Campbell Interest Inventory (SCII). The attribute independent variables, occupational setting and highest level of education completed, were determined by responses to a questionnaire. The dependent variable, vocational interests, was measured by the SCII scores (see Table 1, p. 29).

Sample Description

A random cluster sample of 400 licensed dental hygienists was obtained through the cooperation of professional licensure offices of selected states. Individuals participating in the study met the specific criteria for inclusion in a female occupation group of the SCII. These criteria included that the participant must:

1. be female
2. be between 25 and 55 years old
3. have been employed in the occupation (dental hygiene) for three years or more
4. indicate that they like their work
5. have met some minimum level of proficiency; i.e., licensure.^{2,3}

Table 1
Summary of Research Design

Groups	Attribute Independent Variables	Dependent Variables*
Group 1	(X ₁) (Dental Hygiene Private Practitioners)	Y
Group 2	(X ₂) (Dental Hygiene Community Practitioners)	Y
Group 3	(X ₃) (Dental Hygiene Educators)	Y
Groups	Independent Variables	Dependent Variables*
Group 1	(X ₄) (No Formal Education)	Y
Group 2	(X ₅) (Certificate or Associate Degree)	Y
Group 3	(X ₆) (Baccalaureate Degree)	Y
Group 4	(X ₇) (Master's Degree)	Y
Group 5	(X ₈) (Doctoral Degree)	Y

*SCII scores

Data concerning the subject's age, sex, highest level of education completed, type of occupational setting, length of time employed in dental hygiene, and job satisfaction were assessed by means of a brief questionnaire administered subsequent to the SCII (see Appendix A).

Respondents not meeting the criteria for this study were excluded. For data analysis each participant included in the study was placed in a category according to occupational setting and the highest level of education completed. In addition, each study participant's score was included in mean group scores in order to assess the vocational interests of the entire sample.

Research Design

The attribute independent variables in the 3 x 5 factorial design were occupational setting and the highest level of education completed. These variables were further classified as:

1. Occupational setting:
 - a. Dental Hygiene Private Practitioner
 - b. Dental Hygiene Community Practitioner
 - c. Dental Hygiene Educator
2. Highest level of education completed:
 - a. No formal education
 - b. Certificate or Associate Degree
 - c. Baccalaureate Degree
 - d. Master's Degree
 - e. Doctoral Degree

The dependent variable, vocational interests, was measured by the scores obtained on the SCII (see Table 1, p. 29).

An ex post facto design was appropriate since the investigator neither manipulated vocational interests nor randomly assigned subjects to groups. Samples were restricted to homogeneous groups of dental hygienists in accordance with the standards established for female occupational criterion samples of the SCII.

Methodology

The states included in this study, Connecticut, Michigan, and North Carolina, were selected on the basis of: 1) having two or more accredited dental hygiene education programs, 2) the number of active licensed dental hygienists, and 3) the number of dental hygienists employed in community practice settings (including public schools, hospitals, or other institutions). The professional licensing offices of the three states selected were contacted to obtain a list of names and addresses of licensed dental hygienists. One hundred thirty-three dental hygienists were randomly selected from the licensure lists of Connecticut and North Carolina and 134 dental hygienists from Michigan, for a total sample of 400 dental hygienists.

Each hygienist included in the sample was mailed a packet containing a cover letter briefly explaining the purpose of the study, requesting participation and urging prompt return of the background questionnaire and completed SCII (see Appendix B). A questionnaire assessing background

information; an SCII instructions sheet and test booklet; a self-addressed, stamped envelope; and a self-addressed stamped postcard indicating that the subject has completed and returned the questionnaire were also included in the packet (see Appendixes A, C, D and E).

Subject participation was on a volunteer basis.

An effort to gain an adequate response was made by mailing a postcard reminder to the 271 non-respondents two weeks following the first packet mailing (see Appendix F). A second packet containing a new cover letter; background questionnaire; an SCII instructions sheet and test booklet; and a self-addressed, stamped envelope was mailed to the 218 non-respondents following an additional two weeks (see Appendix G). Only SCII booklets and questionnaires received within the six week time interval that were accurately and correctly completed were analyzed for the study.

Respondents were excluded from the final sample for data analysis if the information provided on the background questionnaire did not meet all of the criteria for inclusion in an SCII female occupational group. Respondents were eliminated from the study if they:

1. were male or
2. were less than 25 years of age or over 55 years of age or
3. had been employed in dental hygiene for less than three years or
4. were indifferent to or disliked their work as a dental hygienist or
5. were not currently employed as a dental hygienist private practitioner, community

practitioner, or educator for at least twenty hours or nine contact hours per week.

Each participant meeting the established criteria for inclusion in a female occupational group for the SCII was assigned to a group according to occupational setting and the highest level of education completed for data analysis. Occupational setting and highest level of education were determined by information obtained from the background questionnaire. In addition, each participant meeting the criteria was included in the total sample group for data analysis.

Human Subjects

Subjects gave voluntary informed consent to participate in this study by completing and returning the background questionnaire and SCII booklet. The cover letter explained that all responses were to remain confidential and results would be reported in group form only. A participation postcard was provided to determine which dental hygienists returned the questionnaire and SCII booklet while assuring anonymity of responses.

There were no potential risks nor benefits to the individuals choosing to participate. Results of this study will potentially benefit: 1) individuals considering a career in dental hygiene, 2) those dental hygienists choosing the type of occupational setting in which they would prefer to work, and 3) leaders in the dental hygiene

profession in making decisions regarding the future of dental hygiene.

Instrumentation

The Strong-Campbell Interest Inventory (SCII) is a standardized vocational interest inventory designed to reflect the basic interest areas of individuals and the characteristic responses of men and women employed in various occupations.³ The rationale for selection of the SCII to measure vocational interests in this study included the following:

1. The SVIB-SCII is the oldest vocational interest inventory in use.⁴⁵
2. The SVIB-SCII is a widely known and used vocational interest inventory.^{2,3}
3. An occupational profile for female dental hygienists has been previously established for the SCII.³
4. Utilization of the SCII will permit a comparison of the research findings with those of Ishida.

The 325 items included in the SCII test booklet are divided into seven sections: Occupations, School Subjects, Activities, Amusements, Types of People, Preference Between Two Activities, and Your Characteristics (see Appendix E). The items included in the first five sections require a "Like," "Indifferent," or "Dislike" response. The Preference Between Two Activities section requires the individual to make a choice between two contrasting activities. The items in the last section, Your Characteristics,

require a "Yes," "No," or "Question" response to indicate whether or not the respondent feels each statement describes himself/herself. No time limit is specified for completing the inventory. The time required for the average adult to complete the inventory is about 30 minutes.³

The respondent's answers are scored by automatic scoring machines. The SCII scores are reported as a "profile" of scores in four areas: General Occupational Themes, Basic Interest Scales, Occupational Scales and Special Scales (see Appendix H).³

General Occupational Theme Scales of the SCII. The SCII General Occupational Theme Scales are based on Holland's theory of career development.³ These scales measure the six types of personality and occupational environments as identified by Holland. The six categories are Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. (Descriptions of each of the categories are included in Appendix I.) A "high" standard score for one of the Holland Theme categories indicates the individual may have traits and likes/dislikes similar to those included in the particular category description. Individuals are encouraged to compare their scores to the code types that have been established for the various occupational groups.³

Each established SCII Occupational Scale has been assigned a "code type" which corresponds to the highest General Occupational Theme scores obtained by a sample of

people in that occupation. Each occupation's code type was determined empirically by SVIB responses of individuals in that occupation or by ascertaining which occupations are preferred by people of known code types. The strength of the scores for the General Occupational Themes is represented by the order of the letters in the code type. For example, the code type for dental hygienist is IR, indicating that higher scores are obtained for the Investigative Theme than the Realistic Theme. The Conventional Theme receives a higher score from dental assistants who have an occupational code type of CR.³

Various investigations confirm the validity of the SCII General Occupational Themes. An investigation conducted by Utz and Korben⁴⁰ studied the construct validity of the SCII General Occupational Themes and concluded that the occupational themes and their descriptions were valid in terms of similar personality variables, based on predicted relationships between the SCII General Occupational Themes and the Edwards Personal Preference Schedule.

Lunneborg²⁰ correlated the Vocational Interest Inventory (organized according to Roe's eight occupational groups) with the SCII. Lunneborg concluded that "the correlations . . . totally supported the validity of the (SCII) General Themes."²⁰

A study by Catron and Zultowski⁴ based on SCII results of four academic divisions in a university setting confirmed the concurrent validity of the General

Occupational Themes. The General Occupational Themes were found to differentiate the four divisions through individual theme scores and when the themes were combined into profiles.

The mean test-retest reliability of the SCII General Occupational Themes, based on three separate samples tested and retested over various intervals, is roughly .50. The test-retest time intervals ranged from 14 days to three years, and the median test-retest correlations ranged from .81 to .91.^{3,41}

Basic Interest Scales. Twenty-three Basic Interest Scales were originally developed to enhance the understanding of the Occupational Scales. Each scale measures one dominant interest theme, such as art, medical science, or public speaking. The Basic Interest Scales are homogeneous scales developed by assigning item weights and clustering together items which were statistically related (i.e. receive all, or nearly all, "Like" responses from a majority of people). The Basic Interest Scales were normed against a general reference sample to produce standardized scores for ease of interpretation and comparison.³

The SCII Basic Interest Scales have been clustered according to the six General Occupational Themes based on scale intercorrelations. All of the General Occupational Themes include from three to five Basic Interest Scales,

except the Conventional Theme which contains only one Basic Interest Scale, Office Practices.³

Interpretation of the Basic Interest Scales is straightforward. A high score indicates a greater than average liking for an activity represented by the scale, while a low score indicates a greater than average disliking for the activity.³

Scale construction based on item correlations and the single focus of each scale support the content validity of the scales. The Basic Interest Scales are directly related to the previous SVIB Basic Interest Scales. Numerous investigations have been conducted on the SVIB Men's and Women's forms to study the validity of each scale. Mean scores obtained by occupations on the various SVIB Basic Interest Scales are given in the Handbook for the SVIB. These scores demonstrate the ability of the scales to differentiate occupations on the basis of high and low scoring patterns.^{2,3}

The predictive validity of the Basic Interest Scales is not as strong as the concurrent validity. Campbell notes that this may be related to age.³ Most young people tend to be adventuresome and most young women tend to score high on Domestic Arts and Office Practice; however, these scores tend to decrease with age. In general, the less a student's scoring pattern resembles a typical teenage pattern and the more consistent the pattern is across the entire profile, the greater the predictive validity.³

Test-retest reliabilities for the Basic Interest Scales are based on the earlier SVIB data. Test-retest correlations ranged from the .50's, for 16-year-olds retested after 36 years, to the .90's for samples retested after a few weeks. Median test-retest reliabilities based on new SCII data have found correlations of .91, .88, and .82, for two-week, thirty-day, and three-year periods respectively.^{3,14}

Occupational Scales of the SCII. The 124 SCII Occupational Scales provide information regarding the similarity of an individual's responses to those of specific occupational groups. The Occupational Scales are empirically developed by contrasting the SCII responses of people in a specific occupation (a criterion sample) with the responses of people-in-general (the General Reference Sample). The occupational scales reflect differences rather than similarities between the two groups.^{2,3}

Specific standards have been used to establish the concurrent validity of the SCII Occupational Scales. These four standards for the composition of each criterion sample are, persons must:

1. be between 25 and 55 years old
2. have been employed in the occupation for three years or more
3. indicate that they like their work
4. have met some minimum level of proficiency, such as licensure, advanced degrees, etc.^{2,3}

In addition, Campbell has specified that the person must perform his/her occupation in the "typical manner" (i.e.

a physician who is now a writer would be excluded from the physician sample).³

The norming group for the Occupational Scales in the General Reference Sample is a combination of the SCII (1973) Women-in-General (WIG) and the SCII (1973) Men-in-General (MIG) reference samples. Although the sizes of the SCII MIG and WIG samples are smaller than the previous SVIG MIG and WIG samples, the subjects included in the SCII reference groups were randomly selected and matched to the old reference samples by a computer.³

The occupational criterion group scores are tested to determine the separation of the occupations. A percent difference is the statistic used to indicate the degree of separation of each occupational group from the appropriate reference sample, either MIG or WIG. The specific Occupational Scales are developed by compiling from 30 to 50 items showing at least a 16 percent difference. (The number of discriminating items and the percent difference may be lower for some Occupational Scales due to the elimination of some of the older SVIB items.)^{2,3}

The current SCII booklet was developed by combining the men's and women's forms of the SVIB. Of the 325 items included in the SCII booklet, 180 were common to both the SVIB Men's and Women's forms, 74 were found only in the men's form, 69 appeared only in the women's form and two items are new. Most of the SCII Occupational Scales are based on one of the previous single-sex forms of the SVIB.

Therefore, most male occupational groups have not been tested on 71 items now included in the SCII booklet, and most female occupations have not been tested on 76 items new included in the SCII booklet. The Occupational Scales will be updated as new samples are tested using the SCII booklet.³

As previously mentioned, the Occupational Scales are coded to correspond with one, two, or three of the General Occupational Themes. This application of Holland's Theory greatly enhances the interpretation of the Occupational Scales.³

An individual's profile includes the scores for all of the Occupational Scales. Comparing an individual's scores with the Occupational Scales of the same sex is called "same-sex referencing." Comparing an individual's scores with the Occupational Scales of the opposite sex is called "cross-sex referencing." Although both types of scores are given on an individual's profile, only the scores for the same-sex are plotted.³

The concurrent validity of the Occupational Scales is based on 1) the contrast between the occupational criterion groups and the MIG or WIG reference groups, and 2) the mean scores of occupations on other occupations' scales. The "percent overlap" is the statistic used to contrast the criterion and reference samples. A perfect scale discrimination would result in a zero percent overlap. Identical distributions would result in a 100 percent overlap.

The present overlap for the SCII Occupational Scales ranged from 17 percent to 58 percent, with a median overlap of 36 percent. Campbell reports that the sample mean scores for occupational samples on each other's scales tend to be normally distributed around the General Reference Sample mean and ranged from 30 to 40 scale points, approximately three to four standard deviations.³

Recent studies of the predictive accuracy of the SCII Occupational Scales have used McArthur's classification system, classifying individuals into three categories according to the predictive level of their earlier scores. These three categories are "Good Hits," "Poor Hits," and "Clean Misses." Each study has defined the range of the standard scores to be included in the three categories.³ Dolliver⁶ summarized the SVIB predictive validity of five major studies. The time span of the five studies sited ranged from 7 to 18 years. The percent of "Good Hits" ranged from 61 percent, over a 14-year period, to 42 percent, over a 12-year period. The corresponding "Clean Misses" percentages for the same two studies were 26 percent and 46 percent, respectively. The mean percent of "Good Hits" for the five studies were 49 percent, and 35 percent for the "Clean Misses."^{3,5}

Campbell reported the test-retest statistics for the SCII Occupational Scales for three samples. The three samples, tested and retested over two-week, thirty-day,

and three-year periods, received median correlations of .90, .88, and .85, respectively.³

Statistical Treatment

The scale of measurement for the dependent variable, SCII scores, is an interval scale. Characteristics of the SCII scores that classify them as interval data are an arbitrary zero point and equal intervals.

National Computer Systems of Minneapolis, Minnesota commercially scored the SCII test booklets and produced an interest profile for each booklet submitted. Overall mean scores for the Dental Hygienist (f) Occupational Scale, and each of the six General Occupational Themes included in the interest profile were computed using Statistical Package for the Social Sciences²⁷ (SPSS) and the computer facilities at Old Dominion University. Mean scores for each of these scales were also computed according to groups based on occupational setting and highest level of education.

Two-way analysis of variance (ANOVA) was used to determine the main effects of occupational setting and level of education on the Dental Hygienist (f) Occupational Scale scores and each of the General Occupational Theme scores using SPCC. Interaction effects among occupational settings and levels of education were also tested.

The cluster sample of 400 licensed dental hygienists was randomly selected from the lists of licensed dental hygienists obtained through the cooperation of the

professional licensing agencies of selected states. The sample size, scale of measurement, sampling technique, and research design are compatible for use of the ANOVA.

The null hypotheses were tested at the 0.05 level of significance. The sample was selected randomly and the sample size was large enough to minimize error due to sampling technique (see Table 3, p. 48). Subjects were assigned to groups based on their highest level of education completed and type of professional occupational setting. Therefore, no investigator bias was introduced in group composition.

Chapter 4

RESULTS AND DISCUSSION

Four hundred Strong-Campbell Interest Inventory booklets and background questionnaires were mailed to a random cluster sample of licensed dental hygienists in Connecticut, Michigan, and North Carolina. A total of 239 booklets and questionnaires were returned, for a 60 percent response rate. The difference between the number of interest inventories and questionnaires mailed and the number received was due to non-response or incorrect mailing addresses. Eighty-five respondents completed the questionnaire and interest inventory correctly and met the criteria determined for this study (see Table 2).

One hundred fifty-four respondents did not meet the criteria for this study and, therefore, were rejected. The major reasons for rejection of respondents were that the respondents: 1) were no longer employed as dental hygienists, 2) had been employed as a dental hygienist for less than three years, and 3) were less than 25 years or more than 55 years of age (see Table 2).

Three educational levels (no formal education, Master's degree, and Doctoral degree) and one occupational setting (dental hygiene education) were eliminated from

Table 2

Response to the Strong-Campbell Interest Inventory
and Background Questionnaire

Groups	Number Returned
Rejected Responses	
Not Employed as a Dental Hygienist	63
Employed as a Dental Hygienist Less Than Three Years	23
Less Than 25 or More Than 55 Years of Age	23
Employed Less than 20 Hours per Week as a Dental Hygienist	20
Indicated Indifference or Dislike for Their Work as a Dental Hygienist	14
Background Questionnaire Not Returned	6
Different Job Description	3
Information on Background Questionnaire Incomplete	<u>2</u>
Total Rejected . .	154
Accepted Responses	<u>85</u>
Total Returned	239
Total Mailed	400
Response Rate	60%

the statistical analysis due to a low number of respondents in those groups (see Table 3). Statistical analysis was performed on the SCII scores of the 81 respondents with a certificate or associate degree, or baccalaureate degree, and who were employed as dental hygiene private and community practitioners. Background information regarding mean age, mean years of employment as a dental hygienist, and response rates to the question, "Do you like your work?" for each group are presented in Appendix J.

National Computer Systems of Minneapolis, Minnesota commercially scored the SCII test booklets and produced an interest profile for each of the 81 individuals included in the final sample for statistical analysis. Raw data from the interest profiles were coded and analyzed using the computer facilities at the Old Dominion University Computer Center. A two-way analysis of variance for the Dental Hygienist (f) Occupational Scale, each of the six General Occupational Themes, and each of the 23 Basic Interest Scales of the SCII was used to determine significant differences between mean interest scores of dental hygiene private practitioners and dental hygiene community practitioners. Significant differences between dental hygienists with a certificate or associate degree, and dental hygienists with a baccalaureate degree were also determined with the two-way analysis of variance. Additionally, the two-way analysis of variance determined the

Table 3
Breakdown of Accepted Responses

Occupational Setting	Highest Level of Education				
	No Formal Education	Certificate or Associate Degree	Baccalaureate Degree	Master's Degree	Doctorate Degree
Dental Hygiene Private Practitioners	0	65	8	0	0
Dental Hygiene Community Practitioners	0	6	2	1	0
Dental Hygiene Educators	0	0	2	1	0

interaction effects among the two occupational settings and the two educational levels.

Results

Data were analyzed to test the hypothesis that no statistically significant difference at the 0.05 level existed between the SCII scores of dental hygiene private practitioners and dental hygiene community practitioners. Mean SCII scores and standard deviations from the two occupational setting groups are presented in Tables 4 and 5. Two-way analysis of variance was used to determine the significance of vocational interest differences between the two groups of dental hygienists based on occupational setting. Analysis of variance revealed no statistically significant differences at the 0.05 level between the two occupational setting groups on the Dental Hygienist (f) Occupational Scales or the six General Occupational Themes (see Table 6, p. 53, and Appendix K).

Analysis of variance revealed significant differences between the two occupational setting groups for two of the 23 Basic Interest Scales: Agriculture $F = 5.38$, $df = 1,77$, $p = 0.02$; Nature $F = 4.92$, $df = 1,77$, $p = 0.03$ (see Table 6, p. 53, and Appendix K). Examination of mean scores on the Agriculture and Nature Basic Interest Scales indicated that dental hygienists employed in private practice settings tend to score higher than dental hygienists employed in community practice settings for both scales (see Table 5).

Table 4

Dental Hygienist (f) Occupational Scale and General Occupational Theme Scores for Dental Hygienists According to Occupational Setting

SCII Scale		Groups	
		Dental Hygiene Private Practitioners N=73	Dental Hygiene Community Practitioners N=8
Dental Hygienist (f) Occupational Scale	\bar{x} SD	45.04 10.12	41.50 8.32
General Occupational Themes			
Realistic	\bar{x} SD	45.56 10.15	45.12 10.13
Investigative	\bar{x} SD	46.78 9.04	49.25 8.58
Artistic	\bar{x} SD	51.27 8.84	53.50 5.60
Social	\bar{x} SD	50.38 9.10	53.62 11.15
Enterprising	\bar{x} SD	50.34 7.92	51.62 8.83
Conventional	\bar{x} SD	47.73 9.20	49.00 2.20

Table 5

Basic Interest Scale Scores for Dental Hygienists
According to Occupational Setting

SCII Basic Interest Scale		Groups	
		Dental Hygiene Private Practitioners N=73	Dental Hygiene Community Practitioners N=8
Agriculture	\bar{x}	51.89	44.12
	SD	9.69	11.46
Nature	\bar{x}	55.18	48.12
	SD	8.75	10.13
Adventure	\bar{x}	46.08	48.00
	SD	9.19	10.50
Military Activities	\bar{x}	48.75	47.75
	SD	8.45	6.54
Mechanical Activities	\bar{x}	44.82	47.75
	SD	8.84	10.47
Science	\bar{x}	46.59	52.00
	SD	8.77	7.01
Mathematics	\bar{x}	43.60	43.75
	SD	9.81	8.48
Medical Science	\bar{x}	58.21	60.38
	SD	8.12	7.39
Medical Service	\bar{x}	58.56	58.62
	SD	8.95	8.12
Music/Dramatics	\bar{x}	52.16	58.12
	SD	9.75	6.01
Art	\bar{x}	53.26	53.25
	SD	9.82	8.41
Writing	\bar{x}	48.59	53.88
	SD	8.55	7.88
Teaching	\bar{x}	46.58	48.38
	SD	9.95	14.05

Table 5 - Continued

SCII Basic Interest Scale		Groups	
		Dental Hygiene Private Practitioners N=73	Dental Hygiene Community Practitioners N=8
Social Service	\bar{x}	51.30	55.00
	SD	8.71	8.62
Athletics	\bar{x}	50.67	51.12
	SD	8.72	10.78
Domestic Arts	\bar{x}	58.62	51.88
	SD	10.26	9.11
Religious Activities	\bar{x}	51.60	55.00
	SD	9.04	6.85
Public Speaking	\bar{x}	44.81	50.00
	SD	8.53	9.74
Law/Politics	\bar{x}	43.90	48.88
	SD	8.19	11.13
Merchandising	\bar{x}	52.45	52.50
	SD	8.36	7.80
Sales	\bar{x}	50.26	49.62
	SD	7.94	8.86
Business Management	\bar{x}	48.08	52.38
	SD	8.54	9.90
Office Practices	\bar{x}	50.73	50.38
	SD	9.39	9.29

Table 6

Summary of Results of Analysis of Variance According to
Occupational Setting for All SCII Scales

SCII Scale	F	Degrees of Freedom	p
Dental Hygienist (f) Occupational Scale	0.77	1,77	0.38
General Occupational Themes			
Realistic	0.01	1,77	0.92
Investigative	0.30	1,77	0.58
Artistic	0.43	1,77	0.52
Social	1.16	1,77	0.28
Enterprising	0.30	1,77	0.58
Conventional	0.22	1,77	0.64
Basic Interest Scales			
Agriculture	5.38	1,77	0.02*
Nature	4.92	1,77	0.03*
Adventure	0.19	1,77	0.66
Military Activities	0.02	1,77	0.89
Mechanical Activities	0.77	1,77	0.38
Science	2.31	1,77	0.13
Mathematics	0.01	1,77	0.93
Medical Science	0.49	1,77	0.49
Medical Service	0.02	1,77	0.88
Music/Dramatics	0.00	1,77	0.98
Art	0.00	1,77	0.99
Writing	2.83	1,77	0.10
Teaching	0.15	1,77	0.70
Social Service	1.73	1,77	0.19
Athletics	0.00	1,77	0.98
Domestic Arts	2.60	1,77	0.11
Religious Activities	1.74	1,77	0.19
Public Speaking	2.46	1,77	0.12

Table 6 - Continued

SCII Scale	F	Degrees of Freedom	<u>p</u>
Basic Interest Scale (cont.)			
Law/Politics	1.93	1,77	0.17
Merchandising	0.01	1,77	0.91
Sales	0.02	1,77	0.89
Business Management	1.86	1,77	0.18
Office Practice	0.01	1,77	0.93

*p < 0.05

The hypothesis that no statistically significant differences at the 0.05 level existed between the SCII scores of dental hygienists with a certificate or associate degree, and dental hygienists with a baccalaureate degree was also tested using the two-way analysis of variance. Mean SCII scores and standard deviations from the two educational level groups are presented in Tables 7 and 8. Two-way analysis of variance revealed no statistically significant differences at the 0.05 level between the two groups based on highest level of education for the Dental Hygienist (f) Occupational Scale or the six General Occupational Themes (see Table 9, p. 59, and Appendix K).

Significant differences were revealed by analysis of variance between the two educational level groups for one of the 23 Basic Interest Scales, Religious Activities $F = 4.64$, $df = 1,77$, $p = 0.03$ (see Table 9, p. 59). Mean Religious Activities Basic Interest Scale scores were significantly higher for the certificate or associate degree dental hygienists than for the baccalaureate degree dental hygienists (see Table 8).

Two-way analysis of variance was also employed to determine if a statistically significant interaction effect occurred among the two occupational settings and the two levels of education on the SCII scores. Means scores and standard deviations from the four dental hygienist groups based on occupational setting and highest level of

Table 7

Dental Hygienist (f) Occupational Scale and General Occupational Theme Scores for Dental Hygienists According to Highest Level of Education

SCII Scale		Groups	
		Certificate or Associate Degree N=71	Baccalaureate Degree N=10
Dental Hygienist (f) Occupational Scale	\bar{x} SD	44.52 8.94	39.50 8.30
General Occupational Themes			
Realistic	\bar{x} SD	44.42 9.52	47.44 12.46
Investigative	\bar{x} SD	46.86 9.00	52.50 6.42
Artistic	\bar{x} SD	52.64 6.76	52.00 8.42
Social	\bar{x} SD	51.81 10.68	51.12 8.58
Enterprising	\bar{x} SD	51.02 9.10	49.88 5.64
Conventional	\bar{x} SD	48.49 5.88	47.31 5.32

Table 8

Basic Interest Scale Scores for Dental Hygienists
According to Highest Level of Education

Basic Interest Scale	Groups		
	Certificate or Associate Degree N=71	Baccalaureate Degree N=10	
Agriculture	\bar{x} SD	45.74 8.36	55.38 11.90
Nature	\bar{x} SD	50.38 8.45	55.75 11.38
Adventure	\bar{x} SD	45.64 10.22	51.56 4.11
Military Activities	\bar{x} SD	49.02 7.86	44.81 4.84
Mechanical Activities	\bar{x} SD	45.68 9.34	47.62 12.12
Science	\bar{x} SD	48.24 7.50	53.19 7.70
Mathematics	\bar{x} SD	43.28 9.70	45.88 7.62
Medical Science	\bar{x} SD	59.41 7.63	59.06 8.86
Medical Service	\bar{x} SD	59.20 8.80	55.88 8.76
Music/Dramatics	\bar{x} SD	52.30 8.46	51.44 5.14
Art	\bar{x} SD	53.72 8.94	52.19 10.36
Writing	\bar{x} SD	51.50 7.84	50.19 10.88
Teaching	\bar{x} SD	46.73 11.97	50.00 12.96

Table 8 - Continued

Basic Interest Scale		Groups	
		Certificate or Associate Degree N=71	Baccalaureate Degree N=10
Social Service	\bar{x} SD	53.58 9.40	50.50 5.50
Athletics	\bar{x} SD	49.52 9.93	55.31 7.11
Domestic Arts	\bar{x} SD	55.50 10.62	53.06 4.26
Religious Activities	\bar{x} SD	53.72 8.50	49.88 4.20
Public Speaking	\bar{x} SD	46.78 9.58	49.12 7.02
Law/Politics	\bar{x} SD	45.59 9.41	49.81 12.20
Merchandising	\bar{x} SD	52.92 8.87	50.56 3.24
Sales	\bar{x} SD	50.59 9.20	47.75 3.17
Business Management	\bar{x} SD	49.60 9.96	51.31 4.51
Office Practices	\bar{x} SD	51.44 10.00	46.62 5.74

Table 9

Summary of Results of Analysis of Variance According to
Highest Level of Education for All SCII Scales

SCII Scale	F	Degrees of Freedom	p
Dental Hygienist (f) Occupational Scale	0.27	1,77	0.60
General Occupational Themes			
Realistic	0.02	1,77	0.87
Investigative	1.99	1,77	0.16
Artistic	0.05	1,77	0.82
Social	1.32	1,77	0.25
Enterprising	0.95	1,77	0.33
Conventional	0.42	1,77	0.52
Basic Interest Scale			
Agriculture	2.05	1,77	0.16
Nature	0.67	1,77	0.42
Adventure	0.79	1,77	0.38
Military Activities	2.14	1,77	0.15
Mechanical Activities	0.02	1,77	0.88
Science	1.33	1,77	0.25
Mathematics	0.93	1,77	0.34
Medical Science	0.00	1,77	0.95
Medical Service	1.12	1,77	0.29
Music/Dramatics	0.07	1,77	0.79
Art	0.01	1,77	0.93
Writing	0.11	1,77	0.74
Teaching	0.26	1,77	0.61
Social Service	2.04	1,77	0.16
Athletics	0.80	1,77	0.37
Domestic Arts	1.43	1,77	0.24
Religious Activities	4.64	1,77	0.03*
Public Speaking	0.02	1,77	0.89

Table 9 - Continued

SCII Scale	F	Degrees of Freedom	p
Basic Interest Scale (cont.)			
Law/Politics	1.75	1,77	0.19
Merchandising	0.57	1,77	0.45
Sales	0.31	1,77	0.58
Business Management	0.17	1,77	0.68
Office Practices	2.06	1,77	0.16

*p < 0.05

education are presented on Tables 10 thru 12. No statistically significant interaction effects at the 0.05 level among the occupational settings and educational levels were found using analysis of variance on the Dental Hygienist (f) Occupational Scale, the six General Occupational Themes, or the 23 Basic Interest Scales (see Table 13, p. 69, and Appendix K).

Discussion

Findings from the analysis reject the null hypothesis that there is no statistically significant difference at the 0.05 level between the vocational interests of dental hygiene private practitioners and dental hygiene community practitioners as measured by the Strong-Campbell Interest Inventory. Data analysis revealed statistically significant agriculture and nature interest differences at the 0.02 and 0.03 levels respectively between dental hygiene private practitioners and dental hygiene community practitioners. Results suggest that private practice dental hygienists have stronger agriculture and nature interests than community practice dental hygienists. The geographic location of the respondents might have influenced the results; however, it is impossible to identify whether this fact existed due to the anonymity of responses from the random sample. The results might have been influenced by the lower number of respondents in the dental hygiene community practitioner group, or the differences between

Table 10

Dental Hygienist (f) Occupational Scale Scores for
Dental Hygienists According to Occupational
Setting and Highest Level of Education

Groups	N	\bar{x}	SD
Dental Hygiene Private Practitioners			
Certificate or Associate Degree	65	45.05	10.11
Baccalaureate Degree	8	45.00	10.94
Dental Hygiene Community Practitioners			
Certificate or Associate Degree	6	44.00	7.77
Baccalaureate Degree	2	34.00	5.66
Overall	81	44.69	9.97

Table 11

General Occupational Theme Scores for Dental Hygienists According to
Occupational Setting and Highest Level of Education

Groups		General Occupational Themes					
		Realistic	Investi- gative	Artistic	Social	Enterpris- ing	Conven- tional
Dental Hygiene Private Practitioners							
Certificate or Associate Degree N=65	\bar{x} SD	45.83 10.20	46.38 9.32	51.12 9.13	50.95 9.24	50.72 8.16	47.98 9.23
Baccalaureate Degree N=8	\bar{x} SD	43.38 10.08	50.00 5.76	52.50 6.23	45.75 6.54	47.25 4.92	45.62 9.24
Dental Hygiene Community Practitioners							
Certificate or Associate Degree N=6	\bar{x} SD	43.00 8.83	47.33 8.69	54.17 4.40	52.67 12.13	51.33 10.03	49.00 2.53
Baccalaureate Degree N=2	\bar{x} SD	51.50 14.85	55.00 7.07	51.50 10.61	56.50 10.61	52.50 6.36	49.00 1.41
Overall N=81	\bar{x} SD	45.52 10.09	47.02 8.98	51.49 8.57	50.70 9.29	50.47 7.97	47.85 8.76

Table 12

Basic Interest Scale Scores for Dental Hygienists According to Occupational
Setting and Highest Level of Education

Groups		Basic Interest Scales				
		Agriculture	Nature	Adventure	Military Activities	Mechanical Activities
Dental Hygiene Private Practitioners						
Certificate or Associate Degree N=65	\bar{x} SD	51.66 9.88	55.08 9.03	45.95 9.48	49.20 8.70	45.02 8.92
Baccalaureate Degree N=8	\bar{x} SD	53.75 8.24	56.00 6.50	47.12 6.81	45.12 4.73	43.25 8.68
Dental Hygiene Community Practitioners						
Certificate or Associate Degree N=6	\bar{x} SD	39.83 6.85	45.67 7.87	45.33 10.95	48.83 7.03	46.33 9.77
Baccalaureate Degree N=2	\bar{x} SD	57.00 15.56	55.50 16.26	56.00 1.41	44.50 4.95	52.00 15.56
Overall N=81	\bar{x} SD	51.12 10.07	54.48 9.08	46.27 9.28	48.65 8.24	45.11 8.99

Table 12 - Continued

Groups		Basic Interest Scales				
		Science	Mathematics	Medical Science	Medical Service	Music/ Dramatics
Dental Hygiene Private Practitioners						
Certificate or Associate Degree N=65	\bar{x} SD	46.31 9.03	43.22 9.49	58.15 8.40	58.91 8.97	52.26 9.84
Baccalaureate Degree N=8	\bar{x} SD	48.88 6.22	46.75 12.40	58.62 5.71	55.75 9.05	51.38 9.58
Dental Hygiene Community Practitioners						
Certificate or Associate Degree N=6	\bar{x} SD	50.17 5.98	43.33 9.91	60.67 6.86	59.50 8.62	52.33 7.09
Baccalaureate Degree N=2	\bar{x} SD	57.50 9.19	45.00 2.83	59.50 12.02	56.00 8.48	51.50 0.70
Overall N=81	\bar{x} SD	47.12 8.73	43.62 9.64	58.42 8.03	58.57 8.84	52.16 9.42

Table 12 - Continued

Groups		Basic Interest Scales				
		Art	Writing	Teaching	Social Service	Athletics
Dental Hygiene Private Practitioners						
Certificate or Associate Degree N=65	\bar{x} SD	53.12 10.07	48.68 8.63	46.46 10.40	51.83 8.82	50.55 8.93
Baccalaureate Degree N=8	\bar{x} SD	54.38 8.00	47.88 8.31	47.50 5.40	47.00 6.76	51.62 7.15
Dental Hygiene Community Practitioners						
Certificate or Associate Degree N=6	\bar{x} SD	54.33 7.81	54.33 7.06	47.00 13.54	55.33 9.99	48.50 10.93
Baccalaureate Degree N=2	\bar{x} SD	50.00 12.73	52.50 13.44	52.50 20.51	54.00 4.24	59.00 7.07
Overall N=81	\bar{x} SD	53.26 9.65	49.11 8.58	46.75 10.33	51.67 8.72	50.72 8.86

Table 12 - Continued

Groups		Basic Interest Scales				
		Domestic Arts	Religious Activities	Public Speaking	Law/Politics	Merchandising
Dental Hygiene Private Practitioners						
Certificate or Associate Degree N=65	\bar{x} SD	59.17 10.49	52.45 8.94	44.88 8.94	43.51 8.17	52.68 8.63
Baccalaureate Degree N=8	\bar{x} SD	54.12 7.10	44.75 6.98	44.25 4.13	47.12 8.13	50.62 5.76
Dental Hygiene Community Practitioners						
Certificate or Associate Degree N=6	\bar{x} SD	51.83 10.76	55.00 8.07	48.67 10.23	47.67 10.65	53.17 9.11
Baccalaureate Degree N=2	\bar{x} SD	52.00 1.41	55.00 1.41	54.00 9.90	52.50 16.26	50.50 0.71
Overall N=81	\bar{x} SD	57.95 10.30	51.94 8.87	45.32 8.73	44.40 8.57	52.46 8.26

Table 12 - Continued

Groups	Basic Interest Scales			
	Sales	Business Management	Office Practices	
Dental Hygiene Private Practitioners				
Certificate or Associate Degree	\bar{x}	50.35	48.38	51.22
N=65	SD	8.34	8.88	9.49
Baccalaureate Degree	\bar{x}	49.50	45.62	46.75
N=8	SD	3.51	4.78	7.94
Dental Hygiene Community Practitioners				
Certificate or Associate Degree	\bar{x}	50.83	50.83	51.67
N=6	SD	10.07	11.05	10.50
Baccalaureate Degree	\bar{x}	46.00	57.00	46.50
N=2	SD	2.83	4.24	3.54
Overall	\bar{x}	50.20	48.51	50.69
N=81	SD	7.98	8.71	9.32

Table 13

Summary of Results of Analysis of Variance According to
Interaction Effects of Occupational Settings and
Educational Levels for All SCII Scales

SCII Scale	F	Degrees of Freedom	p
Dental Hygienist (f) Occupational Scale	12.3	1,77	0.27
General Occupational Themes			
Realistic	1.43	1,77	0.24
Investigative	0.25	1,77	0.62
Artistic	0.27	1,77	0.61
Social	1.18	1,77	0.28
Enterprising	0.41	1,77	0.52
Conventional	0.09	1,77	0.77
Basic Interest Scale			
Agriculture	3.01	1,77	0.09
Nature	1.24	1,77	0.27
Adventure	1.29	1,77	0.26
Military Activities	0.00	1,77	0.97
Mechanical Activities	0.83	1,77	0.36
Science	0.38	1,77	0.54
Mathematics	0.04	1,77	0.83
Medical Science	0.05	1,77	0.82
Medical Service	0.00	1,77	0.97
Music/Dramatics	0.00	1,77	0.99
Art	0.40	1,77	0.53
Writing	0.02	1,77	0.89
Teaching	0.22	1,77	0.64
Social Service	0.20	1,77	0.66
Athletics	1.39	1,77	0.24
Domestic Arts	0.32	1,77	0.57
Religious Activities	0.98	1,77	0.33
Public Speaking	0.58	1,77	0.45

Table 13 - Continued

SCII Scale	F	Degrees of Freedom	p
Basic Interest Scale (cont.)			
Law/Politics	0.02	1,77	0.87
Merchandising	0.01	1,77	0.94
Sales	0.30	1,77	0.59
Business Management	1.30	1,77	0.26
Office Practices	0.01	1,77	0.93

the two groups in age or years of employment as a dental hygienist (see Table 3, p. 48, and Appendix J).

The results of the analysis also reject the null hypothesis that there is no statistically significant difference at the 0.05 level among the vocational interests of dental hygienists with various levels of education completed as measured by the Strong-Campbell Interest Inventory. Analysis of data revealed statistically significant religious activities interest differences at the 0.03 level between dental hygienists with a certificate or associate degree and dental hygienists with a baccalaureate degree. Results suggest that dental hygienists who have completed a certificate or associate degree have stronger interests in religious activities than dental hygienists who have completed a baccalaureate degree. The results might have been influenced by the low number of respondents with a baccalaureate degree, or the differences between the two groups in years of employment as a dental hygienist. Geographic location of respondents might have also influenced the results. Again, however, it is impossible to determine whether this influence existed due to anonymity of responses.

Findings from the analysis fail to reject the null hypothesis that there is no statistically significant interaction effect at the 0.05 level among the various occupational settings and levels of education as measured by the Strong-Campbell Interest Inventory. The interaction

effects of only two occupational settings (private practice and community practice) and two educational levels (certificate or associate degree and baccalaureate degree) were statistically analyzed due to a lower number or lack of respondents in the other occupational setting and educational level groups. The results of the analysis might have been influenced by the low number of respondents in the dental hygiene community practitioner and baccalaureate degree groups.

The results of this study provided a minimal amount of information regarding the differences in interest patterns among dental hygienists. The major purpose of the SCII is to facilitate educational and career guidance. The intention of the SCII is not to pinpoint the specific career an individual should pursue; but rather, to assemble general information in the form of interest patterns which may be used with other types of information, such as experience and abilities, when approaching career decisions.^{2,3} The results of this investigation, therefore, support the intention of the SCII to provide general occupational information.

No statistically significant differences were revealed by data analysis of the SCII Dental Hygienist (f) Occupational Scale scores from dental hygienists according to occupational setting or educational level. Data analysis also did not reveal significant interaction effects among occupational settings and educational levels

on the basis of the SCII Dental Hygienist (f) Occupational Scale scores.

Scores obtained for an Occupational Scale of the SCII are intended to measure the similarity/dissimilarity of an individual's interests with the interests of people in that occupation. The scores for the Occupational Scales have been standardized. The current SCII Dental Hygienist (f) Occupational Scale is based on items which differentiate dental hygienists from women-in-general. The sample of dental hygienists studied with the SVIB-W in 1969 by Ishida serves as the criterion group for the current Dental Hygienist (f) Occupational Scale.^{3,13} Scores between 26 and 44 fall in the "average" range and indicate a response similar to that of people-in-general. Members of a particular occupation are expected to score about 50 on their own Occupational Scale. A score between 45 and 50 on an Occupational Scale indicates a high similarity between an individual's interests and the interests of persons in that occupation.³

The results showed that the SCII Dental Hygienist (f) Occupational Scale scores were somewhat lower than expected (see Tables 4, 7, and 10, pp. 50, 56, and 62). Dental hygiene private practitioners received the highest mean score on this scale, 45.04, and dental hygienists with a baccalaureate degree received the lowest mean score, 39.50. The overall mean score for this scale was 44.69. These lower scores might have occurred because the

vocational interests of dental hygienists have changed since the criterion sample was studied with the SVIB-W by Ishida in 1969. Further research is needed to test dental hygienists on all of the items included in the SCII and to validate the Dental Hygienist (f) Occupational Scale.

Data analysis revealed no statistically significant differences between the SCII General Occupational Themes scores of dental hygienists in private practice and dental hygienists in community practice, or dental hygienists with a certificate or associate degree and dental hygienists with a baccalaureate degree. No statistically significant interaction effects among occupational settings and educational levels were revealed on the basis of scores obtained on the General Occupational Themes.

Standardized scores for each of the General Occupational Themes are interpreted according to percentile bands.³ The mean scores obtained from each of the occupational setting and educational level groups included in this study fell in the average range for all six of the General Occupational Themes (see Tables 4 and 7, pp. 50 and 56). Therefore, these groups of dental hygienists cannot be differentiated from people-in-general on the basis of General Occupational Themes scores.

A two or three letter code has been assigned to each Occupational Scale representing the scale's Holland classification. The types of information used to arrive at the SCII Holland classification for each Occupational

Scale, in the order of their importance, include: 1) mean scores of each occupational sample on the six General Occupational Themes, 2) correlations between the General Occupational Themes and the Occupational Scales, 3) correlations between the Occupational Scales and the Basic Interest Scales, and 4) correlations between the Occupational Scales themselves.³ The data used to classify female dental hygienists were based on Ishida's criterion sample.^{3,13} The SCII has assigned the Dental Hygienist (f) Occupational Scale an IR code, indicating high scores for the Investigative and Realistic General Occupational Themes. The scores obtained by adapting Ishida's results to the six General Occupational Themes were R = 51, I = 54, A = 49, S = 50, E = 51, and C = 47.³

The overall mean General Occupational Themes scores for the dental hygienists included in this study are R = 45.52, I = 47.02, A = 51.49, S = 50.70, E = 50.47, and C = 47.95 (see Table 11, p. 63). According to the interpretive boundaries for the General Occupational Themes established by the SCII, the mean scores from the total sample of dental hygienists in this study for all six scales fall in the average range. Therefore, the General Occupational Themes do not differentiate the overall sample of dental hygienists in this investigation from people-in-general.

The mean General Occupational Themes scores for the dental hygienists in this study are lower for the

Realistic and Investigative Themes than the scores adapted from Ishida's dental hygienist sample. The lowest mean group scores on the six General Occupational Themes scales obtained from the dental hygienists in this study were for the Realistic and Investigative Themes, and the highest mean group scores were for the Artistic, Social, and Economic Themes. These mean scores fail to support the classification of the IR Themes for the SCII Dental Hygienist (f) Occupational Scale, and suggest an ASE classification for the Dental Hygienist (f) Occupational Scale.

Examination of the descriptions of Holland's six basic occupational categories supports an ASE classification for dental hygienists. Artistic persons "highly value aesthetic qualities" and "see themselves as expressive, original, intuitive, and creative." Social persons are described as "sociable, responsible, and humanistic." Social types

. . . enjoy activities that involve informing, training, curing, or enlightening others; (and) perceive themselves as understanding, responsible, idealistic, and helpful.

Individuals described by the enterprising types "have verbal skills suited to selling, dominating, and leading." Enterprising types "see themselves as . . . self-confident, cheerful, and sociable; (and) generally have a high energy level"³ (see Appendix I).

The practice of dental hygiene involves a great deal of interpersonal communication. Dental hygienists exhibit sociability and self-confidence when communicating with clients. In addition, the dental hygienist functions as a teacher in the role of oral health educator to promote preventive dentistry. Valuing of aesthetic qualities may be exhibited in the performance of cleansing and polishing of the dentition, and promotion of aesthetics via preventive care and instruction.

The IR themes which are currently used to classify the SCII Occupational Scale for dental hygienists are described by Holland as follows. Investigative persons have a

. . . strong scientific orientation; . . . are usually task-oriented, introspective and asocial; . . . prefer to work independently; . . . (and) perceive themselves as lacking in leadership or persuasive abilities.

Investigative types describe themselves as "analytical, curious, independent, and reserved; and especially dislike repetitive activities." Holland describes Realitic persons as "robust, rugged, practical, and physically strong; (and) somewhat uncomfortable in social settings."

In addition, realistic persons have

. . . good motor coordination and skills but lack verbal and interpersonal skills; usually perceive themselves as mechanically and athletically inclined; . . . (and) like to build things with tools

(See Appendix I for a more complete description of Holland's occupational categories.)

The traditional perception of a dental hygienist may view the role of the dental hygienist as a technician based on the actual performance of oral prophylactic services. In addition, the educational training of dental hygienists involves a great deal of scientific background. Based on these thoughts, the IR classification might be representative of dental hygienists. However, increased emphasis in the areas of interpersonal communication and oral health education in dental hygiene education and practice might have influenced the interests of dental hygienists. Therefore, further research is necessary to validate the Holland classification of dental hygienists.

A direct comparison of the results of this study with Ishida's results was not possible due to the changes in items included in the test and the revised profiling system. However, the results of this study tend to support Ishida's findings that dental hygienists obtain high scores for Biological Sciences (now Medical Science) and Medical Service and scores similar to women-in-general for the remainder of the Basic Interest Scales¹³ (see Tables 5, 8, and 12, pp. 51, 57, and 64).

The General Occupational Themes were not included in Ishida's study; however, the SCII norms for dental hygienists have been adapted from Ishida's sample. As previously discussed, the results of this study do not support the SCII General Occupational Themes' norms for dental hygienists based on Ishida's sample.

The only SCII Occupational Scale included in this investigation was the Dental Hygienist (f) Occupational Scale. The scores for the remaining 123 Occupational Scales were not analyzed and therefore cannot be compared to Ishida's results.

Specific recommendations regarding educational and career counseling cannot be made based on the results of this study. Only three of the 30 SCII scales studied in this investigation differentiated among the groups. Scores obtained by dental hygienists on the Dental Hygienist (f) Occupational Scale were somewhat lower than expected. The results of this study support Ishida's findings for the Basic Interest Scales. The mean scores obtained from dental hygienists in this study disagree with dental hygienist norms for the General Occupational Themes and the Holland's classification which were adapted from Ishida's results. Further research regarding the vocational interests of dental hygienists is necessary to validate the current norms established for dental hygienists on the SCII General Occupational Themes. In addition, further research with the SCII is necessary to validate Ishida's findings for the Occupational Scales and to test dental hygienists on the SCII items which were not included in the SVIB-W.

In general, educational and career counselors should exercise caution when interpreting results on the Dental Hygienist (f) Occupational Scale. Scores on this scale

might be somewhat lower than expected. In addition, clients with interest patterns similar to the interest patterns of dental hygienists might receive lower scores for the Investigative and Realistic Themes than for the Artistic, Social, and Economic General Occupational Themes.

Results of this study might have been affected by the following factors:

1. A low response rate. Only 239, or 60 percent, of the 400 dental hygienists included in the random cluster sample returned the SCII booklet and background questionnaire.

2. The number of respondents included in each group based on occupational setting and highest level of education completed was small, except for the group of dental hygiene private practitioners with a certificate or associate degree (see Table 3, p. 48).

3. Observed group differences might have been affected by differences in years of age among the dental hygienist groups (see Appendix J). The mean age of dental hygiene private practitioners was 34.5 years; for dental hygiene community practitioners, 43.5 years; for dental hygienists with a certificate or associate degree, 37.5 years; and for dental hygienists with a baccalaureate degree, 40.5 years.

4. Observed group differences might have been affected by differences in the number of years of employment as a dental hygienist among the dental hygienist

groups (see Appendix J). The mean number of years employed as a dental hygienist for dental hygiene private practitioners was 8.5 years; for dental hygiene community practitioners, 17.0 years; for dental hygienists with a certificate or associate degree, 10.5 years; and for dental hygienists with a baccalaureate degree, 15.0 years.

5. Differences in degree of job satisfaction among the groups of dental hygienists (see Appendix J). Dental hygienists included in each group were asked "Do you like your work?" and responded either "I couldn't be more satisfied" or "I like it." The percentage of dental hygienists in each group indicating that they "liked" their work ranged from 71 to 100 percent.

Chapter 5

SUMMARY AND CONCLUSIONS

A limited number of investigations have examined the vocational interests of dental hygienists. The majority of information which is known about dental hygienists' vocational interests is based on earlier editions of interest inventories which have been superceded.

The purpose of this study was to examine the vocational interests of dental hygienists according to occupational setting and highest level of education completed. Strong-Campbell Interest Inventories and background questionnaires were mailed to a random cluster sample of 400 dental hygienists licensed in Connecticut, Michigan, and North Carolina. Eighty-one respondents meeting the sample criteria were assigned to groups based on information obtained from a background questionnaire. An ex post facto 2 x 2 factorial research design was used. The attribute independent variables were occupational setting and highest level of education completed. The dependent variable, vocational interests, was measured using the Strong-Campbell Interest Inventory.

Two-way analysis of variance was employed to determine if statistically significant vocational interest

differences existed among 1) dental hygienists employed in private practice settings and dental hygienists employed in community practice settings, and 2) dental hygienists with a certificate or associate degree and dental hygienists with a baccalaureate degree. The two-way analysis of variance also tested for statistically significant interaction effects among occupational settings and levels of education.

The results of this investigation reject the null hypothesis that there is no statistically significant difference at the 0.05 level between the vocational interests of dental hygiene private practitioners and dental hygiene community practitioners as measured by the Strong-Campbell Interest Inventory. The results of this study also reject the null hypothesis that there is no statistically significant difference at the 0.05 level between the vocational interests of dental hygienists with a certificate or associate degree and dental hygienists with a baccalaureate degree as measured by the Strong-Campbell Interest Inventory. The findings failed to reject the null hypothesis that there are no statistically significant interaction effects at the 0.05 level among the dental hygiene occupational settings and levels of education as measured by the Strong-Campbell Interest Inventory.

The findings of this study lead to the following conclusions:

1. Dental hygiene private practitioners have stronger agriculture and nature interests than dental hygiene community practitioners.

2. Dental hygienists with a certificate or associate degree have stronger interests in religious activities than dental hygienists who have completed a baccalaureate degree.

3. Vocational interests of dental hygienists are not differentially affected by the interaction of occupational settings and educational levels.

Unhypothesized findings suggest that the current norms established for dental hygienists on the six General Occupational Themes and the Holland's code assigned to the Dental Hygienist (f) Occupational Scale might not be a valid representation of the current interests of dental hygienists.

Considering the limitations and results of this study, the following recommendations for future investigation are made:

1. Conduct a study to determine the classification of dental hygienists according to Holland's theory.

2. Replicate this study and include a sample of dental hygiene educators obtained from the Section on Dental Hygiene Education of the American Association of Dental Schools to ensure an adequate number of dental hygiene educators.

3. Replicate this study and include all of the SCII Occupational Scales and include age and years of employment as a dental hygienist as independent variables.

4. Conduct a study comparing the vocational interests of dental hygienists as measured by the SCII with the established scores of the current SCII women/people-in-general samples.

BIBLIOGRAPHY

1. Anderson, Wayne. Predicting graduation from a school of nursing. *Vocational Guidance Quarterly*, 16:295-300, June 1968.
2. Campbell, D. P. Handbook for the Strong Vocational Interest Blank. Stanford, Stanford University Press, 1971, xxv + 516 p.
3. Campbell, D. P. Manual for the SVIB-SCII: Strong-Campbell Interest Inventory. 2nd ed. Stanford, Stanford University Press, 1978, xii + 130 p.
4. Catron, D. W., and Zultowski, W. H. Strong-Campbell General Occupational Themes: profiles of four academic divisions. *Measurement and Evaluation in Guidance*, 10:38-43, Apr. 1977.
5. Cottle, W. C. Interest and personality inventories. Boston, Houghton Mifflin Company, 1968, xi + 116 p.
6. Dolliver, R. H., Junce, J. T., and Irvin, J. A. SVIB revisions and factors affecting scale reliability. *Journal of Vocational Behavior*, 6:391-7, June 1975.
7. Frank, A. C. and Kirk, Barbara A. Characteristics of dental hygiene students. *Vocational Guidance Quarterly*, 18 (3):207-11, Mar. 1970. ✓ ✓
8. Good, C. V., ed. Dictionary of education. 3rd ed. New York, McGraw-Hill, 1973, p. 645.
9. Harmon, L. W., and Campbell, D. P. Use of interest inventories with nonprofessional women: stewardesses versus dental assistants. *Journal of Counseling Psychology*, 15:17-22, Jan. 1968. ✓ ✓
10. Heist, P. Personality characteristics of dental students. *Educational Record*, 41:240-52, July 1960.
11. Holland, J. L. Making vocational choices: a theory of careers. Englewood Cliffs, N.J., Prentice-Hall, Inc., 1973. ✓

12. Hopke, W. E., ed. Dictionary of personal and guidance terms. Chicago, J. G. Ferguson Publishing Co., 1968, p. 347. ✓
13. Ishida, Helen. Vocational interests of dental hygienists. Vocational Guidance Quarterly, 23:257-61, Mar. 1975. ✓
LB15.H66
14. Johnson, R. W. Comparability of old and revised forms of the Strong Vocational Blank for Women. Journal of Applied Psychology, 55:50-6, Jan. 1971.
15. Johnson, R. W., and Leonard, L. C. Psychological test characteristics and performance of nursing students. Nursing Research, 19:147-50, Mar.-Apr. 1970.
16. Kirk, B. A., Cummings, R. W., and Hackett, H. R. Personal and vocational characteristics of dental students. Personnel and Guidance Journal, 41:522-7, Feb. 1963.
17. Kline, Paul. Psychology of vocational guidance. New York, John Wiley & Sons, 1974, 253 p.
18. Koot, Adele C. Values of dental hygienists in three different occupational settings. Thesis, Old Dominion University, 1978, p. 6. ✓
19. Loupe, M. J., Meskin, L. H., and Proshek, J. M. Contrasting interest profiles of dental educators, practicing dentists, and graduate students. Journal of Dental Education, 40(4):215-8, Apr. 1976.
20. Lunneborg, C. E., and Lunneborg, Patricia W. Construct validity of four basic vocational interest factors. Journal of Vocational Behavior, 12:165-71, Apr. 1978.
21. Malvitz, D. M., and Judge, S. P. Employment patterns of dental hygienists in Michigan. Am. Dent. Hyg. A. J., 50:463-8, Oct. 1976. ✓
22. Matheson, Maureen, ed. The college handbook. 17th ed. New York, The College Board, 1979, p. xxii + xxiii.
23. McAdams, W. J. C. Reasons dental hygienists dislike their practice. Am. Dent. Hyg. A. J., 50:563-71, Dec. 1976. ✓
24. McCall, J. N. Trends in the measurement of vocational interest. Review of Educational Research, 35:53-62, Jan. 1965. ?
0

25. Merkle, C. L. An analysis of the interests of a 1977 sample of female registered nurses as measured by the Strong-Campbell Interest Inventory. Doctoral Dissertation, Boston, Boston College, 1978, x + 140 p. ? 0
26. Mowbray, J. M., and Taylor, R. G. Validity of interest inventories for the prediction of success in a school of nursing. *Nursing Research*, 16:78-81, Winter 1967.
27. Nil, N. H., Hull, C. H., Jenkins, J. G., Steinbrenner, K., and Bent, D. H. *Statistical Package for the Social Sciences*. New York, McGraw-Hill, 1975, 675 p.
28. O'Connor, Patricia. Strong Vocational Interest Blank Scores and differential attraction to an individualized curriculum. *J. Dent. Educ.* 40(11):733-9, Nov. 1976.
29. O'Neil, P. M., and Madaus, G. F. Differences in interest patterns between graduates of diploma and basic collegiate programs in nursing. *J. of Counseling Psychology*, 13(3):300-5, 1966. ✓
30. Peters, H. J., and Hansen, K. D. *Vocational guidance and career development*. 3rd ed. New York, Mcmillan Publishing Co., Inc., 1977. xi + 481 p. ? 6
31. Powell, David. Comparison of interest patterns of general dentists and pedodontists on the Strong Vocational Interest Blank. *J. Dent. Educ.*, 38(1): 42-8, Jan. 1974.
32. Smith, T. A. Dental practice and the psychology of vocational choice. *Am. Dent. A. J.*, 98:538-44, Apr. 1979.
33. Stanley, J. C., and Hopkins, K. D. *Educational and psychological measurement and evaluation*. Englewood Cliffs, N.J., Prentice Hall, 1972, xxiii + 520 p.
34. Super, D. E., and Crites, J. O. *Appraising vocational fitness by means of psychological tests*. New York, Harper & Row, 1962, 688 p.
35. U. S. Department of Commerce, Bureau of the Census. *A statistical portrait of women in the U.S.* Washington, Government Printing Office, 1976, 90 p.
36. U. S. Department of Commerce, Bureau of the Census. *Statistical abstract of the United States: 1978*. 99th ed. Washington, Government Printing Office, 1978, p. 398.

37. U. S. Department of Labor, Bureau of Labor Statistics. Length of working life for men and women, 1970. Washington, Government Printing Office, 1976, 17 p.
38. U. S. Department of Labor, Bureau of Labor Statistics. U. S. working women: a databook. Washington, Government Printing Office, 1977, 67 p.
39. U. S. Department of Labor, Employment Standards Administration. 1975 handbook on women workers. Washington, Government Printing Office, 1975, xiii + 435 p.
40. Utz, Patrick, and Korben, Donald. The construct validity of the occupational themes on the Strong-Campbell Interest Inventory. *Journal of Vocational Behavior*, 9:31-42, Aug. 1976.
41. Whitton, Mary C. Same-sex and cross-sex reliability and concurrent validity of the Strong-Campbell Interest Inventory. *Journal of Counseling Psychology*, 22:204-9, May 1975.
42. Wilkins, E. M. Clinical practice of the dental hygienist. 4th ed. Philadelphia, Lea & Febiger, 1976, p. 3.
43. Wolman, B. B., ed. Dictionary of behavioral science. New York, Van Nostrand Reinhold Co., 1973, p. 199.
44. Zaki, H. A., and Stallard, R. E. The role of the dental hygienist in preventive periodontics. *J. Periodont.*, 42:233-6, Apr. 1971.
45. Zytowski, D. G., ed. Contemporary approaches to interest measurement. Minneapolis, University of Minnesota Press, 1973, vi + 251 p.

Appendix A

BACKGROUND QUESTIONNAIRE

1. Please check (✓) the items which indicate the levels of education that you have completed and specify the area of emphasis.

- No formal education (preceptorship, apprenticeship training)
- Certificate or Associate Degree in _____
- Baccalaureate Degree in _____
- Master's Degree in _____
- Doctoral Degree in _____
- Other _____

2. Please indicate the total number of years you have been employed in any aspect of dental hygiene.

_____ years

3. Please check (✓) one of the following five statements as it applies to you:

- I am a dental hygienist employed for at least twenty hours weekly in a private general or specialty dental office(s) and whose responsibilities include prophylaxis, patient education, etc.
- I am a dental hygienist who is employed at least twenty hours weekly in a public health facility, community clinic, school, hospital, or other institution, and whose responsibilities include prophylaxis, patient education, screening examinations, brush-ins, program planning, teacher training workshops, administrative duties, etc.

I am a dental hygienist employed by an institution for at least nine contact hours weekly to teach dental hygiene students, who are in pursuit of a dental hygiene certificate, or baccalaureate, or master's degree.

I am a dental hygienist whose job description and/or hours of work do/does not fit one of the above categories.

Please describe your position and hours of work in the following space.

I am not currently employed as a dental hygienist. However, I am currently _____

4. Please check (✓) the response which best answers the following question.

Do you like your work?

I couldn't be more satisfied

I like it

I am indifferent to it

I dislike it

5. Please indicate your age at the time of your last birthday.

_____ years

6. Please indicate your sex.

female

male

Appendix B

COVER LETTER FOR FIRST MAILING

March 3, 1980

Dear Colleague:

An investigation is being conducted to study the vocational interests of dental hygienists. Information found through this study might have implications for vocational counseling in dental hygiene and assist others in making educational and career decisions regarding the dental hygiene profession.

You can participate in this study by completing the enclosed questionnaire and interest inventory. Please follow the instructions sheet carefully, and complete and mail the inventory booklet and background questionnaire by March 17, 1980. A self-addressed, postage-paid envelope is included for your convenience. You need not sign the questionnaire or the interest inventory.

A postage-paid postcard has been included to facilitate follow-up procedures while maintaining anonymity of your responses. Please sign and mail the postcard separately to indicate the return of your questionnaire and interest inventory.

All responses will remain strictly confidential. Results of the study will be available upon request and will be reported in group form only.

Thank you for your cooperation and participation.

Sincerely,

Renee Johnson, R.D.H., B.S.
Graduate Student

Appendix C
PARTICIPATION POSTCARD

Dear Ms. Johnson:

I have completed and returned the
questionnaire and interest inventory.

(Please Print Your Name)

(Date)

Appendix D

INSTRUCTIONS FOR COMPLETING THE
STRONG-CAMPBELL INTEREST INVENTORY

This inventory will take approximately 30 minutes to complete. It is important that you select a quiet place to complete the inventory and that you answer all of the items at one sitting.

When you are ready to complete the inventory please follow these directions:

1. DO NOT make any marks on the first page of this booklet. (Names or numbers are not to be used to maintain anonymity of responses.)
2. Use a soft, black lead pencil. (Number 2 lead preferred.) Make a heavy, dark mark for each number.
3. If you make a mistake, or change your mind, please erase carefully and thoroughly.
4. This booklet will be processed by automatic equipment. To avoid errors please keep it free from wrinkles and stray marks.
5. You must answer every question. Work quickly - first impressions usually give the best results.
6. Begin with item number 1, page 2. Read the directions for each section and answer all items through number 325. Select only one answer for each item. There are no right or wrong answers.

Appendix E

STRONG-CAMPBELL INTEREST INVENTORY
TEST BOOKLET

STRONG-CAMPBELL INTEREST INVENTORY

EDWARD K. STRONG, JR.
(1884-1963)

DAVID P. CAMPBELL

Copyright © 1933 (renewed 1961), 1938 (renewed 1965), 1945 (renewed 1973), 1946 (renewed 1974), 1959, 1964, 1965, 1966, 1968, 1969, 1972, 1974 by the Board of Trustees of the Leland Stanford Junior University. All rights reserved in all parts and accessories. No part of the Manual or of the test, answer sheets, profiles, and other scoring forms, norms, scales, scoring keys, and other accessories associated with it may be printed or reproduced by any other means, electronic, mechanical, or photographic, or portrayed, translated, or included in any information storage and retrieval system, or used to print or otherwise reproduce a computer-generated interpretation, without permission in writing from the publisher, Stanford University Press, Stanford, California 94305. Printed in the United States of America.

NAME GRID DIRECTIONS

Print your name in the boxes. Print your last name first. Skip a box, then print as much of your first name as possible. Blacken the circle below each box that has the same letter as the box. Blacken the blank circle for spaces.

NAME									
○	○	○	○	○	○	○	○	○	○
A	A	A	A	A	A	A	A	A	A
B	B	B	B	B	B	B	B	B	B
C	C	C	C	C	C	C	C	C	C
D	D	D	D	D	D	D	D	D	D
E	E	E	E	E	E	E	E	E	E
F	F	F	F	F	F	F	F	F	F
G	G	G	G	G	G	G	G	G	G
H	H	H	H	H	H	H	H	H	H
I	I	I	I	I	I	I	I	I	I
J	J	J	J	J	J	J	J	J	J
K	K	K	K	K	K	K	K	K	K
L	L	L	L	L	L	L	L	L	L
M	M	M	M	M	M	M	M	M	M
N	N	N	N	N	N	N	N	N	N
○	○	○	○	○	○	○	○	○	○
P	P	P	P	P	P	P	P	P	P
○	○	○	○	○	○	○	○	○	○
R	R	R	R	R	R	R	R	R	R
S	S	S	S	S	S	S	S	S	S
T	T	T	T	T	T	T	T	T	T
U	U	U	U	U	U	U	U	U	U
V	V	V	V	V	V	V	V	V	V
W	W	W	W	W	W	W	W	W	W
X	X	X	X	X	X	X	X	X	X
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Z	Z	Z	Z	Z	Z	Z	Z	Z	Z

SEX

Male

Female

IDENTIFICATION NUMBER

○	○	○	○	○	○	○	○	○	○
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

FOR COMPUTER USE ONLY

○	○	○	○	○	○
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

This inventory is used to help you understand your work interests in a general way, and to show you some kinds of work you might be comfortable in. The following pages list many jobs, activities, school subjects, and so forth, and you are asked to show your liking or disliking for each. Your answers will be compared with the answers given by people already working in a wide range of jobs, and your scores will show how similar your interests are to the interests of these people. But this is not a test of your abilities; it is an inventory of your interests. Your scores will be presented to you later, on a special sheet called a profile, with information on how to understand the scores.

- MARKING INSTRUCTIONS**
1. Please fill in your name and if required, identification number on this booklet. Follow the instructions carefully.
 2. Interpretation of the Theme Scales is not possible unless the sex of the examinee is recorded.
 3. Use any soft, black lead pencil. Make a heavy, dark mark.
 4. If you make a mistake, or change your mind, please erase carefully and thoroughly.
 5. This booklet will be processed by automatic equipment. To avoid errors, please keep it free from wrinkles and stray marks.
 6. Please try to answer each question. Work quickly; first impressions usually give the best results with this inventory.

FOR PROCESSING

Return to

NATIONAL COMPUTER SYSTEMS

4401 West 76th Street

Minneapolis, Minnesota 55435

OCCUPATIONS

Many occupations are listed below. For each of them, show how you feel about doing that work.

- Mark on this sheet in the space labeled "L" if you like that work. L I D
- Mark in the space labeled "I" if you are indifferent (that is, don't care one way or another) L I D
- Mark in the space labeled "D" if you dislike it. L I D

Don't worry about whether you would be good at that job or about your lack of training. Forget about how much money you could make or whether you could get ahead. Think only about whether you would like to do that work.

Work fast. Answer every one.

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> <input type="radio"/> Actor/Actress <input type="radio"/> Advertising executive <input type="radio"/> Architect <input type="radio"/> Art museum director <input type="radio"/> Art teacher <input type="radio"/> Artist <input type="radio"/> Artist's model <input type="radio"/> Astronomer <input type="radio"/> Athletic director <input type="radio"/> Auctioneer <input type="radio"/> Author of children's books <input type="radio"/> Author of novels <input type="radio"/> Author of technical books <input type="radio"/> Auto mechanic <input type="radio"/> Auto racer <input type="radio"/> Auto sales <input type="radio"/> Bank teller <input type="radio"/> Beauty and haircare consultant <input type="radio"/> Biologist <input type="radio"/> Bookkeeper <input type="radio"/> Building contractor <input type="radio"/> Business teacher <input type="radio"/> Buyer of merchandise <input type="radio"/> Carpenter <input type="radio"/> Cartoonist <input type="radio"/> Cashier in bank <input type="radio"/> Chemist <input type="radio"/> Children's clothes designer <input type="radio"/> Church worker <input type="radio"/> City or state employee <input type="radio"/> City planner <input type="radio"/> Civil engineer <input type="radio"/> College professor <input type="radio"/> Computer operator <input type="radio"/> Corporation lawyer <input type="radio"/> Costume designer <input type="radio"/> Courtroom stenographer <input type="radio"/> Criminal lawyer <input type="radio"/> Dancing teacher <input type="radio"/> Dental assistant <input type="radio"/> Dentist <input type="radio"/> Designer, electronic equipment <input type="radio"/> Dietitian | <ul style="list-style-type: none"> 44. <input type="radio"/> Draftsman 45. <input type="radio"/> Dressmaker/Tailor 46. <input type="radio"/> Editor 47. <input type="radio"/> Electrical engineer 48. <input type="radio"/> Electronics technician 49. <input type="radio"/> Elementary school teacher 50. <input type="radio"/> Employment manager 51. <input type="radio"/> Factory manager 52. <input type="radio"/> Farmer 53. <input type="radio"/> Fashion model 54. <input type="radio"/> Florist 55. <input type="radio"/> Foreign correspondent 56. <input type="radio"/> Foreign service officer 57. <input type="radio"/> Free-lance writer 58. <input type="radio"/> Governor of a state 59. <input type="radio"/> High school teacher 60. <input type="radio"/> Home economics teacher 61. <input type="radio"/> Hospital records clerk 62. <input type="radio"/> Housekeeper 63. <input type="radio"/> Hotel manager 64. <input type="radio"/> Illustrator 65. <input type="radio"/> Income tax accountant 66. <input type="radio"/> Interior decorator 67. <input type="radio"/> Inventor 68. <input type="radio"/> Jet pilot 69. <input type="radio"/> Judge 70. <input type="radio"/> Labor arbitrator 71. <input type="radio"/> Laboratory technician 72. <input type="radio"/> Landscape gardener 73. <input type="radio"/> Librarian 74. <input type="radio"/> Life insurance agent 75. <input type="radio"/> Machine shop supervisor 76. <input type="radio"/> Machinist 77. <input type="radio"/> Manager, Chamber of Commerce 78. <input type="radio"/> Manager, child care center 79. <input type="radio"/> Manager, women's style shop 80. <input type="radio"/> Manufacturer 81. <input type="radio"/> Mechanical engineer 82. <input type="radio"/> Military officer 83. <input type="radio"/> Minister, priest or rabbi 84. <input type="radio"/> Musician 85. <input type="radio"/> Newspaper reporter 86. <input type="radio"/> Nurse 87. <input type="radio"/> Nurse's aide/Orderly | <ul style="list-style-type: none"> 88. <input type="radio"/> Office clerk 89. <input type="radio"/> Office manager 90. <input type="radio"/> Opera singer 91. <input type="radio"/> Orchestra conductor 92. <input type="radio"/> Pharmacist 93. <input type="radio"/> Photographer 94. <input type="radio"/> Physician 95. <input type="radio"/> Playground director 96. <input type="radio"/> Poet 97. <input type="radio"/> Police officer 98. <input type="radio"/> Politician 99. <input type="radio"/> Private secretary 100. <input type="radio"/> Professional athlete 101. <input type="radio"/> Professional dancer 102. <input type="radio"/> Professional gambler 103. <input type="radio"/> Psychologist 104. <input type="radio"/> Public relations director 105. <input type="radio"/> Rancher 106. <input type="radio"/> Realtor 107. <input type="radio"/> Receptionist 108. <input type="radio"/> Retailer 109. <input type="radio"/> Sales manager 110. <input type="radio"/> School principal 111. <input type="radio"/> Scientific illustrator 112. <input type="radio"/> Scientific research worker 113. <input type="radio"/> Sculptor 114. <input type="radio"/> Secret service agent 115. <input type="radio"/> Social worker 116. <input type="radio"/> Specialty salesperson 117. <input type="radio"/> Sports reporter 118. <input type="radio"/> Statistician 119. <input type="radio"/> Flight attendant 120. <input type="radio"/> Stockbroker 121. <input type="radio"/> Surgeon 122. <input type="radio"/> Toolmaker 123. <input type="radio"/> Traveling salesperson 124. <input type="radio"/> Travel bureau manager 125. <input type="radio"/> Typist 126. <input type="radio"/> TV announcer 127. <input type="radio"/> Vocational counselor 128. <input type="radio"/> Waiter/Waitress 129. <input type="radio"/> Wholesaler 130. <input type="radio"/> X-Ray technician 131. <input type="radio"/> YMCA/YWCA staff member |
|--|--|--|



SCHOOL SUBJECTS

before your interest in these subjects, even though you have studied them.

- Agriculture
- Algebra
- Arithmetic
- Ancient languages (Latin, Sanskrit, etc.)
- Art
- Bible history
- Bookkeeping
- Botany
- Calculus
- Chemistry
- Civics (government)
- Dramatics
- Economics
- English composition
- Geometry
- Home economics
- Industrial arts
- Journalism
- Literature
- Mathematics
- Mechanical drawing
- Military drill
- Modern languages (French, German, etc.)
- Nature study
- Penmanship
- Philosophy
- Physical education
- Physics
- Physiology
- Political science
- Psychology
- Public speaking
- Sociology
- Statistics
- Typewriting
- Zoology

ACTIVITIES

interests as before. Give the first that comes to mind.

- Making a speech
- Doing research work
- Repairing a clock
- Cooking
- Operating machinery
- Writing reports
- Discussions of politics
- Taping a sprained ankle
- Adjusting a carburetor
- Going to church

- 178. Heading a civic improvement program
- 179. Raising flowers and vegetables
- 180. Interviewing job applicants
- 181. Teaching children
- 182. Teaching adults
- 183. Meeting and directing people
- 184. Taking responsibility
- 185. Sewing
- 186. Making statistical charts
- 187. Operating office machines
- 188. Giving first aid assistance
- 189. Decorating a room with flowers
- 190. Interviewing prospects in selling
- 191. Drilling soldiers
- 192. Pursuing bandits in a sheriff's posse
- 193. Watching an open-heart operation
- 194. Checking typewritten material for errors
- 195. Repairing electrical wiring
- 196. Organizing cabinets and closets
- 197. Adjusting difficulties of others
- 198. Starting a conversation with a stranger
- 199. Cabinetmaking
- 200. Being a forest ranger
- 201. Bargaining ("swapping")
- 202. Looking at things in a clothing store
- 203. Buying merchandise for a store
- 204. Displaying merchandise in a store
- 205. Competitive activities
- 206. Regular hours for work
- 207. Continually changing activities
- 208. Interviewing clients
- 209. Arguments
- 210. Developing business systems
- 211. Doing your own laundry work
- 212. Saving money
- 213. Contributing to charities
- 214. Raising money for charity
- 215. Expressing judgments publicly, regardless of what others say
- 216. Climbing along the edge of a steep cliff
- 217. Living in the city
- 218. Discussing the purpose of life

PART IV. AMUSEMENTS

Show in the same way how you feel about these ways of having fun. Work rapidly. Do not think over various possibilities. Record your first feeling of liking, indifference, or disliking.

- 219. Golf
- 220. Fishing
- 221. Jazz or rock concerts
- 222. Looking at things in a hardware store
- 223. Boxing
- 224. Poker
- 225. Bridge
- 226. Solving mechanical puzzles
- 227. Planning a large party
- 228. Religious music
- 229. Drilling in a military company
- 230. Amusement parks
- 231. Conventions
- 232. Formal dress affairs
- 233. Electioneering for office
- 234. Art galleries
- 235. Leading a scout troop
- 236. Writing a one-act play
- 237. Symphony concerts
- 238. Night clubs
- 239. Church young people's groups
- 240. Sports pages in newspaper
- 241. Poetry
- 242. Skiing
- 243. Business magazines
- 244. Popular mechanics magazines
- 245. Reading the Bible
- 246. Magazines about art and music
- 247. Building a radio or stereo set
- 248. Attending lectures
- 249. Family pages in newspapers
- 250. Performing scientific experiments
- 251. Camping
- 252. Playing chess
- 253. Preparing dinner for guests
- 254. Entertaining others
- 255. Trying new cooking recipes
- 256. Being the first to wear the latest fashion
- 257. Organizing a play

Part V. Types of People. People tend to choose jobs where they can work with the following types of people. Work fast – don't think of specific examples – give the first impression that comes to mind.

- | | | |
|--|--|--|
| 58. <input type="radio"/> <input type="radio"/> <input type="radio"/> Highway construction workers | 266. <input type="radio"/> <input type="radio"/> <input type="radio"/> Religious people | 275. <input type="radio"/> <input type="radio"/> <input type="radio"/> Outspoken people with new ideas |
| 59. <input type="radio"/> <input type="radio"/> <input type="radio"/> High school students | 267. <input type="radio"/> <input type="radio"/> <input type="radio"/> Aggressive people | 276. <input type="radio"/> <input type="radio"/> <input type="radio"/> Fashionably dressed people |
| 60. <input type="radio"/> <input type="radio"/> <input type="radio"/> Military officers | 268. <input type="radio"/> <input type="radio"/> <input type="radio"/> Physically sick people | 277. <input type="radio"/> <input type="radio"/> <input type="radio"/> Prominent business leaders |
| 61. <input type="radio"/> <input type="radio"/> <input type="radio"/> Artistic persons | 269. <input type="radio"/> <input type="radio"/> <input type="radio"/> Babies | 278. <input type="radio"/> <input type="radio"/> <input type="radio"/> Athletic persons |
| 62. <input type="radio"/> <input type="radio"/> <input type="radio"/> Foreigners | 270. <input type="radio"/> <input type="radio"/> <input type="radio"/> Very old people | 279. <input type="radio"/> <input type="radio"/> <input type="radio"/> People who daydream a lot |
| 63. <input type="radio"/> <input type="radio"/> <input type="radio"/> Ballet dancers | 271. <input type="radio"/> <input type="radio"/> <input type="radio"/> Emotional people | 280. <input type="radio"/> <input type="radio"/> <input type="radio"/> Outstanding scientists |
| 64. <input type="radio"/> <input type="radio"/> <input type="radio"/> Nonconformists | 272. <input type="radio"/> <input type="radio"/> <input type="radio"/> People who have made fortunes in business | 281. <input type="radio"/> <input type="radio"/> <input type="radio"/> People who live dangerously |
| 65. <input type="radio"/> <input type="radio"/> <input type="radio"/> People who assume leadership | 273. <input type="radio"/> <input type="radio"/> <input type="radio"/> Thrifty people | |
| | 274. <input type="radio"/> <input type="radio"/> <input type="radio"/> Musical geniuses | |

Part VI. Preference Between Two Activities. Here are several pairs of activities or occupations. Show which one of each pair you like better; if you prefer the one on the left, mark in the space labeled "L"; if you prefer the item on the right, mark in the space labeled "R". If you like both the same, or if you can't decide, mark in the space labeled "=". Work rapidly. Make one mark for each pair.

- | | | |
|--|---|---|
| 32. Airline pilot | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Airline ticket agent |
| 33. Taxicab driver | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Police officer |
| 34. Headwaiter/Hostess | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Lighthouse keeper |
| 35. Selling things house to house | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Gardening |
| 36. Developing plans | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Carrying out plans |
| 37. Doing a job yourself | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Telling somebody else to do the job |
| 38. Dealing with things | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Dealing with people |
| 39. Taking a chance | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Playing safe |
| 40. Drawing a definite salary | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Receiving a commission on what is done |
| 41. Outside work | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Inside work |
| 42. Work for yourself | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Carrying out the program of a superior whom you respect |
| 43. Superintendent of a hospital | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Warden of a prison |
| 44. Vocational counselor | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Public health officer |
| 45. Physical activity | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Mental activity |
| 46. Dog trainer | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Juvenile parole officer |
| 47. Thrilling, dangerous activities | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Quieter, safer activities |
| 48. Physical education director | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Free-lance writer |
| 49. Statistician | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Social worker |
| 50. Technical responsibility (in charge of 25 people doing scientific work) | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Supervisory responsibility (in charge of 300 people doing business-office work) |
| 51. Going to a play | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Going to a dance |
| 52. Teacher | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Salesperson |
| 53. Experimenting with new grooming preparations | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Experimenting with new office equipment |
| 54. Being married to a research scientist | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Being married to a sales executive |
| 55. Working in a large corporation with little chance of being president before age 55 | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Working for yourself in a small business |
| 56. Working in an import-export business | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Working in a research laboratory |
| 57. Music and art events | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Athletic events |
| 58. Reading a book | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Watching TV or going to a movie |
| 59. Appraising real estate | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Repairing and restoring antiques |
| 60. Having a few close friends | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Having many acquaintances |
| 61. Work in which you move from place to place | <input type="radio"/> <input type="radio"/> <input type="radio"/> | Work where you live in one place |

Part VII. Your Characteristics. Show here what kind of person you are. If the item describes you, mark in the space labeled (Yes); if the item does not describe you, mark in the space labeled (No); if you cannot decide, mark in the space labeled (?). (Be frank in pointing out your weak points, because these are as important as your strong points in choosing a career.)

- | | |
|--|--|
| 2. <input type="radio"/> <input type="radio"/> <input type="radio"/> Usually start activities of my group | 319. <input type="radio"/> <input type="radio"/> <input type="radio"/> Can prepare successful advertisements |
| 3. <input type="radio"/> <input type="radio"/> <input type="radio"/> Have more than my share of novel ideas | 320. <input type="radio"/> <input type="radio"/> <input type="radio"/> Stimulate the ambitions of my associates |
| 4. <input type="radio"/> <input type="radio"/> <input type="radio"/> Win friends easily | 321. <input type="radio"/> <input type="radio"/> <input type="radio"/> Can write a concise, well-organized report |
| 5. <input type="radio"/> <input type="radio"/> <input type="radio"/> Make decisions immediately, not after considerable thought | 322. <input type="radio"/> <input type="radio"/> <input type="radio"/> Enjoy tinkering with small hand tools |
| 6. <input type="radio"/> <input type="radio"/> <input type="radio"/> Prefer working alone rather than on committees | 323. <input type="radio"/> <input type="radio"/> <input type="radio"/> Can smooth out tangles and disagreements between people |
| 7. <input type="radio"/> <input type="radio"/> <input type="radio"/> Have mechanical ingenuity (inventiveness) | 324. <input type="radio"/> <input type="radio"/> <input type="radio"/> Put drive into an organization |
| 8. <input type="radio"/> <input type="radio"/> <input type="radio"/> Am concerned about philosophical problems such as religion, meaning of life, etc. | 325. <input type="radio"/> <input type="radio"/> <input type="radio"/> Have patience when teaching others |



Appendix F

POSTCARD REMINDER

Dear Colleague:

You recently received materials for a study regarding the vocational interests of dental hygienists. The information you can provide is very important to this study in order to obtain a true representation of dental hygienists. If you would like to participate in this study and have not returned your completed forms, please do so within the next few days.

Thank you for your participation.

Sincerely,

Renee Johnson, R.D.H., B.S.
Graduate Student

Appendix G

COVER LETTER FOR SECOND MAILING

April 1, 1980

Dear Colleague:

You might recall receiving a questionnaire and an interest inventory for a study of the vocational interests of dental hygienists. The amount of existing knowledge about the vocational interests of dental hygienists is minimal, therefore, your participation in this study is very important.

In studies such as this a low response rate will bias the results and seriously influence the validity of the findings. Enclosed is a new questionnaire and interest inventory booklet. If you have previously completed and returned the booklet and questionnaire do not return these materials. If you have not previously returned the materials please follow the instructions carefully and return the completed questionnaire and booklet in the enclosed postage paid envelope by April 11, 1980. All responses will remain anonymous, and the information will be reported in group form only. The results of the study will be available upon request.

Thank you for participating in the study.

Sincerely,

Renee Johnson, R.D.H., B.S.
Graduate Student

Appendix H

STRONG-CAMPBELL INTEREST INVENTORY
PROFILE FORM

SVIB-SCI Profile for

Date Scored

Strong-Campbell Interest Inventory
Profile for use with test booklet T325
Stanford University Press, Stanford, California
of the Strong Vocational Interest Blank

General Occupational Themes			Administrative Indexes		
Theme	Description	Score	(for the use of the counselor)		
R-THEME	This is a	Score.	TOTAL RESPONSES		
I-THEME	This is a	Score.	INFREQUENT RESPONSES		
A-THEME	This is a	Score.	Response %		
S-THEME	This is a	Score.	LP	IP	DP
E-THEME	This is a	Score.	OCCUPATIONS		
C-THEME	This is a	Score.	SCHOOL SUBJECTS		
			ACTIVITIES		
			AMUSEMENTS		
			TYPES OF PEOPLE		
			PREFERENCES		
			CHARACTERISTICS		
			Special Scales: AOR: IE:		

Basic Interest Scales		Very Low	Low	Average	High	Very High				
R-THEME	AGRICULTURE									
	NATURE	30	35	40	45	50	55	60	65	70
	ADVENTURE									
	MILITARY ACTIVITIES									
	MECHANICAL									
I-THEME	SCIENCE									
	MATHEMATICS									
	MEDICAL SCIENCE									
	MEDICAL SERVICE									
A-THEME	MUSIC/ DRAMATICS	30	35	40	45	50	55	60	65	70
	ART									
	WRITING									
S-THEME	TEACHING									
	SOCIAL SERVICE									
	ATHLETICS									
	DOMESTIC ARTS									
	RELIGIOUS ACTIVITIES									
E-THEME	PUBLIC SPEAKING									
	LAW/ POLITICS									
	MERCHANDISING									
	SALES									
	BUSINESS MGMT.	30	35	40	45	50	55	60	65	70
C-THEME	OFFICE PRACTICES									

Copyright © 1953 (revised 1964, 1968) by the Board of Trustees of the Stanford University Interest Inventory. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher, Stanford University Press, Stanford, California 94305.

Occupational Scales

Scale	Sex	Sta.	Very	Dis-similar	Ave	Similar	Very	Code	Scale	Sex	Sta.	Very	Dis-similar	Ave	Similar	Very
			Dis-similar				Similar					Dis-similar				Similar
FARMER	m							AE INT. DECORATOR	m							
INSTRUM. ASSEMBL.	f							AE ADVERTISING EXEC.	m							
VOC. AGRIC. TCHR.	m							A LANGUAGE TEACHER	f							
DIFTITIAN	m							A LIBRARIAN	f							
POLICE OFFICER	m							A LIBRARIAN	m							
Hwy. PATROL OFF.	m							A REPORTER	f							
ARMY OFFICER	f							A REPORTER	m							
PHYS. ED. TEACHER	f							AS ENGLISH TEACHER	f							
SKILLED CRAFTS	m							AS ENGLISH TEACHER	m							
FORESTER	m							SI NURSE, REGISTERED	f							
RAD. TECH. (X-RAY)	f							SIR PHYS. THERAPIST	m							
MERCH. MAR. OFF.	m							SRC NURSE, LIC. PRACT.	m							
NAVY OFFICER	m							S SOCIAL WORKER	f							
NURSE, REGISTERED	m							S SOCIAL WORKER	m							
VETERINARIAN	m		15	25	45	55		S PRIEST	m		15	25	45	55		
CARTOGRAPHER	m							S DIR., CHRISTIAN ED.	f							
ARMY OFFICER	m							SE YWCA STAFF	f							
AIR FORCE OFFICER	m							SIE MINISTER	m							
OCCUP. THERAPIST	f							SEA ELEM. TEACHER	m							
ENGINEER	f							SC ELEM. TEACHER	f							
ENGINEER	m							SCE SCH. SUPERINTEND.	m							
CHEMIST	f							SCE PUBLIC ADMINSTR.	m							
PHYSICAL SCIENTIST	m							SCE GUIDANCE COUNS.	m							
MEDICAL TECH.	f							SER RECREATION LEADER	f							
PHARMACIST	f							SEC RECREATION LEADER	m							
DENTIST	f							SEC GUIDANCE COUNS.	f							
DENTIST	m		15	25	45	55		SEC SOC. SCI. TEACHER	f		15	25	45	55		
MENTAL HYGIENIST	f							SEC SOC. SCI. TEACHER	m							
PHYS. THERAPIST	f							SEC PERSONNEL DIR.	m							
PHYSICIAN	m							ESC DEPT. STORE MGR.	m							
MATH-SCI. TEACHER	m							ESC HOME ECON. TCHR.	f							
MATH-SCI. TEACHER	f							ESA FLIGHT ATTENDANT	f							
LIBRARIAN	f							ES CH. OF COMM. EXEC.	m							
MEDICAL TECH.	m							ES SALES MANAGER	m							
ACTUARIAN	m							ES LIFE INS. AGENT	m							
COMPUTER Progr.	f							E LIFE INS. AGENT	f							
COMPUTER Progr.	m							E LAWYER	f							
MATHEMATICIAN	f							E LAWYER	m							
MATHEMATICIAN	m		15	25	45	55		EI COMPUTER SALES	m		15	25	45	55		
INVESTMENT	f							EI INVESTM. FUND MGR.	m							
PHARMACOLOGIST	m							EIC PHARMACIST	m							
VETERINARIAN	f							EC BUYER	f							
ACTUARIAN	f							ECS BUYER	m							
PHYSICIAN	f							ECS CREDIT MANAGER	m							
SOCIAL SCIENTIST	m							ECS FUNERAL DIRECTOR	m							
COLLEGE PROFESSOR	f							ECR REALTOR	m							
COLLEGE PROFESSOR	m							ERC AGRIBUSINESS MGR.	m							
TECH. PATHOL.	f							ERC PURCHASING AGENT	m							
TECH. PATHOL.	m							ESR CHIROPRACTOR	m							
PSYCHOLOGIST	f							CE ACCOUNTANT	m							
PSYCHOLOGIST	m		15	25	45	55		CE BANKER	f		15	25	45	55		
LANGUAGE INTERPR.	f							CE BANKER	m							
ARCHITECT	m							CE CREDIT MANAGER	f							
ADVERTISING EXEC.	f							CE DEPT. STORE SALES	f							
PHYSICIAN	f							CE BUSINESS ED. TCHR.	f							
PHYSICIAN	m							CES BUSINESS ED. TCHR.	m							
PHYSICIAN	f							CSE EXEC. HOUSEKEEPER	f							
PHOTOGRAPHER	m							C ACCOUNTANT	f							
PHYSICIAN	f							C SECRETARY	f							
PHYSICIAN	m							CR DENTAL ASSISTANT	f							
ENTERTAINER	f							CRI NURSE, LIC. PRACT.	f							
INTERIOR DECORATOR	f							CRF PRACTITIONER	f							

Appendix I

DESCRIPTIONS OF HOLLAND'S SIX BASIC
OCCUPATIONAL CATEGORIES*

The extreme model of each of Holland's six types can be described as follows:

REALISTIC: Persons of this type are robust, rugged, practical, and physically strong; somewhat uncomfortable in social settings; have good motor coordination and skills but lack verbal and interpersonal skills; usually perceive themselves as mechanically and athletically inclined; are practical, stable, natural, and persistent; prefer concrete to abstract problems; see themselves as aggressive; have conventional political and economic goals; and rarely perform creatively in the arts or sciences, but do like to build things with tools. Realistic types prefer such occupations as mechanic, engineer, electrician, fish and wildlife specialist, crane operator, tool designer, and various technician positions.

INVESTIGATIVE: This category includes those with a strong scientific orientation; they are usually task-oriented introspective and asocial; prefer to think through rather than act out problems; have a great need to understand the physical world; enjoy ambiguous tasks; prefer to work independently; have unconventional values and attitudes; usually perceive themselves as lacking in leadership or persuasive abilities, but are confident of their scholarly and intellectual abilities; describe themselves as analytical, curious, independent, and reserved; and especially dislike repetitive activities. Vocational preferences include astronomer, biologist, chemist, technical writer, and zoologist.

ARTISTIC: Persons of the artistic type prefer free, unstructured situations with maximum opportunities for self-expressing; resemble investigative types in being introspective and asocial but differ in having less ego strength and greater need for individual expression, in being more impulsive, and in suffering more frequently

*Reprinted from Manual for the Strong-Campbell Interest Inventory, Form T325 of the STRONG VOCATIONAL INTEREST BLANK SECOND EDITION, by David P. Campbell with the permission of the publishers, Stanford University Press. © 1974, 1977 by the Board of Trustees of the Leland Stanford Junior College.

Appendix J

SUMMARY OF BACKGROUND INFORMATION FOR THE FINAL
SAMPLE OF DENTAL HYGIENISTS

Background Area	Dental Hygiene Private Practitioners			Dental Hygiene Community Practitioners			Overall Total N=81
	Certificate or Associate Degree N=65	Baccalau- reate Degree N=8	Total Group N=73	Certificate or Associate Degree N=6	Baccalau- reate Degree N=2	Total Group N=8	
Mean Years of Age	32	37	34.5	43	44	43.5	39.0
Mean Years Employed as a Dental Hygienist	9	8	8.5	12	22	17.0	12.8
Frequency and Percent Responses to "Do You Like Your Job?"							
"I couldn't be more satisfied"	19 29.2%	2 25.0%	21 28.8%	1 16.7%	0 0%	1 12.5%	22 27.2%
"I like it"	46 71.0%	6 75.0%	52 71.2%	5 83.3%	2 100%	7 87.5%	59 72.8%

Table 14

Analysis of Variance Among Dental Hygienists (f) Occupational
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	117.66	2	58.83	0.59	0.56
Empset	76.84	1	76.84	0.77	0.38
Educ	27.25	1	27.25	0.27	0.60
Two-Way Interaction					
Empset Educ	122.77	1	122.77	1.23	0.27
Explained	240.42	3	80.14	0.80	0.50
Residual	7710.86	77	100.14		
Total	7951.28	80	99.39		

Empset = Employment Setting
Educ = Educational Level

Table 15

Analysis of Variance Among the Realistic General Occupational
Theme Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	3.98	2	1.99	0.02	0.98
Empset	0.92	1	0.92	0.01	0.92
Educ	2.61	1	2.61	0.02	0.87
Two-Way Interaction					
Empset Educ	148.72	1	148.72	1.43	0.24
Explained	152.71	3	50.90	0.49	0.69
Residual	7987.51	77	103.73		
Total	8140.22	80	101.75		

Empset = Employment Setting
Educ = Educational Level

Table 16

Analysis of Variance Among the Investigative General
Occupational Theme Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	204.90	2	102.45	1.27	0.29
Empset	24.61	1	24.61	0.30	0.58
Educ	160.94	1	106.94	1.99	0.16
Two-Way Interaction					
Empset Educ	20.34	1	20.34	0.25	0.62
Explained	225.23	3	75.08	0.93	0.43
Residual	6220.72	77	80.79		
Total	6445.95	80	80.57		

Empset = Employment Setting
Educ = Educational Level

Table 17

Analysis of Variance Among the Artistic General Occupational
Theme Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	39.64	2	19.82	0.26	0.77
Empset	32.22	1	32.22	0.43	0.52
Educ	3.91	1	3.91	0.05	0.82
Two-Way Interaction					
Empset Educ	20.26	1	20.26	0.27	0.61
Explained	50.90	3	19.97	0.26	0.85
Residual	5816.35	77	75.54		
Total	5876.25	80	73.45		

Empset = Employment Setting
Educ = Educational Level

Table 18

Analysis of Variance Among the Social General Occupational
Theme Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	189.50	2	94.75	1.10	0.34
Empset	99.82	1	99.82	1.16	0.28
Educ	113.74	1	113.74	1.32	0.25
Two-Way Interaction					
Empset Educ	101.20	1	101.20	1.18	0.28
Explained	290.69	3	96.90	1.13	0.34
Residual	6612.20	77	85.87		
Total	6902.89	80	86.29		

Empset = Employment Setting
Educ = Educational Level

Table 19

Analysis of Variance Among the Enterprising General Occupational
Theme Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	73.15	2	36.58	0.57	0.57
Empset	19.47	1	19.47	0.30	0.58
Educ	61.29	1	61.29	0.95	0.33
Two-Way Interaction					
Empset Educ	26.67	1	26.67	0.41	0.52
Explained	99.82	3	33.28	0.52	0.67
Residual	4976.35	77	64.63		
Total	5076.17	80	63.45		

Empset = Employment Setting

Educ = Educational Level

Table 20

Analysis of Variance Among the Conventional General Occupational
Theme Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	44.46	2	22.23	0.28	0.76
Empset	16.99	1	16.99	0.22	0.64
Educ	32.76	1	32.76	0.42	0.52
Two-Way Interaction					
Empset Educ	6.90	1	6.90	0.09	0.77
Explained	51.36	3	17.12	0.22	0.88
Residual	6082.86	77	79.00		
Total	6134.22	80	76.68		

Empset = Employment Setting
Educ = Educational Level

Table 21

Analysis of Variance Among the Agriculture Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	626.17	2	313.08	3.35	0.04*
Empset	503.69	1	503.69	5.38	0.02*
Educ	191.40	1	191.40	2.05	0.16
Two-Way Interaction					
Empset Educ	281.71	1	281.71	3.01	0.09
Explained	907.88	3	302.63	3.24	0.03
Residual	7202.89	77	93.54		
Total	8110.76	80	101.38		

Empset = Employment Setting

Educ = Educational Level

*p < 0.05

Table 22
 Analysis of Variance Among the Nature Basic Interest
 Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	411.40	2	205.70	2.60	0.08
Empset	388.44	1	388.44	4.92	0.03*
Educ	52.74	1	52.74	0.67	0.42
Two-Way Interaction					
Empset Educ	98.37	1	98.37	1.24	0.27
Explained	509.77	3	169.92	2.15	0.10
Residual	6084.45	77	79.02		
Total	6594.22	80	82.43		

Empset = Employment Setting

Educ = Educational Level

*p < 0.05

Table 23

Analysis of Variance Among the Adventure Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	95.23	2	47.62	0.55	0.58
Empset	16.42	1	16.42	0.19	0.66
Educ	68.72	1	68.72	0.79	0.38
Two-Way Interaction					
Empset Educ	111.72	1	111.72	1.29	0.26
Explained	206.96	3	68.98	0.80	0.50
Residual	6675.07	77	86.69		
Total	6882.02	80	86.02		

Empset = Employment Setting
Educ = Educational Level

Table 24

Analysis of Variance Among the Military Activities Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	153.63	2	76.82	1.12	0.33
Empset	1.28	1	1.28	0.02	0.89
Educ	146.37	1	146.37	2.14	0.15
Two-Way Interaction					
Empset Educ	0.08	1	0.08	0.00	0.97
Explained	153.71	3	51.24	0.75	0.53
Residual	5276.61	77	68.53		
Total	5430.32	80	67.88		

Empset = Employment Setting
Educ = Educational Setting

Table 25

Analysis of Variance Among the Mechanical Activities Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	63.74	2	31.87	0.39	0.68
Empset	63.60	1	63.60	0.77	0.38
Educ	1.93	1	1.93	0.02	0.88
Two-Way Interaction					
Empset Educ	68.44	1	68.44	0.83	0.36
Explained	132.18	3	44.06	0.54	0.66
Residual	6335.82	77	82.28		
Total	6468.00	80	80.85		

Empset = Employment Setting
Educ = Educational Level

Table 26
 Analysis of Variance Among the Science Basic Interest
 Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	310.56	2	155.28	2.08	0.13
Empset	172.68	1	172.68	2.31	0.13
Educ	99.47	1	99.47	1.33	0.25
Two-Way Interaction					
Empset Educ	28.15	1	28.15	0.38	0.54
Explained	338.71	3	112.90	1.51	0.22
Residual	5754.06	77	74.73		
Total	6092.77	80	76.16		

Empset = Employment Setting
 Educ = Educational Level

Table 27

Analysis of Variance Among the Mathematics Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	88.99	2	44.50	0.47	0.63
Empset	0.65	1	0.65	0.01	0.93
Educ	88.84	1	88.84	0.93	0.34
Two-Way Interaction					
Empset Educ	4.32	1	4.32	0.04	0.83
Explained	93.32	3	31.11	0.32	0.81
Residual	7335.82	77	95.27		
Total	7429.14	80	92.86		

Empset = Employment Setting
Educ = Educational Level

Table 28

Analysis of Variance Among the Medical Science Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	34.24	2	17.12	0.26	0.77
Empset	32.58	1	32.58	0.49	0.49
Educ	0.30	1	0.30	0.00	0.95
Two-Way Interaction					
Empset Educ	3.32	1	3.32	0.05	0.82
Explained	37.56	3	12.52	0.19	0.90
Residual	5126.17	77	66.57		
Total	5163.73	80	64.55		

Empset = Employment Setting
Educ = Educational Level

Table 29

Analysis of Variance Among the Medical Service Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	89.28	2	44.64	0.56	0.58
Empset	1.88	1	1.88	0.02	0.88
Educ	89.26	1	89.26	1.12	0.29
Two-Way Interaction					
Empset Educ	0.14	1	0.14	0.00	0.97
Explained	89.43	3	29.81	0.37	0.77
Residual	6166.45	77	80.08		
Total	6255.88	80	78.20		

Empset = Employment Setting
Educ = Educational Level

Table 30

Analysis of Variance Among the Music/Dramatics Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	6.65	2	3.32	0.04	0.96
Empset	0.05	1	0.05	0.00	0.98
Educ	6.64	1	6.64	0.07	0.79
Two-Way Interaction					
Empset Educ	0.00	1	0.00	0.00	0.99
Explained	6.65	3	2.22	0.24	0.99
Residual	7094.26	77	92.13		
Total	7100.91	80	88.76		

Empset = Employment Setting

Educ = Educational Level

Table 31
 Analysis of Variance Among the Art Basic Interest
 Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	0.68	2	0.34	0.00	0.99
Empset	0.02	1	0.02	0.00	0.99
Educ	0.68	1	0.68	0.01	0.93
Two-Way Interaction					
Empset Educ	38.65	1	38.65	0.40	0.53
Explained	39.33	3	13.11	0.14	0.94
Residual	7404.22	77	96.16		
Total	7443.56	80	93.04		

Empset = Employment Setting
 Educ = Educational Level

Table 32

Analysis of Variance Among the Writing Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	209.76	2	104.88	1.42	0.25
Empset	208.65	1	208.65	2.83	0.10
Educ	8.30	1	8.30	0.11	0.74
Two-Way Interaction					
Empset Educ	1.32	1	1.32	0.02	0.89
Explained	211.08	3	70.36	0.95	0.42
Residual	5682.92	77	73.80		
Total	5894.00	80	73.68		

Empset = Employment Setting
Educ = Educational Level

Table 33

Analysis of Variance Among the Teaching Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	51.74	2	25.87	0.24	0.79
Empset	16.93	1	16.93	0.15	0.70
Educ	28.39	1	28.39	0.26	0.61
Two-Way Interaction					
Empset Educ	24.66	1	24.66	0.22	0.64
Explained	76.41	3	25.47	0.23	0.87
Residual	8462.65	77	109.90		
Total	8539.06	80	106.74		

Empset = Employment Setting
Educ = Educational Level

Table 34

Analysis of Variance Among the Social Service Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	252.37	2	126.19	1.67	0.20
Empset	130.63	1	130.63	1.73	0.19
Educ	153.74	1	153.74	2.04	0.16
Two-Way Interaction					
Empset Educ	15.16	1	15.16	0.20	0.66
Explained	267.53	3	89.18	1.18	0.32
Residual	5812.47	77	75.49		
Total	6080.00	80	76.00		

Empset = Employment Setting
Educ = Educational Level

Table 35

Analysis of Variance Among the Athletics Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	64.88	2	32.44	0.41	0.67
Empset	0.04	1	0.04	0.00	0.98
Educ	63.39	1	63.39	0.80	0.37
Two-Way Interaction					
Empset Educ	110.16	1	110.16	1.39	0.24
Explained	175.03	3	58.34	0.74	0.53
Residual	6111.44	77	79.37		
Total	6286.47	80	78.58		

Empset = Employment Setting
Educ = Educational Level

Table 36

Analysis of Variance Among the Domestic Arts Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	475.31	2	237.66	2.30	0.11
Empset	269.18	1	269.18	2.60	0.11
Educ	147.64	1	147.64	1.43	0.24
Two-Way Interaction					
Empset Educ	33.64	1	33.64	0.32	0.57
Explained	508.96	3	169.65	1.64	0.19
Residual	7974.85	77	103.57		
Total	8483.80	80	106.05		

Empset = Employment Setting
Educ = Educational Level

Table 37

Analysis of Variance Among the Religious Activities Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	431.74	2	215.87	2.87	0.06
Empset	130.53	1	130.53	1.74	0.19
Educ	348.53	1	348.53	4.64	0.03*
Two-Way Interaction					
Empset Educ	73.39	1	73.39	0.98	0.33
Explained	505.13	3	168.38	2.24	0.09
Residual	5783.56	77	75.11		
Total	6288.69	80	78.61		

Empset = Employment Setting

Educ = Educational Level

*p < 0.05

Table 38

Analysis of Variance Among the Public Speaking Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	195.79	2	97.89	1.29	0.28
Empset	186.97	1	186.97	2.46	0.12
Educ	1.45	1	1.45	0.02	0.89
Two-Way Interaction					
Empset Educ	44.02	1	44.02	0.58	0.45
Explained	239.81	3	79.94	1.05	0.38
Residual	5859.85	77	76.10		
Total	6099.65	80	76.25		

Empset = Employment Setting
Educ = Educational Level

Table 39

Analysis of Variance Among the Law/Politics Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	304.57	2	152.29	2.11	0.13
Empset	139.40	1	139.40	1.93	0.17
Educ	126.42	1	126.42	1.75	0.19
Two-Way Interaction					
Empset Educ	1.83	1	1.83	0.02	0.87
Explained	306.40	3	102.14	1.41	0.25
Residual	5568.96	77	72.32		
Total	5875.36	80	73.44		

Empset = Employment Setting
Educ = Educational Level

Table 40

Analysis of Variance Among the Merchandising Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	40.21	2	20.10	0.29	0.75
Empset	0.87	1	0.87	0.01	0.91
Educ	40.19	1	40.19	0.57	0.45
Two-Way Interaction					
Empset Educ	0.47	1	0.47	0.01	0.94
Explained	40.68	3	13.56	0.19	0.90
Residual	5415.42	77	70.33		
Total	5456.10	80	68.20		

Empset = Employment Setting
Educ = Educational Level

Table 41

Analysis of Variance Among the Sales Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	p
Main Effects	23.52	2	11.76	0.18	0.84
Empset	1.24	1	1.24	0.02	0.89
Educ	20.61	1	20.61	0.31	0.58
Two-Way Interaction					
Empset Educ	19.62	1	19.62	0.30	0.59
Explained	43.14	3	14.38	0.22	0.88
Residual	5049.70	77	65.58		
Total	5092.84	80	63.66		

Empset = Employment Setting
Educ = Educational Level

Table 32

Analysis of Variance Among the Business Management Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	145.43	2	72.71	0.96	0.39
Empset	141.23	1	141.23	1.86	0.18
Educ	12.56	1	12.56	0.17	0.68
Two-Way Interaction					
Empset Educ	98.73	1	98.73	1.30	0.26
Explained	244.15	3	81.38	1.08	0.36
Residual	5830.09	77	75.72		
Total	6074.25	80	75.93		

Empset = Employment Setting
Educ = Educational Level

Table 43

Analysis of Variance Among the Office Practices Basic Interest
Scale Scores of All Groups

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	<u>p</u>
Main Effects	182.36	2	91.18	1.04	0.36
Empset	0.61	1	0.61	0.01	0.93
Educ	181.47	1	181.47	2.06	0.16
Two-Way Interaction					
Empset Educ	0.61	1	0.61	0.01	0.93
Explained	182.97	3	60.99	0.69	0.56
Residual	6768.32	77	87.90		
Total	6951.28	80	86.89		

Empset = Employment Setting
Educ = Educational Level