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PERSONALITY CORRELATES
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WITH UNDERGRADUATE FIELD
OF SPECIALIZATION

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of the Ohio State University

By

Nancy Anna Hoddick, B. S., M. A.

****

The Ohio State University
1964

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CHAPTER I

INTRODUCTION

Development of the Problem

A great deal of interest has been generated over the years regarding the relationship of personality characteristics to vocational choice. The current surge, or perhaps resurgence of interest in such a relationship, has been stimulated by two events: (1) increased recognition of a theory of personality organization based on personal needs and need satisfactions and (2) the development of a forced-choice instrument to measure fifteen personality variables drawn from Murray's (14) and others lists of manifest needs. These developments have done much to stimulate current interest and research in this area.

Murray (5, 23, 25, 41) and his collaborators at Harvard view personality as consisting of an integrated complex of psychological needs and perceptual press. Behavior results from the interaction between the individual (his needs and potentialities) and persons, objects, or events found within his phenomenal field. Needs become activating processes which goad an individual into making certain types of responses, which in turn reduce frustration and relieve tension. Press refers to an aspect
of the individual's phenomenal field which has become differentiated in terms of his current needs. Press may be any person, object, or event which may satisfy an individual's needs. Needs and press are functionally related and exhibit certain characteristics which Murray calls "thema." Thema (e.g., one's vocational commitment) describes the way a particular press (e.g., academic major) interacts with a need (e.g., need for achievement) to bring satisfaction to the individual.

Over the years psychologists have made important contributions to the counseling process by developing tests of ability, interest, and, more recently, personality. One of the most promising in the latter category is the Edwards Personal Preference Schedule (EPPS). This instrument is strongly tied to Murray's theory of personality organization, is well constructed, employs a forced-choice technique, and matches items for social desirability.

If Murray's theoretical rationale is sound, then by studying the needs and need satisfactions of students, an investigator should uncover information important to the understanding of students' academic and vocational choices. Moreover, such an investigation promises to yield insight into ways a college might more adequately utilize student potential, what procedures promote satisfaction and thus stimulate more effective learning.

While much of the research reported in the literature has shown a relationship between personality and occupation,
the question of whether the relationship can be demonstrated prior to entering a vocation has received little attention. If such a relationship could be demonstrated, the information would be of considerable value to persons engaged in vocational counseling at the college level. With increasing college enrollments and the extension of academic preparation, it is essential that educators practice efficiency in maximizing student potential and that wasteful periods of trial and error be reduced wherever and whenever possible.

Research Design

The intent of the present study is threefold: first, to attempt to identify significant differences on fifteen personality variables measured by the Edwards Personal Preference Schedule for three groups of undergraduate women differing in area of concentration within home economics; second, to determine the relationship between these variables and satisfaction with a specific area of concentration, and finally, to examine differences in scholastic aptitude and achievement among these three groups. The first two purposes are considered to be major; the third subsidiary.

The following hypotheses were formulated for three groups of undergraduate women majoring in home economics at the New York State College of Home Economics at Cornell University. The three groups represent the following areas of concentration: (1) Child Development and Family
Relationships, (2) Food and Nutrition and Institution Management, and (3) Housing and Design and Textiles and Clothing. These hypotheses grew out of observation and experience and were suggested by the literature in the field.

1. Certain needs are more closely related to choice of major within home economics than to choice between two or more fields (3, 16). That is to say (a) there is no statistically significant difference in the personal needs of home economics students and "college women" in general, and (b) there are statistically significant differences in the personal needs of students specializing in various areas of home economics, specifically Child Development and Family Relationships, Food and Nutrition and Institution Management, and Housing and Design and Textiles and Clothing.

2. There are no statistically significant differences in the academic aptitude and/or achievement of students concentrating in different areas of home economics.

3. There are statistically significant differences in the satisfaction of student needs by specific areas of concentration within home economics.

4. There is a statistically significant relationship between need satisfaction and strength of need for each of the three groups.

Basic Assumptions

The fundamental assumptions underlying this investigation influencing its design and methodology must be
stated at the onset. To the degree that these assumptions are subject to question in the same measure the results may be challenged.

1. Students choosing different areas of concentration within a broad academic field have somewhat different personal needs.

2. These needs are necessary or at least contribute to achievement and satisfaction in the area.

3. The Edwards Personal Preference Schedule is a sufficiently valid and reliable instrument for measuring fifteen personal needs.

4. The Scholastic Aptitude Test (SAT) of the College Entrance Examination Board and the Graduate Record Examination Aptitude Test of the Educational Testing Service (GREAT) are valid and reliable measures of general scholastic ability.

5. The questionnaire measuring degree of need satisfaction developed by the author was assumed to be adequately valid and reliable for the measurement of student need satisfaction within an area of concentration in home economics.

In order to obtain information about the subjects, the student's official record in the Office of the Secretary of the College plus supplementary information from her counselor's file were utilized. It was assumed that the information from these sources was accurate.
Definition of Terms

Operational definitions for terms that appear repeatedly throughout this study include the following: (1) **Major**, specialization, and area of concentration are used interchangeably to denote the area within home economics in which the student earned the greatest number of credit hours. (2) **College cumulative average** is the term used to describe the actual average of all grades earned by a student while attending the University. It includes grades for work taken in other undergraduate divisions of the University as well as grades in the College of Home Economics. It does not include grades earned by a student while studying in absentia. (3) **Subject matter average** refers to the actual average of all grades received by a student in her specific area of concentration within home economics. (4) The list of manifest needs associated with each of the fifteen Edwards Personal Preference variables and the Satisfaction-Dissatisfaction Questionnaire have been defined by Edwards (14:11) as follows:

(a) **ach Achievement**: To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great novel or play.

(b) **def Deference**: To get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to tell others that they have done a good job, to accept the
leadership of others, to read about great
men, to conform to custom and avoid the un­
conventional, to let others make decisions.

(c) **Order**: To have written work neat and
organized, to make plans before starting on
a difficult task, to have things organized,
to keep things neat and orderly, to make
advance plans when taking a trip, to or­
ganize details of work, to keep letters and
files according to some system, to have
meals organized and a definite time for
eating, to have things arranged so that they
run smoothly without change.

(d) **Exhibition**: To say witty and clever
things, to tell amusing jokes and stories,
to talk about personal adventures and ex­
periences, to have others notice and comment
upon one's appearance, to say things just to
see what effect it will have on others, to
talk about personal achievements, to be the
center of attention, to use words that others
do not know the meaning of, to ask questions
others cannot answer.

(e) **Autonomy**: To be able to come and go as
desired, to say what one thinks about things,
to be independent of others in making de­
cisions, to feel free to do what one wants,
to do things that are unconventional, to
avoid situations where one is expected to
conform, to do things without regard to what
others may think, to criticize those in
positions of authority, to avoid responsi­
bilities and obligations.

(f) **Affiliation**: To be loyal to friends, to
participate in friendly groups, to do things
for friends, to form new friendships, to make
as many friends as possible, to share things
with friends, to do things with friends
rather than alone, to form strong attach­
ments, to write letters to friends.

(g) **Intracception**: To analyze one's motives
and feelings, to observe others, to under­
stand how others feel about problems, to put
one's self in another's place, to judge
people by why they do things rather than by
what they do, to analyze the behavior of
others, to analyze the motives of others, to
predict how others will act.
(h) **Succorance**: To have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection from others, to have others do favors cheerfully, to be helped by others when depressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.

(i) **Dominance**: To argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

(j) **Abasement**: To feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

(k) **Nurturance**: To help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

(l) **Change**: To do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new things, to eat in new and different places, to try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.
Endurance: To keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.

Heterosexuality: To go out with members of the opposite sex, to engage in social activities with the opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite sex, to be regarded as physically attractive by those of the opposite sex, to participate in discussions about sex, to read books and plays involving sex, to listen to or to tell jokes involving sex, to become sexually excited.

Aggression: To attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others off when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence.

Significance and Delimitations of the Study

This study was of necessity limited to a single class of senior women (Class of 1962) in the New York State College of Home Economics at Cornell University. It was not intended as a definitive analyses of the need patterns and satisfactions of all students studying within the broad field of home economics.

The admission and graduation requirements of the College plus the academic requirements of the professional fields represented in the study impose further limitations
which serve to sharpen the uniqueness of the sample. Generalizations from the data to include other students and institutions would be inappropriate.

Nevertheless, the value of the study for the specific situation lies in two primary areas: (1) a presentation of the relationship of student needs to professional choices within home economics and (2) an examination of these relationships in terms of need satisfactions. The results should indicate whether the needs of students are in conflict with established departmental programs, what needs are dominant in each group, and to what extent the needs of students are being ignored. Hopefully, such information will not only assist students to make more appropriate professional commitments, but will be utilized by departments to strengthen existing programs.

Organization of the Study

In Chapter I an attempt was made to state the purpose of the study and its importance, to purpose a number of hypotheses to be tested, to clarify the underlying assumptions and to define some of the terms occurring repeatedly throughout the study. Some limitations of the study were also noted.

The literature reviewed in Chapter II establishes references specifically related to personality characteristics and choice of undergraduate major. Various approaches to the study of personality variables and
vocational choice are acknowledged and significant trends identified. Special emphasis is placed on those studies utilizing the Edwards Personal Preference Schedule and measures of need satisfaction.

The description of the setting in which the study was conducted, the nature of the sample and the instruments employed, procedures followed and the statistical techniques used in analyzing the data are presented in Chapter III.

The results of the tabulation and analysis of the data are reported in Chapter IV. The findings are grouped, for convenience, under the following headings: (1) Edwards Personal Preference Schedule, (2) Academic Aptitude and Achievement, (3) the Satisfaction-Dissatisfaction Questionnaire, and (4) Relationship between need strength and need satisfaction.

Chapter V, the final chapter, provides a summary of the investigation and recommendations for further research.
CHAPTER II

REVIEW OF THE LITERATURE

Studies attempting to relate personality characteristics to vocational choice have been numerous. In general, the characteristics studied have been determined by available instruments rather than by any a priori theoretical formulations. No doubt this has been due to a lack of consensus regarding personality theory and in part to the absence of a nonclinically oriented instrument tied to a recognized theory of personality organization.

The personality characteristic to receive greatest attention has been interest as measured by the Strong Vocational Interest Blank (SVIB) and the Kuder Preference Record (KPR). This has been a fertile area of research since 1920. The Kuder scores measure relatively pure interest factors, whereas Strong scores measure the interests of people in occupations (37, 62). Interests have been found to be fairly permanent, little influenced by vocational training and experience, and important in determining the direction and persistence of an individual's vocational choice (64). The research indicates that individuals tend to enter and to remain in an occupation which provides outlets for their interests and to leave
unsatisfying fields for more satisfying ones (63). Darley and Hagenah (11:103-133) and Roe (56:79-102) have most recently summarized this research. Interest appears to be multiply determined—a combination of needs, values, aptitudes, and social expectations—rather than a single psychological entity. For this reason the findings appear spurious and are difficult to interpret in terms of the present study.

A number of investigators have made use of personality inventories to study occupational groups. However, until recently the results of these investigations were held in disrepute because the instruments had questionable validity and were poorly constructed. Technical improvements have greatly enhanced the utility of personality inventories. Among the most widely used instruments today are the Minnesota Multiphasic Personality Inventory (MMPI), the Guilford-Zimmerman Temperament Survey, the California Personality Inventory (CPI), and the Edwards Personal Preference Schedule (EPPS).

A few investigators have employed projective techniques such as the Rorschach Inkblot Test, Murray’s Thematic Apperception Test (TAT), Rotter’s Incomplete Sentences Test, and the Blacky Pictures. An early study by Roe (54) investigated the relationship between personality and vocation for a group of scientists and technicians by means of a group Rorschach. In a later study (55) of
eminent biologists, she obtained data from three tests: The Rorschach, the TAT, and a verbal-spacial-mathematical test. Her results showed certain communalities, in terms of personality characteristics, for the groups studied.

At present, the evidence remains inconclusive. In general, the findings tend to suggest that persons who resemble one another on some personality characteristics are attracted to similar vocations. Berg (4) has hypothesized that definite personality characteristics are more closely related to choices within broad professional fields than to choices between two or more fields. Two years later, Fine (16), writing in the same journal, hinted at much the same thing. If the hypothesis is valid and personality variables related to vocational choice can be identified, then this information would be invaluable to the counseling process.

The primary aim of the present chapter is threefold: (1) to establish references specifically related to personality characteristics and choice of undergraduate field of specialization, (2) to review the literature relating personal needs and vocational choice, and (3) to examine studies relating personal need and job satisfaction. Particular emphasis is placed on those studies utilizing the Edwards Personal Preference Schedule to measure psychological needs.
Personality Characteristics and Choice of Undergraduate Major

A search of the literature revealed seven studies specifically directed toward determining the nature of the personality characteristics of persons in specific undergraduate majors. The instruments employed to measure these personality characteristics varied. A modified form of the Blacky Pictures was utilized by one investigator, the Minnesota Multiphasic Personality Inventory (MMPI) by another, a combination of personality inventories by two investigators and the Edwards Personal Preference Schedule (EPPS) by three.

Teevan (69:212) ... "attempted to investigate whether or not the personality of an individual is correlated significantly with his choice of major field in College." He compared scores derived from a modified form of the Blacky Pictures for three broad groupings of college majors--Group I: Music, Art, German, French, and English; Group II, Government, Economics, and History; and Group III: Geology, Astronomy, Biology, Physics, and Chemistry. The subjects were eighty-five men with grade-point averages of B- or better. The results showed some significant differences among the groups. Group I (Literature) had significantly higher disturbance scores on oral eroticism than either of the other groups; Group II (Social Science) had significantly higher scores on oral sadism, oedipal intensity, guilt feelings and anaclitic love; and Group III (Science)
had the lowest scores in all divisions. In general, his results are in accord with other findings, i.e., verbal ability and oral eroticism are correlated; persons in the social sciences are likely to have had difficulty with parental relationships; and scientists are apt to be low because they are not particularly interested in interpersonal relationships (56:82-83).

Lough (38) undertook an investigation to compare 300 women students, 185 from a state teachers college curriculum and 115 from a liberal arts curriculum on the basis of their scores on the Minnesota Multiphasic Personality Inventory (MMPI). The results showed that (1) the total group was normal and relatively stable with a slight tendency toward hypomania, (2) there were no significant differences on the separate scales between those preparing to teach in the elementary grades or to teach public school music, those preparing to be nurses or those enrolled in a traditional liberal arts curriculum, and (3) on the basis of mean t scores, nursing cadets appeared to have somewhat more masculine interests and to be more stable and unemotional than the other groups. Lough concluded . . . "the Minnesota Multiphasic Personality Inventory had little or no value in educational selection and was not a useful instrument for differentiating between those more suited for one occupation than another."

Sternberg (61) studied the nature of patterns of personality traits and the extent of differences among
students majoring in different subjects in college. The Kuder Preference Record (KPR), the Allport-Vernon-Lindzey Study of Values (AVL) and the Minnesota Multiphasic Personality Inventory (MMPI) were administered to 270 male students, 30 from each of nine fields of study. The data were factor analyzed and the nine sub-groups compared on mean factor scores by F and t tests. His results showed every major sub-group differing significantly in mean factor scores from all other sub-groups on at least one factor. Greater differences were noted between aesthetics (English and Music), Social Science (History, Political Science and Economics), Human Science (Psychology, Biochemistry or Pre-medical), and Natural Science and Mathematics (Chemistry and Mathematics) than were found between most individual fields of study. Inter-group differences were in accord with "logical expectations." Sternberg concluded that there were significant differences among groups of students majoring in different fields and that the extent of the differences varied among the groups.

Healy and Borg (26) used a battery of tests to compare the personality characteristics of nursing school students, graduate nurses and a normative group of women students from the University of Texas. No characteristic patterns appeared in the analysis of scores on the test battery for beginning students. This may have been accounted for by the fact the nursing students were in their first term,
unscreened and the data were gathered before those who were unsatisfied or unsuited to the program were dropped. A pattern of traits did emerge for the graduate nurses.

Garrison and Scott (19) studied the personal needs of college students preparing to teach. They hypothesized that the personal needs of students preparing to teach would differ significantly according to the prospective area of teaching. Personal needs were measured by the Edwards Personal Preference Schedule. The investigators' hypothesis was confirmed regarding the following personal needs of prospective women teachers: needs—Achievement, Nurturance, Order, and Succorance. Their hypothesis was confirmed with reservations in regard to: needs—Autonomy, Heterosexuality, Affiliation, Exhibition, Change, and Abasement. Their hypothesis was rejected in terms of the following needs: Intraception, Endurance, Deference and Dominance.

Kirchner, Dunnette, and Mansley (33) compared scores on the Edwards Personal Preference Schedule for a group of 362 college-educated male sales applicants with the Edwards normative group of male college students (N=760). The results showed that fourteen of the sixteen mean differences were significant at the .01 level. Moreover, eleven of the sixteen standard deviation scores were higher for the original normative group confirming the fact that the sales applicant group were a more homogenous sample. The sales
group tended to score higher on the scales which have good face validity for the sales profession. Since faking was possible, the investigators suggested that the scores may have reflected a stereotype.

Taylor (68) used the Edwards Personal Preference Schedule in an attempt to establish need profiles for three college majors: accounting, management, and marketing. The subjects were students from the College of Business Administration at the University of Washington. The student groups were compared with the Edwards normative group of general college students (N=760) on the basis of mean scores on the fifteen personal needs measured by the Edwards Personal Preference Schedule. The results of the study demonstrated that it was possible to develop need profiles for each of the college majors.

The last three studies have been concerned with the personal needs of college students and are particularly significant in view of some recent trends in the literature. Roe (56) has argued that in order to understand the role of occupations, psychologists must have an understanding of the individual and his needs. Forer (17) maintains that . . .

choice of vocation is not primarily rational and logical, but is a somewhat blind, impulsive, emotional and automatic process and is not always subject to practical and reasonable considerations.

Occupational choice, the specific occupation chosen or the lack of preference is an expression of basic personality organization and can and
should satisfy basic needs. Selection of a vo-
cation, like the expression of other interests,
is a personal process, a culmination of the in-
dividual's unique psychological development. . . .
Occupational adjustment can probably further per-
sonal adjustment in two ways: (a) by gratifying
needs which are not completely gratified in non-
occupational behavior (without frustrating
further needs), and (b) by permitting the outlet
for neurotic needs whose expression in other
situations would lead to disaster or by providing
sufficient neurotic gratification to prevent
dissolution of the personality.

Thompson (71:350) suggests that . . . "the degree of
satisfaction an individual obtains from his work is pro-
portionate to the degree which it enables him to implement
his self-concept and to satisfy his salient needs." He
maintains that the making of career decisions and ad-
justing vocationally are processes, i.e., a series of re-
lated behaviors and consequently must be studied from a
developmental frame of reference.

Borrowing from Bucher, Form and Miller, and Ginzberg
and Associates, Super (65) proposes the following voca-
tional life stages (1) growth (birth to fourteen years),
(2) exploration (ages 15-24), (3) establishment (age 25-44),
(4) maintenance (age 45-64) and (5) decline (age 65-on).
Accordingly, the level, sequence, and duration of an in-
dividual's career pattern hinges on parental socio-
economic level, ability, personality, and opportunity.
The Career Pattern Study (67) of 142 ninth grade boys from
Middletown, New York, is an attempt to verify his theory.
Holland (27, 28) assumes an individual is the product of the interaction of his particular heredity with a variety of cultural and personal forces and his physical environment. Each individual builds a hierarchy of adjustive orientations to deal with his environment. The life style heading the hierarchy determines the direction of his choices. Thus, when making a vocational decision an individual searches for situations which will satisfy this established hierarchy of adjustive orientations. Holland starts with the premise that other than intra-individual factors are also of importance in accounting for vocational choices. He argues that a theory of vocational choice is incomplete unless it considers both intra- and extra-individual factors.

Small (58) made the following assumptions when he investigated the personality determinants of vocational choice . . .

People seek satisfaction of three basic needs in every major aspect of their lives—including the vocational. When a need is consciously felt it is subject to control and modification of realistic factors. When it is unconscious, our control is less direct and often tenuous. The person with the healthy ego is in strong contact with reality. A healthy ego permits the individual to check his drive for need satisfaction against the facts provided by the environment and his own faculties.

The importance of personal need became abundantly clear in Hoppock's (31:74-75) outline of a theory of vocational choice. He proposes the following postulates:
(1) Occupations are chosen to meet needs.
(2) The occupation that we choose is the one that we believe best meets the needs that most concern us.
(3) Needs may be intellectually perceived, or they may be only vaguely felt as attractions which draw us in certain directions. In either case, they may influence choices.
(4) Occupational choice begins when we first become aware that an occupation can help to meet our needs.
(5) Occupational choice improves as we become better able to anticipate how well a prospective occupation will meet our needs. Our capacity thus to anticipate depends upon our knowledge of ourselves, our knowledge of occupations, and our ability to think clearly.
(6) Information about ourselves affects occupational choice by helping us to recognize what we want and by helping us anticipate whether or not we will be successful in collecting what the contemplated occupation offers us.
(7) Information about occupations affects occupational choice by helping us to discover the occupations that may meet our needs and by helping us to anticipate how well satisfied we may be in one occupation as opposed to another.
(8) Job satisfaction depends upon the extent to which the job that we hold meets the need that we feel it should meet. The degree of satisfaction is determined by the ratio between what we have and what we want.
(9) Satisfaction can result from a job which meets our needs today from a job which promises to meet them in the future.
(10) Occupational choice is always subject to change when we believe that change will better meet our needs.

The importance of personal needs as they influence vocational choice is gaining increasing attention in the literature. The fact that needs provide a more parsimonious explanation of human behavior than interest, for example, is a major attraction for many psychologists.
Personal Needs and Vocational Choice

The Edwards Personal Preference Schedule has been utilized in three studies directed toward examination of the need structure of persons in various occupations. These studies lend support to the mounting evidence in the literature pointing to the importance of need patterns in vocational choice.

Guba and Jackson (22) studied the need patterns of in-service teachers as measured by the Edwards Personal Preference Schedule. Analysis of the data revealed communalities within the teaching population at the level of psychological needs. The teachers scored significantly higher on needs: Deference, Order, and Endurance; significantly lower on Exhibition and Heterosexual needs. Great variability was found in relation to teaching experience and sex groupings. Low heterosexual scores were more pronounced in the experienced teacher group. In general, the needs which were characteristic of the teaching group were more prominent among the more experienced teachers.

Navran and Stauffacher (43) investigated the personality structure of psychiatric nurses in the hope of providing norms for the screening of graduate nurses interested in neuropsychiatric assignments. Their findings revealed that (1) there were differences in personality patterns between psychiatric nurses and "women-in-general," (2) the psychiatric nurses had higher scores on
needs: Order, Deference, Endurance and Aggression; lower scores on Autonomy, Affiliation and Exhibition ($P \leq .001$ in all cases) and (3) there were distinct differences in personality make-up between those nurses rated as "superior" in job performance from those who were rated as only "adequate."

A follow-up study (42) compared the personality structure of psychiatric and non-psychiatric nurses (general medical and surgical groups). An analysis of the data revealed that (1) there were significant differences between the non-psychiatric nurses and the Edwards normative group of "college-women-in-general" on eight variables; the nurses scoring higher on needs: Order, Deference and Endurance; lower on the needs: Affiliation, Autonomy, Succorance, Exhibition and Dominance; and (2) there were significant differences between the non-psychiatric and psychiatric nurses on seven variables, the non-psychiatric nurses scoring significantly higher on needs: Order, Deference; significantly lower on Aggression, Intraception, Heterosexuality, Dominance and Abasement. The investigators interpreted the data to suggest that the non-psychiatric nurses are relatively more work-oriented than patient oriented.

Both of these studies are marred, however, by a serious methodological error. The investigators used Edwards Personal Preference Schedule Raw Scores instead of $T$ scores when making interscale comparisons (35:379).
Personal Needs and Job Satisfaction

Schaffer (57) was one of the first to attempt to examine job satisfaction as it related to need satisfaction. His hypothesis was that...

over-all satisfaction will vary directly with the extent to which those needs of an individual which can be satisfied in a job are actually satisfied; the stronger the need, the more closely will job satisfaction depend on its fulfillment. . . . The most accurate prediction of over-all job satisfaction can be made from the measure of the extent to which each person's strongest two or three needs are satisfied.

He devised a questionnaire to measure three variables for each of twelve needs: (1) strength of need, (2) degree to which each need was being satisfied, and (3) over-all satisfaction with the job. Using Murray's list of manifest needs as a starting point, Shaffer drew up a list of twelve needs: (1) recognition and approbation, (2) affection and interpersonal relations, (3) mastery and achievement, (4) dominance, (5) social welfare, (6) self-expression, (7) socio-economic status, (8) moral value scheme, (9) dependence, (10) creativity and challenge, (11) economic security, and (12) independence. His sample of seventy-two employed males was heavily weighted with professional persons and therefore was not typical of the total population. However, he did find that the strongest needs for this group were need for creativity, mastery and social welfare. Schaffer found some evidence that the measure of the extent to which each individual's
most important needs were satisfied yielded the best prediction in terms of over-all satisfaction.

Periodic reviews by Hoppock (29, 30), Robinson (45, 46, 47, 48, 49, 50), Robinson and Connors (51, 52, 53) summarize job satisfaction research. Unfortunately, most of the studies reported have been undertaken with no clear statement of a theoretical model, and are primarily concerned with self-concept, recognition, and status. Perhaps this accounts for the fact that little real progress has been made in relating personal needs to job satisfaction since Schaffer's study in 1953.

Summary

This chapter has attempted to distinguish between different approaches to the study of personality characteristics and choice of undergraduate majors, to establish references specifically related to personal needs and vocational choice, and to examine studies relating personal needs and job satisfactions. Some significant trends in the theory of vocational choice were noted. Special emphasis was placed on those studies utilizing the Edwards Personal Preference Schedule to measure personal needs in relation to vocational choice.
CHAPTER III

DESCRIPTION OF THE SAMPLE AND METHODOLOGY

To assist in the interpretation of the results of this investigation, the circumstances under which the study was conducted need to be described. A consideration of the setting in which the study was made as well as a description of the sample, the collection of the data, procedures and method of statistical analyses is necessary for a better understanding of the results.

The Setting

The New York State College of Home Economics is one of four state-supported units of the State University of New York and one of seven undergraduate divisions of Cornell University located in Ithaca, New York. The College functions as a professional school offering teaching and research facilities in home economics.

The aim today (1958-62) of the College of Home Economics in its resident undergraduate program is to guide each student in the uses of educational opportunities made available by the College, the University, and the Community toward effective functioning (1) in her individual living and as a member of society as a whole, (2) in homemaking and in the case of the majority of students, (3) in a vocation other than that of homemaking to which home economics has a major contribution to make (9:11).
There are seven departments in the College: Child Development and Family Relationships; Food and Nutrition; Home Economics Education; Household Economics and Management; Housing and Design; Institution Management; Textiles and Clothing. An attempt is made to interrelate the work of these departments.

Courses in home economics deal with the effective feeding, clothing and housing of the family; the care, growth, and guidance of children; the family relationships; the development of artistic sense and taste that brings beauty into the home in many ways; the organization and running of the home on a sound economic, social, and hygienic basis; and the care and use of equipment.

The coordination of the sciences and arts toward constructive family life appropriate to our society is a primary function of home economics. This College, as part of the University, gives students the opportunity to elect studies in many fields. Of the 120 credit hours required for a degree, one-fourth are devoted to basic courses in the biological, physical and social sciences; at least one-third to courses in home economics, and one-third to elective courses in the various colleges of the University. English and physical education are required of all students (9:14-15). (A breakdown of the requirements for the degree Bachelor of Science may be found in Appendix A).

The basic training of the home economics students with which this study is concerned leads to a wide variety of occupations. In the field of Child Development and Family Relationships students may prepare for positions working with children in nursery schools, day care centers, hospital activities programs, as junior case workers with public or private social work agencies, and
may obtain an excellent foundation for further work at the graduate level in psychology, education and sociology. Students specializing in food and nutrition may find openings in social work and public health agencies; food promotional work with commercial food and utility companies. In the field of institutional management students work toward positions as hospital dietitians or in food service in restaurants, hotels and other commercial establishments as well as in industry. The student specializing in housing and design will prepare for the business field, for work in advertising, art, photography, designing, interior decorating and the like. In the field of textiles and clothing, students prepare for positions in retailing, advertising, textile testing and promotion (9:26-28).

Since the College has many more applicants for admission than can be accommodated, it exercises a policy of selective admissions. As a state-supported institution, the College is limited in the number of out-of-state students it can accept—15 per cent of the entering class. As a result, the student body is predominantly from New York State. Minimum academic standards (Appendix B) have been established to insure, insofar as possible, that accepted students will be able to meet the scholastic standards of the University. A personal interview with at least two members of the Committee on Admissions is required of all New York State applicants who meet the minimum scholastic requirements (9:34-37).
Three facts must be kept in mind when interpreting the results of the present study. First, the students participating in the study have been screened by a Committee on Admissions in terms of certain minimum academic requirements, personal characteristics and interest in home economics. Moreover, the participants are predominantly residents of New York State. Second, all students are majors in home economics but may have chosen to specialize in a specific area within home economics. Furthermore, each student must complete a minimum of forty hours in home economics but she may not complete a specified number of hours in a certain department even though she considers herself to be concentrating in that area of home economics. Third and finally, the College is not primarily a vocational school. Students have a great deal of latitude in the choice and direction of their studies. Most of the students who graduate from the College will take half their work in other divisions of the University.

The Sample

The subjects used in the present study were members of the senior class enrolled in the New York State College of Home Economics at Cornell University during the academic year 1961-62.

One hundred and sixty women were registered in the class in September, 1961. Eleven of this number were transfer students from outside the University, seven failed
to graduate in either February or June of 1962, eleven considered themselves as home economics education majors and were not included in the present study. Of the 131 subjects remaining, complete data were available for 117 students: 50 Child Development and Family Relationships majors, 33 Food and Nutrition and Institution Management majors, and 34 Housing and Design and Textiles and Clothing majors.

The average age of the students studied was 21 years 5 months; the range 20 years one month to 25 years one month. Fifteen students, or approximately 13 percent of the group, came from homes outside New York State; two from outside the country. Fifteen students in the group were married and three were transfer students from other divisions of the University: one from the College of Arts and Sciences, one from the School of Hotel Administration, and one from the College of Agriculture.

Fifty-three students, or approximately 45 percent of the group, were receiving some form of scholarship help, and 77 or 65 percent of the group were engaged in some form of remunerative work, e.g., waitress, library page, etc.

The mean number of credit hours for graduation earned by the group was 123, the range between 120 and 138. Thirty-nine members of the group graduated with 120 credit hours, the minimum requirement for the degree Bachelor of Science. The mean number of home economics credit hours
carried by students was 56, the range between 40 and 79. The average number of non-home economics credit hours was 66, the range between 40 and 85 credit hours. (A breakdown for each of the three major groups represented in the study will be found in Appendix C.)

Eighty-eight students in the total group explored at least one other area of home economics before making their final decision, 26, two other areas, and 3, three other areas. Eighty-one students decided on their area of concentration in their freshman year, 20 in their sophomore year, and 16 in their junior year.

The students, by and large, represent our so-called middle class. The majority of the students' parents are employed in professional and business pursuits. A number of the students come from farms. A considerable number of the students' mothers are gainfully employed outside the home. Using the United States Census classification, most of the employed mothers were in the "professional, technical and kindred workers classification"; a high proportion of the employed mothers were in the field of education.

The students came from high schools ranging in size of graduating class from 8 to over 2,000. Most of the students graduated from public schools, a few from private schools; most earned a college entrance diploma (60). One hundred and one students were in the upper fifth of their
high school graduating class; 14 were in the second fifth; one in the third, and one student was not ranked by her high school at the time of admission to the College. The mean high school average for the group was 90.33. Nearly all students scored above average on the Scholastic Aptitude Test of the College Entrance Examination Board.

The students who participated in the present study were drawn from a carefully screened undergraduate student body and thus do not necessarily typify undergraduates in other colleges or departments of home economics in New York State or any other state.

Collection of the Data

The instruments used in the present study include the Edwards Personal Preference Schedule (Appendix D) and a Satisfaction-Dissatisfaction Questionnaire (Appendix E) devised by the author.

The Edwards Personal Preference Schedule (EPPS) is a forced-choice personality inventory measuring fifteen manifest needs derived from the work of H. A. Murray and others (14). A separate key yields a measure of internal consistency. Each item of the test requires a choice between two statements which have been matched in terms of social desirability. Raw scores may be converted to T scores for interscale comparisons. The average person requires approximately fifty minutes to complete the inventory.
While the instrument is theoretically oriented and technically sound, Edwards has not demonstrated that his Personal Preference Schedule does in fact measure Murray's manifest needs (7). The manual lists only three attempts (4, 20, 21) to assess the content validity of some of the Edwards Personal Preference Schedule Variables. Apart from these, the only other evidence available in the literature consists of correlations of Personal Preference Schedule scales with scales of the MMPI (1, 40), the California Psychological Inventory (13), and the Strong Vocational Interest Blank (13). These correlations, while supportive, are not sufficient and the validity of the Edwards Personal Preference Schedule variables remains subject to question.

The manual (14:19) reports test-retest reliability coefficients between .74 and .88. The internal consistencies estimated from split half correlations range from .60 to .87. Intercorrelations between scales are reported to be low indicating that the variables being measured are relatively independent.

Appendix (F) shows the intercorrelations on the EPPS for the three groups of students participating in the present study. While the intercorrelations are, in general, quite low, many are of sufficient magnitude to question the independence of some of the variables.
Norms are available for college men (N=760), college women (N=749), a general adult male group (N=4031), and a general adult female group (N=4932).

The Satisfaction-Dissatisfaction Questionnaire devised by the author asked subjects to indicate their degree of satisfaction with a specific area of concentration within home economics in terms of fifteen manifest needs measured by the Edwards Personal Preference Schedule. A separate scale provides a measure of over-all satisfaction. Subjects were asked to rate their degree of satisfaction on a five-point scale from the very well satisfied to five frankly dissatisfied (6). Since this scale was reversed in terms of the Edwards Personal Preference scale where high needs received a high score, the scores for the Satisfaction-Dissatisfaction scale were transposed prior to statistical analysis. As a result, high satisfaction became five and frankly dissatisfied one.

An open-ended question asking students to elaborate on why they felt the way they did followed each question. These data were supplemental and are not used in the present study except as cross-checks on the student's initial ratings.

When developing items for the Satisfaction-Dissatisfaction Questionnaire, the writer relied heavily on the phrases used by Edwards in defining each of the fifteen manifest needs associated with his instrument. A conscious effort was made to frame the questions in such a
way as to utilize, where possible, the exact phrases used in defining the need.

A first draft of the Questionnaire was pre-tested on three members of the faculty in the Counseling Service. Questions were then revised and sharpened on the basis of their comments and suggestions. Two items, measuring student satisfaction of the needs abasement and heterosexuality, proved particularly difficult to frame. The specific phrasing of the definitions for abasement and heterosexuality was inappropriate in the present context. Some modifications were necessary on these items.

An examination of the validity of the items on the Satisfaction-Dissatisfaction Questionnaire was undertaken. Fifteen faculty members were given a list of the fifteen manifest needs and their definitions plus a set of five cards, each of which contained one question from the Satisfaction-Dissatisfaction Questionnaire. The judges were asked to read the question on each card and to try to identify the need to which it was related. Each judge rated five items which were randomly selected and each item was rated by five different judges.

A tally of the results revealed 100 per cent agreement on eleven of the items measuring satisfaction of the needs: achievement, order, exhibition, autonomy, affiliation, intraception, succorance, dominance, nurturance, change, and endurance; 80 per cent agreement on the two items measuring satisfaction of the needs deference and
aggression; 20 per cent agreement on the item measuring satisfaction of the need heterosexuality and no agreement on need abasement. For this reason, data for items ten (abasement) and fourteen (heterosexuality) are highly suspect.

Test-retest reliability coefficients are given in Table 1. These coefficients are based on the records of a group of twenty students in the New York State College of Home Economics who took the Satisfaction-Dissatisfaction Questionnaire twice with a one week interval separating the two administrations.

**TABLE 1**

Test-Retest Reliability Coefficients for the Satisfaction-Dissatisfaction Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>r'11</th>
<th>Stability*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>1. achievement</td>
<td>.32</td>
<td>2.75</td>
</tr>
<tr>
<td>2. deference</td>
<td>.76</td>
<td>2.60</td>
</tr>
<tr>
<td>3. order</td>
<td>.75</td>
<td>2.30</td>
</tr>
<tr>
<td>4. exhibition</td>
<td>.40</td>
<td>2.70</td>
</tr>
<tr>
<td>5. autonomy</td>
<td>.48</td>
<td>2.30</td>
</tr>
<tr>
<td>6. affiliation</td>
<td>.48</td>
<td>2.55</td>
</tr>
<tr>
<td>7. intraception</td>
<td>.65</td>
<td>2.05</td>
</tr>
<tr>
<td>8. succorance</td>
<td>.76</td>
<td>2.10</td>
</tr>
<tr>
<td>9. dominance</td>
<td>.85</td>
<td>3.25</td>
</tr>
<tr>
<td>10. abasement</td>
<td>.63</td>
<td>2.15</td>
</tr>
<tr>
<td>11. nurturance</td>
<td>.53</td>
<td>1.70</td>
</tr>
<tr>
<td>12. change</td>
<td>.38</td>
<td>2.10</td>
</tr>
<tr>
<td>13. endurance</td>
<td>.57</td>
<td>2.55</td>
</tr>
<tr>
<td>14. heterosexuality</td>
<td>.67</td>
<td>1.80</td>
</tr>
<tr>
<td>15. aggression</td>
<td>.79</td>
<td>2.90</td>
</tr>
<tr>
<td>over-all rating</td>
<td>.85</td>
<td>2.00</td>
</tr>
<tr>
<td>N</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

*Test and retest with two week interval. Means and standard deviations are for first testing.
One explanation which may be offered to account for the range of the reliability coefficients may be the circumstances under which the study was conducted. Fifty volunteers were solicited by mail from among students in the Class of 1964 in the New York State College of Home Economics. The first copy of the questionnaire was mailed two days before the assassination of the President of the United States. Although the students were requested to return the completed questionnaire within the week, few did so. After repeated follow-up requests by mail or telephone, thirty-one copies of the completed questionnaire were returned.

The retesting was also carried out by mail and the thirty-one participants received their second copy of the questionnaire during the week of mid-term examinations. Since these students were under extreme pressure both times, had no commitment to the study or the writer, the results may not be an accurate measurement of the reliability of the items in the instrument.

After repeated follow-up requests by mail or telephone, twenty-four questionnaires were returned. Four of these were not usable because the students failed to follow directions, i.e., did not answer all of the questions.

Intercorrelations of the variables measured by the Satisfaction-Dissatisfaction Questionnaire were computed for the three groups of students majoring in different areas within home economics specifically Child Development and
Family Relationships (N=50), Food and Nutrition and Institution Management (N=33), and Housing and Design and Textiles and Clothing (N=34). Intercorrelations are, in general, low and can be found in Appendix G.

Students were requested to submit scores from the Scholastic Aptitude Test of the College Entrance Examination Board for admission to the College. The Graduate Record Examination Aptitude Test of the Educational Testing Service scores were obtained through an institutional testing program in which the College participated. All students took the examination in January, 1962.

For each student the verbal and math score of the Scholastic Aptitude Test (CEEB), verbal and quantitative scores on the Graduate Record Examination Aptitude Test (ETS), and the College cumulative average were collected. These data plus the data used to compute the student's subject matter average were obtained from the student's official record in the Office of the Secretary of the College.

Records in the Office of the Secretary of the College and the Counseling Service provided information on the student's background, high school record, college work experience, scholarship help, etc.

Incidental information used in the discussion of the results was obtained from the students themselves in conference with the writer who served as their class counselor. Following administration of both the Edwards
Personal Preference Schedule and the Satisfaction-Dissatisfaction Questionnaire, the results of the former were made available to interested students on a voluntary basis. Nearly all students took advantage of an opportunity to discuss the results with the author.

Procedure

The Edwards Personal Preference Schedule was given to all students during the first three weeks of the fall term. A letter (Appendix H) requesting the cooperation of each student and explaining the purpose of the test administration was sent to all members of the Class of 1962 in early September.

The Edwards Personal Preference Schedule was administered twice: opening day fall term and again three weeks later for those students who could not participate in the first administration. Students were instructed to follow the directions on the cover of the test booklet; no additional information was given to them about the test. All answer sheets were checked as the booklets were collected to make sure a choice had been recorded for each item.

Answer sheets were hand scored and the individual's personality profile plotted. Raw scores were converted to T scores (14:14) for use in interscale comparisons.

The Satisfaction-Dissatisfaction scale was administered to February graduates during the last week of fall term and to June graduates during the last week of spring.
Students were instructed to read the instructions on the first page of the questionnaire and then, if there were no questions, to proceed with the questionnaire. Some questions were asked about checking the appropriate subject matter area, e.g., "If I am preparing to teach home economics but have taken the greatest number of credit hours in textiles and clothing, which should I check?"

Student responses to the questionnaire were checked prior to collecting the papers; no omissions were discovered. The raw scores were transposed (scale reversed) to correspond with the Edwards Personal Preference Scale and the data recorded. Student responses were double-checked for accuracy against their answers to the open-ended question, "I feel this way because....."

Student cooperation throughout the testing was excellent. Following administration of the Satisfaction-Dissatisfaction Questionnaire, students were told the purpose of the study. They exhibited a high degree of interest in the study and this interest was sustained throughout.

The data were divided into three groups according to the student's subject matter area as checked on the Satisfaction-Dissatisfaction Questionnaire. Three sub-groups emerged: Child Development and Family Relationships (N=50); Food and Nutrition and Institution Management (N=33); and Housing and Design and Textiles and Clothing (N=34).
Analysis of the Data

The mean profile (raw scores) for the entire group of home economics students was compared with that of the Edwards normative sample of "College Women," by means of t tests. It should be noted that the t tests were considered only as a rough guide to the significance of the difference between means, since the underlying assumption of the t test was violated. However, inasmuch as the intercorrelations between scales are low, this may not be of much practical significance.

Mean scores on the fifteen Personal Preference scale variables for each of the three sub-groups were compared by an analysis of variance technique, F test. Significant differences at the .05 and .01 levels of confidence were noted. Where the mean differences were significant (P ≤ .05), Duncan's multiple range tests were run to determine where the significance lay (15,36).

Raw scores were converted to T scores and mean profiles were established for each of the three sub-groups permitting interscale comparisons.

Finally, total scores on the Edwards Personal Preference Schedule variables and the Satisfaction-Dissatisfaction Questionnaire for each sub-group were compared by means of Product Moment correlations to determine the relationship between degree of satisfaction and strength of needs for each group.
Summary

This chapter has included a description of the setting in which the study was conducted, a definition of the sample and the instruments used, an explanation of how the data were collected and what procedures were followed, and finally, an account of the statistical techniques employed in analyzing the data.
CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter is devoted to the presentation and analysis of the data collected on three groups of seniors (Class of 1962) differing in area of concentration in the New York State College of Home Economics at Cornell University. The three areas represented in the study are (1) Child Development and Family Relationships (CDFR), (2) Food and Nutrition and Institution Management (FNIM), and (3) Housing and Design and Textiles and Clothing (HDTc).

Data were collected to test the following hypotheses:

1. Certain needs are more closely related to choice of major within home economics than to choice between two or more major fields. That is to say, (a) there are no statistically significant differences in the personal needs of home economics students and "College Women" in general; and (b) there are statistically significant differences in the personal needs of students specializing in various areas of home economics--specifically, Child Development and Family Relationships, Food and Nutrition and Institution Management, Housing and Design and Textiles and Clothing.
2. There are no statistically significant differences in academic aptitude and/or achievement of students concentrating in different areas of home economics.

3. There are statistically significant differences in the satisfaction of students' needs by specific areas of concentration within home economics.

4. There is a statistically significant correlation between high need satisfaction and strength of need for each of the three groups.

Analysis of the data included hand scoring of the Edwards Personal Preference Schedule and computation of subject-matter average for each student. Scholastic Aptitude Test Scores (CEEB), Graduate Record Examination Aptitude Test Scores (ETS), and college cumulative averages were obtained from each student's official College record. All data were coded and the information punched into IBM cards. The total group was then sub-divided according to the student's area of concentration within Home Economics. Mean profiles (raw scores) for the entire group of home economics students were compared with that of the Edward's normative sample of "college women" by means of t tests. Analysis of variance (F tests) was computed to determine significant differences between means of the three groups of students: Child Development and Family Relationships, Food and Nutrition and Institution Management, and Housing and Design and Textiles and Clothing. Finally, coefficients
of correlations between needs and satisfactions were computed for each of the groups.

The findings from these computations are presented in this chapter. Tests of significance were computed for all differences found between the three groups and a five percent (or less) level of probability was used in deciding which differences were significant.

Analysis of the Data

The Edwards Personal Preference Schedule (EPPS)

Table 2 demonstrates the significance of the means (t's) for the Edwards Personal Preference Schedule variables for the total group of Home Economics students and the Edwards normative sample of "College Women." A comparison of the means of the two groups showed no significant differences on any of the sixteen variables measured by the Edwards Personal Preference Schedule. The Home Economics students showed remarkable similarity to the Edwards normative group of "College Women."
TABLE 2

Tests of Significance of Means (t's) for the EPPS Variables for the Total Group of Home Economics Students (N=117) and Edwards Normative Group of "College Women" (N=749)

<table>
<thead>
<tr>
<th>EPPS Variables</th>
<th>H.Ec.</th>
<th>Norm</th>
<th>t's</th>
</tr>
</thead>
<tbody>
<tr>
<td>ach</td>
<td>12.62</td>
<td>13.08</td>
<td>.31</td>
</tr>
<tr>
<td>def</td>
<td>11.65</td>
<td>12.40</td>
<td>.46</td>
</tr>
<tr>
<td>ord</td>
<td>9.54</td>
<td>10.24</td>
<td>.94</td>
</tr>
<tr>
<td>exh</td>
<td>14.25</td>
<td>14.29</td>
<td>.04</td>
</tr>
<tr>
<td>aut</td>
<td>13.13</td>
<td>12.29</td>
<td>-.33</td>
</tr>
<tr>
<td>aff</td>
<td>16.06</td>
<td>17.40</td>
<td>.64</td>
</tr>
<tr>
<td>int</td>
<td>18.20</td>
<td>17.32</td>
<td>-.47</td>
</tr>
<tr>
<td>suc</td>
<td>12.74</td>
<td>12.53</td>
<td>-.07</td>
</tr>
<tr>
<td>dom</td>
<td>14.64</td>
<td>14.18</td>
<td>-.19</td>
</tr>
<tr>
<td>aba</td>
<td>14.56</td>
<td>15.11</td>
<td>-.21</td>
</tr>
<tr>
<td>nur</td>
<td>15.76</td>
<td>16.42</td>
<td>.31</td>
</tr>
<tr>
<td>chg</td>
<td>18.71</td>
<td>17.21</td>
<td>-.63</td>
</tr>
<tr>
<td>end</td>
<td>12.11</td>
<td>12.63</td>
<td>.17</td>
</tr>
<tr>
<td>het</td>
<td>15.21</td>
<td>14.34</td>
<td>-.29</td>
</tr>
<tr>
<td>agg</td>
<td>11.15</td>
<td>10.59</td>
<td>-.22</td>
</tr>
<tr>
<td>con</td>
<td>11.68</td>
<td>11.74</td>
<td>.09</td>
</tr>
</tbody>
</table>

$t_{01} = 2.58$

$t_{05} = 1.96$

Table 3 compares the standard deviation on the Edwards Personal Preference Schedule for the total group of home economics students and the Edwards normative group of "College Women." The group of home economics students showed greater homogeneity on fourteen of the sixteen variables: Achievement, Deferece, Order, Exhibition, Affiliation, Intraception, Dominance, Abasement, Nurturance, Change, Endurance, Heterosexuality, Aggression, and Consistency.
On two of the sixteen variables: Autonomy and Succorance, the home economics students exhibited greater heterogeneity.

### TABLE 3

A Comparison of the Standard Deviations on the EPPS for the Total Group of Home Economics Students (N=117) and the Edwards Normative Group of "College Women" (N=749)

<table>
<thead>
<tr>
<th>EPPS Variables</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H.Ec.</td>
</tr>
<tr>
<td>ach</td>
<td>3.87</td>
</tr>
<tr>
<td>def</td>
<td>3.23</td>
</tr>
<tr>
<td>ord</td>
<td>4.33</td>
</tr>
<tr>
<td>exh</td>
<td>3.39</td>
</tr>
<tr>
<td>aut</td>
<td>4.65</td>
</tr>
<tr>
<td>aff</td>
<td>3.71</td>
</tr>
<tr>
<td>int</td>
<td>4.28</td>
</tr>
<tr>
<td>suc</td>
<td>4.90</td>
</tr>
<tr>
<td>dom</td>
<td>4.31</td>
</tr>
<tr>
<td>aba</td>
<td>4.43</td>
</tr>
<tr>
<td>nur</td>
<td>3.95</td>
</tr>
<tr>
<td>chg</td>
<td>4.71</td>
</tr>
<tr>
<td>end</td>
<td>5.01</td>
</tr>
<tr>
<td>het</td>
<td>4.88</td>
</tr>
<tr>
<td>agg</td>
<td>4.44</td>
</tr>
<tr>
<td>con</td>
<td>1.72</td>
</tr>
</tbody>
</table>

Table 4 tests the significance (F's) of the mean differences on the Edwards Personal Preference Schedule variables for three groups of home economics students, specifically Child Development and Family Relationships, Food and Nutrition and Institution Management, and Housing and Design and Textiles and Clothing.
A comparison of the means for the three groups on each of the fifteen personal needs measured by the Edwards Personal Preference Schedule revealed significant differences at the .05 (or less) level on four of the fifteen variables. Differences in means for the need Exhibition was found to be significant at the .05 level of confidence. Significant differences at the .01 level of confidence were noted for the needs Autonomy, Intraception, and Endurance. No significant differences in mean response Consistency were found among the sub-groups.

Inspection of the significant F's in Table 4 shows wherein these differences lie. Duncan's Multiple Range Test (36) was applied to the significant F's on the Edwards Personal Preference Schedule for purposes of statistical verification. The results of these computations are reported in Appendix I.
TABLE 4

Tests of Significance (F's) on the EPPS Variables for the Three Groups and the Total Group

<table>
<thead>
<tr>
<th>EPPS Variables</th>
<th>MEANS</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CDPR</td>
<td>PNIM</td>
<td>HDT</td>
<td>Total</td>
<td>P</td>
</tr>
<tr>
<td></td>
<td>(N=50)</td>
<td>(N=33)</td>
<td>(N=34)</td>
<td>(N=117)</td>
<td></td>
</tr>
<tr>
<td>ach</td>
<td>12.38</td>
<td>12.88</td>
<td>12.74</td>
<td>12.62</td>
<td>.18</td>
</tr>
<tr>
<td>def</td>
<td>11.50</td>
<td>12.21</td>
<td>11.32</td>
<td>11.65</td>
<td>.66</td>
</tr>
<tr>
<td>ord</td>
<td>9.06</td>
<td>10.97</td>
<td>8.88</td>
<td>9.55</td>
<td>2.75</td>
</tr>
<tr>
<td>exh</td>
<td>14.70</td>
<td>13.03</td>
<td>14.77</td>
<td>14.25</td>
<td>3.09+</td>
</tr>
<tr>
<td>aut</td>
<td>12.56</td>
<td>11.64</td>
<td>15.41</td>
<td>13.13</td>
<td>6.72++</td>
</tr>
<tr>
<td>aff</td>
<td>16.16</td>
<td>15.76</td>
<td>16.21</td>
<td>16.06</td>
<td>.17</td>
</tr>
<tr>
<td>int</td>
<td>19.82</td>
<td>17.18</td>
<td>16.79</td>
<td>18.20</td>
<td>7.14++</td>
</tr>
<tr>
<td>suc</td>
<td>13.74</td>
<td>12.42</td>
<td>11.59</td>
<td>12.71</td>
<td>1.95</td>
</tr>
<tr>
<td>dom</td>
<td>14.26</td>
<td>15.15</td>
<td>14.71</td>
<td>14.64</td>
<td>.35</td>
</tr>
<tr>
<td>abs</td>
<td>14.06</td>
<td>15.70</td>
<td>14.21</td>
<td>14.56</td>
<td>1.39</td>
</tr>
<tr>
<td>nur</td>
<td>16.78</td>
<td>14.94</td>
<td>15.32</td>
<td>15.75</td>
<td>2.03</td>
</tr>
<tr>
<td>chg</td>
<td>18.72</td>
<td>18.52</td>
<td>18.88</td>
<td>18.71</td>
<td>.05</td>
</tr>
<tr>
<td>end</td>
<td>10.32</td>
<td>14.46</td>
<td>12.44</td>
<td>12.10</td>
<td>7.15++</td>
</tr>
<tr>
<td>het</td>
<td>15.12</td>
<td>15.82</td>
<td>14.74</td>
<td>15.21</td>
<td>.52</td>
</tr>
<tr>
<td>agg</td>
<td>11.20</td>
<td>9.91</td>
<td>12.27</td>
<td>11.15</td>
<td>2.40</td>
</tr>
</tbody>
</table>

Response Consistency: 11.70 11.73 11.59 11.68 .07

++ Significant at the .01 level  F_{01} (df=2,100)=4.82
+ Significant at the .05 level  F_{05} (df=2,100)=3.09

Table 5 shows the rank order of mean T scores on the Edwards Personal Preference Schedule variables for the three groups and the total group. The mean T scores shown are standard scores; i.e., the raw scores have been converted into a form which permits interscale comparisons. The average standard scale is 50. Any variance above or below 50 is indicative of being above or below average when compared with the Edwards Normative Group. The
highest mean T score in each group was ranked one, the second highest, two, etc. Therefore, the strongest need in each group ranks one; the weakest, fifteen.

**TABLE 5**

Rank Order of Mean T Scores on the EPPS for the Three Groups and the Total Group

<table>
<thead>
<tr>
<th>Rank</th>
<th>CDFR (N=50)</th>
<th>FNIM (N=33)</th>
<th>HDTC (N=34)</th>
<th>Total (N=117)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>int 55.30</td>
<td>end 53.48</td>
<td>aut 55.71</td>
<td>chg 52.96</td>
</tr>
<tr>
<td>2</td>
<td>chg 53.16</td>
<td>het 52.82</td>
<td>agg 53.88</td>
<td>het 51.56</td>
</tr>
<tr>
<td>3</td>
<td>suc 52.78</td>
<td>chg 52.76</td>
<td>chg 52.85</td>
<td>aut 51.48</td>
</tr>
<tr>
<td>4</td>
<td>het 51.46</td>
<td>dom 52.21</td>
<td>exh 50.85</td>
<td>int 51.48</td>
</tr>
<tr>
<td>5</td>
<td>agg 51.10</td>
<td>ord 51.67</td>
<td>het 50.50</td>
<td>agg 51.02</td>
</tr>
<tr>
<td>6</td>
<td>exh 51.08</td>
<td>aba 51.46</td>
<td>dom 50.44</td>
<td>dom 50.81</td>
</tr>
<tr>
<td>7</td>
<td>aut 50.66</td>
<td>ach 49.91</td>
<td>end 49.41</td>
<td>suc 50.54</td>
</tr>
<tr>
<td>8</td>
<td>nur 50.46</td>
<td>suc 49.85</td>
<td>ach 49.06</td>
<td>def 50.51</td>
</tr>
<tr>
<td>9</td>
<td>dom 50.14</td>
<td>int 49.81</td>
<td>nur 48.15</td>
<td>exh 49.73</td>
</tr>
<tr>
<td>10</td>
<td>ach 48.30</td>
<td>def 48.67</td>
<td>suc 47.91</td>
<td>aba 49.23</td>
</tr>
<tr>
<td>11</td>
<td>aba 48.12</td>
<td>aut 48.39</td>
<td>def 47.76</td>
<td>ach 49.13</td>
</tr>
<tr>
<td>12</td>
<td>ord 47.30</td>
<td>agg 47.94</td>
<td>int 47.74</td>
<td>end 48.88</td>
</tr>
<tr>
<td>13</td>
<td>aff 46.92</td>
<td>nur 46.79</td>
<td>ord 47.06</td>
<td>nur 48.75</td>
</tr>
<tr>
<td>14</td>
<td>def 46.36</td>
<td>aff 45.97</td>
<td>aff 46.97</td>
<td>ord 43.46</td>
</tr>
<tr>
<td>15</td>
<td>end 45.48</td>
<td>exh 42.52</td>
<td>aba 45.12</td>
<td>aff 46.76</td>
</tr>
</tbody>
</table>

The needs Change and Heterosexuality ranked among the first five in each of the three groups; first and second respectively for the total group. Aggression ranked among the first five for Child Development and Family Relationships, Housing and Design and Textiles and Clothing and the total group. Intraception and Succorance were among the first five for Child Development and Family Relationships. Intraception ranked third for the total group. Endurance, Dominance, and Order were among
the first five needs for the total group. Autonomy and Exhibition were among the first five for the Housing and Design and Textiles and Clothing group. Autonomy ranked third for the entire group.

The need for Affiliation ranked among the lowest five in each of the three groups and the total group. Abasement, Order, and Deference ranked among the lowest five for Child Development and Family Relationships and Housing and Design and Textiles and Clothing. Order ranked fourteenth for the total group. Endurance ranked fifteenth for the Child Development and Family Relationships group and twelfth for the total group. Autonomy, Aggression, Nurturance and Exhibition ranked among the lowest five for the Food and Nutrition and Institution Management group. Nurturance ranked thirteenth for the total group. Intraception ranked twelfth for the Housing and Design and Textiles and Clothing group, but was fourth for the total group. Achievement ranked eleventh for the total group.

**Academic Aptitude and Achievement**

Table 6 compares the mean verbal and mathematics scores for each group on the Scholastic Aptitude Test of the College Entrance Examination Board. Significant differences among means were identified by means of F tests.

A comparison of the means for the three groups and the total group showed no significant differences on either the Scholastic Aptitude Test verbal or mathematics scores.
The three groups were remarkably similar with Food and Nutrition and Institution Management recording the highest verbal and mathematics mean scores. Housing and Design and Textiles and Clothing had the lowest mean verbal score; Child Development and Family Relationships the lowest mean mathematics score. However, none of the differences were significant at the .05 (or less) level.

### TABLE 6

**Tests of Significance (F's) on the SAT Verbal and Math Scores for Three Groups and the Total Group of Home Economics Students**

<table>
<thead>
<tr>
<th>MEANS</th>
<th>CDFR (N=50)</th>
<th>FNIM (N=33)</th>
<th>HDTG (N=34)</th>
<th>Total (N=117)</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Verbal</strong></td>
<td>574</td>
<td>577</td>
<td>567</td>
<td>573</td>
<td>.16</td>
</tr>
<tr>
<td><strong>Math</strong></td>
<td>546</td>
<td>576</td>
<td>572</td>
<td>562</td>
<td>2.35</td>
</tr>
</tbody>
</table>

\[ F_{0.01} \text{ (df 2,100)} = 4.82 \]

\[ F_{0.05} \text{ (df 2,100)} = 3.09 \]

Table 7 shows the results of F tests computed to determine significant differences on the Graduate Record Examination Aptitude Test verbal and quantitative scores for three groups of Home Economics students and the total group.

A comparison of the mean verbal scores for the three groups and the total group revealed no significant differences at the .05 (or less) level of confidence. The Child Development and Family Relationships group had the
highest mean verbal score on the Graduate Record Examination Aptitude Test; Housing and Design and Textiles and Clothing the lowest mean score for the three groups.

**TABLE 7**

Tests of Significance (F's) on the Graduate Record Examination Verbal and Quantitative Scores for Three Groups and the Total Group of Home Economics Students

<table>
<thead>
<tr>
<th>MEANS</th>
<th>CDPR (N=50)</th>
<th>FNIM (N=33)</th>
<th>HDTG (N=34)</th>
<th>Total (N=117)</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal</td>
<td>586</td>
<td>585</td>
<td>553</td>
<td>576</td>
<td>2.10</td>
</tr>
<tr>
<td>Quantitative</td>
<td>500</td>
<td>558</td>
<td>540</td>
<td>528</td>
<td>4.82++</td>
</tr>
</tbody>
</table>

++Significant at .01 level $F_{0.01}$ (df 2,100) = 4.82

+Significant at .05 level $F_{0.05}$ (df 2,100) = 3.09

Highly significant differences ($P \leq .01$) were observed among the three groups when comparing mean quantitative scores. Inspection of Table 7 reveals wherein these differences lie. Duncan's Multiple Range Tests (36) were run on the significant F's for purposes of statistical verification and the results are reported in Appendix J. The Child Development and Family Relationships mean score of 500 was significantly ($P \leq .01$) lower than the scores recorded for either Housing and Design and Textiles and Clothing or Food and Nutrition and Institution Management. No significant difference was found between the mean quantitative score for Housing and Design
and Textiles and Clothing and Food and Nutrition and Institution Management.

Table 8 shows the results of tests of significance (F's) run on college cumulative average and subject matter average for the three groups and the total group of Home Economics Students.

**TABLE 8**

Tests of Significance (F's) on College Cumulative Average and Subject Matter Average for Three Groups and the Total Group of Home Economics Students

<table>
<thead>
<tr>
<th></th>
<th>MEANS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CDFR (N=50)</td>
</tr>
<tr>
<td>Academic Achievement</td>
<td></td>
</tr>
<tr>
<td>College Cumulative</td>
<td>79.61</td>
</tr>
<tr>
<td>Average</td>
<td></td>
</tr>
<tr>
<td>Subject Matter</td>
<td>81.92</td>
</tr>
<tr>
<td>Average</td>
<td></td>
</tr>
</tbody>
</table>

++Significant at .01 level $F_{01}$ (df 2,100) = 4.82

+Significant at .05 level $F_{05}$ (df 2,100) = 3.09

A comparison of the mean scores on college cumulative average and subject-matter average for the three groups and the total group of Home Economics students revealed no significant differences at the .05 (or less) level of confidence. The Food and Nutrition and Institution Management group recorded the highest mean score and was closely followed by Child Development and Family Relationships and Housing and Design and Textiles and
Clothing respectively. The Housing and Design and Textiles and Clothing group had the highest mean subject matter average and was followed by Child Development and Family Relationships and Food and Nutrition and Institution Management. Mean scores for the three groups on both college cumulative average and subject matter average were closely grouped; no significant differences were noted.

**Satisfaction-Dissatisfaction Questionnaire**

Table 9 demonstrates the significance of mean differences on the Satisfaction-Dissatisfaction Questionnaire for three groups of Home Economics students and the total group.

A comparison of means for the three groups on each of the fifteen variables measuring need satisfaction revealed significant differences at the .05 (or less) level on five of the fifteen variables. Differences in means measuring the satisfaction of needs, Endurance and Heterosexuality, were found to be significant at the .05 level. Highly significant differences at the .01 level were found for the needs Intraception, Change, and Aggression.

Inspection of the significant F's in Table 9 shows wherein these differences lie. For purposes of statistical verification, Duncan's Multiple Range Test (36) was applied to the significant F's. The results of these computations are reported in Appendix K. On the Satisfaction-Dissatisfaction Questionnaire variable Aggression, the results
indicate a difference between the Child Development and Family Relationships mean (3.60) and the Housing and Design and Textiles and Clothing mean (2.65) significant at the .01 level; a difference between Child Development and Family Relationships (3.60) and Food and Nutrition and Institution Management (3.12) significant at the .05 level. No significant mean differences on over-all satisfaction were found among the three groups.

**TABLE 9**

Tests of Significance (F's) on the Satisfaction-Dissatisfaction Questionnaire for Three Groups and the Total Group

<table>
<thead>
<tr>
<th>Degree of Satisfaction</th>
<th>CDFR (N=50)</th>
<th>FNIM (N=33)</th>
<th>HDTC (N=34)</th>
<th>Total (N=117)</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>ach</td>
<td>3.06</td>
<td>3.18</td>
<td>3.24</td>
<td>3.15</td>
<td>.43</td>
</tr>
<tr>
<td>def</td>
<td>3.26</td>
<td>3.27</td>
<td>3.47</td>
<td>3.33</td>
<td>.57</td>
</tr>
<tr>
<td>ord</td>
<td>3.78</td>
<td>3.88</td>
<td>3.77</td>
<td>3.80</td>
<td>.10</td>
</tr>
<tr>
<td>exh</td>
<td>3.22</td>
<td>3.58</td>
<td>3.41</td>
<td>3.38</td>
<td>1.01</td>
</tr>
<tr>
<td>aut</td>
<td>3.68</td>
<td>3.70</td>
<td>3.38</td>
<td>3.60</td>
<td>.94</td>
</tr>
<tr>
<td>aff</td>
<td>3.76</td>
<td>3.85</td>
<td>3.59</td>
<td>3.74</td>
<td>.85</td>
</tr>
<tr>
<td>int</td>
<td>4.16</td>
<td>3.15</td>
<td>3.38</td>
<td>3.65</td>
<td>10.30++</td>
</tr>
<tr>
<td>suc</td>
<td>3.58</td>
<td>3.94</td>
<td>3.59</td>
<td>3.68</td>
<td>1.22</td>
</tr>
<tr>
<td>dom</td>
<td>3.32</td>
<td>3.30</td>
<td>2.91</td>
<td>3.20</td>
<td>1.83</td>
</tr>
<tr>
<td>aba</td>
<td>3.52</td>
<td>4.00</td>
<td>3.91</td>
<td>3.77</td>
<td>2.34</td>
</tr>
<tr>
<td>nur</td>
<td>3.98</td>
<td>3.85</td>
<td>3.44</td>
<td>3.79</td>
<td>2.48</td>
</tr>
<tr>
<td>chg</td>
<td>3.38</td>
<td>3.24</td>
<td>4.41</td>
<td>3.64</td>
<td>14.40++</td>
</tr>
<tr>
<td>end</td>
<td>3.16</td>
<td>3.39</td>
<td>3.94</td>
<td>3.45</td>
<td>4.10+</td>
</tr>
<tr>
<td>het</td>
<td>4.04</td>
<td>4.42</td>
<td>3.88</td>
<td>4.10</td>
<td>3.81+</td>
</tr>
<tr>
<td>agg</td>
<td>3.60</td>
<td>3.12</td>
<td>2.65</td>
<td>3.19</td>
<td>8.97++</td>
</tr>
<tr>
<td>Over-all</td>
<td>3.74</td>
<td>3.67</td>
<td>3.29</td>
<td>3.59</td>
<td>2.04</td>
</tr>
</tbody>
</table>

++Significant at .01 level  F₀₁ (df 2,112) = 4.79
+SSignificant at .05 level  F₀₅ (df 2,112) = 3.07
Table 10 shows the rank order of means on the Satisfaction-Dissatisfaction Questionnaire for the three groups and the total group. The highest mean in each group was ranked as one, the second highest as two, etc. The most satisfied need in each group was ranked one, the lowest fifteen.

<table>
<thead>
<tr>
<th>Rank</th>
<th>CDFR (N=50)</th>
<th>FNIM (N=33)</th>
<th>HDTG (N=34)</th>
<th>Total (N=117)</th>
</tr>
</thead>
<tbody>
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The variables Heterosexuality and Order are among the first five for each sub-group. Conversely, the variable Achievement is among the bottom five for each group, with no ranking higher than thirteenth. Affiliation
appears within the first five for Child Development and 
Family Relationships and Food and Nutrition and Insti-
tution Management and the total group; sixth for Housing 
and Design and Textiles and Clothing. Intraception and 
Nurturance are among the first five for Child Development 
and Family Relationships, but are absent from the first 
five for Food and Nutrition and Institution Management and 
Housing and Design and Textiles and Clothing. Nurturance 
ranks third for the total group. Abasement ranks among 
the first four for Food and Nutrition and Institution 
Management, Housing and Design and Textiles and Clothing 
and the total group, but ninth for Child Development and 
Family Relationships. Succorance is among the first five 
for Food and Nutrition and Institution Management, but is 
not among the first five for any other group. Endurance 
is rated second for Housing and Design and Textiles and 
Clothing, but does not appear among the first five for any 
of the other sub-groups.

**Relationship Between Need Strength 
and Need Satisfaction**

Coefficients of correlations were computed between 
need strengths and need satisfactions for each sub-group. 
t tests to determine the significance of the correlations 
were run. These results are reported in Table 11.
TABLE 11

Significance (t's) of Correlations Between Need Strengths and Need Satisfactions for Three Sub-Groups

<table>
<thead>
<tr>
<th>Sub-Group</th>
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<tr>
<td>1. Child Development and Family Relationships</td>
<td>.45</td>
<td>1.8169+</td>
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<tr>
<td>2. Food and Nutrition and Institution Management</td>
<td>.04</td>
<td>1.1467</td>
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<td>3. Housing and Design and Textiles and Clothing</td>
<td>-.24</td>
<td>-.8913</td>
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</table>

++Significant at .01 level \( t_{01} (df 13) = 2.650 \)

+Significant at .05 level \( t_{05} (df 13) = 1.771 \)

The correlation coefficient between need strength and need satisfaction was found to be significant at the .05 level for Child Development and Family Relationships; the correlation coefficient for Food and Nutrition and Institution Management while in the hypothesized direction was not significant, and the correlation for the Housing and Design and Textiles and Clothing group was not significant and inverse of the hypothesized direction.

Discussion of the Findings

It is clear from Tables 2 and 3 that the Home Economics students as a group do not differ significantly from a normative group of "College Women." In general, the Home Economics students are a more homogeneous group in terms of personal needs, Autonomy and Succorance excepted.
When the Home Economics students were sub-divided according to a student's area of concentration within home economics, significant differences in personal needs were noted (Table 4). These findings tend to substantiate the hypothesis that certain personal needs are more closely related to choice of major within home economics than to choice of major between two or more major fields.

The ranking of the traits (Table 5) gives qualitative support to several of the quantitative differences reported in Table 4. Needs Change and Heterosexuality were prominent for all sub-groups. The Child Development and Family Relationships group were significantly more Intracceptive, the Housing and Design and Textiles and Clothing group significantly more autonomous; the Food and Nutrition and Institution Management group significantly more persistent (Endurance). Conversely, the Child Development and Family Relationships group were significantly less persistent (Endurance), the Food and Nutrition and Institution Management group significantly less out-going (Exhibition).

These findings suggest that the Child Development and Family Relationships group are more people-oriented (Intraception, Succorance); the Food and Nutrition and Institution Management group more work-oriented (Endurance, Order), the Housing and Design and Textiles and Clothing group more egocentered (Autonomy, Exhibition).
The results were not surprising, i.e., presumably persons attracted to Child Development and Family Relationships are more interested in people; persons attracted to Food and Nutrition and Institution Management more work-oriented; and Housing and Design and Textiles and Clothing more egocentered.

The comparatively high needs Change and Heterosexuality which cut across the three sub-groups are easily understood when seen in context. Home Economics is concerned with the home and family life. Persons with strong heterosexual needs are likely to be drawn to the field because of its subject matter content. Moreover, Home Economics draws heavily on the supporting sciences (Biological, Physical, and Social) and humanities; providing both depth and breadth of experience.

It is conceivable that a student's aptitude and achievement influence her feelings of satisfaction with an area of concentration within home economics. To assure that no significant differences were present among the three groups, mean scores on the Scholastic Aptitude Test, the Graduate Record Examination Aptitude Test, college cumulative average and subject matter average (Tables 6, 7, 8, 9) were submitted to an analysis of variance. Significant differences were found only on the quantitative scores of the Graduate Record Examination Aptitude Test (Table 7). These differences probably reflect the group's exposure to mathematical concepts during
their college careers. The Food and Nutrition and Institution Management group was high as one might expect, since this group's professional commitment requires a program with a heavy concentration in the natural sciences. This group has continued to use quantitative reasoning in the laboratory to a greater degree than either of the other areas represented.

Quantitative differences in need satisfaction among the three sub-groups are reported in Table 9. The ranking of need satisfactions (Table 10) gives qualitative support to several of the quantitative differences observed in Table 9.

Significant differences in need satisfaction were found for five of the fifteen variables: Intracception, Change, Endurance, Heterosexuality, and Aggression. Differences in satisfaction of needs Intracception, Change, and Endurance are in the expected directions when one considers the subject matter content of the fields represented. That is to say, Child Development and Family Relationships with its concern for the child, his growth and development, family influences, etc., is most likely to satisfy the need Intracception; Housing and Design and Textiles and Clothing with its emphasis on the exploration of basic concepts of design and the development of creative abilities through individual projects presumably would most satisfy the needs Change and Endurance.
Conversely, the Food and Nutrition and Institution Man-
agement curriculum would be expected to least satisfy the
needs Intraception and Change; the Child Development and
Family Relationships concentration to least satisfy the
need Endurance.

Differences in the satisfaction of the needs Hetero-
sexuality and Aggression are not as readily explained.
Clues to the direction of these differences are suggested
by the wording of the questions:

14. How well satisfied are you this the pre-
paration will aid you in becoming a more
effective marriage partner, a more ade-
quate homemaker, a better woman? (Hetero-
sexuality)

Two possible explanations come to mind for the di-
rection of the differences in Heterosexual need satis-
faction. First, if the question had been so worded as to
include mother, then it is possible Child Development and
Family Relationships would prove more satisfying. An-
other possible explanation lies in the fact that Child
Development and Family Relationships raises more questions
than it answers with the end result these students feel
the preparation is less satisfactory. The difference
between Food and Nutrition and Institution Management and
Child Development and Family Relationships, while not
significant, is certainly intriguing. The difference
between Food and Nutrition and Institution Management and
Housing and Design and Textiles and Clothing is
significant and to be expected in terms of the subject-matter content of the fields.

15. To what extent have you been satisfied with the opportunities of attacking contrary points of view, of openly criticizing or demonstrating to others you disagree with them? (Aggression)

At first glance, one may be surprised about the fact that the Housing and Design and Textiles and Clothing group are least satisfied in terms of the need Aggression. However, emphasis here is on learning skills and techniques. Criticism, for the most part, is given by the instructor and directed toward a student's project or piece of work in terms of well established principles. In this sense, a student has less opportunity to attack contrary points of view or to openly criticize. In the same sense, the subject-matter content of Child Development and Family Relationships is more controversial.

The correlations between need strength and need satisfaction (Table 11) are more provocative than definitive. The coefficient of correlation for the Child Development and Family Relationships group was found to be in the hypothesized direction and significant at the .05 level. The coefficient of correlation for Food and Nutrition and Institution Management was in the expected direction but not significant. The coefficient of correlation for Housing and Design and Textiles and Clothing was in the reverse direction but not significant.
Hindsight focused suspicion on the composition of the groups under consideration. The Child Development and Family Relationships group was the only "pure" classification of majors; both Food and Nutrition and Institution Management and Housing and Design and Textiles and Clothing were a combination of two majors. Perhaps the logic of combining these groups was not sound. Certainly Food and Nutrition and Institution Management majors are closer in subject-matter content than Housing and Design or Textiles and Clothing, which might account for the difference in direction. If the combined majors had been established prior to the administration of the Satisfaction-Dissatisfaction Questionnaire rather than after, no doubt the results would have been different and less subject to question. The data on need satisfaction for Food and Nutrition and Institution Management, Housing and Design and Textiles and Clothing is unquestionably contaminated and should be ignored.

Summary

Information about the personal needs and need satisfactions of three groups of undergraduates differing in area of concentration in the New York State College of Home Economics has been presented and described in this chapter. Analysis of the data was presented under the following headings (1) The Edwards Personal Preference Schedule, (2) Academic Aptitude and Achievement, (3) The
Satisfaction-Dissatisfaction Questionnaire, and (4) Relationship between need strength and need satisfaction. The chapter concluded with a discussion of the findings.
CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The primary purpose of the present investigation was to study the need patterns and need satisfactions of students majoring in different areas of home economics. The areas represented were (1) Child Development and Family Relationships, (2) Food and Nutrition and Institution Management, (3) Housing and Design and Textiles and Clothing.

Data were collected to test the following hypothesis:

1. Certain needs are more closely related to choice of major within home economics than to choice between two or more major fields. That is to say: (a) There are no statistically significant differences in the personal needs of home economics students and "College Women" in general, and (b) There are statistically significant differences in the personal needs of students specializing in various areas of home economics, specifically, Child Development and Family Relationships, Food and Nutrition and Institution Management, Housing and Design and Textiles and Clothing.

68
2. There are no statistically significant differences in the academic aptitude and/or achievement of students concentrating in different areas of home economics.

3. There are statistically significant differences in the satisfaction of student needs by specific areas of concentration within home economics.

4. There is a statistically significant correlation between need satisfaction and strength of need for each of the three groups.

The Edwards Personal Preference Schedule and a questionnaire designed to measure need satisfaction were administered to 117 senior women (Class of 1962) in the New York State College of Home Economics at Cornell University. For purposes of analysis, the total group of home economics students was sub-divided according to each student's area of concentration within home economics. Three sub-groups emerged: Child Development and Family Relationships (N=50), Food and Nutrition and Institution Management (N=33), Housing and Design and Textiles and Clothing (N=34). The first of these groupings was a "pure" major; the second and third logical combinations of closely related areas.

Information pertaining to a student's academic aptitude and achievement were secured from two sources: (1) the student's official college record and (2) her personal file in the Counseling Service.
Mean scores on the fifteen Edwards Personal Preference Schedule variables for the total group of home economics students and the Edwards normative sample of "College Women" were compared by means of t tests. Further comparison of mean scores for each sub-group was undertaken by means of analysis of variance (F test). Product Moment Coefficients of Correlation were computed to determine the relationship between need strength and degree of satisfaction experienced by students concentrating in different areas within home economics. The significance level of the study was .05 or less (P ≤ .05).

Conclusions

Hypothesis 1 was confirmed. Analysis of the data showed no significant difference between home economics students and the Edwards normative sample of "College Women." Statistically significant differences among the three sub-groups were found on four of the fifteen needs: Exhibition, Autonomy, Intracception, and Endurance. The Child Development and Family Relationships students were significantly more intraceptive; the Housing and Design and Textiles and Clothing Group significantly more autonomous; the Food and Nutrition and Institution Management group significantly more persistent (Endurance) and significantly less out-going (Exhibition).

Hypothesis 2 was confirmed with reservations. A comparison of mean scales for each of the three sub-groups
revealed no significant differences in the verbal and mathematical scores on the Scholastic Aptitude Test (CEEB), the verbal score on the Graduate Record Examination Aptitude Test (ETS), college cumulative average and subject matter average. Significant differences ($P \leq .01$) were found among the three sub-groups on mean quantitative scores on the Graduate Record Examination Aptitude Test. It was suggested that these differences reflected the group's exposure to quantitative concepts during their college careers. For example, the Food and Nutrition and Institution Management group with its strong physical science orientation scored significantly higher than either of the other sub-groups.

Hypothesis 3 was confirmed. Significant differences in need satisfaction among the three groups were found on five of the fifteen variables: Satisfaction of needs Intraception, Change, Endurance, Heterosexuality, and Aggression. Students in the field of Child Development and Family Relationships were most satisfied in terms of the needs: Intraception and Aggression. The Housing and Design and Textiles and Clothing field most satisfied the needs Change and Endurance. The Food and Nutrition and Institution Management group was significantly more satisfied in terms of Heterosexual need than the Housing and Design and Textiles and Clothing group.
Hypothesis 4 was confirmed with reservations. The coefficients of correlation between need strength and need satisfaction for each of the sub-groups proved more provocative than definitive. The coefficient of correlation for the Child Development and Family Relationships group was in the hypothesized direction and significant \((P \leq 0.05)\). The coefficients of correlation for the other groups were not significant and need strength and need satisfaction for the Housing and Design and Textiles and Clothing group showed an inverse relationship. Since the Food and Nutrition and Institution Management and Housing and Design and Textiles and Clothing groups were not "pure" groups, the validity of these findings was questionable.

In general, the results of the present study were encouraging and tended to be consistent with theory. Weaknesses in the present investigation were pointed out and further research would be rewarding.

**Recommendations for Further Research**

Several possibilities for further research are suggested by the present investigation. However, before undertaking the research certain improvements need to be made to correct weaknesses in the present study. First, it is essential that "pure" groupings of majors constitute the sample so as not to contaminate the findings. This may be difficult in some situations necessitating
repeated testing of seniors over a period of years. Second, increasing the subtlety of the Satisfaction-Dissatisfaction Questionnaire by utilizing a more refined scale should provide a more definitive measure of need satisfaction. Third, and last, items ten and fourteen of the Satisfaction-Dissatisfaction Questionnaire need to be reframed. Some experimentation will have to be done to improve the validity of these items. Reframing item ten of the Satisfaction-Dissatisfaction Questionnaire so it reads:

10. To what extent are you satisfied with the opportunities afforded you to acknowledge your own errors, to accept the blame for poor performance, or to consult with staff about difficulties in areas in which you feel inadequate?

may strengthen this item. The inclusion of mother in item fourteen on the Satisfaction-Dissatisfaction Questionnaire so it reads:

14. How well satisfied are you that this preparation will aid you in becoming a more effective marriage partner, a more adequate mother and homemaker, a better woman?

should improve the item.

With the above modifications four possibilities for further study are suggested by the present investigation.

1. A follow-up study on the Class of 1962 to determine the congruity between need satisfactions in college and need satisfaction on the job.
2. Replication of the study to see if the results are the same for other situations.

3. A study to identify those factors which affect satisfaction or dissatisfaction either in college or in jobs which attract home economists.

4. A study to determine the possibility of developing need satisfaction profiles for home economists or specific work environments which attract home economists.

Certainly the tabulation and analyses of the answers to the Satisfaction-Dissatisfaction Questionnaire used in the present study should not be overlooked. The information contained therein should be helpful to those departments in the College seeking to strengthen existing programs and to improve student morale.
APPENDIX A
The requirements for the degree of Bachelor of Science are the completion of 120 credit hours of required and elective work during the four years and, in addition, four credits of physical education, one credit in each of the first four terms, unless excused by the University Committee on Requirements for Graduation. Official excuse slips are issued by the Secretary of the College.

The student must be in residence for at least two terms immediately prior to receiving the degree. A cumulative average of at least 70 is required.

Credits should be distributed in the following groups as indicated:

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<th>hours</th>
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<td>Basic sciences, minimum required hours</td>
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<td>Courses in any college in the University. To include:</td>
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<tr>
<td>A. Biological sciences</td>
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<tr>
<td>Courses taken must include at least one course in human biology, such as:</td>
<td></td>
</tr>
<tr>
<td>Biology 1, General Biology (spring semester)</td>
<td>Physiology 303, Human Physiology</td>
</tr>
<tr>
<td>Biology 9, Biological Basis of Social Problems</td>
<td>Zoology 201, The Nature of Man: Structure and Development</td>
</tr>
<tr>
<td>Remaining work to be chosen from the following subject-matter areas: Bacteriology, Botany, Entomology, Physiology, Zoology. (Zoology 201 and Biology 9 may not both be used to fulfill the requirements of 6 credit hours. Conservation 9, General Ornithology, may be counted as a biological science.)</td>
<td></td>
</tr>
<tr>
<td>B. Physical sciences</td>
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<tr>
<td>Courses to be taken in at least two of the following subject-matter areas: Chemistry,</td>
<td></td>
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</table>
Physics, Astronomy, Meteorology, Geology, except for Geology 105 (Geography), and Geology 108 (Mineral Resources), both of which are counted as social sciences. Agricultural Engineering 10 (Household Mechanics) may be counted as a physical science.

C. Social sciences........................................ 12
Not more than six hours may be in any one of the following subject-matter areas: Economics, Government, History, Psychology, Sociology, Philosophy.

One course each to be taken in Areas 1, 2, 3, and 4 (below).

Area 1. Courses which contribute to understanding the behavior of individuals.

Area 2. Courses which contribute to understanding the social institutions of the society in which the individual lives.

Area 3. Courses which contribute to understanding the social institutions of contemporary societies other than that in which the individual lives.

Area 4. A second course from Areas 1, 2, or 3, or a course in any social science exclusive of courses which are technical, mathematical, or highly specialized.

D. Basic science elective................................. 6
Choose courses from A, B, or C. However, not more than nine hours of social science taken to meet the social science requirement and the basic science elective may be in one subject-matter area.

Group II

English, minimum required hours...................... 6
English 111-112. Students who are exempted from English 112 may choose any other 3-credit course in English Composition or Literature.

Group III

Home Economics, minimum required hours........... 40
To include the homemaking core courses
Group IV

Electives.............................................. 44
A. A maximum of 24 credits may be elected in the endowed divisions of the University, for example, Arts and Sciences, Architecture, Hotel Administration 120

Physical Education (should be taken during the first four terms of residence)..................... 4
APPENDIX B
MINIMUM SCHOLASTIC REQUIREMENTS FOR FRESHMAN APPLICANTS

In order to be entitled to consideration for admission, applicants must meet these requirements:

1. Sixteen units representing completion of a secondary-school course and in the main to be made up of English, foreign language (ancient or modern), mathematics, science, and social studies including history. Although it is not required, it is desirable for students to take both biology and chemistry in high school, since the degree our graduates are awarded is a Bachelor of Science and our graduation requirements include college work in both biological and physical sciences. Most of our applicants offer a typical college preparatory program.

2. Achievement in two of the following three:
   a. A high school average of at least 85 at the end of the seventh semester.
   b. A scholastic rating in the upper two-fifths of the high school graduating class at the end of the seventh semester.
   c. A score of 500 or above on the verbal section of the Scholastic Aptitude Test of the College Entrance Examination Board.
## Total Number of Hours at Time of Graduation

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## Distribution of Hours in Home Economics Courses

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## Distribution of Hours in Non-Home Economics Courses

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M=27  M=29  M=29
APPENDIX D
The Edwards Personal Preference Schedule
and Score Sheet
DIRECTIONS

This schedule consists of a number of pairs of statements about things that you may or may not like; about ways in which you may or may not feel. Look at the example below.

A I like to talk about myself to others.
B I like to work toward some goal that I have set for myself.

Which of these two statements is more characteristic of what you like? If you like "talking about yourself to others" more than you like "working toward some goal that you have set for yourself," then you should choose A over B. If you like "working toward some goal that you have set for yourself" more than you like "talking about yourself to others," then you should choose B over A.

You may like both A and B. In this case, you would have to choose between the two and you should choose the one that you like better. If you dislike both A and B, then you should choose the one that you dislike less.

Some of the pairs of statements in the schedule have to do with your likes, such as A and B above. Other pairs of statements have to do with how you feel. Look at the example below.

A I feel depressed when I fail at something.
B I feel nervous when giving a talk before a group.

Which of these two statements is more characteristic of how you feel? If "being depressed when you fail at something" is more characteristic of you than "being nervous when giving a talk before a group," then you should choose A over B. If B is more characteristic of you than A, then you should choose B over A.

If both statements describe how you feel, then you should choose the one which you think is more characteristic. If neither statement accurately describes how you feel, then you should choose the one which you consider to be less inaccurate.

Your choice, in each instance, should be in terms of what you like and how you feel at the present time, and not in terms of what you think you should like or how you think you should feel. This is not a test. There are no right or wrong answers. Your choices should be a description of your own personal likes and feelings. Make a choice for every pair of statements; do not skip any.

The pairs of statements on the following pages are similar to the examples given above. Read each pair of statements and pick out the one statement that better describes what you like or how you feel. Make no marks in the booklet. On the separate answer sheet are numbers corresponding to the numbers of the pairs of statements. Check to be sure you are marking for the same item number as the item you are reading in the booklet.

If your answer sheet is printed in BLACK ink:
For each numbered item draw a circle around the A or B to indicate the statement you have chosen.

If your answer sheet is printed in BLUE ink:
For each numbered item fill in the space under A or B as shown in the Directions on the answer sheet.

Do not turn this page until the examiner tells you to start.
1 A I like to help my friends when they are in trouble.
   B I like to do my very best in whatever I undertake.

2 A I like to find out what great men have thought about various problems in which I am interested.
   B I would like to accomplish something of great significance.

3 A Any written work that I do I like to have precise, neat, and well organized.
   B I would like to be a recognized authority in some job, profession, or field of specialization.

4 A I like to tell amusing stories and jokes at parties.
   B I would like to write a great novel or play.

5 A I like to be able to come and go as I want to.
   B I like to be able to say that I have done a difficult job well.

6 A I like to solve puzzles and problems that other people have difficulty with.
   B I like to follow instructions and to do what is expected of me.

7 A I like to experience novelty and change in my daily routine.
   B I like to tell my superiors that they have done a good job on something, when I think they have.

8 A I like to plan and organize the details of any work that I have to undertake.
   B I like to follow instructions and to do what is expected of me.

9 A I like people to notice and to comment upon my appearance when I am out in public.
   B I like to keep my things neat and orderly on my desk or workspace.

10 A I like to avoid situations where I am expected to do things in a conventional way.
    B I like to read about the lives of great men.

11 A I would like to be a recognized authority in some job, profession, or field of specialization.
    B I like to have my work organized and planned before beginning it.

12 A I like to find out what great men have thought about various problems in which I am interested.
    B If I have to take a trip, I like to have things planned in advance.

13 A I like to finish any job or task that I begin.
    B I like to keep my things neat and orderly on my desk or workspace.

14 A I like to tell other people about adventures and strange things that have happened to me.
    B I like to have my meals organized and a definite time set aside for eating.

15 A I like to be independent of others in deciding what I want to do.
    B I like to keep my things neat and orderly on my desk or workspace.

16 A I like to be able to do things better than other people can.
    B I like to tell amusing stories and jokes at parties.

17 A I like to conform to custom and to avoid doing things that people I respect might consider unconventional.
    B I like to talk about my achievements.

18 A I like to have my life so arranged that it runs smoothly and without much change in my plans.
    B I like to tell other people about adventures and strange things that have happened to me.

19 A I like to read books and plays in which sex plays a major part.
    B I like to be the center of attention in a group.

20 A I like to criticize people who are in a position of authority.
    B I like to use words which other people often do not know the meaning of.

21 A I like to accomplish tasks that others recognize as requiring skill and effort.
    B I like to be able to come and go as I want to.

22 A I like to praise someone I admire.
    B I like to feel free to do what I want to do.

23 A I like to keep my letters, bills, and other papers neatly arranged and filed according to some system.
    B I like to be independent of others in deciding what I want to do.

24 A I like to ask questions which I know no one will be able to answer.
    B I like to criticize people who are in a position of authority.

25 A I get so angry that I feel like throwing and breaking things.
    B I like to avoid responsibilities and obligations.

26 A I like to be successful in things undertaken.
    B I like to form new friendships.

27 A I like to follow instructions and to do what is expected of me.
    B I like to have strong attachments with my friends.

28 A Any written work that I do I like to have precise, neat, and well organized.
    B I like to make as many friends as I can.

29 A I like to tell amusing stories and jokes at parties.
    B I like to write letters to my friends.

30 A I like to be able to come and go as I want to.
    B I like to share things with my friends.

31 A I like to solve puzzles and problems that other people have difficulty with.
    B I like to judge people by why they do something—not by what they actually do.

32 A I like to accept the leadership of people I admire.
    B I like to understand how my friends feel about various problems they have to face.

33 A I like to have my meals organized and a definite time set aside for eating.
    B I like to study and to analyze the behavior of others.
34 A I like to say things that are regarded as witty and clever by other people.
B I like to put myself in someone else's place and to imagine how I would feel in the same situation.

35 A I like to feel free to do what I want to do.
B I like to observe how another individual feels in a given situation.

36 A I like to accomplish tasks that others recognize as requiring skill and effort.
B I like my friends to encourage me when I meet with failure.

37 A When planning something, I like to get suggestions from other people whose opinions I respect.
B I like my friends to treat me kindly.

38 A I like to have my life so arranged that it runs smoothly and without much change in my plans.
B I like my friends to feel sorry for me when I am sick.

39 A I like to be the center of attention in a group.
B I like my friends to make a fuss over me when I am hurt or sick.

40 A I like to avoid situations where I am expected to do things in a conventional way.
B I like my friends to sympathize with me and to cheer me up when I am depressed.

41 A I would like to write a great novel or play.
B When serving on a committee, I like to be appointed or elected chairman.

42 A When in a group, I like to accept the leadership of someone else in deciding what the group is going to do.
B I like to supervise and to direct the actions of other people whenever I can.

43 A I like to keep my letters, bills, and other papers neatly arranged and filed according to some system.
B I like to be one of the leaders in the organizations and groups to which I belong.

44 A I like to ask questions which I know no one will be able to answer.
B I like to tell other people how to do their jobs.

45 A I like to avoid responsibilities and obligations.
B I like to be called upon to settle arguments and disputes between others.

46 A I would like to be a recognized authority in some job, profession, or field of specialization.
B I feel guilty whenever I have done something I know is wrong.

47 A I like to read about the lives of great men.
B I feel that I should confess the things that I have done that I regard as wrong.

48 A I like to plan and organize the details of any work that I have to undertake.
B When things go wrong for me, I feel that I am more to blame than anyone else.

49 A I like to use words which other people often do not know the meaning of.
B I feel that I am inferior to others in most respects.

50 A I like to criticize people who are in a position of authority.
B I feel timid in the presence of other people I regard as my superiors.

51 A I like to do my very best in whatever I undertake.
B I like to help other people who are less fortunate than I am.

52 A I like to find out what great men have thought about various problems in which I am interested.
B I like to be generous with my friends.

53 A I like to make a plan before starting in to do something difficult.
B I like to do small favors for my friends.

54 A I like to tell other people about adventures and strange things that have happened to me.
B I like my friends to confide in me and to tell me their troubles.

55 A I like to say what I think about things.
B I like to forgive my friends who may sometimes hurt me.

56 A I like to be able to do things better than other people can.
B I like to eat in new and strange restaurants.

57 A I like to conform to custom and to avoid doing things that people I respect might consider unconventional.
B I like to participate in new fads and fashions.

58 A I like to have my work organized and planned before beginning it.
B I like to travel and to see the country.

59 A I like people to notice and to comment upon my appearance when I am out in public.
B I like to move about the country and to live in different places.

60 A I like to be independent of others in deciding what I want to do.
B I like to do new and different things.

61 A I like to be able to say that I have done a difficult job well.
B I like to work hard at any job I undertake.

62 A I like to tell my superiors that they have done a good job on something, when I think they have.
B I like to complete a single job or task at a time before taking on others.

63 A If I have to take a trip, I like to have things planned in advance.
B I like to keep working at a puzzle or problem until it is solved.

64 A I sometimes like to do things just to see what effect it will have on others.
B I like to stick at a job or problem even when it may seem as if I am not getting anywhere with it.
65 A I like to do things that other people regard as unconventional.
B I like to put in long hours of work without being distracted.

66 A I would like to accomplish something of great significance.
B I like to kiss attractive persons of the opposite sex.

67 A I like to praise someone I admire.
B I like to be regarded as physically attractive by those of the opposite sex.

68 A I like to keep my things neat and orderly on my desk or workspace.
B I like to be in love with someone of the opposite sex.

69 A I like to talk about my achievements.
B I like to be regarded as physically attractive by those of the opposite sex.

70 A I like to do things in my own way and without regard to what others may think.
B I like to read books and plays in which sex plays a major part.

71 A I would like to write a great novel or play.
B I like to attack points of view that are contrary to mine.

72 A When I am in a group, I like to accept the leadership of someone else in deciding what the group is going to do.
B I feel like criticizing someone publicly if he deserves it.

73 A I like to have my life so arranged that it runs smoothly and without much change in my plans.
B I get so angry that I feel like throwing and breaking things.

74 A I like to ask questions which I know no one will be able to answer.
B I like to tell other people what I think of them.

75 A I like to avoid responsibilities and obligations.
B I feel like making fun of people who do things that I regard as stupid.

76 A I like to be loyal to my friends.
B I like to do my very best in whatever I undertake.

77 A I like to observe how another individual feels in a given situation.
B I like to be able to say that I have done a difficult job well.

78 A I like my friends to encourage me when I meet with failure.
B I like to be successful in things undertaken.

79 A I like to be one of the leaders in the organizations and groups to which I belong.
B I like to be able to do things better than other people can.

80 A When things go wrong for me, I feel that I am more to blame than anyone else.
B I like to solve puzzles and problems that other people have difficulty with.

81 A I like to do things for my friends.
B When planning something, I like to get suggestions from other people whose opinions I respect.

82 A I like to put myself in someone else's place and to imagine how I would feel in the same situation.
B I like to tell my superiors that they have done a good job on something, when I think they have.

83 A I like my friends to be sympathetic and understanding when I have problems.
B I like to accept the leadership of people I admire.

84 A When serving on a committee, I like to be appointed or elected chairman.
B When I am in a group, I like to accept the leadership of someone else in deciding what the group is going to do.

85 A If I do something that is wrong, I feel that I should be punished for it.
B I like to conform to custom and to avoid doing things that people I respect might consider unconventional.

86 A I like to share things with my friends.
B I like to make a plan before starting in to do something difficult.

87 A I like to understand how my friends feel about various problems they have to face.
B If I have to take a trip, I like to have things planned in advance.

88 A I like my friends to treat me kindly.
B I like to have my work organized and planned before beginning it.

89 A I like to be regarded by others as a leader.
B I like to keep my letters, bills, and other papers neatly arranged and filed according to some system.

90 A I feel that the pain and misery that I have suffered has done me more good than harm.
B I like to have my life so arranged that it runs smoothly and without much change in my plans.

91 A I like to have strong attachments with my friends.
B I like to say things that are regarded as witty and clever by other people.

92 A I like to think about the personalities of my friends and to try to figure out what makes them as they are.
B I sometimes like to do things just to see what effect it will have on others.

93 A I like my friends to make a fuss over me when I am hurt or sick.
B I like to talk about my achievements.

94 A I like to tell other people how to do their jobs.
B I like to be the center of attention in a group.

95 A I feel timid in the presence of other people I regard as my superiors.
B I like to use words which other people often do not know the meaning of.

96 A I like to do things with my friends rather than by myself.
B I like to say what I think about things.
97 A I like to study and to analyze the behavior of others.  
B I like to do things that other people regard as unconventional.

98 A I like my friends to feel sorry for me when I am sick.  
B I like to avoid situations where I am expected to do things in a conventional way.

99 A I like to supervise and to direct the actions of other people whenever I can.  
B I like to do things in my own way without regard to what others may think.

100 A I feel that I am inferior to others in most respects.  
B I like to avoid responsibilities and obligations.

101 A I like to be successful in things undertaken.  
B I like to form new friendships.

102 A I like to analyze my own motives and feelings.  
B I like to make as many friends as I can.

103 A I like my friends to help me when I am in trouble.  
B I like to do things for my friends.

104 A I like to argue for my point of view when it is attacked by others.  
B I like to write letters to my friends.

105 A I feel guilty whenever I have done something I know is wrong.  
B I like to have strong attachments with my friends.

106 A I like to share things with my friends.  
B I like to analyze my own motives and feelings.

107 A I like to accept the leadership of people I admire.  
B I like to understand how my friends feel about various problems they have to face.

108 A I like my friends to do many small favors for me cheerfully.  
B I like to judge people by why they do something—not by what they actually do.

109 A When with a group of people, I like to make the decisions about what we are going to do.  
B I like to predict how my friends will act in various situations.

110 A I feel better when I give in and avoid a fight, than I would if I tried to have my own way.  
B I like to analyze the feelings and motives of others.

111 A I like to form new friendships.  
B I like my friends to help me when I am in trouble.

112 A I like to judge people by why they do something—not by what they actually do.  
B I like my friends to show a great deal of affection toward me.

113 A I like to have my life so arranged that it runs smoothly and without much change in my plans.  
B I like my friends to feel sorry for me when I am sick.

114 A I like to be called upon to settle arguments and disputes between others.  
B I like my friends to do many small favors for me cheerfully.

115 A I feel that I should confess the things that I have done that I regard as wrong.  
B I like my friends to sympathize with me and to cheer me up when I am depressed.

116 A I like to do things with my friends rather than by myself.  
B I like to argue for my point of view when it is attacked by others.

117 A I like to think about the personalities of my friends and to try to figure out what makes them as they are.  
B I like to be able to persuade and influence others to do what I want to do.

118 A I like my friends to sympathize with me and to cheer me up when I am depressed.  
B When with a group of people, I like to make the decisions about what we are going to do.

119 A I like to ask questions which I know no one will be able to answer.  
B I like to tell other people how to do their jobs.

120 A I feel timid in the presence of other people I regard as my superiors.  
B I like to supervise and to direct the actions of other people whenever I can.

121 A I like to participate in groups in which the members have warm and friendly feelings toward one another.  
B I feel guilty whenever I have done something I know is wrong.

122 A I like to analyze the feelings and motives of others.  
B I feel depressed by my own inability to handle various situations.

123 A I like my friends to feel sorry for me when I am sick.  
B I feel better when I give in and avoid a fight, than I would if I tried to have my own way.

124 A I like to be able to persuade and influence others to do what I want.  
B I feel depressed by my own inability to handle various situations.

125 A I like to criticize people who are in a position of authority.  
B I feel timid in the presence of other people I regard as my superiors.

126 A I like to participate in groups in which the members have warm and friendly feelings toward one another.  
B I like to help my friends when they are in trouble.

127 A I like to analyze my own motives and feelings.  
B I like to sympathize with my friends when they are hurt or sick.

128 A I like my friends to help me when I am in trouble.  
B I like to treat other people with kindness and sympathy.

129 A I like to be one of the leaders in the organizations and groups to which I belong.  
B I like to sympathize with my friends when they are hurt or sick.
130 A I feel that the pain and misery that I have suffered has done me more good than harm.
B I like to show a great deal of affection toward my friends.

131 A I like to do things with my friends rather than by myself.
B I like to experiment and to try new things.

132 A I like to think about the personalities of my friends and to try to figure out what makes them as they are.
B I like to try new and different jobs—rather than to continue doing the same old things.

133 A I like my friends to be sympathetic and understanding when I have problems.
B I like to meet new people.

134 A I like to argue for my point of view when it is attacked by others.
B I like to experience novelty and change in my daily routine.

135 A I feel better when I give in and avoid a fight, than I would if I tried to have my own way.
B I like to move about the country and to live in different places.

136 A I like to do things for my friends.
B When I have some assignment to do, I like to start in and keep working on it until it is completed.

137 A I like to analyze the feelings and motives of others.
B I like to avoid being interrupted while at my work.

138 A I like my friends to do many small favors for me cheerfully.
B I like to stay up late working in order to get a job done.

139 A I like to be regarded by others as a leader.
B I like to put in long hours of work without being distracted.

140 A If I do something that is wrong, I feel that I should be punished for it.
B I like to stick at a job or problem even when it may seem as if I am not getting anywhere with it.

141 A I like to be loyal to my friends.
B I like to go out with attractive persons of the opposite sex.

142 A I like to predict how my friends will act in various situations.
B I like to participate in discussions about sex and sexual activities.

143 A I like my friends to show a great deal of affection toward me.
B I like to become sexually excited.

144 A When with a group of people, I like to make the decisions about what we are going to do.
B I like to engage in social activities with persons of the opposite sex.

145 A I feel depressed by my own inability to handle various situations.
B I like to read books and plays in which sex plays a major part.

146 A I like to write letters to my friends.
B I like to read newspaper accounts of murders and other forms of violence.

147 A I like to predict how my friends will act in various situations.
B I like to attack points of view that are contrary to mine.

148 A I like my friends to make a fuss over me when I am hurt or sick.
B I feel like blaming others when things go wrong for me.

149 A I like to tell other people how to do their jobs.
B I like to get revenge when someone has insulted me.

150 A I feel that I am inferior to others in most respects.
B I feel like telling other people off when I disagree with them.

151 A I like to help my friends when they are in trouble.
B I like to do my very best in whatever I undertake.

152 A I like to travel and to see the country.
B I like to accomplish tasks that others recognize as requiring skill and effort.

153 A I like to work hard at any job I undertake.
B I would like to accomplish something of great significance.

154 A I like to go out with attractive persons of the opposite sex.
B I like to be successful in things undertaken.

155 A I like to read newspaper accounts of murders and other forms of violence.
B I would like to write a great novel or play.

156 A I like to do small favors for my friends.
B When planning something, I like to get suggestions from other people whose opinions I respect.

157 A I like to experience novelty and change in my daily routine.
B I like to tell my superiors that they have done a good job on something, when I think they have.

158 A I like to stay up late working in order to get a job done.
B I like to praise someone I admire.

159 A I like to become sexually excited.
B I like to accept the leadership of people I admire.

160 A I feel like getting revenge when someone has insulted me.
B When I am in a group, I like to accept the leadership of someone else in deciding what the group is going to do.

161 A I like to be generous with my friends.
B I like to make a plan before starting in to do something difficult.
162 A I like to meet new people.
   B Any written work that I do I like to have precise, neat, and well organized.

163 A I like to finish any job or task that I begin.
   B I like to keep my things neat and orderly on my desk or workspace.

164 A I like to be regarded as physically attractive by those of the opposite sex.
   B I like to plan and organize the details of any work that I have to undertake.

165 A I like to tell other people what I think of them.
   B I like to have my meals organized and a definite time set aside for eating.

166 A I like to show a great deal of affection toward my friends.
   B I like to say things that are regarded as witty and clever by other people.

167 A I like to try new and different jobs—rather than to continue doing the same old things.
   B I sometimes like to do things just to see what effect it will have on others.

168 A I like to stick at a job or problem even when it may seem as if I am not getting anywhere with it.
   B I like people to notice and to comment upon my appearance when I am out in public.

169 A I like to read books and plays in which sex plays a major part.
   B I like to be the center of attention in a group.

170 A I feel like blaming others when things go wrong for me.
   B I like to ask questions which I know no one will be able to answer.

171 A I like to sympathize with my friends when they are hurt or sick.
   B I like to say what I think about things.

172 A I like to eat in new and strange restaurants.
   B I like to do things that other people regard as unconventional.

173 A I like to complete a single job or task at a time before taking on others.
   B I like to feel free to do what I want to do.

174 A I like to participate in discussions about sex and sexual activities.
   B I like to do things in my own way without regard to what others may think.

175 A I get so angry that I feel like throwing and breaking things.
   B I like to avoid responsibilities and obligations.

176 A I like to help my friends when they are in trouble.
   B I like to be loyal to my friends.

177 A I like to do new and different things.
   B I like to form new friendships.

178 A When I have some assignment to do, I like to start in and keep working on it until it is completed.
   B I like to participate in groups in which the members have warm and friendly feelings toward one another.

179 A I like to go out with attractive persons of the opposite sex.
   B I like to make as many friends as I can.

180 A I like to attack points of view that are contrary to mine.
   B I like to write letters to my friends.

181 A I like to be generous with my friends.
   B I like to observe how another individual feels in a given situation.

182 A I like to eat in new and strange restaurants.
   B I like to put myself in someone else's place and to imagine how I would feel in the same situation.

183 A I like to stay up late working in order to get a job done.
   B I like to understand how my friends feel about various problems they have to face.

184 A I like to become sexually excited.
   B I like to study and to analyze the behavior of others.

185 A I feel like making fun of people who do things that I regard as stupid.
   B I like to predict how my friends will act in various situations.

186 A I like to forgive my friends who may sometimes hurt me.
   B I like my friends to encourage me when I meet with failure.

187 A I like to experiment and to try new things.
   B I like my friends to be sympathetic and understanding when I have problems.

188 A I like to keep working at a puzzle or problem until it is solved.
   B I like my friends to treat me kindly.

189 A I like to be regarded as physically attractive by those of the opposite sex.
   B I like my friends to show a great deal of affection toward me.

190 A I feel like criticizing someone publicly if he deserves it.
   B I like my friends to make a fuss over me when I am hurt or sick.

191 A I like to show a great deal of affection toward my friends.
   B I like to be regarded by others as a leader.

192 A I like to try new and different jobs—rather than to continue doing the same old things.
   B When serving on a committee, I like to be appointed or elected chairman.

193 A I like to finish any job or task that I begin.
   B I like to be able to persuade and influence others to do what I want.
194 A I like to participate in discussions about sex and sexual activities.
   B I like to be called upon to settle arguments and disputes between others.

195 A I get so angry that I feel like throwing and breaking things.
   B I like to tell other people how to do their jobs.

196 A I like to show a great deal of affection toward my friends.
   B When things go wrong for me, I feel that I am more to blame than anyone else.

197 A I like to move about the country and to live in different places.
   B If I do something that is wrong, I feel that I should be punished for it.

198 A I like to stick at a job or problem even when it may seem as if I am not getting anywhere with it.
   B I feel that the pain and misery that I have suffered has done me more good than harm.

199 A I like to read books and plays in which sex plays a major part.
   B I feel that I should confess the things that I have done that I regard as wrong.

200 A I feel like blaming others when things go wrong for me.
   B I feel that I am inferior to others in most respects.

201 A I like to do my very best in whatever I undertake.
   B I like to help other people who are less fortunate than I am.

202 A I like to do new and different things.
   B I like to treat other people with kindness and sympathy.

203 A When I have some assignment to do, I like to start in and keep working on it until it is completed.
   B I like to help other people who are less fortunate than I am.

204 A I like to engage in social activities with persons of the opposite sex.
   B I like to forgive my friends who may sometimes hurt me.

205 A I like to attack points of view that are contrary to mine.
   B I like my friends to confide in me and to tell me their troubles.

206 A I like to treat other people with kindness and sympathy.
   B I like to travel and to see the country.

207 A I like to conform to custom and to avoid doing things that people I respect might consider unconventional.
   B I like to participate in new fads and fashions.

208 A I like to work hard at any job I undertake.
   B I like to experience novelty and change in my daily routine.

209 A I like to kiss attractive persons of the opposite sex.
   B I like to experiment and to try new things.

210 A I feel like telling other people off when I disagree with them.
   B I like to participate in new fads and fashions.

211 A I like to help other people who are less fortunate than I am.
   B I like to finish any job or task that I begin.

212 A I like to move about the country and to live in different places.
   B I like to put in long hours of work without being distracted.

213 A If I have to take a trip, I like to have things planned in advance.
   B I like to keep working at a puzzle or problem until it is solved.

214 A I like to be in love with someone of the opposite sex.
   B I like to complete a single job or task before taking on others.

215 A I like to tell other people what I think of them.
   B I like to avoid being interrupted while at my work.

216 A I like to do small favors for my friends.
   B I like to engage in social activities with persons of the opposite sex.

217 A I like to meet new people.
   B I like to kiss attractive persons of the opposite sex.

218 A I like to keep working at a puzzle or problem until it is solved.
   B I like to be in love with someone of the opposite sex.

219 A I like to talk about my achievements.
   B I like to listen to or to tell jokes in which sex plays a major part.

220 A I feel like making fun of people who do things that I regard as stupid.
   B I like to listen to or to tell jokes in which sex plays a major part.

221 A I like my friends to confide in me and to tell me their troubles.
   B I like to read newspaper accounts of murders and other forms of violence.

222 A I like to participate in new fads and fashions.
   B I feel like criticizing someone publicly if he deserves it.

223 A I like to avoid being interrupted while at my work.
   B I feel like telling other people off when I disagree with them.

224 A I like to listen to or to tell jokes in which sex plays a major part.
   B I feel like getting revenge when someone has insulted me.

225 A I like to avoid responsibilities and obligations.
   B I feel like making fun of people who do things that I regard as stupid.
## Edwards Personal Preference Schedule

### DIRECTIONS

Use the special pencil.

Make your marks heavy and black.

**EXAMPLE**

If A fits you better, mark | A |
If B is more like you, mark | B |

Erase completely any answer you wish to change.

Make one choice for every pair of statements.

Do not skip any pairs.

If you find it hard to choose between two statements just make the best choice you can. Don't spend too much time on any one pair - your first impression is good enough.

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The Psychological Corporation, New York 17, N.Y.
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Edwards Personal Preference Schedule

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Name__________________________
Date__________________________

All information obtained on this questionnaire will be held in strictest confidence. There are no right and wrong answers. I simply would like your honest opinion on each of the following statements.

Students find some subject matter more interesting and satisfying than others. On the following list, check the subject matter area in which you have had the greatest number of course credit hours. Be sure to check one and only one.

Child Development & Family Relationships
Food and Nutrition
Home Economics Education
Household Economics & Management
Housing and Design
Institution Management
Textiles & Clothing

Now, in the upper right-hand corner on each succeeding page write your name and under your name the abbreviation for the subject matter area you checked in the list above. Your name and the subject matter area in which you have had the greatest number of course credit hours should appear on each page.

I am interested in knowing how you feel about the course work you have taken in the subject matter area you checked.

Directions: Circle the appropriate number following each question to indicate your degree of satisfaction with the courses you took in the area checked above.

Read carefully the questions and think about your answer before responding. I realize the questions are complex, but I am asking you to make an over-all evaluation of each question even though you may feel differently about some of the points raised.
1. How well satisfied are you with your progress or achievement in terms of feeling you have done your best, have accomplished tasks requiring skill and effort or have done a difficult job well?

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I feel this way because _____________________________________________


2. To what extent have you received help or suggestions, been able to find out what others think or to know what was expected of you?

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I feel this way because _____________________________________________


3. How well satisfied are you that your written work has been neat and organized or that you have been given time to make a plan before starting on difficult assignments?

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I feel this way because _____________________________________________
Name _________________________

Subject Matter______________________

4. To what extent have you been satisfied with the opportunities afforded you to demonstrate your mastery of skills or knowledge in the area, to talk of personal experiences and/or achievements?

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I feel this way because____________________________________

5. Are you satisfied with the freedom you have been given to say what you think, to work independently of others, to develop your own methods of doing the work, or to criticize an authority whose point of view is not in accord with your own?

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I feel this way because____________________________________

6. To what extent have you been given the opportunity to work with others, to share or do the work cooperatively with others rather than alone?

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I feel this way because____________________________________
Name ________________________________

Subject Matter _________________________

7. To what extent has the work helped you analyze your own motives and feelings, enabled you to observe others, assisted you in understanding how others feel or helped you predict how others will act?

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I feel this way because ________________________________________


8. How well satisfied are you with the help and encouragement you received, that you had been treated kindly or that others were sympathetic to your problems and concerns?

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<td>well saturated</td>
<td>well dis-satisfied</td>
<td>satisfied</td>
<td>satisfied</td>
</tr>
</tbody>
</table>

I feel this way because ________________________________________


9. How well satisfied are you with the opportunities afforded you to argue a point of view, to supervise or direct others, or to demonstrate qualities of leadership or organizational ability?

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<td>fairly</td>
<td>somewhat</td>
<td>frankly</td>
</tr>
<tr>
<td></td>
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<td>well saturated</td>
<td>well dis-satisfied</td>
<td>satisfied</td>
<td>satisfied</td>
</tr>
</tbody>
</table>

I feel this way because ________________________________________


10. To what extent are you satisfied with the opportunities afforded you to ask questions, to explain when things have not gone well or to consult with staff about difficulties or areas in which you feel inadequate?

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<th>5</th>
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<td>satisfied</td>
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<tr>
<td>I feel this way because</td>
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<td></td>
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</table>

11. Are you satisfied that this preparation will enable you to help others, to assist the less fortunate, or to be generous toward others you wish to help or teach?

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<td>I feel this way because</td>
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</table>

12. To what extent are you satisfied with the opportunities given you to try new and different things, to experiment and/or to be creative in your work?

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<th>5</th>
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<td>I feel this way because</td>
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13. To what extent have you been stimulated by the subject matter or the instructor(s) to the point of putting in long hours, of sticking at a problem because of the interest it held for you or to the point of becoming irritated because of interruptions when you are working?

1 ________ 2 _____ 3 _______ 4 _________ 5

Very well satisfied fairly well somewhat dissatisfied frankly satisfied

I feel this way because ____________________________________________

14. How well satisfied are you that this preparation will aid you in becoming a more effective marriage partner, a more adequate homemaker, or a better woman?

1 ________ 2 _______ 3 _______ 4 ________ 5

Very well satisfied fairly well somewhat dissatisfied frankly satisfied

I feel this way because ____________________________________________

15. To what extent have you been satisfied with the opportunities of attacking contrary points of view, of openly criticizing or of demonstrating to others you disagree with them?

1 ________ 2 _______ 3 _______ 4 ________ 5

Very well satisfied fairly well somewhat dissatisfied frankly satisfied

I feel this way because ____________________________________________
16. All things considered, to what extent are you satisfied with your preparation in this area?

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<th>5</th>
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<td>very well satisfied</td>
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<td>somewhat dissatisfied</td>
<td>frankly dissatisfied</td>
</tr>
</tbody>
</table>

I feel this way because


Intercorrelations on the Edwards Pd for Three Groups: COFH (n=50), F10 (n=35), and HOTC (n=34)

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<th>HOTC</th>
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<td>4-exh FNIW</td>
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<td>5-aut FNIW</td>
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<td>6-aff FNIW</td>
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**Significance at .01**
**Significance at .05**

**r-table**

```
.01 .05
CDFH afewah(55) .37 .27
F10 afewah(35) .45 .35
HOTC afewah(35) .45 .35
```
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**Significant at .01**
+S+Significant at .05

\* p < .01
** p < .001

Table 9.4: Correlations on the 3-Rating Dissatisfaction Scale for Three Groups: CFRF (N=50), FRNU (N=50), and HOTC (N=50).
Helen G. Canoyer, Dean         September 8, 1961

I am looking forward to working with the Class of 1962 and am anxious to become acquainted with you as soon as possible. I hope that you will come in to see me early in the semester. My office will be Room 107, the one Mrs. Emerson had last year.

This fall I plan to undertake some research, the results of which I hope will be of benefit to members of the Counseling Service and future students in the College. This research can best be accomplished with the cooperation of the present Senior Class. For this reason I am asking you to meet with me on Wednesday, September 20th at 9:30 a.m. in the Amphitheatre of Martha Van Rensselaer Hall for the purpose of administering a Personal Preference Inventory. This will take between forty minutes and an hour. Data obtained from this session will be available to seniors interested in the results of their inventory and I shall be glad to discuss the results with each of you.

Sometime later in the term each of you will be asked to fill out a blank containing statements regarding your area of specialization. This will probably take you less than 15 minutes. Both the inventory and the blank have no right and wrong answers, but rather are requests for your opinion.

All information obtained from either of these sources will be held in the strictest confidence.

Sincerely yours,

Nancy A. Hoddick
Assistant Professor
Counseling Service

NAH/pt

100
APPENDIX I
Duncan's Multiple Range Test on the Significant F's on the EPPS Between Three Groups: CDFR (N=50), HDTC (N=34) and FNIM (N=33)

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<th>HDTC</th>
<th>CDFR</th>
<th>FNIM</th>
<th>Shortest Significant Ranges</th>
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<td>19.82</td>
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<td>int</td>
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<td>14.46</td>
<td>12.44</td>
<td>10.32</td>
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<td>14.46</td>
<td>11.69</td>
<td>26.11++</td>
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<td>12.44</td>
<td>14.63+</td>
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++Significant at .01 level of confidence.
+Significant at .05 level of confidence.
Duncan's Multiple Range Test on the Significant F's on the GRE Quantitative Score Between Three Groups: CDFR (N=50), HDTC (N=34), and FNIM (N=33)

<table>
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<td>104.17</td>
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++Significant at .01 level of confidence.
+Significant at .05 level of confidence.
Duncan's Multiple Range Test on the Significant F's on Satisfaction-Dissatisfaction Questionnaire Between Three Groups: CDFR (N=50), HDTC (N=34) and FNIM (N=33)

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<thead>
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<td>int</td>
<td>4.16</td>
<td>5.38++</td>
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<td>R2=3.23 2.44</td>
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++Significant at .01 level of confidence.
+Significant at .05 level of confidence.
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Nancy Anna Hoddick was born in Buffalo, New York, on July 13, 1926. She graduated from Kenmore Senior High School in 1944, entered Boston University, Sargent College, the following September, and received the degree Bachelor of Science in June, 1948.

The fall of that same year, she joined the faculty of The Buffalo Seminary as a teacher of Health and Physical Education. In September, 1951, she accepted a similar position on the faculty of Kenmore Junior High School.

She entered the graduate school of Cornell University the following September; and while pursuing graduate studies held an assistantship in the Office of the Dean of Men and Dean of Women serving as a Graduate Resident in the dormitory.

In 1954, she joined the faculty of the New York State College of Home Economics at Cornell as an Instructor and Counselor of Students.

September, 1959, she entered The Ohio State University as a candidate for the degree Doctor of Philosophy with a major in Educational Psychology. For the next two years, while completing her course requirements, she held a teaching assistantship in the Department of Psychology.

The fall of 1961, she returned to the New York State College of Home Economics as an Assistant Professor and Counselor of Students.