

AN ABSTRACT OF THE THESIS OF

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Doctoral Students

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The study was designed to determine the effect of doctoral study upon the marriages of doctoral students.

The sample for the research was drawn from the total population of married doctoral students enrolled in Oregon State University/Western Oregon State College's School of Education and Oregon State University's College of Home Economics. The student spouses in the sample included couples who had completed their residency year or the bulk of their course work.

These couples were interviewed in depth using the Primary Communications Inventory, the Broderick Commitment Scale, the Locke-Thomes Marital Adjustment Test, as well as a demographic questionnaire. Retrospective research techniques were used.

Analysis of covariance, analysis of variance and linear regression were utilized in testing the five hypotheses. Based on the data collected and analyzed for this study:

1. Both perceived commitment and perceived communication were found to be significantly related to marital adjustment for both doctoral students and their spouses.

2. There was no significant difference in the strength of marital adjustment over the course of doctoral study for doctoral students and their spouses. The path of marital adjustment

revealed a closely parallel curvilinear pattern for both groups.

3. No significant difference was found in perceived marital adjustment for male doctoral students as compared to that for female doctoral students. This pattern reflected levels of communication and commitment for these groups.

4. None of the demographic variables analyzed had any significant effect on marital adjustment.

The Impact of Doctoral Education on the
Marriages of Doctoral Students

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♦ DEDICATION ♦

I wish to dedicate this dissertation to my father, Albert McVety. His profound belief in education rubbed off and started this entire process.

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My husband, Stan, and my children, James and Tanya, were the ones who made this dissertation possible. Stan never waived from the belief that it was "my turn now." James never complained that his mother was gone, but faithfully ran up the phone bill keeping me informed of what was going on in his life. Tanya became the best roommate a graduate student could have.

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TABLE OF CONTENTS

<u>Chapter</u>		<u>Page</u>
I	INTRODUCTION	1
	Background of the Problem	2
	Purpose of the Study.	5
	Objectives.	5
	Delimitations of the Study.	6
	Limitations of the Study.	6
II	REVIEW OF THE LITERATURE	8
	Introduction.	8
	Divorce in the United States.	8
	Marriage and Education.	13
	Graduate Study and Married Students	15
	Factors Associated with Marital Adjustment.	20
	Communication and Marital Adjustment of Students	29
	Commitment and Marriages.	33
III	RESEARCH DESIGN.	40
	Procedures.	40
	Population and Sample	41
	Instrumentation	43
	Locke-Thomes Marital Adjustment Test	43
	Broderick Commitment Scale (BCS)	45
	Primary Communication Inventory (PCI).	46
	Draw-a-Graph	47
	Demographic Questionnaire.	47
	Data-Collection-Procedures.	48
	The Interview.	49
	Assumptions	50
	Hypotheses.	51
	Treatment of the Data	52
	Analysis of Covariance (ANCOV)	53
	Analysis of Variance (ANOVA)	54
	Multiple Regression.	55
IV	ANALYSIS OF THE DATA	56
	Findings Relative to the Hypotheses	57
	Findings Relative to H01a, H01b, and H01c.	57
	Findings Relative to H02a, H02b, and H02c.	59
	Findings Relative to H03	61
	Findings Relative to H04	64
	Findings Relative to H05	68
	Additional Findings Related to the Data	72
	Spouses of Doctoral Students	72
	Females Compared to Males.	75

	Summary for Data Analysis.	78
	Other Related Findings	79
V	SUMMARY, CONCLUSIONS AND RECOMMENDATIONS. . . .	87
	Summary.	87
	Summary of the Findings.	89
	Discussion of the Findings and Related	
	Conclusions.	90
	Summary of Conclusions	96
	Recommendations for Further Action	96
	Suggestions for Further Research	98
	BIBLIOGRAPHY.	101
	APPENDICES	
A	Introductory Letter	114
B	Postcard.	116
C	Agreement/Disagreement Scale.	118
D	Locke-Thomes Marital Adjustment Test.	120
E	Broderick Commitment Scale.	123
F	Primary Communication Inventory	126
G	Graph - Degree of Commitment.	129
H	Graph - Degree of Communication	131
I	Graph - Degree of Marital Adjustment.	133
J	Demographic Questionnaire	135
K	Narrative Questions Ending Interview.	137

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	Marital Adjustment for Doctoral Students and Spouses at Three Different Program Stages	63
2	Marital Adjustment Levels for Male and Female Doctoral Students	66
3	Levels of Commitment for Male and Female Doctoral Students at Four Stages of Doctoral Study	67
4	Communication Levels for Male and Female Doctoral Students at Four Stages of Doctoral Study	68
5	Test for Reduced Model	70
6	Marital Adjustment of Student Spouses at Various Stages of the Doctoral Program	73
7	Perceived Levels of Commitment for Male and Female Spouses at Various Stages of the Doctoral Program	74
8	Perceived Communication Levels of Doctoral Student Spouses at the Various Stages of the Doctoral Program	75
9	Perceived Commitment Levels at Various Stages of Doctoral Study when the Female is the Doctoral Student	76
10	Marital Adjustment at Various Stages of the Doctoral Program when the Male is the Doctoral Student	77
11	Perceived Commitment Levels at Various Stages Of Doctoral Study when the Male is the Doctoral Student	77

LIST OF TABLES

<u>Table</u>		<u>Page</u>
I	Demographic and Biographic Profile of Sample	44
II	Spouses' Mean Scores and Standard Deviations on Locke-Thomes Marital Adjustment Test	58
III	Spouses' Means and Standard Deviations on the Broderick Commitment Scale	58
IV	Analysis of Covariance between Marital Adjustment and Commitment for Doctoral Students and Their Spouses	59
V	Spouses' Means and Standard Deviations on the Primary Communication Inventory	60
VI	Analysis of Covariance between Marital Adjustment and Communication for Doctoral Students and Their Spouses	61
VII	Cell Means for Marital Adjustment for Doctoral Students and Their Spouses at Three Stages of Doctoral Study	62
VIII	Standard Deviations in Marital Adjustment Levels for Doctoral Students and Spouses at Three Program Stages	63
IX	Analysis of Variance for Marital Adjustment at Three Stages of Doctoral Study	64
X	Analysis of Variance for Perceived Marital Adjustment of Male and Female Doctoral Students	65
XI	Analysis of Variance for All Demographic Variables for Doctoral Students and Their Spouses	69
XII	Analysis of Variance for Living Arrangements of Couples	71
XIII	Sum of Squares and Levels of Significance for Demographic Variables	71

The Impact of Doctoral Education on the Marriages of Doctoral Students

CHAPTER I

INTRODUCTION

The democratic ideology places high value on the family and on the right of each individual to educational opportunities; thus the student marriage is of vital concern to our society and in a similar fashion to the institution of higher learning [Aller].

Education has been viewed as the path to the American dream of a better, richer, happier life [Kallen] and as an important vehicle for change [Darkenwald]. Parallel to this view has been the view that the family represents the cornerstone of American society.

As the educational attainment level of the adult population has risen over the last two decades, there has been a significant strengthening of the belief that more education equates to a happier life [Cross]. The net result has been an exponential growth in the participation of educated adults in continuing educational opportunities.

By contrast, the institution of marriage has suffered dramatic challenges to the concept that the cornerstone of adult happiness equates to marriage. During the last two decades, divorce rates have increased at an alarming rate. In 1980, the marriage rate in Oregon was 8.7 marriages per 1000 population compared to a divorce rate showing a ratio of 77 divorces to every 100 marriages [Benton County Department of Health].

Research conducted on the impact of education and, in particular, graduate education on the marriage has shown that the chances of the survival of a marriage during a period when one or both spouses is/are in a graduate program averages less than one

in six [Centra]. Thacker identified this problem and found the problem to be even more pronounced for doctoral students than for masters' students [Thacker]. The Carnegie Commission reported that graduate students said that they would have been happier had they never entered graduate school [Feldman].

The idea that two of the most important elements in American society, education and marriage, appear to be negatively related represents an important challenge to educators. The need for contemporary data relative to this relationship and its impact on both education and marriage constitutes the basic purpose for this study.

Background of the Problem

In 1938, the Association of School Administrators and the Educational Policies Committee of the National Education Association issued a "Joint Statement on the Purposes of Education in American Democracy." The comprehensive description centered around four desired goals: self-realization, economic efficiency, civic responsibility and human relationships [American Association of School Administrators].

Over the next decades, textbooks continued the emphasis on education as an important instrument for improvement of the quality of personal and group living. National concern focused on education's effect on the nation's greatest resource--its young people [DeYoung].

Since World War II, higher education institutions have shown a rapidly changing growth pattern. While the student population prior to this time was comprised primarily of the eighteen- to twenty-year-old group, the number of persons over twenty-five seeking higher education will have increased from eleven million in 1970 to twenty-two million by 1990 [Weathersby].

According to statistics compiled from a sampling of students enrolled in American graduate schools in Fall 1967, sixty percent of all graduate students were married [Stebbins]. The continued influx of this subculture into American colleges and universities

indicates a "persistent trend toward combining marriage and the pursuit of higher education" [Hamer].

Along with the marked increase of married students attending graduate school has come an increase in the rate of divorce for this group. By 1975, divorce statistics for doctoral students indicated that the chances for continued success of their marriages averaged less than one in six [Centra].

Though there has been a limited amount of research relating directly to the predicament of the married doctoral student, major concerns have surfaced. The findings have indicated a direct contradiction to the purposes of education regarding the preservation of human relationships. Even more central is the dichotomy which has become apparent between two major components of American life: the institution of marriage and the right to educational opportunities [Aller].

Graduate study involves major life transitions. While education should present positive changes in terms of self-actualization [Maslow] and economic status [Hamer], for student couples the changes that do take place primarily involve losses rather than additions [Namir]. Losses which impact the marital/family unit and which have been found to be affected by the pursuit of education center around: changes in socioeconomic status; changes resulting from intensity of pursuit of high levels of academic achievement; changes in basic attitudes and value systems; changes in availability and use of time; and changes resulting from the adjustment that must necessarily take place in the marriage.

In a 1977 study on the impact of graduate and professional study on the marital adjustment of graduate couples, it was found that such study appears to have a negative effect on marital adjustment and that the impact was greater at the doctoral level than at the master's [Thacker]. Half of the families in an additional study at the University of Idaho also indicated adjustment problems of varying origin and degree [Aller].

Whitmer found combining college attendance with marriage and parenthood was a major cause of tension. "Family size and pressure

associated with graduate study can give having children a negative value" [Christenson and Philbrick].

Adjustment requires redefinition in terms of what is possible within the prescription of traditional beliefs and values [Klasman]. Changes in life situation and experience of spouses may cause incompatibility in marital role performance of one spouse and role expectations of the other spouse. Both of these are necessary factors for adjustment. If this happens, the marriage may become strained and spouses may experience negative feelings about each other and their marriage [Hurvitz].

When one partner enters graduate school, both experience a degree of role dissatisfaction even though it may not be apparent immediately. Individuals indicate the need to shift their concentration from the marital/family relationship to the daily demands of the graduate program. They also reported that this shift in concentration made them less likely to be sensitive to the changes occurring in their relationship [Epstein].

In order to cope with this shift in concentration, a great degree of commitment to the planned pursuit of graduate study is required from both spouses. Research findings suggest that commitment to a course of action or to a person may have a powerful effect on behavior, perceptions and emotions [Broderick and O'Leary]. Whether adaptation of a person's concept of the family relationship encourages individual achievement depends more on commitment to the opportunity structure and the need for mutual individual protection than on family traditions in society [Marris]. Thus, there appears to be a need to explore the possible link between graduate study, marriage and commitment. The demands of graduate school leave little time for spouses to be together and, even though the level of commitment may be great, graduate study may also cause shifts in commitment.

Research also indicates a positive correlation between marital adjustment and the ability to communicate [Narvin]. Functional issues of marriage can bring problems and place demands on the ability to communicate. Graduate study can force separation by

physical distance as is the case of many students who are forced to leave a spouse or family temporarily in another location. Separation can also be due to the intense concentration required by the program at the expense of family time.

The lack of opportunity for verbal and non-verbal communication may promote misunderstandings which can cause even greater alienation and can bring the couple to the divorce courts [Altman].

The background information indicates that marital adjustment could be related to the degree of impact on the marriages of doctoral couples as measured through levels of communication and commitment. It is hoped that further research might contribute to a better understanding of the factors involved in the perpetuation of the marital relationship in times of stress and thus provide help to future doctoral students by alerting them to areas of concern and to possible strategies for marital survival.

Purpose of the Study

The purpose of this study was to determine the effect of doctoral study upon the marriages of doctoral students.

Objectives

The major objectives of the study were:

1. to determine if perceived marital adjustment is related to each spouse's degree of commitment to marriage and the pursuit of doctoral study;
2. to determine if perceived marital adjustment is related to the level of communication between the spouses at various stages of the doctoral process;
3. to determine if there is a predictable pattern of marital adjustment for male doctoral couples during the course of

doctoral study which differs from the pattern of marital adjustment for female doctoral couples; and

4. to determine if selected demographic variables could be related to marital adjustment during the course of doctoral study.

Delimitations of the Study

The generalizability of the study findings are delimited by the following:

1. This study was conducted on two campuses of a state university and restricted to doctoral students enrolled in education or home economics.
2. This study was limited to doctoral students enrolled in EdD or PhD programs in OSU-WOSC's School of Education or in Oregon State University's College of Home Economics.
3. All subjects had completed the majority (approximately 75%) of their course work and had put in their residence year.
4. Only those subjects and their spouses who willingly agreed to participate were included in the study.
5. The sample was limited to those students socialized to American ways of life.

Limitations of the Study

The generalizability of the study findings may be limited because of the following:

1. Due to extreme distance and resulting travel expenses, some interviews were conducted over the telephone.
2. Data collection was accomplished by interviews utilizing self-reporting and retrospective research techniques.
3. Married, separated and couples divorced during the stages of the doctoral programs were included in the sample.

4. Both new and modified instruments were utilized during the course of the research.
5. Some of the instruments, while widely utilized in the literature by established research professionals, did not have current validity data available.
6. Respondents' answers were subject to their willingness to provide accurate information.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Statistics compiled in 1977 from a sampling of students enrolled in American graduate schools indicated that sixty percent of all graduate students were married [Stebbins, 1977]. Two years earlier, divorce statistics for doctoral students indicated that the chances for continued success of their marriages were less than one in six [Centra]. These statistics focus on the two main concerns that are the impetus for this study: graduate education and marriage.

The existing literature related to marriage and education particularly focusing on marital adjustment of students is reviewed and presented in this chapter. As a part of the study, two other variables were isolated as possible factors associated with marital adjustment. These variables, commitment and communication, are also explored in the literature.

The literature review begins with the broad problem of divorce in the United States and narrows its focus to specific variables affecting the doctoral student marriage. The literature is divided into sections which are presented in the following order:

1. Marriage and Divorce in the United States
2. Marriage and Education
3. Graduate Study and Married Students
4. Communication and Marital Adjustment
5. Commitment and Marriage.

Divorce in the United States

It is impossible to obtain from official sources the necessary comprehensive facts on the stability of family life that are

needed to evaluate that problem fully [Carter]. According to Samuel Preston in his 1975 study on American marriages ending in divorce:

. . . all indicators of the incidence of divorce rose considerably between 1969 and 1973. The ratio of divorces to marriages rose from .298 to .401 and the divorce rate went from .0127 to .0185. In the absence of any firm theoretical base, it seems justifiable to conclude that the percent of marriages ending in divorce under the rate of 1973 was in the lower to mid-forties.

Further national statistics reported in 1979 indicate 1.1 million divorces and 2.2 million marriages in 1979, with the divorce rate at 5.1 per 1000 population and the marriage rate at 10.3 per 1000 population. "If the current level of divorce continues on a lifetime basis, the proportion of marriages ending in divorce may be close to 40%" [Glick].

The collection of vital statistics which include divorce statistics is the responsibility of each state and differs from the federally collected national census [Carter]. The State of Oregon's 1982 vital statistics indicate an alarming divorce to marriage ratio of 69.4 divorces to 100 marriages. However, this does indicate a decline from the 1980 ratio of 77 divorces to 100 marriages [Oregon Department of Vital Statistics].

These social statistics dealing with divorce rates coupled with the declining birth rate and the increasing ratio of juvenile crime have been watched by researchers with alarm [Weil, 1972; Yorburg, 1973]. There have been many studies since the mid-1960's addressing causes for this apparent breakdown in the family unit.

In 1966, Levinger studied 600 pre-divorce interviewees in Cleveland. The reasons for divorce, according to Levinger's findings, possibly centered around social class as a variable. The reasons why the lower and middle class wives in his study were seeking divorce centered around physical abuse, drinking and financial problems. Individuals who represented a higher social class were more concerned with emotionally related issues, such as excessive demands, lack of love and infidelity.

Statistics compiled by the U.S. Department of Health, Education and Welfare in 1973 indicate that the duration of marriage at time of divorce has become shorter, that the divorce rate of those individuals in first marriages has increased, and that the divorce rate is higher for those persons married at an earlier age. The divorce rate is higher among blacks than other races. Those individuals with college educations are less likely to be divorced than those with a high school education and those marriages without children are more susceptible to divorce than those with children.

In a 1970 study of 4452 households [Renne] in Alameda County, California, data indicated that 23 percent of the females and 18 percent of the males were dissatisfied in their marriages. This difference was greatly reduced for husbands at higher socioeconomic levels and for couples without children. Black women were especially dissatisfied. The relationship between socioeconomic status and marital satisfaction was also closer for blacks than for whites. These statistics strongly support the previous study indicating a possible link between social class and marital stability.

The Renne study also indicated that people currently raising children were more likely to be dissatisfied than those who had never had children or whose children were already raised. Dissatisfaction did not, however, increase proportionately as the number of children increased.

A close relationship was also found between marital happiness and general happiness and job satisfaction. Negative factors associated with marital unrest were heavy drinking and feelings of isolation. The feelings of social isolation were measured by lack of close relatives and absence of intimate associates. General mobility in the present business world was addressed in a study of 128 managers and their wives [Renshaw] and was pointed out as a strong factor in disconnected social relationships and isolation.

It is clear that income level and unemployment affect marital stability and that occupational prestige and money are correlates of life style and family patterns [Rogers].

The more the individual is integrated into the economic opportunity structure as measured by occupational status, education and income, the greater the cohesiveness of the family and marital satisfaction [Scanzoni].

In a study of 140 Minneapolis adults, Miller dealt with the impact on marital satisfaction of socio-economic status as well as with the effect attributed to the number of children in the family. The findings indicated that socio-economic status was a stronger causal factor of marital satisfaction than the number of children. Both factors did, however, impact on the time available for couples to engage in companionship activities. This negative effect on time in turn affected marital satisfaction.

Not only is the amount of time spent together important, but the timing of that time is also significant. If the time available for one spouse is not synchronized with the time available to the other spouse, it may not improve the quality of life at all [Reisman].

Marini [1982], in looking at 3934 married respondents from large metropolitan areas in the United States, concluded that the relationship of marital companionship to both marital happiness and overall happiness may be seen as a result of the negative relationship between the amount of time a couple spends together and feelings of negative affect. The amount of time spent together is not associated with general feelings of positive affect but is only related to general feelings of negative affect.

Problems concerned with lack of time spent together were also found in the literature related to the amount of travel associated with job success. Renshaw [1980], studying 128 managers and their wives, found problems resulting from disconnected social relationships and from increased responsibility for the individual left with maintaining family life as well as from guilt on the part

of the traveling spouse that he/she had deserted the family. The family system may begin to shut out the traveling spouse as the spouse who has had the responsibility for the family may not want to give up the role of family leader [Rogers]. Further related problems that also appeared in the literature as a result of travel were infidelity and a growing gap of knowledge and life experiences between husbands and wives [Levinger; Rogers].

The perceived change in power structure opens a possible problem area involving the partners' perceptions of themselves as well as their perceptions of their partner. Studying 259 male and female undergraduates, Gerber found marital satisfaction to be highest when both wives and husbands were successful or enacted traditional roles. A man's sense of sexual identity was found to be most affected by his salary, his career success and his wife's willingness to play a role that supported his ego. This was not correspondingly true for women. For women, individual dissatisfactions were projected onto the marital relationship resulting in a negative affect on marital satisfaction..

A cross-sectional study of 900 Detroit wives [Blood and Wolfe] found the husband's prestige or social standing to be the most important source of marital satisfaction. There was found to be a relationship between the spouses' attitudes towards traditional versus emergent forms regarding sex roles and the quality of marital adjustment [Stein]. This resulting congruence of the male/husband self-concept and that held of him by his wife have been repeatedly found to be related to marital adjustment [Koltar; Taylor; Luckey].

Conflicting findings have emerged relating to age at marriage and marital satisfaction. Lee studied 389 couples of Catholic and Lutheran churches and found that those married at young ages were more inclined to be in marriages with lower socio-economic status. It was concluded that the resulting financial stress and dissatisfaction was the factor associated with marital dissatisfaction, not the age of the individuals at marriage. Conversely, the National

Opinion Reserach Center surveys from 1973 to 1975 [Glenn and Weaver] found little or no relationship between age at marriage and socio-economic status.

A final issue that is not adequately dealt with in the literature is the importance of fluctuations due to different stages of adult development. Sheehy [1977] reported four changed perceptions during life's passages: the individual's interior sense of self and how individuals look at themselves in relation to others; the proportion of 'safeness to danger' resulting from changing perception; time perceived to be running out; and a shift in the sense of 'aliveness' resulting in concern over possible stagnation. These concerns are manifested in life-cycle research by other developmentalists as well.

Cross [1981] identified the phase of 23 to 28 years of age as moving into the adult world, 29 to 34 years of age as a phase of searching for stability and 39 to 42 years of age as a time of becoming one's own person. Marker events occur during these phases. The earliest stage is characterized by events centering on establishing a marriage and family. As life passes, events lead to progress in career or a change, possible separation or divorce or remarriage and possible return to school. At a slightly later age, 37 to 42, women tend to enter careers and education.

Marriage and Education

Victor Stone (1984), president of the American Association of University Professors, recently wrote about the benefits that the student and the family of the student will gain as a result of education. He spoke of the resulting richness of life in the family unit as well as the societal benefit of the training of the educated individual in coping with life's problems.

In the same year Frank Rhodes, president of Cornell University, talked about the business of education in cultivating the human mind, nurturing the human heart and promoting the art of

living. Yale economists, Dresch and Waldenberg, in analysis of student enrollments speak of the most important new challenge to the nation's colleges and universities as being the education of needed human resources as well as the conducting of needed research. Students over 25 years of age equalled 38 percent of college enrollment in 1978 and will rise to 47 percent by 1990 [ACPRA].

The willingness of people to engage in lifelong learning in order to accommodate the needs of these individuals as well as the needs of society will be a necessity [National Investment in Higher Education]. This push towards more and continuing education has given rise to conflicting research reports.

The Carnegie Corporation and Sloan Foundation in a recent comprehensive study concluded that college education is related to improved family life and greater human understanding and tolerance. The number of years of schooling has also been proven to be positively related to marital satisfaction [Luckey, 1966].

Conversely, reports indicate that the amount of study concerning marriage and family relationships currently taking place at the high school and college levels may be a contributing factor in the increase in the divorce rate, instead of teaching people to cope with marriage [Cox in Thacker]. Research also shows that a growing number of wives are increasing their financial independence through higher educational levels. These wives are then translating this ability to support themselves outside of marriage into a readiness to break the marriage [Thacker].

The United States Department of Health, Education and Welfare figures show age groups at the time of divorce to be centered in the 25- to 29-year bracket for husbands and the 20- to 24-year bracket for wives. The majority of graduate students in the United States fall within the 22- to 30-year age grouping [Wright; Feldman] and are, therefore, a high risk group for divorce. According to the most recent statistics directly addressing this issue, one out of ten male doctoral students and one out of four female doctoral students were divorced in 1975 [Centra].

Graduate Study and Married Students

A relatively small amount of research has been undertaken to address the impact of graduate study on the marriages of graduate students. What has been done follows the pattern of a rise in divorce rates. Earlier studies indicate more positive conclusions regarding the deleterious effect on marriages of graduate students than do later studies.

The graduate school experience can be likened to adult developmental stages. It involves "identity crises and financial and emotional dependence on others, anxiety regarding ability to assume 'adult roles,' as well as cultural discontinuity" [Lang; Havighurst; Taylor; Kneller]. The experience itself can be divided into experiential stages of initiation, maintenance and termination with each of these stages involving social roles, developmental tasks and coping behaviors [Lange]. The degree to which students can effectively cope with the stages of anxiety reflect their ability to cope with changes in self-perception and interpersonal relationships.

No relationships were found between marital adjustment and education by Terman in 1938 and Bowerman in 1939. Burgess and Cottrell, also in a 1939 report, suggested that while education may be related directly to marital adjustment, it can indirectly contribute to the stability of marriage. However, in later articles on college couples, college attendance was discussed as a source of family tension [Christensen and Philbrick].

In a 1954 study of 641 college couples at the University of Washington [Nygren], it was found that while husbands are significantly more critical of their marital adjustment than their wives, school had little effect on marital adjustment. In fact, marriage positively influenced their enjoyment and appreciation of school.

Selby, investigating marital adjustment and marital communication, found doctoral study to have no effect on marital

adjustment. While Selby's study targeted the population that this study will address, the research appears to have serious limitations. Adjustment was measured over only a four-month period with students having been in the doctoral program a relatively short time period.

As divorce rates nationally began climbing, a number of studies surfaced looking at student personnel services which might aid in preventing this trend from permeating student marriages. The focus of these studies generally indicated the concern that college study added stress and had an adverse effect on the marital adjustment of college students [Dressel, King and Fess]. Aller found a significant concern among husbands and wives over deterioration of marital adjustment and family adjustment. Stebbins further found that husbands and wives generally perceived levels of strain as a result of study to be similar.

The research concern over the effect of graduate study on marriages accelerated in the 1970s as the divorce rate also accelerated. In 1977, Andrew Thacker undertook an extensive study of 773 graduate students at the University of Houston. The purpose of the study was to determine the effect of graduate study on perceived marital adjustment of graduate students. The sample responded to a four-part, self-administered questionnaire. Using a 0.05 level of significance, Thacker concluded that graduate education does have an effect on the perceived marital adjustment of graduate students. This effect is deleterious and is more apparent at the doctoral level than at the masters.

In the same year, another study was completed at the University of Northern Colorado by Ricky Williams [1977]. Williams was concerned with the many statements by previous writers who believed that married couples experience more stress due to college attendance. The subjects for this study included 40 married male doctoral students and their wives and a control group of 40 couples matched to the characteristics of the doctoral group.

Williams constructed his own questionnaire to measure perceptions of change in the marital relationship since entering the

doctoral program. The questionnaire had an internal consistency reliability of .94 for the total score and produced results supporting Thacker's conclusions. Based on the data, it was concluded that a doctoral program has a significant negative impact upon the perceptions that male doctoral students and their spouses have of their marital relationship.

An interesting phenomenon regarding college couples' perceptions of the degree of happiness in their marriages was dealt with in a study measuring the need for marital counseling services for married college students. The study of 312 University of Arizona married students utilized the Marital Adjustment Inventory and the Confidential Questionnaire. The results showed that over 70 percent of the married college student population saw their marriages as extremely happy or quite happy. Only two percent of those returning the questionnaires saw their marriages as quite unhappy or extremely unhappy [Gruver].

In further examination of the data, only two percent of the population saw their marriages as quite unhappy, more than ten percent were considering divorce at the time of the survey. The researchers analyzed the statistics concluding that an unhappy marriage is akin to a failure to the partners in the marriage [Gruver].

It was also noted that in the general population, studies have shown that about 35 percent of marriages are not entirely happy [Mace and Mace]. In the Gruver study, most of the questionnaires answered by those students considering divorce were returned by only one spouse in the pair. Gruver and Labadie believed this fact would indicate that rather than ten percent, the actual statistic for those seeking divorce would be closer to 20 percent and more in line with the general population. The study did underscore marital problems as plaguing most student marriages but "these difficulties surrounding marriage and education are neither more nor less important than they were 20 years ago" [Gruver and Labadie].

Prior studies generally concentrated on the male as the doctoral student. Between 1969 and 1975 the number of adult women learners increased 45 percent compared to an 18 percent increase for men [Cross]. Centra's study in 1975 of 3658 male and female doctoral students reflected a need for research to concentrate on the plight of the marriage of the female doctoral student as a result of graduate study. Centra's findings indicated that two out of five women married prior to entering doctoral programs were likely to divorce, remarry or separate during the course of the program. Almost 40 percent of the women married when they started the program were divorced before they finished their studies.

Studies by the Carnegie Commission and by Feldman also supported Centra's results. Swoboda's more recent study of 255 doctoral candidates in education showed seven times more females were divorced than males. When she included candidates from areas other than education, Swoboda found 15 percent of the females were divorced as compared to 4.67 percent of the males.

Linda Lewis' recent study [1981], utilizing retrospective research techniques, focused only on female doctoral students. This study further supported the continued need for concern over the relationship between marital adjustment and doctoral study. A significant difference was found between the marital adjustment of female doctoral students and their spouses at all stages of the program. The greatest difference and lowest adjustment scores existed for husbands whose wives had been working on the degree for two to three years as opposed to those whose wives had been enrolled for six to nine years.

The previously cited literature has dealt with marital adjustment of the graduate student while in the graduate program. Suzanne Fischer's 1981 study focused on another surfacing problem. Her study examined the relationship between doctoral study and divorce among doctoral students graduating from Florida State University. The study examined factors affecting the marital relationship so as to produce conflict.

In a follow-up of graduating students, it was found that the rate of divorce among doctoral degree recipients polled was greater than the rate of divorce reported by county, state and national divorce data. Fischer also concluded that the rate of divorce in the studied population appeared to be increasing over time.

Though studies have suggested a difficulty with graduate student marriages which is at least as great as the difficulties experienced in the general population, results of other research studies raise some question as to whether student marriages are more "risky." In a 1980 study of 125 married students at an Australian University [Khan and Sharples], the mean marital adjustment score for all individual spouses was 110.099 on the Locke-Wallace Marital Adjustment Test. This score was compared to the score of 101 used by Locke and Wallace in 1959 to separate high and low maritally adjusted persons. While the study utilized persons socialized in a somewhat different culture, the results suggested a more positive attitude toward marital adjustment.

Persons with people-oriented value systems scored highest in marital happiness. This fact was also found to be true in a study by Flowers and Hughes. The overriding factor, however, was the ability of partners to mutually compromise. Compromise as the basis of marital harmony has also been identified by other researchers [Ellis and Harper; Ford].

This idea of compromise was discussed in detail in a 1978 study on application of marital systems theory. Hooper found that families have the inherent capacity to change in order to enhance the growth of their members. The use of this capacity is dependent on the degree of commitment on the part of the changing individual to his or her own growth. Rice further emphasized the fact that some families cope with change by denying the ramifications of change. What one spouse views as undesirable can also be viewed by another as highly desirable. In fact, conflict itself can stimulate academic performance and rejection of old roles.

Factors Associated with Marital Adjustment

The existing literature on marital adjustment deals with several broad areas, one of which is marital role congruence. Research by Eric Bermann [1966] on compatibility and stability in the dyad found that need compatibility predicted stability but role compatibility predicted it better.

While Bermann's study dealt with pairs of female students, Winch [1967] pursued the same theme but with male/female dyads. Winch's conclusions indicate that the sex of the dyad is not the issue. The issue is whether the roles of the members of the dyad are or are not differentiated.

Nathan Hurvitz [1965], a prolific author on marriage, proposed that "within the family, the roles of husband-and-father and wife-and-mother are units of conduct which stand out as regularities by their recurrence and form patterns of mutually oriented conduct." These roles form a role-set which has two aspects: each spouse's performance of the expected role set; and, each spouse's expectation of how the other spouse will perform these roles. The compatibility of role performance and role expectations is the basis of the social structure of the family. The compatibility of these factors influences marital adjustment [Hurvitz].

Roles are learned and internalized through education and communication. If a spouse's roles are performed according to the other spouse's expectation, positive feelings occur and marital adjustment takes place. Since men and women have been taught different role norms and have had different experiences, they may have incompatible norms of marital roles and marital strain may occur [Hurvitz].

The research of the sixties suggested that high satisfaction was more significantly related to the male role than to female role performance. Navin [1972] in studying attitudes of men to women's careers, suggested that

. . . because the woman's role is closely interwoven with the male role and thus with men's perceptions of themselves, any change in the female role must be accepted by men and bring a change in the male identity.

Research during the same period examined control roles, marital strain and role deviation within the family unit. Using three control roles and a Control Role Attitudes Scale, Hurvitz [1965] looked at seven areas of marital interaction. No significant association was found between the control roles, role deviation and marital strain. It was found, however, that, though there was no difference between the husbands' control role scores and marital adjustment scores, wives' control role scores increased as marital adjustment increased.

The results indicate that wives with control roles that were conservative and traditional with the authority lodged in the husband were happier in their marriages than were wives who had control roles which were democratic, liberal, and companionable with shared authority. These findings appear to contradict the commonly held opinion that couples with companionship attitudes will tend to be happier than couples who hold traditional attitudes" [Hurvitz].

In the same year, a study was undertaken by Koltar [1965] with results lending support to Hurvitz's findings. Koltar found no difference between happy and unhappy marriages when using husbands' self-rating of dominance. A significant difference was found in the way that happily married wives rated their husbands. The happy wives perceived their husbands as significantly more dominant than unhappily married wives.

Nevin [1972] also indicated that the narrower the male view is concerning what is masculine, the less tolerant he will be to wider expression through numerous roles. McMillin's 1972 study of student attitudes indicated that men were becoming more accepting of women's career roles.

Increasing stress on egalitarian marriages is found in the literature of the 1970s. A 1977 study of 29 male and 42 female students [Keith and Brubaker] indicated that dual-career marriages are associated with more shared activities. When projecting to their own marital relationship, the same students tended to predict a more traditional division of labor in their own households.

The issue of shared activities was addressed in Phyllis Schlafly's provocative book The Power of the Positive Woman published in 1978. Schlafly, addressing the impact of the feminist movement and equality in household duties, found that the feminist movement had not made much of a dent in duty sharing. Women still were responsible for 80 to 90 percent of the household duties.

By the early 1980s, Sonn [1981], studying sex-role orientation, found that by that time traditional roles were becoming less socially acceptable. Using the BEM Sex-role Inventory to measure the relationship between sex-role attitudes of dyads and preference for equalitarian or traditional marital roles, Sonn found no difference between androgynous, stereotyped and undifferentiated individuals in her sample. All showed preference to options reflecting neutral or somewhat egalitarian marital roles.

Sonn [1981] interpreted this finding to be an indication of changing societal attitudes toward marriage. Process measures suggested a difference between females in androgynous and stereotyped dyads. The difference indicated support for behavioral flexibility of androgenous couples while sex-role stereotyped females displayed a more limited range of behavior consistent with feminine-role orientation.

An interesting theory related to the lack of sharing of household duties was found in William Blackwell's book on working partners [1979]. Blackwell suggested that there are several factors causing unequal distribution of work.

On the positive side, he suggested that roles are far less defined in the present day and, with society's changing attitudes, men are not threatened by traditionally feminine tasks. More of today's men have also been reared in homes where both parents worked.

One of the negative factors working against equal distribution of household tasks is male ineptness. This results from men having not been trained in how to perform expected female tasks. There has also been the Total Woman [Morgan] pressure on husbands combined with the tendency on the part of wives to be dissatisfied with the quality of work performed by husbands.

According to Hamer [1963],

The expectation that role perceptions and performance are related to marital happiness rests on the concept of the family as a matrix of defined, interlocking and interdependent roles.

A 1952 study by Jacobson hypothesized that divorced couples would have greater attitudinal disparity than married couples regarding marital roles.

Using 100 divorced and 100 married couples, Jacobson found a significant difference related to sex with high marital adjustment for husbands associated with congruity between their own role concepts and expectations and those of their wives. Research has indicated that there is often difficulty on the part of the student who is the father to meet the expectations of family members as well as the expectations of the university [Ibsen].

Satisfaction with life and work may also have a bearing on the degree of role conflict. In a very recent study on interrole conflict, Beutell [1982], studying 115 women, found that women who placed a similar level of importance on work as did their husbands had less role conflict than those who differed from their husbands in role orientation. The amount of conflict in women's home and non-home roles increased significantly when the husband was dissatisfied with his own life.

The effect of perceived competition on marital adjustment has been a research topic in the literature. Gerber [1977] attributed sex-role stereotypes to descriptions of married couples which were rated as feminine or masculine by 259 male and female undergraduates at the City University of New York. Male raters tended

to see the husband as less masculine when his wife was successful; whereas, females saw him as less masculine when his wife was unsuccessful. When both husband and wife were in the same field, the husband was rated more masculine than when there was a difference in fields of work.

Marital satisfaction was highest when both spouses were successful or in traditional roles. The achievement status of the wife appeared to affect the masculinity/femininity of the husband and thus conformed with cultural stereotypes that a successful wife is a threat to her husband's masculinity [Gerber, 1977].

The issue of "threat" again surfaced in Almquist's study of a random sample of the undergraduate student body of a large university [1974]. The results indicated that nearly all of the females and a high percentage of the males favored the wife working to "launch her husband in his career." Men generally felt that the wife should work if she preferred to do so.

The low-favorability group frequently included mothers with higher levels of education as well as those who had more education than did their husbands. This suggests that men in the study reacted negatively to women who were high achievers. These men also were more likely to choose high status occupations for themselves. They tended to be more conventional and less flexible.

The students who favored women working had mothers employed in low status positions. The study appears to emphasize the possibility of a semiconscious male threat level as a source of marital discord. This level seems to be a result of parental rather than societal roles. Regardless of related variables such as status before marriage, Richardson [1979] and Fischer [1981] both indicated that wife superiority is in itself a sufficient cause for marital trouble and that this conflict would be present without any other contributing factors.

Luckey [1970] and Stuckert [1963] both found marital satisfaction to be related to the degree of congruence in the husband's self-concept and the perception held of him by his wife. Taylor

[1975] later found that, while this congruence was significantly related to the husband's and the couple's marital adjustment scores, it was not related to the wife's adjustment scores.

Marital happiness is related to congruence of the husband's actual and ideal traits and to congruence of the wife's ratings about her husband's actual and ideal traits [Tharp]. When wives rated their husbands' emotional maturity, it correlated substantially with marital happiness, but husbands indicated no correlation when rating their wives [Dean].

Evidence of this contradiction can be found in college student marriages. Aller found that too great a capacity for independent thinking and too much aggression or dominance in wives adversely affected marital adjustment. Barash [1949], studying veterans, found the greatest problem in adjustment of married students to be the conflict between traditional and contemporary roles.

The contradiction in role attitudes has been a research concern regarding the female doctoral student. According to DeGroot [1977], family opposition has been found to be the most pressing problem for the female doctoral student. Though the husbands in DeGroot's sample were mildly supportive before the wife began her doctoral program, they withdrew their support during the second and third terms when they failed to cope with the changes that had occurred in their spouses and in their home life due to the first term of graduate school. If the female persisted with her studies, her husband was found eventually to develop new role expectancies for both of them and restore support. However, forces of previous socialization and current social pressures caused a consistent rise in power conflict.

It has been proposed that spousal support is made up of dual components: behavioral and attitudinal [Rice]. Instrumental support for returning women students was made up of the degree of behavioral role sharing in household tasks, child-care and social responsibilities.

Attitudinal components are characterized by emotional support. Rice [1979] found little change in the actual division of labor when a wife returns to school. However, she found the husband and the family to be key variables in overall support.

Lewis' 1981 research also dealt with female doctoral students. She found no significant relationship between marital adjustment and each spouse's attitude toward sex-appropriate roles and behaviors. Marital adjustment, however, was significantly affected for a husband when looked at in proportion to the length of time that his wife was in the program.

Farmer [1972], studying 162 college women, found that over 41 percent experienced negative consequences in home/career conflict. Dual-career students are less traditional. It has also been implied that high-ability men may be less threatened by the prospect of having a career-oriented wife [Peplau].

Other studies also investigated the relationship of education to marital adjustment. Lewis [1981] found that the educational level of the husband was not significantly related to the marital adjustment of the doctoral student couple. Bergen's study [1976] of 509 married students at Kansas State University contradicted these findings showing a negative trend in marital adjustment which grew as the husband's educational levels increased.

Husbands with advanced degrees had a significantly lower quality of marriage than husbands with less education. O'Leary [1975], studying role conflict, concluded that men are socialized for success, competency and decision-making supremacy. The findings also indicated that wives expected their husbands to continue this role. Thus, college for these men reaffirmed this position of role supremacy. The husbands, however, were also socialized to expect a subordinate role for their wives so the conclusions of the study would not hold true if the wife were the one going to college.

Monclair undertook a cross-sectional study with spousal support, assertiveness, conjugal conflict and marital happiness

measured in subjects at various stages in their academic careers. His sample consisted of 13 male and 83 female randomly selected married second-career students. It was concluded that what is reported as role conflict may be surface manifestations of more subtle problems of lack of spousal support and conjugal power conflict.

While marital happiness was significantly lower if the wife only was a student, marital adjustment has been found to be significantly higher if both spouses were enrolled [Bergen]. McKeon and Piercy [1980], using graduate students and the Locke-Wallace to measure marital adjustment, found supporting results indicating marital adjustment is better when both spouses are students. This finding is consistent with Fischer's conclusion that when personal growth is not matched by a mate, a resulting source of conflict is present which, in turn, impacts marital adjustment.

Since Christensen and Philbrick's study [1952] of 346 veterans and their wives at Purdue University determined that the combining of marriage and parenthood with college attendance caused family tension, other studies have also addressed this issue. These studies have primarily disputed the assumption that marital happiness and children go together.

Nygreen [1954], in his study of 500 University of Washington couples, found that the majority of student families (52%) had children but, as the number of children in the family increased, fathers were less likely to recommend combining marriage and school.

Whitmer [1965] later found that two-thirds of his sample of 476 married students at the University of Florida had children and most of the children were of preschool age requiring the added strain of day-care arrangements. While Aller [1963], Ibsen [1967] and Hurley [1967] support this negative relationship between the number of children and marital adjustment, the 127 women in Hunt's study [1966] indicated that they were not willing to postpone returning to school until their children were grown.

Reasons for concern over inevitable resulting conflict have been further confirmed in studies on working mothers. Nye [1976], studying women who were mothers of children in first and second grades, married at least six years, living in urban areas and with one or more children, found marriages of employed mothers were more likely to be characterized by conflict.

A recent extensive study, involving both married and divorced recipients of doctoral degrees, broke the problem of children and conflict into several subfactors. Isolated as sources of conflict by all respondents were not only the presence of children but the extent of responsibility for the children during doctoral study, the need to delay birth of children and the birth of a child during doctoral study. Any break in the "usual routine" was also isolated as a factor and certainly supports the concerns over children in the doctoral marriage [Fischer].

Luckey in 1966 contradicted previous studies, finding no relationship between the number of children and marital happiness. However, in 1970, Luckey and Bain concluded that children may be the only source of happiness in an unhappy marriage.

In a rather backhanded way, Hamer [1963] reached the same conclusion. In his review of the literature, Hamer expressed surprise that children tend to detract from, instead of adding to, marital happiness. However, he also found as a very provocative factor that low happiness may often be positively associated with marital stability.

The stress problems related to finances have been dealt with by many researchers. Aller [1963] found finances to be the greatest concern among married students. From 90 to 95 percent were under constant financial stress [Mueller].

The correlation between income and marital adjustment was found to be positive by many researchers [Nygren; Selby; Hunt; Bergen; Namir]. Tucker [1964] also found lack of finances to be the single most important factor for non-completion of doctoral degrees. At the University of Northern Colorado, a significantly

higher proportion of doctoral couples had disagreements over finances than did control groups [Williams].

Wives of married students are primarily occupied with helping to support the family [Oppelt]. This has presented a problem for doctoral couples. The quality of the marriage was found to be much lower if the wife was depended on as a major source of income for financing graduate school [Bergen]. There also was found to be a great deal of resentment on the part of these working wives when they saw other wives dropping out of school and going to work so their husbands could finish school.

In attempts to assess the problems of married students, many factors have emerged. Time demands have been raised as a major factor in marital discord. Communication, with its relationship to time, is a major concern of this study.

Communication and Marital Adjustment of Students

Communication is defined as the exchange of meaningful symbols, including words and gestures. Primary communication is the communication which is intimate, free-flowing and unrestricted [Locke, Sabagh and Thomes].

Bienvenue [1970], in constructing and evaluating a test of marital communication, further defined marital communication as "the exchange of feelings and meanings as husbands and wives try to understand one another and see their problems and differences through listening silences, facial expressions and gestures."

In a study of 126 couples in 1956, primary communication and marital adjustment were found to be positively correlated more than 99 percent of the time. Hobart and Klausner, in their 1959 study, also found that open and effective communication is significantly related to marital adjustment for both husbands and wives.

If a couple is forced to be separated, the opportunity to communicate will be reduced. Though good verbal communication is

most influential on marital adjustment, lack of gestures and cues may also promote misunderstanding [Navran]. Bier and Sternberg [1977], studying 51 couples, reported that couples who had the least amount of conflict demonstrated more interpersonal closeness in terms of touching each other, looking at each other and sitting closer together. Any event which impairs the couple's relationship, such as separation or stress, could put a negative strain on their ability to communicate.

When graduate student marriages are examined, it can be observed that physical separations often occur when lack of finances, family priorities and program demands force the student spouse to leave their non-student partner at home in another location while the student pursues the degree alone. Even when they are together, a major problem of married student life is that there is not enough time for both marriage and education [Hamer] and the marriage is what usually is neglected [Ibsen; Altman].

Frustration experienced by the graduate student as a result of social isolation may manifest itself in increased intimacy with the family or, conversely, it may cause isolation and loneliness. Neal and Groat [1974], studying 334 married women, addressed the psychological distance that can develop between the two spouses as a husband pursues a graduate degree and the wife does not. They found alienation across four subscales: meaninglessness, powerlessness, normlessness and social isolation. The alienation increased significantly during graduate school. Stebbins [1975] found that while husbands were developing academic involvement, wives were developing social isolation.

While some researchers found isolation and lack of communication less pronounced if both spouses were students, others [Halleck; Craven] identified lack of time for each other as a problem in marriages that were more egalitarian or in which both spouses were students. They found that after academic and household tasks were completed, there was little time for togetherness and resulting communication.

Lack of time to talk, lack of time for recreation and frequency and time of day for sexual activity were major sources of dissatisfaction [Gruver and Labadie]. The college environment creates a situation where students must be physically as well as emotionally separated from their marriage partners, creating significant isolation resulting in marital adjustment problems [Gilbert; Court; Gruver and Labadie].

Graduate students are chronic movers [Packard] and stress of relocation leads to spouses' dependence on each other [Immundo]. In graduate school, the need to achieve is great. Life is highly structured and all-absorbing in terms of time commitment, but there is also daily contact with other students [Namir]. The non-academic partner does not have the same structure and goal-directed purpose. This difference in their lives may be responsible for difficulties resulting from lack of communication [Namir].

Namir's results are supported by related findings in a 1982 study by Laura Epstein. While Epstein's study dealt with relocation and graduate school, partners in her study also talked about looking to each other for support to cope with transition. While they looked to each other for this needed support, both spouses were less sensitive to changes occurring in their relationship. Both spouses experienced role dissatisfaction and were facing new challenges as well as experiencing disequilibrium. The results indicate a definite gap in communication just at a time when communication is most necessary.

The literature deals with perceptions of male doctoral students and their wives regarding the impact of the program upon their marital communication. A significant number of student couples reported that both the quality and amount of their communication had decreased. Research further concludes that doctoral programs have a significant negative impact upon the perceptions that many male doctoral students and their spouses have of their marital relationship. Even higher proportions reported that the amount and quality of their leisure time had decreased as had their spouse's valuation of them [Williams].

The perceptions of the spouses, however, may not be congruent with each other. DeGroot [1977] found that students consistently underestimated the amount of spousal support in reference to their spouse's perceptions. Non-student spouses consistently overestimated the level of support. With marital happiness being a reciprocal relationship, this apparent lack of communication indicates that resulting tension permeates the entire conjugal relationship.

Effective communication occurs most frequently between people who have similar beliefs, values, education and social status [Rogers and Shoemaker]. Stephenson's study of married women students at the University of Maryland [1980] indicated that these women cited considerably more positive than negative changes as having occurred in their relationships since they returned to school. The spouse's reactions had not been as positive. However, it has been found that when both spouses are students, significantly positive effects occur in marital adjustment [Bergen; McKeon and Piercy]. These results concur with Rogers and Shoemaker's findings.

A study dealing with the investigation of factors relating to marital adjustment isolated communication as a factor to be considered. Price [1969] studied 200 couples from a stratified random sample of households based on various categories of student housing at Iowa State University and meeting specific criteria. A positive relationship was found between the degree of communication between the couples and the degree of marital adjustment achieved by the couple. While this study supports other research findings, it would appear that some question could be raised regarding the validity of a non-student sample used to predict results in a population that is comprised entirely of students.

Another study, which also investigated marital communication, appears to have research weaknesses. The Selby study of 47 male doctoral students and their wives [1973] found no significant effect of doctoral study on marital communication. This study did not allow for the effects that would take place over time.

In a later, more extensive study, 312 married students filled out the Marital Adjustment Inventory and the Confidential

Questionnaire in order to identify causes of marital difficulty. Fifty-two percent of the males and 57 percent of the females identified communication to be problematic. More than 45 percent of both spouses pointed to the related lack of recreational time as a major cause of marital difficulty [Gruver and Labadie].

A very extensive investigation was conducted regarding the self-perceived relationship between doctoral study and the occurrence of divorce among married doctoral students who graduated from Florida State University during a ten-year period ending in June, 1975 [Fischer]. Respondents reporting stress isolated as a source of conflict the amount of time that should be spent together. Even the respondents reporting no stress indicated time to be the only factor perceived as always affecting the marital relationship so as to produce conflict.

Divorced respondents isolated the extent of communicating personal concerns to their spouses as a major factor. Among the conditions responsible for marital conflict and the solution to that conflict, three elements were critical. These elements were: the relationship with the major professor; communication; and recreational activities, including time for participation and encouragement from spouse [Fischer].

Alexander Taylor [1967] sums marriage as being viewed as a process of reciprocal role perceptions, understandings and performances on the part of marital partners. Jay Haley [1963] brings closure to this section in his statement that

the process of defining the relationship through communication is basic to establishing control within the relationship and will play a large role in determining the presence or absence of conflict.

Commitment and Marriages

With the entrance of America into the 1980s came a concern for the "future of the family." This concern was exemplified by

Vice-president Mondale's White House Conference on Families. The subject of this conference became a topic of considerable discussion as a possible means for strengthening the family unit.

Half of all American families move every five years [U.S. Department of Commerce, 1977], which often leads to geographic separation from support systems. This isolation increases the stress of family responsibilities. When intrafamily relationships are the sole source of support and committed relationships, they can be very limiting. A great burden is placed on the relationship when partners are the sole means for meeting each other's social and emotional needs. Even though this arrangement is sometimes the most economically feasible plan, it is not psychologically and emotionally feasible without considerable cost [Conger]. The doctoral student falls within the bounds of this very transient group and often bears the brunt of this psychological and emotional cost.

The family is undergoing other changes in addition to personal mobility which tend to weaken significantly its solidarity. Some of these changes are: loss of family function; decline of status ascriptions coupled with increased status achievement; and ascendancy to materialistic values [Hobart].

The emergence of separate institutions in society which make American life easier also make active family membership less necessary. Social status now rests on occupational achievement rather than on family ascription [Hobart]. This factor tends to undermine the perceived value of the necessity of total commitment.

The trend in American society toward a proliferation of relationships rather than toward confinement to relationship within the immediate family, neighbors and close friends, reflects on commitment to the family unit. Relationships can be cultivated at work, at school and through friends. The pursuit of "necessary" contacts can infringe on family life and alienate spouses [Hobart].

Lock and Wallace [1959] found that individual spouses' value systems impact marital satisfaction. Those who are primarily self-oriented tend to be less happy. The key to changing values is in

renewed commitment to the family and to the human values which the family symbolizes. Hobart believes that the family as a commitment implies freedom in the definition of the marital relationship to meet the demands of the particular needs and ways of life of the members of the family unit. This individuality implies flexibility to increase individuality. With the intense demands, both in time and academic pressures that the doctoral student experiences, commitment would appear to be a strong factor in survival of the individual's marital relationships.

The emerging factor in Khan's study of 125 married psychology students was mutual compromise. This marital compromise was found to be even more important than congruence of value systems. The value of compromise in marital adjustment was supported by other researchers as well [Ford; Ellis and Harper].

"Individual members must be willing to sacrifice personal achievement for the good of the team" [Blackwell]. When each views the other as a person of unique worth, as a spouse and as a competent individual, conflict and competition can be overcome. These two factors, compromise and mutual respect, are necessary ingredients in commitment.

Levinger and Hiesmann [1980] suggest that specific behavioral rewards help interact to predict potential future rewards. If the potential for future rewards is high, the relationship continues to develop. Rewards of participants must be proportional to each individual's investment [Homans, 1964]. When the equity rule is violated, the disadvantaged person experiences stress and anger. These experiences are then translated into loss of commitment at which time the individual may leave the relationship [Sabatelli].

The apparent relationship between commitment and stability of marriages is important. Commitment provides feedback regarding levels of cohesiveness as well as potential rewards available in alternative relationships. This commitment, however, also "provides a cost of dissolving the present relationship" [Sabatelli].

A commitment-oriented relationship presupposes a perception of equitable available alternatives. Dependence exists when one

spouse perceives the other as having greater available alternatives. The power, in this case, will then transfer to the individual with the higher perceived options. When this power/dependence exists, jealousy and deterioration of commitment occur resulting in poor marital adjustment [McDonald].

Dr. Jeffery Rubin of Taft University [Travis] believes that this dependence and resulting jealousy create a feeling of entrapment on the part of the "power" spouse. Rubin likens this situation to the struggle with a Chinese Finger Trap. The more an individual struggles, the greater the conflict in goal attainment. If individuals just let go, the goal is more easily attained.

The difference between commitment and entrapment is measured by goal direction. If an individual believes in someone strongly enough and wants to maintain the relationship no matter what the cost, that individual is committed. Commitment starts with short-term sacrifice ending in long-term gains. Conversely, a trap begins with short-term gains often ending in long-term discontent [Travis, 1984]. For uncommitted people, day-to-day frustrations are more pronounced because they are not viewed as a step toward a long-range goal [Williams, 1983].

Relatively little research has been undertaken concerning the effect on marriages resulting from love and devotion to a partner. Eric Fromm in The Sane Society noted that we tend to love things and to use people. If career-oriented men are forced to choose, they will sacrifice success in marriage for career success [Whyte]. The priority of love and concern values is directly challenged by success and achievement values [Hobart].

In a 1980 study by Broderick [1980], 201 community members were surveyed to identify components of marriage through respondent's definitions of a "good marriage." Love was mentioned most by both males and females. Love and caring were judged most important by women and second only to understanding by men. Love was defined as a "strong attachment for or devotion to the spouse" coupled with a "willingness to invest much personally to make the spouse happier . . . without reciprocity."

Further investigation of commitment has been dealt with in cognitive dissonance research. When an individual perceives that there are not adequate rewards for participation results in feelings of dissonance. This dissonance increases commitment to the task [Brehn and Cohen]. This commitment does not imply increased liking for the task, but does cause the individuals to address issues rather than to abandon them regardless of the immediate rewards [Broderick].

Attitudes of commitment are likely to be shaped in part before individuals marry. How an individual's parents dealt with conflict may lead to some spouses being less committed than their present relationship might indicate [Broderick]. In order to combat this problem, emphasis is needed for life-long learning throughout the stages of life. This life-long learning is particularly necessary for both marital partners, for parents and their children and for families dealing with their roles in society [Lingren; Herbert; etc.].

Other researchers [Hellerman; Conger] have dealt with adult development theory and its relationship to commitment. Erik Erikson [1968] related the life cycle to a series of eight stages. In each stage, according to Erikson, are crises which, when resolved, allow passage to the next stage. Marital success demands personal maturity, a capacity for true intimacy, an ability to change, patience and commitment. Individuals must be willing to subordinate their own immediate desires to the needs of their spouse [Conger]. If this crisis stage in marriage is resolved, the individual can move to the next life stage.

An individual who is unable to attain may be stuck in either the stage of Identity versus Role Confusion or in Intimacy versus Isolation. That individual may be unable to match earlier acquired skills with an identified role needed in the present stage. Identity is an important developmental task but the capacity for intimacy is required in order to commit oneself to partnerships and to abide by such commitment even though that partnership may call for significant sacrifices or compromise. If the capacity for

intimacy is not achieved, individuals cannot gain satisfaction from contributing to the development of others in the next stage of Generativity [Erikson; Hellerman].

Commitment has not been a subject of research on students, however, it has been alluded to in several studies. In a major study of 1655 Washington State University students, a direct relationship was found for males between commitment to the spouse/parent position and academic achievement. Marriage enhanced determination to stay in school but educational and occupational aspirations were negatively impacted by the number of children in the family. For women, commitment to marriage and children led to conflict between the role of wife and mother and the involvement in school [Hansen].

A study, utilizing a background questionnaire as well as the Dyadic Adjustment Scale, surveyed 60 married couples at the University of Missouri [McRoy and Fisher]. The sample was equally divided among couples in which both spouses were graduate students, the husband only was a graduate student and the wife only was the graduate student. The researchers found that the husband-only was lower on consensus and affection, it showed no difference in cohesion and satisfaction.

DeGroot's study supported McRoy and Fisher's findings. DeGroot found that students consistently underestimated the amount of spousal support they were receiving when compared to the level of support that their non-student spouse was actually giving. The larger the discrepancy, the greater was the degree of marital conflict. Since marital happiness is a reciprocal relationship, resulting tension permeates the entire relationship and resulting commitment to that relationship.

Studies show that commitment to a course of action or a person may have a profound effect on behavior, perceptions and emotions [Beach and Broderick]. Commitment has also been established as a variable in marital satisfaction [Broderick and O'Leary]. In spite of this fact, there has been little research

on the positive effects of commitment in regard to student marriages. In view of the purported risks involved in student marriages and the unique stress-producing factors of graduate education on marriages, a goal of this study is to examine the impact of the commitment variable on these marriages.

CHAPTER III

RESEARCH DESIGN

Procedures

The following procedures were used to examine the hypotheses and draw conclusions:

1. A LIRS search was undertaken in order to identify existing studies and other relevant research concerned with assessing marriage in general and student marriages in particular.
2. The identified literature was reviewed and an outline of the proposed research was submitted to the researcher's doctoral committee for review and approval.
3. A review of existing assessment instruments was conducted in order to identify instruments designed to measure commitment, communication and marital adjustment.
4. As a result of the review, four instruments were selected and adapted for use in the study.
5. A brief questionnaire was developed to collect further information related to demographic and biographic variables.
6. The Human Subjects Committee was notified and the proposed idea was presented to ascertain whether a formal meeting of that committee was necessary in order to approve the research methodology.
7. The prospective population of the study was drawn from a list was obtained from the Oregon State University-Western Oregon State College (OSU-WOSC) School of Education and from the Oregon State University (OSU) College of Home Economics.

8. Letters of explanation describing the study as well as a pre-stamped consent postcard were mailed to all identified prospective participants.
9. As the study focused on the marriages of doctoral students, both students and their spouses were asked to participate. Only those couples who agreed to take part were included in the sample.
10. Follow-up telephone calls were made to all 52 consenting couples arranging for separate interviews with each spouse. The interviews averaged one hour in length.
11. Personal interviews were conducted by the researcher with each respondent. This was done in order to minimize bias by establishing consistency in the interview process. The majority of these interviews were completed face-to-face.
12. Telephone interviews were conducted by the researcher with respondents whose physical distance from OSU made personal interviews not economically feasible. Fifteen such interviews were conducted in areas as far reaching as Alaska and Alabama.
13. The resulting data were compiled and analyzed through the application of appropriate statistics and the use of computer services.
14. Findings were summarized and conclusions relating to the hypotheses were drawn.
15. Recommendations for further study were made as well as implications for needed action.

Population and Sample

The sample for the study was drawn from the entire population of doctoral students in OSU-WOSC School of Education and OSU's College of Home Economics. The names and addresses of all PhD and EdD students were identified from a master list in the School of

Education and from lists made available by the secretaries in each of the divisions of the College of Home Economics and from the secretary in the Higher Education Department.

A letter of explanation of the proposed project [Appendix A] was mailed to each member of the preliminary population. The letter sought to identify doctoral students who were married during the program and who, along with their spouses, were willing to participate in the study. The letter outlined the problem of the study and included some background concerning rationale for such a study. One hundred and seventy-three letters were mailed.

Confidentiality of the findings was emphasized. Responses of spouses were to be kept from each other and separate interviews were to be given. Permission was obtained from the School of Education, and the letter was sent on School of Education letterhead [Appendix A].

A pre-stamped return postcard consent form [Appendix B] was included with the letter. The form was to be signed by both spouses and returned to the researcher. The postcard solicited pertinent information regarding the student's current stage in program. It again emphasized confidentiality.

The preliminary population identified consisted of 173 students. The population was narrowed to include only married doctoral students and those in which the student had completed the bulk (approximately 75%) of their course work or had put in the residence year (three consecutive terms of course work). Foreign students not yet socialized to American ways of life were also eliminated.

Based on the mailing of 173 letters, 46 couples originally agreed to participate. An attempt was made by the researcher to contact non-respondents personally. Due to the personal nature of the study, no further formal mailed inquiry was undertaken.

Eight additional couples were identified who agreed to participate when personally contacted. Of these additional eight couples, one couple dropped out due to lack of time to schedule interviews and two other couples were eliminated from the study as

the husband decided that he was not willing to participate. Fifty-one couples were included in the final sample.

A demographic profile was compiled of those couples who participated in the study. The average individual was from 29 to 35 years of age, had been married six or more years, was from 23 to 28 years old when entering the present marriage, was currently living with his or her spouse and had no children also living with them. This individual or his/her spouse had been in the doctoral program from three to four years and worked part-time. The main source of funding for the doctoral program was their own employment. Eighty-one percent viewed their lifestyle in relation to their socio-economic status as changed little since entering the program [Table I].

Instrumentation

Five instruments were used in the collection of data. Three of the instruments were previously developed and used as assessment tools. Additional instruments were developed to gather biographic and demographic information and to represent graphically the reaction of the variables over the course of the doctoral program.

The following section describes the instruments utilized in the study as well as their reliability and validity. It also describes modifications made and describes development of the demographic questionnaire as well as scoring and administration of the instruments.

Locke-Thomes Marital Adjustment Test

The Locke-Thomes Marital Adjustment Test [Locke and Thomes, 1969] is a revised and shortened version of the Short Marital Adjustment Test which was developed in 1959 by Locke and Wallace. The Locke-Wallace is a widely used brief self-report questionnaire. In 1971, Locke and Thomes constructed a modified version of the

TABLE I
Demographic and Biographic Profile of Sample

AGE	23-28 6	29-35 39	36-44 34	44-55 23
TIME IN PROGRAM	1-2 yrs 40	3-4 yrs 42	5-6 yrs 8	6+ yrs 12
TIME MARRIED	1-2 yrs 11	3-4 yrs 13	5-6 yrs 12	6+ yrs 61
AGE WHEN MARRIED	-23 yrs 34	23-28 yrs 39	29-35 yrs 17	36-44 yrs 12
LIVING ARRANGEMENT	Living Together 88	Separated due to Economics 8	Separated due to Conflict 6	
NUMBER OF CHILDREN	No Children 40	1 Child 16	2 Children 30	3+ Children 16
WORKING ARRANGEMENTS	Not Working 10	Part-time 49	Full-time 43	
SOURCE OF PROGRAM FUNDS	Own Job 70	Spouse's Job 9	Savings 9	Loans and Scholarships 7

Note: 81% had little or no change in lifestyle

Locke-Wallace which they revised and shortened to a 15-item Marital Adjustment Test in 1979. The test utilized a Likert-type scale.

In the original 22-item Marital Adjustment Test [1971], empirical weights were given to the items. In validating this instrument, a reliability coefficient of .90 was obtained [Locke and Wallace, 1959]. The instrument also reliably differentiated between well-adjusted and maladjusted couples.

Spanier [1972] advocated and used continuous weights. Hunt [1978] used the Locke-Wallace Marital Adjustment Test with 66 Dallas-area couples. Using continuous weighting, Hunt found a correlation of .94 for husbands and .92 for wives between scores obtained by the original weights of the Locke-Wallace Marital Adjustment Test and continuous weights.

When Locke and Thomes revised and shortened the test, Thomes secured data from a sample of 72 husbands and wives, all of whom were college graduates. She included the items of the Locke-Wallace Test. There was a correlation of .93 between scores determined by the original weights of the Locke-Thomes test and scores secured by continuous weighting. Therefore, the Locke-Thomes Marital Adjustment Test uses continuous weighting [Locke, 1984].

The Locke-Thomes Marital Adjustment Test was adapted for this study so that it could be administered orally in an interview format [Appendix C]. Couples were asked to rate their responses according to a scale previously used in the Lewis study [1981] [Appendix D]. The results were scored by continuous weighting thus preserving the validity of the test. Respondents were unaware of the weighting process when participating in the interviews.

Broderick Commitment Scale (BCS)

The Broderick Commitment Scale [Broderick, 1981] is a one-item measure to which both spouses respond. The spouses rate themselves on a 0 to 100 scale, indicating how committed they are to their marriage [Appendix E].

The BCS was specifically designed for a 1980 study of the attitudinal and behavioral components of marital satisfaction. The only other available scale with sufficient face validity at that time was the Dean Commitment Scale which did not significantly discriminate between clinic and community groups on levels of commitment.

In contrast the BCS, in a pilot study [Broderick, 1980], correlated significantly with the Marital Adjustment Survey (MAS) [Locke and Wallace, 1948] ($r = .84$, $df = 18$, p less than .01). The MAS has been shown to have a reliability coefficient of .90 and discriminates distressed from non-distressed relationships [Locke and Wallace, 1948].

The BCS discriminates the two groups well. An average rating of 76.3 was obtained for clinic women which indicated significantly less commitment than the community women whose mean rating was 86.4. The average rating of clinic males was 75.1, whereas community males' average rating was 88.5. The BCS successfully discriminates for both groups.

Further studies utilizing the BCS [Broderick and O'Leary; Beach and Broderick] established the utility of the scale in predicting variance in marital satisfaction. The BCS was also selected for this study due to its brevity and ease of administration via the interview technique.

Primary Communication Inventory (PCI)

The Primary Communication Inventory [Locke, Sabagh and Thomes, 1956] was specifically designed to measure communication in marriage. Originally a 26-item questionnaire, it was adapted to 25-items [Navran] containing a five-point Likert-type scale.

Using 24 unhappily married couples and 24 happily married couples, the PCI proved to be highly discriminating for the married couple groups. The critical ratio for the difference between the mean scores was 16.04. The happily married couples had clearly

better communication in both verbal and non-verbal sectors with very little difference between the sexes in both groups [Narvan].

There has also been shown to be a positive correlation between the scores on the PCI and marital satisfaction scores [Locke, Sabagh and Thomes; Navran]. The correlation of .82 was highest in Navran's study. Locke, Sabagh and Thomes reported lower correlations but these correlations were still significant at the .01 level.

The revised PCI was thus utilized for this study [Appendix F]. All 25 items were used. It was not adapted further.

Draw-a-Graph

Draw-a-Graph is a retrospective research technique utilized by Back and Bourque [1970] in studying aging and the cohort effect. Respondents were asked to look back over their lives, charting changes over the course of time, as they remembered them.

Lewis [1981] utilized the Draw-a-Graph concept to obtain a picture of marital adjustment over time. Studying 30 doctoral couples where the female was a candidate, Lewis used four stages of the doctoral program. She asked respondents to plot their marital adjustment over the course of the program. The Draw-a-Graph technique was readily understood by the respondents and yielded data similar to that obtained when using the Marital Adjustment Inventory [Locke and Wallace].

In the present study, three stages of the doctoral program were utilized. Respondents were asked to plot commitment, then communication and, finally, marital adjustment on three separate graphs [Appendices G, H, I].

Demographic-Questionnaire

An additional instrument was developed to obtain biographic and demographic information from the sample [Appendix J]. The purpose of this was three-fold:

1. to develop a profile of the married doctoral student and their spouse.
2. to obtain clues as to other possible reasons for survival of doctoral student marriages or possible sources of conflict in these marriages.
3. to provide information for future doctoral student couples which might better prepare them to adapt to the program and to make the necessary adjustments in their marriages.

The questionnaire gathered information including age, number of children, length of time in the program, sources of funding for the program, as well as information relating to adult developmental stages.

Several additional narrative-type questions were designed to glean information that might help future doctoral couples. These questions included information related to perceived periods and sources of possible stress during the program and marital adjustments that couples had had to make in order to adapt to the program. Advice and suggestions for incoming students were also solicited from the sample [Appendix K].

Data-Collection-Procedures

Personal or telephone interviews were set up with all couples who returned the consent postcards. Upon receipt of the postcard indicating that both spouses would participate, each couple was assigned a number. Each individual's response was then color-coded by sex and by participation or non-participation in the doctoral program. Each individual was contacted personally or by telephone. An interview was scheduled at the respondent's convenience in a private location of his or her choice.

For those individuals living in other states or whose jobs and location made it impossible to personally interview, telephone interview times and locations were scheduled. Often several long-distance calls were necessary in order to complete an individual interview.

It was originally estimated that interviews would take from half an hour to one hour. As rapport was established and conversation flowed, interviews averaged one hour to one and one-half hours.

Separate interviews were held with each spouse and confidentiality was always stressed. Even when couples believed that it was not a problem to be interviewed together, they were separated as it was believed that less inhibition would be displayed.

The Interview

An attempt was made to achieve uniformity in interview procedure. All interviews were pre-scheduled and, in the event that the interview did not take place, a follow-up call was placed and the interview was rescheduled.

All interviews were initiated by the researcher with a brief period of general conversation in order to increase the comfort level of the person being interviewed. The interview was divided into several sections. The instrumentation and instructions were explained briefly at the onset of each session. Respondents were encouraged to express any discomfort they felt with the procedure. The first part of the interview was concerned with demographic and biographic information

The instrumentation regarding commitment was then presented. The researcher explained the scale to be utilized in judging the level of commitment and emphasized the definition of commitment which makes up the scale. Responses were repeated and reaffirmed.

Respondents were then given a blank graph and asked to look backward at their commitment levels as they perceived them at the various stages of the doctoral process. The stages were defined and the graph explained. This was done in the same manner that Back and Bourque [1970] had looked at aging and Sheehy [1974] and Cross [1981] looked over life's passage.

The communication inventory was given next. Participants were asked to fill this out with the researcher present to clarify

items and answer questions. This format was used in order to provide variety and decrease boredom. The communication graph was then presented in the same way that the commitment graph had been given.

The respondents were then handed a rating scale to be used with the responses to the marital adjustment questions. The researcher guided the conversation to cover the issues which were part of the inventory. All issues were presented in the same order to each interviewee. The marital adjustment graph followed immediately.

A tape recorder was not used to record conversation as it was believed that it would impede the flow of candid conversation. Although confidentiality was a concern emphasized from the onset, the trust level was perceived by the researcher as high in all cases.

Assumptions

The following assumptions were made related to the collection of the data in this study:

1. Respondents who volunteered to participate in the study were willing and prepared to answer as truthfully and as thoughtfully as possible.
2. Respondents had not been coerced to take part in the study.
3. Respondents were capable of looking backward over the course of the time that they had been involved with the doctoral program and accurately assess their attitudes and feelings at the various stages presented.
4. Respondents were able to accurately assess their marriages.
5. The sample size of 51 couples would accurately reflect the designated population.

Hypotheses

In an attempt to determine the effect of the doctoral program on the marriages of doctoral students, the following hypotheses were proposed:

- H01a : There is no significant relationship between the perceived degree of commitment to marriage and pursuit of doctoral study and the perceived degree of marital adjustment of doctoral students.
- H01b : There is no significant relationship between the perceived degree of commitment to marriage and pursuit of doctoral study and the perceived degree of marital adjustment of doctoral student spouses.
- H01c : There is a significant relationship between the perceived degree of commitment and the perceived degree of marital adjustment for both doctoral students and their spouses.
- H02a : There is no significant relationship between perceived levels of communication and perceived levels of marital adjustment of doctoral students.
- H02b : There is no significant relationship between perceived levels of communication and perceived levels of marital adjustment of doctoral student spouses.
- H02c : There is a significant relationship between perceived levels of communication and perceived levels of marital adjustment of doctoral student spouses.
- H03 : There is no significant difference between the perceived marital adjustment of doctoral students during the various stages of doctoral study and the perceived marital adjustment of their spouses during the different stages of doctoral study.

- H04 : There is no significant difference between the perceived marital adjustment of male doctoral students and the perceived marital adjustment of female doctoral students.
- H05 : There is no significant difference between the perceived marital adjustment of doctoral students based on selected demographic variables and the perceived marital adjustment of their spouses based on the same variables.

Treatment of the Data

All data were originally hand-tabulated and then keypunched onto computer cards. Based on the hypotheses, statistical analysis was applied. Scores were tabulated for all individuals at eleven points on the "Draw-a-Graph" data sheets for commitment, for communication and for marital adjustment. These data were then averaged at each of the eleven points for doctoral students, for their spouses and for each couple. The information generated was used to illustrate the change over time of commitment, communication and marital adjustment for doctoral student couples.

Analysis of Covariance, Analysis of Variance, as well as linear regression were utilized in testing the five hypotheses. Since the purpose of the study was to determine the effect of the pursuit of doctoral study on the total population of doctoral students, the objective of the analysis was to isolate information about the couples which might be generalized to the total population. Each of the independent variables was correlated to the dependent variable marital adjustment. In addition, two linear regression models were run on the biographic and demographic data in order to predict whether factors other than the two independent variables (commitment and communication) might be related to marital adjustment. Separate analyses were undertaken for the doctoral students and their spouses, for male doctoral students and for female doctoral students, and for the couple.

Analysis of Covariance (ANCOV)

Analysis of Covariance is a statistical technique which combines the concepts of analysis of variance and regression. Regression is a technique used for predicting relationships while Analysis of Variance (ANOVA) is used for contrasting relationships. Predicting allows for description of relationships between sets of data as well as for the probability that the prediction will occur again under the same circumstances [Courtney, 1982]. Contrasting allows for assessing differences between means. It can be applied to descriptive as well as experimental studies [Courtney, 1983].

ANCOV tests the significance of differences of post-mean scores. It is particularly useful where little control has been exercised over independent variables. It adjusts for initial differences in data and accounts for the influence of uncontrolled factors [Courtney, 1983].

ANCOV was used to test the following hypotheses:

- H01a : There is no significant relationship between the perceived degree of commitment to marriage and pursuit of doctoral study and the perceived degree of marital adjustment of doctoral students.
- H01b : There is no significant relationship between the perceived degree of commitment to marriage and pursuit of doctoral study and the perceived degree of marital adjustment of doctoral student spouses.
- H01c : There is a significant relationship between the perceived degree of commitment to marriage and pursuit of doctoral study and the perceived degree of marital adjustment of doctoral student spouses.

- H02a : There is no significant relationship between perceived levels of communication and perceived levels of marital adjustment of doctoral students.
- H02b : There is no significant relationship between perceived levels of communication and perceived levels of marital adjustment of doctoral student spouses.
- H02c : There is a significant relationship between perceived levels of communication and perceived levels of marital adjustment for both doctoral students and their spouses.

Analysis of Variance (ANOVA)

Analysis of Variance is a method for partitioning the sum of squares for experimental data into known components of variation. The F-statistic compares (contrasts) the variance to the overall variance of sample observations. Analysis of Variance permits the researcher to overcome the ambiguity involved in assessing significant differences when more than one comparison is made. The test statistic used was the F with the 14.05 level used to determine significance.

ANOVA was used to test the following hypotheses:

- H03 : There is no significant difference between the perceived marital adjustment of doctoral students during the various stages of doctoral study and the perceived marital adjustment of their spouses during the different stages of doctoral study.

This hypothesis was treated with a two-stage process. The data were first analyzed using analysis of variance. The independent variables were the stages in the program and the dependent variable was the difference in the marital adjustment scores of the individuals within the dyad.

Further analysis of this hypothesis was deemed necessary in order to deal with the individuals within the dyad. Means and variances were computed for these individuals.

H04 : There is no significant difference between the perceived marital adjustment of male doctoral students and the perceived marital adjustment of female doctoral students.

ANOVA was also utilized to treat data in hypothesis four. ANOVA was an appropriate method as perceived marital adjustment scores for males and females were measured without concern for these individuals as a part of a dyad. The males and females had no relationship to each other in this case.

Multiple Regression

The regression effect refers to the phenomenon that values of variables tend to move toward the mean on subsequent evaluations. In the case where there is one variable of particular interest, marital adjustment in this case, the other variables are used to predict how the first variable will behave under given conditions.

Regression is perhaps the most commonly used analysis technique for predicting and is very useful to many situations. Linear regression is a useful mechanism for judging probabilities of success under certain circumstances [Courtney].

Two regression models were developed utilizing the data for hypothesis five. The models were then contrasted and compared to make inferences predicting how marital adjustment will be impacted by demographic variables. The variables were summarized and interrelationships among the variables clarified.

H05 : There is no significant difference between the perceived marital adjustment of doctoral students based on selected demographic variables and the perceived marital adjustment of their spouses based on the same variables.

CHAPTER IV

ANALYSIS OF THE DATA

The purpose of this research was to investigate the impact of doctoral education on the marriages of doctoral students. The sample was drawn from the entire population of doctoral students currently enrolled in OSU-WOSC's School of Education and OSU's College of Home Economics. A total of 102 respondents (51 doctoral students and their spouses) agreed to take part in the study. Almost equal numbers of male and female doctoral students responded with 26 being male and the remaining 25 doctoral students being female.

The data for the research were collected through individual interviews. Analysis of Covariance (ANCOV), Analysis of Variance (ANOVA), as well as linear regression were utilized in testing the five hypotheses. Each of the independent variables, perceived communication and perceived commitment, was correlated to the dependent variable marital adjustment. The two linear regression models were run on biographic and demographic data collected to predict whether factors other than communication and commitment might be related to marital adjustment. Separate analyses were done for doctoral students and spouses, for male doctoral students and female doctoral students, for male spouses and female spouses, for all males and for all females, and for couples.

The .05 level of significance was used to determine whether to accept or reject the null hypotheses. If computed values were less than the value indicated in the statistical tables (tabular value) at the .05 level of significance, the null hypothesis was retained. If the computed value of the statistical "F" was equal to or greater than the tabular value of F, the null hypothesis was rejected. If the null hypothesis is rejected, it can be concluded that events consistent with the null hypothesis are occurring less than five

percent of the time. Therefore, it is preferable to retain the alternate hypothesis and identify the source of variance.

The findings of the study are presented in the following manner to facilitate understanding:

1. presentation of data relative to each hypothesis under investigation,
2. presentation of tables and figures designed to represent and clarify the findings,
3. the rationale for accepting or rejecting each hypothesis,
4. a summary of the statistical analysis, and
5. a presentation of other related findings gleaned through open-ended questions asked at the conclusion of the interviews.

Findings Relative to the Hypotheses

Findings Relative to H01a, H01b, and H01c

- H01a : There is no significant relationship between the perceived degree of commitment to marriage and pursuit of doctoral study and the perceived degree of marital adjustment of doctoral students.
- H01b : There is no significant relationship between the perceived degree of commitment to marriage and pursuit of doctoral study and the perceived degree of marital adjustment of doctoral student spouses.
- H01c : There is a significant relationship between the perceived degree of commitment to marriage and pursuit of doctoral study and perceived degree of marital adjustment for both doctoral students and their spouses.

For the purpose of this study, marital adjustment was measured through data obtained during administration of the Locke-Thomes Marital Adjustment Test. Marital adjustment was measured for both doctoral students and their spouses. The total possible score on the instrument was 76 representing the highest level of marital adjustment. The mean marital adjustment scores and standard

deviation for doctoral students and their spouses are presented in Table II.

The data indicate an average marital adjustment for both groups of 58.62745. Marital adjustment was used as the dependent variable for H01 as well as for H02.

TABLE II Spouses Mean Scores and Standard Deviations on the Locke-Thomes Marital Adjustment Inventory		
	<u>MEAN</u>	<u>STANDARD DEVIATION</u>
Doctoral Students	58.96078	7.29647
Spouses	60.29412	7.90011

The Broderick Commitment Scale was utilized to measure commitment to the marriage. The scale ranges from 0 to 100 with 100 being "extremely committed" and 0 "not at all committed." Means and standard deviations for commitment are shown in Table III.

TABLE III Spouses' Means and Standard Deviations on the Broderick Commitment Scale		
	<u>MEAN</u>	<u>STANDARD DEVIATION</u>
Doctoral Students	88.49020	15.04177
Spouses	90.19608	16.49123

Although commitment scores for both doctoral students and their spouses are above 75 percent (very committed), the majority of spouses perceived their level of commitment to be somewhat higher

(93.21569) than that perceived by candidates (88.49020). The spousal scores also tended to deviate less from each other than did those of their doctoral mates. An analysis of covariance indicated that the computed value of F for the independent variable commitment was 4.11 which is greater than the tabular value. This indicates a significant relationship between commitment and marital adjustment. There is, however, no significant difference in the relationship between commitment and marital adjustment for doctoral students and for their spouses. The lack of a significant relationship is observed because the F scores for both groups are equally and significantly related to marital adjustment (Table IV).

TABLE IV Analysis of Covariance between Marital Adjustment and Commitment for Doctoral Students and Their Spouses		
	<u>F</u>	<u>LEVEL OF SIGNIFICANCE</u>
Commitment/MA	4.11	.0482
Commitment/MA/Both	1.07	.3059

Because the tabular F is greater than the computed F, H01a and H01b are rejected at the .05 level. However, since commitment is significantly related to the dependent variable--marital adjustment--for both doctoral students and their spouses, H01c is retained at the same level.

Findings Relative to H02a, H02b, and H02c

H02a : There is no significant relationship between perceived levels of communication and perceived levels of marital adjustment of doctoral students.

- H02b : There is no significant relationship between perceived levels of communication and perceived levels of marital adjustment of doctoral student spouses.
- H02c : There is a significant relationship between perceived levels of communication and perceived levels of marital adjustment of doctoral student spouses.

The Primary Communication Inventory was utilized to measure perceived levels of communication between doctoral students and their spouses. This inventory consists of 25 questions with a possible total score of 115. Means and standard deviations for communication are shown in Table V.

TABLE V Spouses' Means and Standard Deviations on the Primary Communication Inventory		
	<u>MEAN</u>	<u>STANDARD DEVIATION</u>
Doctoral Students	93.21569	11.56082
Spouses	94.01961	11.38857

Again, it is seen that the communication scores for both doctoral students and spouses are above the eightieth percentile. It is significant to observe that while scores for both groups are very similar (Table V), spouses as a group perceived their levels of marital communication to be slightly higher (94.01961) than did their doctoral partners (93.32569). The spouses' responses were more similar (.17195 [Table XI]) than those of the doctoral students.

The analysis of covariance indicated that the computed F value of 9.49 is greater than the tabular value of 4.04 (Table VI). Since the computed F is greater than the tabular F, there is a significant relationship between communication and marital adjustment.

TABLE VI
Analysis of Covariance between Marital Adjustment
and Communication for Doctoral
Students and Their Spouses

	<u>F</u>	<u>LEVELS OF SIGNIFICANCE</u>
Communication/MA	9.49	.0034
Communication/MA/Both	.87	.3554

The analysis of covariance further indicated that there is no significant difference in the relationship between communication and marital adjustment for either spouses or doctoral students, i.e., in less than five percent of the sample was there any significant difference in the relationship between communication and marital adjustment for doctoral students or their spouses. Therefore, HO2a and HO2b are rejected at the .05 level of significance but the combined hypothesis, HO2c, is retained.

It is further apparent that both covariates, commitment and communication, are significantly related to the dependent variable, marital adjustment for both spouses and doctoral students.

Findings Relative to HO3

HO3 : There is no significant difference between the perceived marital adjustment of doctoral students during the various stages of doctoral study and the perceived marital adjustment of their spouses during the different stages of doctoral study.

In testing hypothesis three, the Back and Bourque Draw-a-Graph was utilized to establish a second method of measuring marital adjustment. Rather than interviewing the respondents through use of a specific line of questioning, as was the case when utilizing the Locke-Thomes, the researcher followed the strategy of Lewis [1981]

asking respondents to look retrospectively at their involvement with the doctoral program. The respondents were then asked to graph on a ten-point scale their perception of their marital adjustment for the different stages of doctoral study.

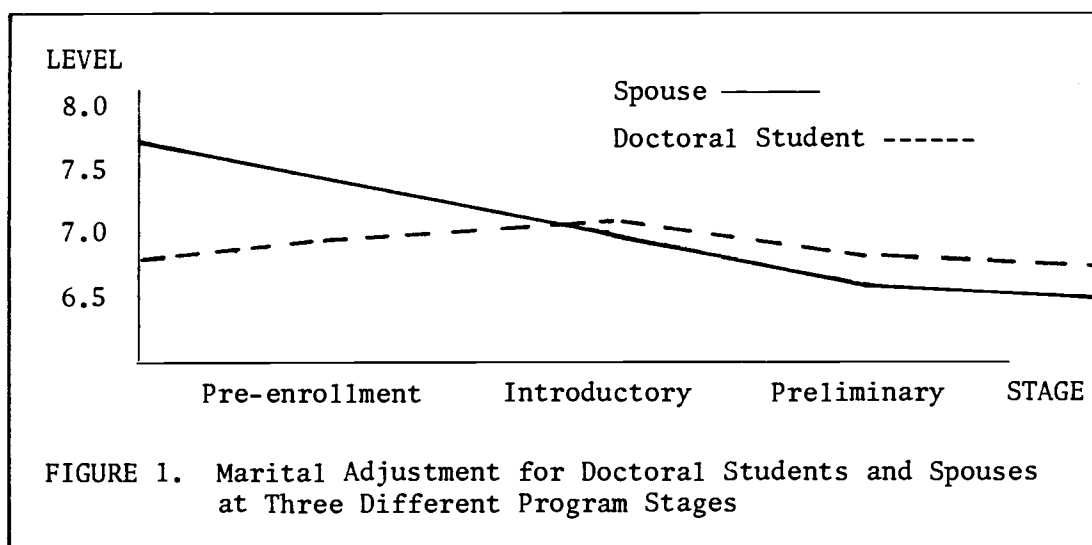
Respondents were asked to chart the entire time that they had been in the program. While respondents had been in the program for different lengths of time and were at slightly different stages of completion, all had completed at least 75 percent of the program and a minimum of a year of residency on campus. Therefore, only the three program stages up to that point were utilized in analyzing this hypothesis. The stages utilized were:

- Pre-enrollment: the year prior to entering the program
- Introductory: the first two terms of course work, and
- Preliminary: course work primarily finished (within 12 hours of completion) and studying for comprehensive exams.

A two-way analysis of variance was used to examine the data obtained from the graphing technique. The data generated relative to marital adjustment for doctoral students and their spouses at different stages of doctoral study indicated that the cell means for both spouses were very close (Table VII).

TABLE VII			
Cell Means for Marital Adjustment for Doctoral Students and Their Spouses at Three Stages of Doctoral Study			
	STAGE		
	1	2	3
Doctoral Students	68.92157	70.49020	71.07843
			Marginal = 71.45425
Spouses	74.31373	70.39216	73.52941

It can be seen that at the pre-enrollment stage, spouses perceived their marital adjustment to be slightly higher than did their doctoral mates. Marital adjustment of spouses dropped slightly prior to stage two while marital adjustment of doctoral students rose slightly during the same period. Spousal marital adjustment scores, originally higher than doctoral students scores, did not recover to their original level. In spite of this fact, the relationship between the marital adjustment scores for both partners is not separated by more than one point on the scale of 0 to 10 at any time (Fig. 1). At the introductory stage, both parties perceived their marital adjustment to be essentially the same.



The standard deviations for marital adjustment at each stage are shown in Table VIII.

TABLE VIII			
Standard Deviations in Marital Adjustment Levels for Doctoral Students and Spouses at Three Program Stages			
	<u>PRE-ENROLLMENT</u>	<u>INTRODUCTORY</u>	<u>PRELIMINARY</u>
Doctoral Students	25.48164	21.82327	25.90972
Spouses	25.04036	26.05462	26.02487

Although the standard deviations indicated similar perceptions of adjustment, there was a greater variability among the spousal perceptions at the introductory stage showing a greater variation in perceived adjustment for that group.

TABLE IX					
Analysis of Variance for Marital Adjustment at Three Stages of Doctoral Study					
	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>PROB.</u>
Doctoral Student Error	509.88562	1	509.88562	.59	.4457
	43144.28105	50	862.88562		
Stage Error	181.04575	2	90.52285	.32	.7296
	28618.95425	100	286.18954		
Interaction Error	384.96732	2	192.48366	1.15	.3221
	16798.36601	100	167.98366		
Mean Error	1562347.14052	1	1562347.14052	777.75	
	100440.35948	50	2008.80719		

The analysis of variance (Table IX) showed the computed F of 1.15 to be significantly below the tabular value. Therefore, the null hypothesis was retained.

Findings Relative to H04

H04 : There is no significant difference between the perceived marital adjustment of male doctoral students and the perceived marital adjustment of female doctoral students.

The information yielded from the Draw-a-Graph technique utilized to examine hypothesis three (Table VIII) indicated that there was no significant difference in the perceived marital adjustment of doctoral students and their spouses at the various stages of the

program. The researcher also wished to determine if the marital adjustment scores of doctoral students were sex-related. When the sample had been identified, it was found that the sample consisted of nearly equal numbers of male and female doctoral students.

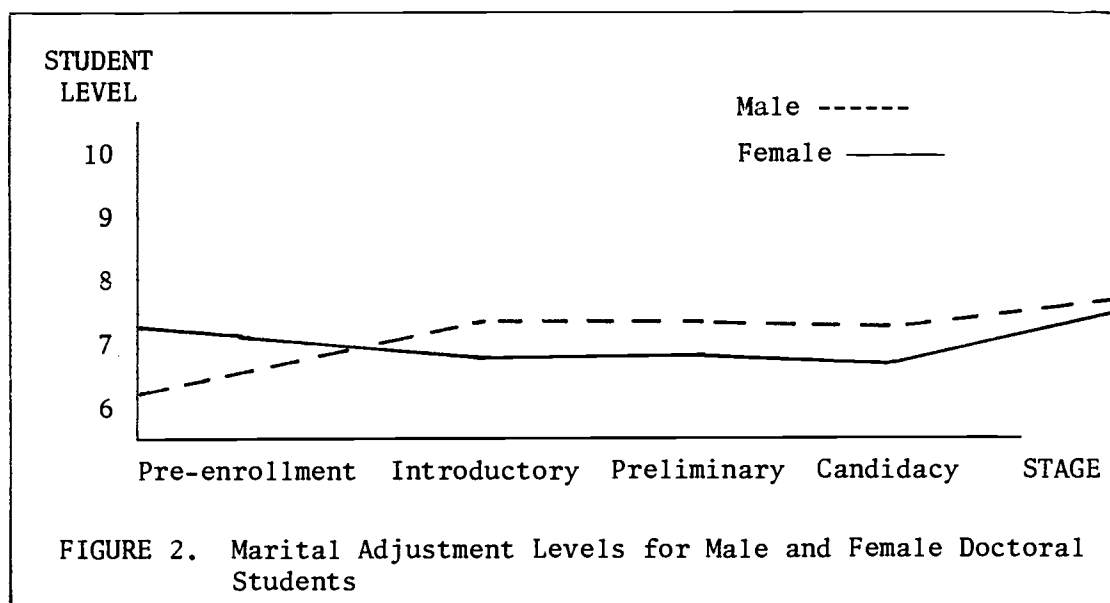
Two measures of marital adjustment were available. One had been taken from the Locke-Thomes Marital Adjustment Test and the other from the Draw-a-Graph data. Hypothesis four was retrospective in nature because it dealt with only one point in time. The Locke-Thomes scores were utilized throughout the study as the dependent variable, marital adjustment, except when dealing with retrospective data. For this reason, the Locke-Thomes scores were again used as the measure of perceived marital adjustment for hypothesis four.

Analysis of variance was used to determine if there was a significant difference in the perception of marital adjustment for male doctoral students as compared to the perception scores for female doctoral students. The analysis of variance data presented in Table X show an F ratio of .918. The tabular value for F at the .05 level with 49 degrees of freedom is 4.05. Since the calculated F is smaller than the tabular F, the null hypothesis is retained. There is no significant difference in perceived marital adjustment of doctoral students whether they are male or female.

TABLE X				
Analysis of Variance for Perceived Marital Adjustment of Male and Female Doctoral Students				
<u>SOURCE</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Between	1	48.9516	48.9616	.918
Within	49	2612.9600	53/3257	
Total	50	2661.9216		

A further related analysis gleaned from the Draw-a-Graph data showed that female doctoral students entered their programs with a

slightly higher perceived marital adjustment level than did their male counterparts (7.5 compared to 6.5 for males: Fig. 2).

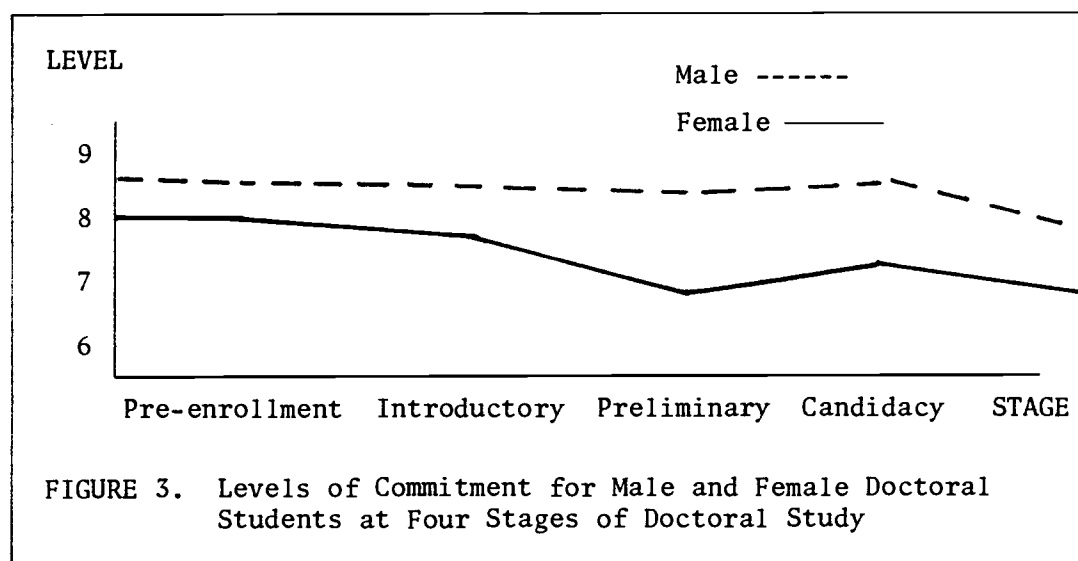


By introductory stage, this perceived marital adjustment level had dropped slightly (3%) for female doctoral students, settling at a level of 70 percent by the time their course work was three-quarters finished. While male doctoral students had lower perceived marital adjustment prior to entering the program, their levels of marital adjustment followed a slightly upward trend upon entering the program. After two terms of course work, perceived marital adjustment exceeded that of female doctoral students and continued to do so through candidacy. (Even though the data are limited relative to the experience during the final stage of the program, it was noted there was an apparent recovery which exceeded the perception of marital adjustment at entry: males were at 6.5 at program entry as compared to a level of 8.0 at stage four while females went from a level of 7.5 at entry to 8.8 by stage four.)

This recovery pattern experienced after preliminary exams was also seen in the Lewis study [1981]. Lewis found that the recovery level for women doctoral students settled at 7.9, but while their

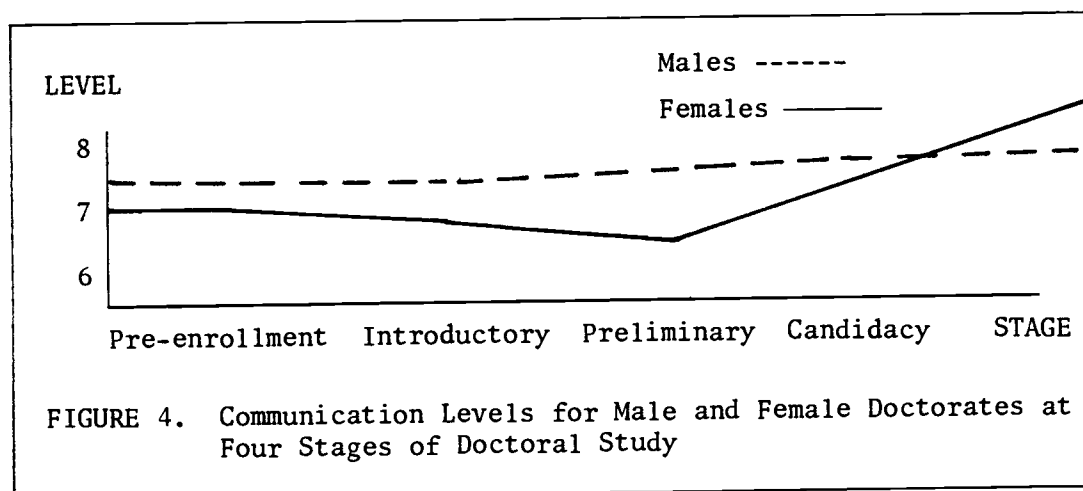
spouses reached a level of 7.3, this level fell short of their original perceived marital adjustment.

This difference between the results of the two studies may be attributed to the fact that all of the males in the Lewis study were spouses, whereas in the current study males were both spouses and doctoral students. The relief of program completion may be felt more directly by doctoral students themselves and may account for this difference in perception.



The data show (Fig. 3) that female doctoral students expressed a lower level of commitment to their marriages at the pre-enrollment stage than that expressed by their male counterparts. While the levels of female commitment rose to within one point of that perceived by males at the introductory stage, commitment became stronger at candidacy but then fell back to a low of 6.4 as compared to 9.0 for males upon completion of their degrees. This pattern shows male doctoral candidates as having a relatively stable perception of commitment to their marriage while the female commitment appeared to be more negatively affected by the degree process. While this pattern is seen in the graphs, the changes in commitment are not great enough to be statistically significant.

Communication levels of female doctoral students are slightly lower at the pre-enrollment and introductory stages but they exceed male scores at the preliminary stage by more than ten percent. However, both groups perceived their communication level to be the same as that reported by the other group by candidacy (Fig. 4). Commitment patterns for both male and female doctoral students follow a similar and closely parallel pattern.



Findings Relative to H05

H05 : There is no significant difference between the perceived marital adjustment of doctoral students based on selected demographic variables and the perceived marital adjustment of their spouses based on the same variables.

A demographic questionnaire was utilized to glean demographic information that might possibly be related to a couple's marital adjustment. The following demographic variables were considered in order to determine if there was a difference between the perceived marital adjustment of doctoral students and their spouses:

1. Age
2. Length of time in the program
3. Length of time married to current spouse
4. Age when entering the current marriage

5. Whether partners are living together
6. Number of children living with the individual
7. Employment status
8. Source of funding for the program
9. Change in socio-economic status and lifestyle since entering the program
10. Educational level.

Linear regression was selected as the method to be used in order to predict how each demographic variable was related to the dependent variable marital adjustment. In order to accomplish this, two linear regression models were then run on the data gathered.

All of the demographic variables were first included in a full regression model. Then ten reduced models were run so that in each of the ten models, one variable was deleted to determine the effect on marital adjustment when that particular variable was eliminated. The eliminated variable was then added back into the model and another variable was eliminated until all ten reduced models had been run.

An analysis of variance was run on each model in order to obtain measures necessary for comparison purposes. The ANOVA for the full model, which included all independent variables, indicated 1790.35 (Table XI) as the sum of the squares for the regression with 35 independent comparisons possible.

TABLE XI			
Analysis of Variance for All Demographic Variables for Doctoral Students and Their Spouses			
<u>SOURCE</u>	<u>df</u>	<u>SUM OF SQUARES</u>	<u>MEAN SQUARE</u>
Regression	35	1790.35	51.1528
Residual	15	1330.24	88.6826

The remaining (residual) 15 degrees of freedom indicated that with only 15 degrees of freedom to vary, the mean square was 88.6826. Computation of these scores was necessary in order to utilize a model to test the effect of eliminating variables in the reduced models (Table XI).

The demographic factors were then isolated in each of the ten reduced models in order to examine the effect of each demographic variable on the dependent variable, marital adjustment. In testing the resulting regression models, an ANOVA table was developed for each reduced model from the data generated when each variable was eliminated. The effect created by the variable which was eliminated was then tested (Fig. 5).

$$F = \frac{\frac{\text{Full Regression SS} - \text{Reduced Regression SS}}{\text{Full Regression DF} - \text{Reduced Regression DF}}}{\text{Full Residual MS}}$$

FIGURE 5. Test for Reduced Model

In all cases the reduced model test generated a computed F value which was less than the tabular F value at the .05 level. This means it can be predicted that in less than five percent of all instances will the eliminated variable have any significant effect on marital adjustment. In only one instance did the effect of a variable on marital adjustment show any notable effect.

The respondents were asked whether they were:

1. currently living together,
2. separated due to distance, finances, etc., involved in program completion, or
3. separated due to marital problems.

The Analysis of Variance for this variable indicated a reduced regression sum of squares of 1471.10 (Table XII).

TABLE XII
Analysis of Variance for Living
Arrangements of Couples

<u>SOURCE</u>	<u>df</u>	<u>SUM OF SQUARES</u>	<u>MEAN SQUARE</u>
Regression	33	1471.10	44.5788
Residual	17	1649.49	97.0286

The F generated equals 1.80 which, while not near the 4.54 tabular F, needed to be significant at the .05 level and is somewhat greater than the values generated by the other variables (Table XIII).

TABLE XIII
Sum of Squares and Levels of Significance
for Demographic Variables

<u>VARIABLE</u>	<u>SS</u>	<u>LEVEL OF SIGNIFICANCE</u>
Living arrangement	1471.10	1.8000
Socio-economic status	1600.03	.7154
Time in program	1659.91	.4902
Employment status	1713.71	.4321
Source of funding	1661.06	.2916
Children	1701.95	.1492
Time married	1705.51	.2392
Age	1731.26	.2221
Age when married	1706.03	.2221
Educational level	1766.53	.0537

While the difference indicates a slightly greater effect of this variable on marital adjustment, it is not great enough to show any significant effect on marital adjustment for even five percent of the time.

When the two regression models were tested, the resulting F-statistic indicated that no variables were significant at the .05 level of significance. The sums of squares from the analysis of variance tables for the reduced regression models as well as the levels of significance generated for each variable are displayed in Table XIII. The data are listed in order of degree of impact of the variable on marital adjustment with most pronounced effect listed first. No significant differences in perceived marital adjustment were found to exist between students or their spouses as a result of any of the ten variables. This finding supports the findings of Lewis [1981] who also found demographic variables to have no significant effect.

Additional Findings Related to the Data

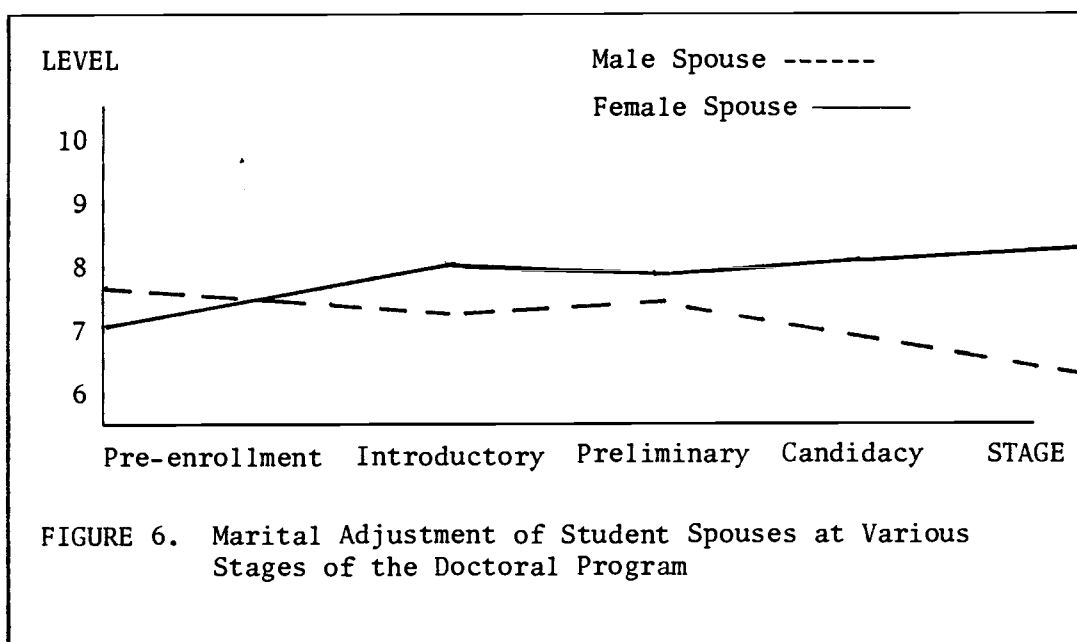
Even though the hypotheses addressed only marital adjustment at three stages of the doctoral program, the participants were asked to complete graphs for commitment and communication as well. Using the Draw-a-Graph technique, they looked retrospectively at communication, commitment and marital adjustment over the entire course of the program. The graphs were broken into nine stages for purposes of analysis. Common frequencies and then averages were run and finally graphed for six different combinations of sample participants. The data for the combination of female doctoral students as compared to male doctoral students as well as the data for doctoral students as compared to doctoral spouses have been previously reported (Table X), while the other two combinations are presented in the following sections:

1. Spouses of Doctoral Students, and
2. All Males as Compared to All Females.

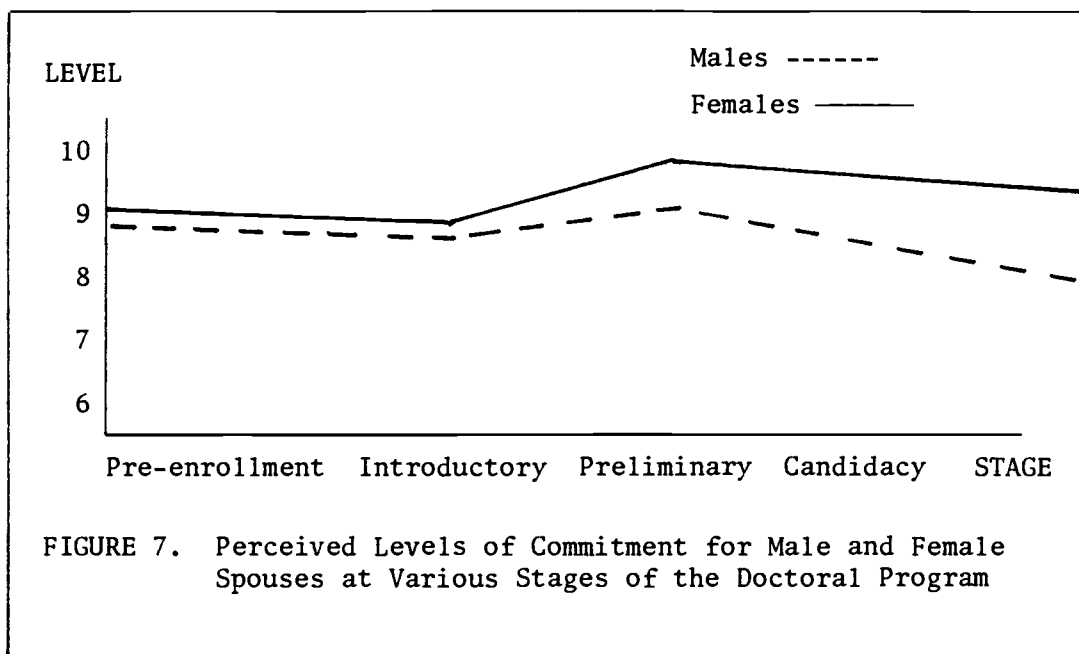
Spouses of Doctoral Students

When spouses only were compared regarding their perceptions, it was observed that, as in the pattern generated by doctoral

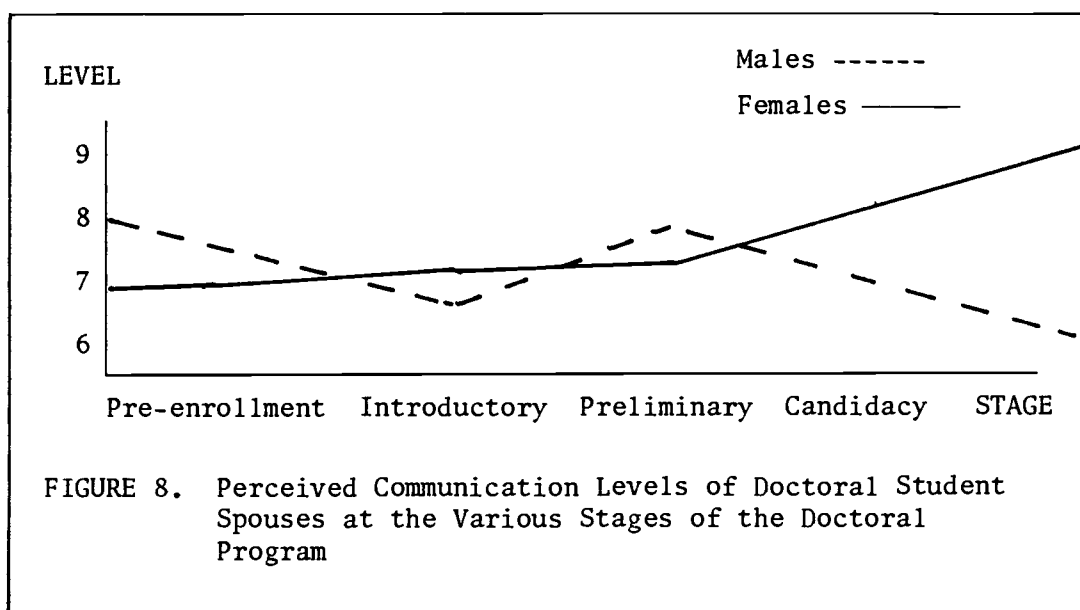
students, the perceived marital adjustment for women was somewhat higher prior to their spouses' entry into the program. The level of marital adjustment perceived by female spouses was equal to that of their male counterparts by pre-enrollment stage but, as in the pattern of doctoral students, the marital level of this group later fell below the level of the male group. Female spouses, unlike female doctoral students, were never able to fully recover their perceived marital adjustment to the level perceived by male spouses (Fig. 6).



This pattern of lower female perception of marital adjustment carried into perceived commitment. Again, like the female doctoral student, female spouses did not report the same degree of commitment as did males (Fig. 7).



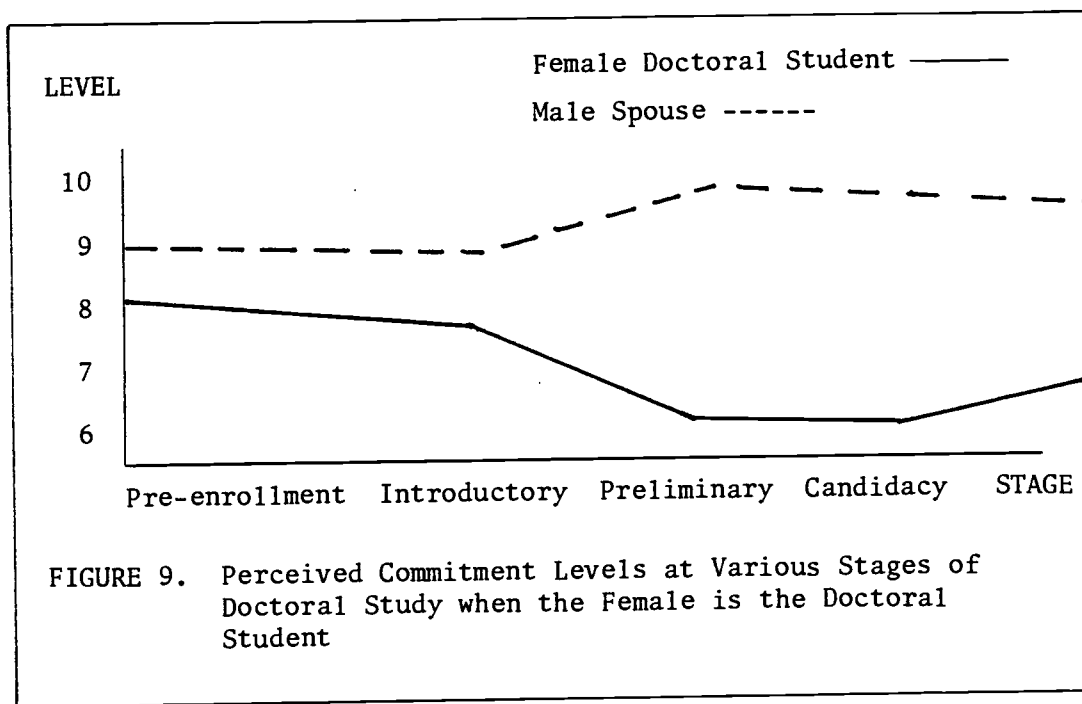
Only when perceiving communication did female spouses judge their levels to be higher than those perceived by male spouses (Fig. 8). While male doctoral students at all stages reported slightly higher levels of communication than did female doctoral students, there was little variance in the pattern. Female spouses had a more varied pattern than did male spouses, with perceived communication higher at the periods of greater program stress, e.g., preliminary and introductory. Male spousal patterns of communication were more stable, rising only at the end of the program where, as in the case of doctoral students, perceived communication for males and females was higher and nearly equal.



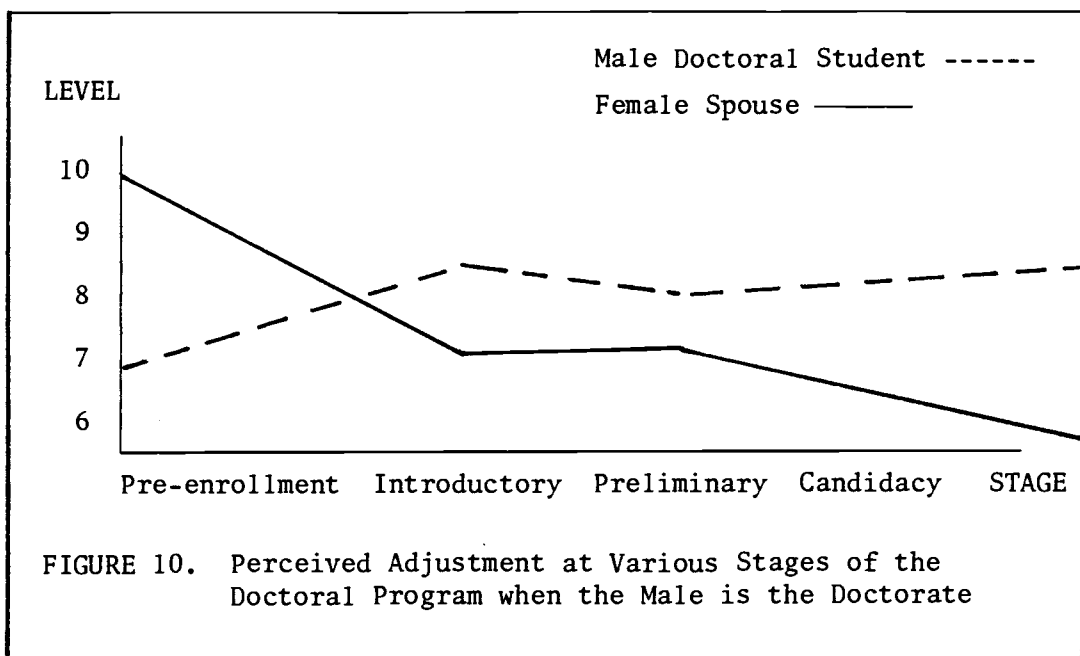
Females Compared to Males

When all females (both doctoral students and spouses) were compared to all males, levels for all variables were parallel but lower for females. The greatest gap was experienced in perceived commitment levels where female commitment was consistently 6 to 15 points lower on a scale of 0 to 100 than that of males. Only on marital adjustment did women begin the doctoral process at a higher level than men. Women also experienced a jump in communication at the preliminary stage which exceeded the male perceived communication level. In breaking down the couples into male and female doctoral couples, it is seen that whether the female was the doctoral student or the spouse, her level on all variables always ended up equal to or lower than those of her spouse. The greatest differences were experienced in levels of commitment with female doctoral students ten points lower than their male spouses. The gap in perceived commitment continued to widen with males 28 points higher at preliminary and 30 points higher upon completion of the program. Female doctoral students experienced a slow but steady decline in

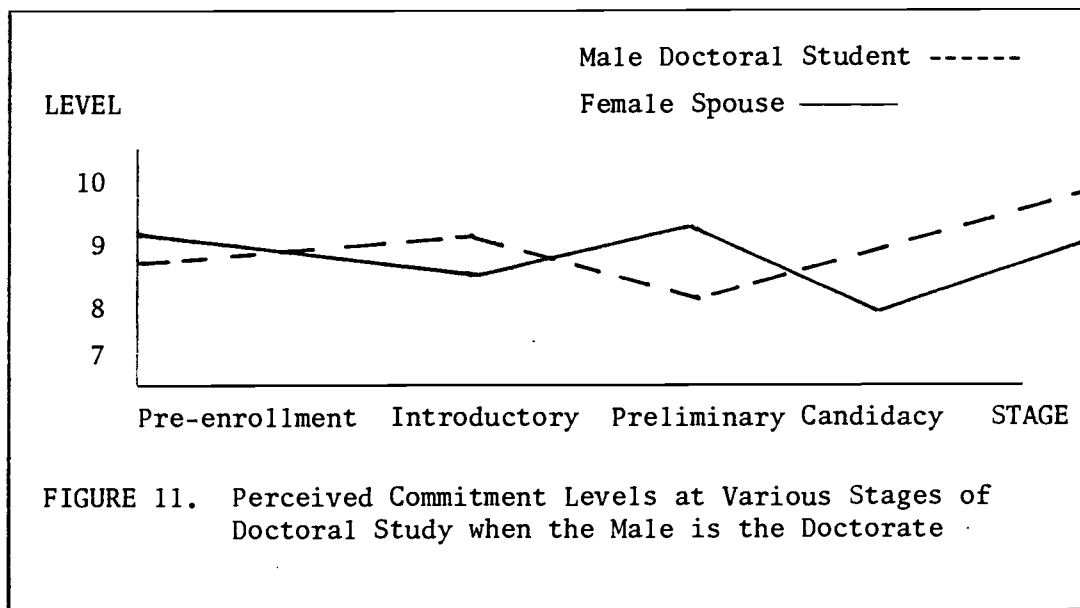
commitment levels until candidacy, where they showed a sharp drop to a low of 6.4 out of 10 at completion of the program (Fig. 9).



When the male partner was the doctoral student, his female spouse started with a more optimistic outlook on all variables than her student spouse. She experienced a much more up-and-down pattern of communication, being 15 points higher at preliminary and 14 points lower prior to candidacy. Male marital adjustment and commitment followed a steady path but female marital adjustment fell from 10.0 at outset of the program to a low of 6.0 at candidacy with a 15-point spread at completion (Fig. 10).



Commitment for both spouses stayed close to 9.0 when the male was the doctoral student. Female spouses experienced slight declines at introductory stage and after preliminary stage (Fig. 11).



Summary for Data Analysis

Based on the data collected and analyzed for this study, the variable commitment was found to be significantly related to marital adjustment for both doctoral students and for their spouses. Perceived communication levels were also found to be significantly related to marital adjustment for both groups.

Marital adjustment was further studied retrospectively over the various stages of doctoral study. It was found that there was no significant difference in the strength of marital adjustment over the course of study when looking at marital adjustment levels for doctoral students and their spouses. The path of marital adjustment revealed by both statistical and non-statistical methods indicated a closely parallel curvilinear pattern for both groups.

Male and female doctoral students were also not found to have any significant differences in perceived marital adjustment. When examined over time, once again marital adjustment followed a curvilinear pattern. This pattern was also reflected in perceived levels of communication and commitment for these groups.

The demographic variables analyzed in order to predict their relationship to marital adjustment indicated that none of them had any significant effect on marital adjustment. While the variable related to living arrangements indicated a slight relationship between marital adjustment levels and couples living together during doctoral study, the relationship was not great enough to be significant.

The distribution of answers for this variable was also skewed due to the fact that only six of the sample couples were not living together and, of these couples, only two were separated due to conflict. Therefore, the regression showed a more pronounced effect.

Lastly, in further graphing of the data not dealt with in the hypotheses, it was found that, while the patterns of marital adjustment were not significantly different for all combinations of sample pairs, females were consistently slightly less committed

to their marriages. Females also perceived their marital adjustment to be somewhat less strong than did males.

Other Related Findings

The purpose of this study was to examine the effect of doctoral education on the marriages of doctoral students. At the conclusion of the portion of the interview needed for statistical analysis, several open-ended narrative questions were asked in order to solicit other information that might be of possible help to future doctoral couples.

Respondents were asked about major sources of stress in their lives during the time in which they had been in the program. They were also asked about adjustments that they had had to make in their marriages as a result of the program. Advice to future doctoral students was also solicited. Finally, respondents were asked if they would enter or have their spouses enter the program if they had it to do over again.

Responses to all questions clustered around major areas of concern. The most common source of stress and the factor that was most significant as an area in which adjustment had to be made was time.

Both doctoral students and spouses repeatedly talked about the stresses related to time. Having to spend so much time apart was perceived to cause lack of communication and resulting problems. With both spouses working either outside the home or with increased family activities in the home, times to be together often did not coincide. There were also complaints of the physical side of marriage being ignored. One doctoral student spoke of competition as to who was the busiest and wondered when "life in the fast lane" really had begun.

The time problem also caused concern over neglect not only of spouses but also of children. Couples with children talked about alternating times to be available for child-care

responsibilities. Non-doctoral student spouses talked about adjusting to becoming "single parents."

This stress often manifested itself in jealousy on the part of spouses over the attention given to the program and peers. Doctoral students were concerned over having to leave their spouses to give time and attention to other people. These same students also expressed stress at spouses finding other outlets for their interests. Disagreements seemed to occur over how both parties prioritized their time.

The greatest time-related adjustment appeared to be a general sensitivity to scheduling. Readjusting scheduling to provide enough time for studying and marriage was necessary. Couples had to adjust to lack of recreation time together. Further stress resulted from lack of time for social activities. The intense time and preoccupation required for studying left little time for interest in and support of non-doctoral student's professional or social interests. Both partners had to be sensitive to the needs of the other. Adjusting to a lack of spontaneity in both verbal and non-verbal communication was also necessary. There was a realization that less time would be available, but what time there was available would be more valuable.

One doctoral student summed the thoughts expressed by many others. He said that his family demanded more time than he was able to give. However, in the final analysis, school did not stand a chance if he had to weigh its importance in relation to his family.

Respondents advised future couples to plan a day or night each week to be together. They also suggested planning a special activity to look forward to at the end of the term. It was stressed that this time must be structured in such a way as to be totally away from the academic situation so that the couple could really be together.

Other advice related to time was that the process takes longer than was anticipated. While it was viewed as important to set specific time-related goals, it was also viewed as important to not try to do too much at once at the expense of the spouse and family.

Couples recommended tolerance and patience. It was advised that both people make a realistic assessment of time and energy needed for both to understand the mental concession needed for the doctoral student. The importance of understanding what can and cannot be controlled was stressed. Three comments summing this advice were:

"It's a long haul, a lot longer than you think. You had better be totally committed and there must be something down the road that is good,"

"Be tolerant, laid back, relaxed. This, too, shall pass," and

"Be aware that things will not get done. Immersion will short-change what was before. Something has to be pitched off the wagon and must be picked up by someone else."

The most commonly relayed secondary source of stress was finances. Couples indicated that, while they were not destitute, they had to live on tighter budgets and often in poor housing while holding down several jobs. This financial strain added considerable stress.

People talked about feelings that one spouse was carrying a bigger financial load than the other. Getting used to the guilt related to not "carrying their own weight" was often mentioned by doctoral students. Adjusting to fear of money was another concern. This fear was usually on the part of a spouse who was not bringing in what he or she believed to be adequate.

Respondents advised that couples should be sure they understand the financial commitment needed in advance of entry into the program. If this is not understood, little financial issues can grow into big problems. Couples also advised future doctoral couples to not be too frugal. A financial plan should be made that both can live with and couples should wait to enter the program until it will not represent a drastic financial loss.

Living conditions were a source of stress linked to finances. Several couples in the sample lived in some form of student housing

as residence advisors. This was viewed as a money-saving measure. In all cases this arrangement was mentioned by at least one partner as a source of stress. While one spouse had hoped it would "add energy" to their marriage, the responsibilities resulted in "no time together to share even the silences." Spouses expressed the need to adjust to the loneliness of having to share their partner with dorm residents. One spouse summed up the situation by stating that "living in a fraternity to save money turns out to be less important because lack of money just makes you stay home which turns out to be a positive thing."

Another stress-related living situation was experienced by couples who had to be physically separated in order for one to go to school. Extreme loneliness was a constant source of stress. In a long-distance marriage there can be little daily reinforcement and communication. They had to adjust to being without their partner. One doctoral student said it really made him appreciate his home while another expressed adjustment problems related to being back together. It was difficult to reestablish sexual feelings as well as to get back to a normal life. Another doctoral student found it difficult to justify her decision to stay and finish her program.

Conflicting feelings were expressed on the possibility of a doctoral student living alone while working on the degree. Several partners, both students and spouses, thought it would be less stressful on the marriage. Several suggested that separation had saved their marriages. They also suggested that other students even go away to school to escape unhappy marriages. The program time was viewed as a time for growth. One doctoral student candidly stated that he and his spouse were much happier when each partner was not totally dependent on the other.

Children were seen as a source of stress by some. There was a fear of not being a good parent but also resentment over having to "vegetate" while being "stuck at home with the children." Teen-age children were particularly mentioned as a source of stress. In every case, it was conceded that these problems were not uniquely related to the program.

A great deal of stress was expressed as a result of the program itself. Respondents repeatedly talked about the stress of dealing with the politics of the program. Both doctoral students and spouses expressed frustration with "administrative trivia," "nit-pickiness" and getting through the "hoops."

Stress was also perceived to be due to a lack of support on the part of faculty and administration for married students. Couples experienced feelings of aloneness in the program. Course loads were heavy and there was a lack of opportunity to meet other students.

Being an experienced professional yet being treated with a lack of respect by instructors was also viewed as stressful. Part-time assistantships were viewed by several students as turning out to be "full-time jobs at a third of the normal pay."

There often was conflict and difference in basic philosophy among faculty that students had to work with. The programs took longer than anticipated, often due to this conflict and other "red tape." Stress resulted from working with committees from a long distance away as well as often having to change committee members. One student concluded that "It's a war."

Loss of self-confidence was reported as a result of the program. This loss often appeared to be a stress the students put on him/herself due to feelings of inadequacy. Doctoral students talked about having to compete with younger people for grades and also about questioning their own ability to succeed. There appeared to be an adjustment in "getting back into school and knowing that your brain still works."

A source of stress also surfaced related to involvement of the non-doctoral spouse in the process of the program. Stress was expressed over this spouse's boredom with the role that had to be assumed in order for their partner to remain in the program. Spouses were often marking time and resented the fact that their "lives had to stop." They resented having nothing "worthy" to do and found it difficult not being valued monetarily or professionally.

Couples advised that doctoral students not leave their spouses out. Spouses must be able to use skills and have something

meaningful to do. The non-doctoral role in the partnership must be equally valued.

Concern was expressed over lack of program support for working spouses who also wished to be students. Spouses who lived on campus could not even use campus facilities. A general lack of sensitivity on the part of the university for married couples was expressed. It was suggested that future doctoral couples check the university location in advance to see that there is something for the spouse before they even consider enrolling.

Representation of these feelings were:

"Take care of the people you care about because there will be times when you will need them to take care of you,"

"Share your lives with each other and be supportive,"

and finally one spouse's solution:

"If you can't beat 'em, join 'em. Be a student too!"

Partners in dual-student marriages also expressed their own stresses and adjustments. Times available to be together often did not coincide due to course loads. There was stress over intense involvement in studies by both partners. Child care was an added source of stress. In general, it was suggested that both parties needed to "lighten up."

On the positive side, students felt they had a better understanding of each other's commitment to the program. They also felt closer studying together but had some trouble adjusting to the quiet. Critical factors mentioned were emotional support from one's spouse, a sound financial base and methods of dealing with the problem of young children. Perhaps the most significant concern was over what would happen once both partners had finished the program and how they would both get good jobs in the same location.

As respondents discussed their advice to future graduate couples, two factors constantly emerged as definite necessities

for marital survival. These factors were commitment to the marriage and communication.

Couples said that both partners must be totally committed to staying married ahead of time. They advised that couples assess their commitment to each other and realize that it will be tested. The program will test all avenues of one's life. If couples can deal with this commitment to each other, then it was believed that they can be equally committed to the program. It was stressed by many and summed up by one person that the process:

". . . must be your problem--yours together. It is really important to be committed to each other and to the time spent together."

In order to attain this total commitment, there must be communication. Couples advised that spouses really express to each other goals for their marriage and come to agreements on how to accomplish these goals. The goals must be clearly communicated so that both partners understand what is really needed. They must also remember that they agreed!

Couples said that they must be able to communicate what is happening; what each individual is going through, both internally and externally. Communication channels must be kept open. Feelings, emotions and realities of the situation must be discussed at all times. One man suggested treating the program like a journey. He advised to first assess both partner's strengths and discuss them. Spouses have to know what they can do for each other and how much each can tolerate.

Both spouses must accept the importance of the degree and be totally aware of each other's motivating forces. With honest discussion of concerns, total commitment to the program within the context of the marriage can be achieved.

A final word of advice touched on past research concerns regarding inferior versus superior educational levels. A female doctoral student expressed the view that if a husband has little education, the wife should not pursue a doctoral degree. Another

male spouse supported that view. He expressed his own personal satisfaction with his own achievements and felt, therefore, that he was not threatened. If this is not the case, it was perceived that feelings of inadequacy would surface resulting with one spouse leaving the other intellectually behind.

The overwhelming majority viewed differences in educational levels as manageable and not a problem. They believed that it was important to make an effort to keep up with the doctoral spouse intellectually in order to keep communication open. It was also stressed that the non-doctoral student must feel secure that the education will not make his/her spouse a "different person," that spouses must, again, be a part of the process. It must be their degree, too. Again, communication and commitment were viewed as the solution.

As a conclusion to this section, an interesting point of view relative to the difference in educational levels was expressed by several spouses who were very supportive of their doctoral mates. They all described their support as being based on the fact that their doctoral spouse really needed the degree for self-confidence. The degree and the resultant self-confidence, therefore, would result in a better adjusted mate and a happier marriage!

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to investigate the impact of doctoral study on the marriages of doctoral students. Previous research was reviewed showing a marked increase in the American divorce rate. This rate was especially significant when narrowed down to student marriages. The rate was increasingly higher as students progressed to higher levels of education.

American tradition emphasizes the value of education. At the same time the family is stressed as a cornerstone of the American way of life. The lack of current research related to possible survival factors concerned with doctoral student marriages, couples with the apparent change in the national trend toward declining divorce rates, served as an impetus for this study.

The research focused on survivorship of doctoral-student marriages. Two possible survival factors--commitment and communication--were isolated and related to marital adjustment of these students. The research was retrospective in design, tracking the course of marriages through the various stages of doctoral study.

The sample consisted of both male and female doctoral students and their spouses. It included couples separated during the course of the program. The study was also available to those divorced during the program.

All individuals in the sample were interviewed either personally or by telephone. This was done in order to learn about their perceptions of their marriages and the impact of doctoral study on their marriages.

All individuals in the sample were interviewed either personally or by telephone. This was done in order to learn about

their perceptions of their marriages and the impact of doctoral study on their marriages.

Five instruments were adapted and utilized in the research:

1. Broderick Commitment Scale
2. Primary Communication Inventory
3. Locke-Thomes Marital Adjustment Test
4. Draw-a-Graph
5. Demographic Questionnaire.

The hypotheses for the study were:

- H01a : There is no significant relationship between the perceived degree of commitment to marriage and pursuit of doctoral study and the perceived degree of marital adjustment of doctoral students.
- H01b : There is no significant relationship between the perceived degree of commitment to marriage and pursuit of doctoral study and the perceived degree of marital adjustment of doctoral student spouses.
- H01c : There is a significant relationship between the perceived degree of commitment to marriage and doctoral study and perceived marital adjustment for both doctoral students and their spouses.
- H02a : There is no significant relationship between the perceived levels of communication and perceived levels of marital adjustment of doctoral students.
- H02b : There is no significant relationship between perceived levels of communication and perceived levels of marital adjustment of doctoral student spouses.
- H02c : There is a significant relationship between perceived levels of communication and perceived levels of marital adjustment of doctoral student spouses.

- H03 : There is no significant difference between the perceived marital adjustment of doctoral students during the various stages of doctoral study and the perceived marital adjustment of their spouses during the different stages of doctoral study.
- H04 : There is no significant difference between the perceived marital adjustment of male doctoral students and perceived marital adjustment of female doctoral students.
- H05 : There is no significant difference between the perceived marital adjustment of doctoral students based on selected demographic variables and the perceived marital adjustment of their spouses based on the same variables.

In analyzing the hypotheses, data were examined for each spouse as well as for couples. Analysis of variance and regression analysis were utilized in testing the hypotheses.

Summary of the Findings

The following is a summary based on the findings of the study:

1. Both commitment and communication are factors which are positively related to marital success of doctoral student couples. This positive relationship is equally significant for both the student and the spouse.
2. Throughout the various stages of doctoral study, both doctoral students and their spouses perceive their marital adjustment to be very much the same.
3. There is no significant difference in male and female doctoral student perception of their marital adjustment.
4. Demographic variables have very little effect on marital adjustment of doctoral students and their spouses.

Discussion of the Findings and Related Conclusions

The purpose of this study was to determine the effect of doctoral study on the marriages of doctoral students. The discussion of the findings and related conclusions will be presented according to the original objectives outlined for the study and will center around the hypotheses related to each of the objectives.

OBJECTIVE 1: to determine if marital adjustment is related to each spouse's degree of commitment to marriage and the pursuit of doctoral study.

Based on the data generated for hypothesis one, there is a significant relationship between perceived levels of commitment to marriage while in a doctoral program and marital adjustment of doctoral students and their spouses.

These findings reflect the downhill trend of divorce in the post-1980 years. American society's turn toward the proliferation of relationships [Hobart] is also reinforced. Researchers [Ford, Ellis and Harper] discussed the value of compromise in marital adjustment with individuals sacrificing to the mutual benefit of the marriage.

Both partners in the present study commented frequently on the need to be first committed to marriage before pursuing the program. They recognized the fact that they "were in this together" and that they were "willing to sacrifice for the good of the team." Levinger's writings link potential future rewards in relationships to continued commitment.

The findings demonstrated a marked difference in the level of commitment when the male was the candidate as compared to when the female was the candidate. Throughout the study it was observed, that whether the female was a student or a spouse, she began the process less committed to her marriage and was never again able to equal or surpass the commitment level of her spouse. This

difference in commitment to marriage was particularly apparent when the female was the doctoral student.

A further indication of the level of commitment within the sample was shown in the great concern that each partner be a part of the goal accomplished. Not only was each partner to have a role in the doctoral process, but the particular part was to be equally valued by the other spouse.

The findings regarding commitment and marital adjustment may be the result of ages and developmental stages of the sample. Statistics indicate that the majority of graduate students fall within the 22- to 30-year age grouping with doctoral students at the high end of the spectrum [Wright]. Life cycle research identifies the ages from 29 to 42 as times of searching for stability and becoming one's own person [Cross].

Erikson [1974] further identified stages of intimacy versus isolation, generativity versus stagnation and ego integrity versus despair. As individuals move from stage to stage, crises in the form of "marker events" occur and only if individuals are able to successfully overcome these crises can they move on to the next stage.

Erikson's final stage of ego integrity indicates an awareness of the positive and the negative aspects of identity and an acceptance of self. The analysis of the data in this study indicates an ability on the part of the participants to successfully address issues of generativity centering on the establishment of marriage and family. The participants also appeared to have progressed successfully into events leading to further education and/or career changes.

Commitment levels of wives, whether students or spouses, were considerably higher than that of their male counterparts at the onset of the program process. By the time they had actually entered the program, the commitment levels fell and remained slightly below that of the males throughout the remaining stages of doctoral study. Many of these women talked about the process as opening new avenues of thought. They spoke of the "freedom to think" about their alternatives as well as their reluctance to assume a subordinate role.

Lewis' earlier study [1981] indicated inequality in male perception of the female role. In the present study, males indicated the acceptance of their wife's roles as being one of equal importance. They discussed equality of opportunity as an accepted fact. It would seem that the decade prior to 1980 may have been devoted to defining female roles and emphasizing the need for equal opportunity. It now appears that males involved with doctoral study post-1980 have, to a great extent, accepted this position of equality.

OBJECTIVE 2: to determine if perceived marital adjustment is related to the level of communication between the spouses at various stages of the doctoral process.

Broderick discussed commitment as an attitude which causes individuals to address issues rather than to abandon them [Broderick]. In order for the couples in the sample to establish the levels of commitment exhibited upon entry into the programs and continue at those levels of commitment, a great deal of communication necessarily had to have taken place. The findings relative to hypothesis two support prior studies regarding the positive relationship between the degree of communication and the degree of marital adjustment achieved by a couple [Price; Selby].

While the couples in the present sample were alert to communication as a possible problem area, for the most part they perceived their communication to have been enhanced by the doctoral process. They indicated the need for a constant sharing of their lives with each other. Contrary to past research [Lewis], the spouses in this study communicated more at high stress stages in the program such as when studying for comprehensive exams.

It was found that time problems created the need to really concentrate on the value of time available to be together. Education appeared to be good for marriages as indicated by the tendency of couples to discuss the more significant issues. This was exemplified by the necessity for communication to evaluate the commitment needed as a prerequisite to contemplating enrollment.

Not all comments regarding communication were positive. It was found that some marriages fell into patterns of total isolation with the doctoral spouse immersing him/herself in studies so that "even when she was home, she was gone." Spouses spoke of a total emotional and physical drain which is "different from anything else."

OBJECTIVE 3: to determine if there is a predictable pattern of marital adjustment for male doctoral couples during the course of doctoral study which differs from the pattern of marital adjustment for female doctoral couples.

The results of the "Draw-a-Graph" technique utilized in hypothesis four indicated that there was little difference in marital adjustment over the stages of the doctoral program. The results were no different for male doctoral students than for female doctoral students. Not only did the pattern not vary, but it was observed that the patterns of marital adjustment, communication and commitment for both partners were parallel throughout all stages of the program.

This parallelism would seem to point to a very close communication link between couples. Contrary to recent findings in Fisher's University of Florida Study [1981], communication in the present study did not appear to suffer as a result of doctoral study. It was, in fact, enhanced. This finding may be due to the present researcher's concentration on positive factors rather than stress factors in studying marital adjustment.

Victor Stone's article [1983] regarding the benefits that the student and family gain as a result of education were supported by the present sample. Couples talked about pride in each other and their accomplishments. They spoke of development of added self-confidence as well as of the resulting positive changes they saw in each other.

OBJECTIVE 4: to determine if selected demographic variables could be related to marital adjustment during the course of doctoral study.

In analyzing the data related to hypothesis five, the only demographic variable appearing to have any effect on marital adjustment of doctoral students was whether or not the couple was living together as they went through the doctoral process. This effect cannot be evaluated adequately as only a small number of sample couples were not living together.

All of those living separately not due to conflict, while describing feelings of loneliness for their mates, felt it was the only possible solution in their particular situation and that it did not have a weakening effect on their marriages. Several even commented that it had increased their ability to communicate as well as to fully appreciate the support given by their mates. They also recognized the significance of the sacrifice necessary in order to complete the degree.

The current findings support Hooper's theory [1978] that families have the capacity to change in ways that most enhance the growth and individualization of their members. Students and spouses in the current study observed changes in each other but found these changes to be positive.

Students frequently mentioned guilt feelings over lack of time available for their children. Non-student spouses spoke of having suddenly become "single parents." While handling of the responsibilities associated with children was mentioned as a critical factor to be dealt with, sample couples appeared to be coping successfully.

Both Katz [1976] and Berkove [1976], in studying student marriages, found that the children of these marriages showed a greater independence, responsibility, and respect for their student mothers. Participants in the current study talked about the demonstration of a "healthy independence" in their children. Thus, presence of children does not appear to significantly strain marriages and there appears to be an added positive effect on the children themselves.

The findings related to finances and lifestyle indicated a definitely felt need on the part of students and spouses to keep their living standards as close as possible to those they had had prior to entering the program. Couples believed that students should not even consider entry into a program if it would represent a "drastic financial drain." They recommended not "scrimping too much" but instead developing a financial plan that both could live with.

Housing was often brought up as a financial issue. Couples believed that they had to have "decent" living quarters, otherwise they would become resentful of the process. Several couples were living in some type of student housing as "house parents." Without fail, the non-student spouse found this to be a very difficult situation and resented sharing what little time was available with the other residents.

While finances were a major area discussed, they were not significantly related to marital adjustment. Other areas frequently brought up were lack of time and intellectual gaps.

In earlier studies [Selby, King and Fess], concern was aired over couples growing apart due to one spouse not keeping up with the other intellectually. Sample couples in this study appeared conscious of inferior and superior educational levels. Both recognized the importance of the non-student spouse feeling satisfied and valued in their own work. They viewed communication as the factor that was necessary in the bridging of any possible gap.

It would appear that the equality issues of a few years ago have been somewhat eased with non-traditional roles being accepted as equally valuable for both men and women in the current sample. Non-doctoral spouses appeared satisfied with their own achievements and, therefore, supported their doctoral spouses. In the same way, the importance of the non-doctoral spouse's role was stressed by their student partners. Only three individuals said they would not begin the doctoral process if they had the decision to make over again.

Summary of Conclusions

1. Both communication and commitment were positively related to marital adjustment levels of doctoral students and their spouses. While commitment was positively related for both groups, it was concluded that perceived commitment levels for males was greater than the levels perceived by females.
2. There was a parallel curvilinear pattern of perceived marital adjustment for males and females throughout the course of doctoral study.
3. None of the demographic variables identified was shown to have any significant positive or negative effects on perceived marital adjustment.
4. It was concluded that doctoral students and their spouses in this study believed more positively about the chances of continued success of their marriages than was shown to be true in previous studies.
5. It can be concluded that there is a very strong potential for a Hawthorne Effect to take place in research of this kind. Any lack of objectivity or any communication of expectation of findings has the potential of dramatically affecting response of the individuals being interviewed.

Recommendations for Further Action

1. College student services programs need to provide a leadership role in organizing activities and support for married students and their spouses. Counseling by impartial counselors (with no recruitment interests) should be available. Counselors should stress the role as a couple rather than as a doctoral student coping with a non-doctoral spouse.
2. Campus facilities and activities should be available to both students and their spouses. The married doctoral spouse

must be viewed as an equal participant in the pursuit of the degree.

3. Efforts should be made to adjust programming, offerings and requirements to suit the needs of the older graduate student population since this group is a significant new population in colleges and universities. Flexibility in the residency requirement would make it easier for these students to complete their degrees without separation from their families. More required courses could be offered in the late afternoon or in the evenings so these students would not have to leave their jobs. This change would also help working spouses who might wish to complete degrees.
4. Efforts should be made on the part of the graduate school and the university as a whole to reduce administrative trivia and hoops that make the graduate process unnecessarily stressful. Flexibility in program deadlines as well as in numbers of signatures required would help to reduce stress for those students having to complete degrees and work with committees while living great distances away from campus.
5. Efforts should be made by individual departments to develop support systems for both students and their spouses. These systems should include departmental orientation for both spouses, departmentally sponsored activities and seminars geared to acceleration of involvement of both spouses in the doctoral process.
6. Departments should instill in their faculties the need to support and respect the older, professionally experienced student. In providing a forum for mutual exchange of ideas, both students and faculties will gain.
7. An awareness should be created on the part of the graduate school and the faculty to the problems of dealing with committees from a long distance away. The chairman should also take an active role in committee selection in order to avoid internal political problems of which the student may be unaware. Recognition

of these problems in guiding students through the process and emphasis on the need for continued committee input and support when students must return to work in other geographic areas is essential.

8. An awareness should be created within departments and student placement offices to the plight of dual-career couples. Usually, a well-educated individual will have an equally motivated and ambitious spouse. Individual departments must be attuned to the problems of finding two careers in close proximity and help their students develop methods of forestalling potential conflict when job seeking. Placement services should cross-reference career files according to geographical area and career area. In this way, different localities can be identified which have potential opportunities for both spouses.
9. Departments should keep files of current research on the success rates of doctoral student marriages and make information available to their potential graduate students.
10. Prospective doctoral couples should be encouraged to evaluate the present condition of their marriages, the levels of commitment to the marriage and their financial condition in order to determine whether the marriage can withstand the potential stresses of a commitment to a doctoral program.

Suggestions for Further Research

It is recommended that further study be undertaken to:

1. follow-up on the marriages in the current study in order to determine the continued survival rate of doctoral marriages five years after completion of the doctoral program.
2. examine the effect of verbal as compared to non-verbal communication on the marital adjustment of students. Research in this area would further increase survival tactics for potential student couples.

3. test the validity and reliability of existing communication and commitment instruments. While a multitude of widely used instruments in both areas currently exist and are utilized by recognized researchers in both fields, they have not been adequately tested for validity and reliability.
4. examine dual-student marriages in order to determine the changes for continuing success of such marriages. Studies should concentrate on survival as well as destructive factors.
5. expand the scope of the population to include a larger segment of couples divorced and separated during the course of doctoral study.
6. expand the scope of the research to include doctoral students in departments other than those utilized in this study.
7. follow-up on doctoral students and their spouses to determine the pattern of marital adjustment after completion of the degree and contrast this to marital adjustment during the degree process.
8. identify additional factors that might be related to marital adjustment of doctoral students.
9. explore and confine investigation to the association between marital adjustment of doctoral student couples and life stage theory.
10. expand the scope of the research to retrospectively examine marital adjustment patterns prior to entry into doctoral programs.
11. re-evaluate the instrumentation utilized in this study and locate alternative measures of communication, commitment and marital adjustment for use in further research.
12. develop and test a comprehensive instrument to evaluate the biographic and demographic factors possibly related to marital adjustment.

13. develop and test an instrument to evaluate possible trouble areas related to marital adjustment of married graduate students.

BIBLIOGRAPHY

- American Association of School Administrations, Schools for a New World. Washington, D.C.: The Association, 1947.
- Courtney, Wayne E. Techniques of Research. Monograph series published by DCE-OSU, Corvallis, Oregon, 1983.
- Aller, Florence D. "Some Factors in Marital Adjustment and Academic Achievement of Married Students." The Personnel and Guidance Journal, March, 1963.
- Altman, S. "Bridal Suites in the Ivory Tower." Overview, 1960.
- Almquist, Elizabeth. "Attitudes of College Men toward Working Wives." Vocational Guidance Quarterly, 23(2), December, 1974.
- McRoy, Sue and Virginia L. Fisher. "Marital Adjustment of Graduate Student Couples." Family Relations, January, 1982.
- Barash, Meyer. "The Social Adjustment of Married Students." The International Journal of Sexology, 1949.
- Back, Kurt W. and Linda Brookover Bourque. "Life Graphs: Aging and Cohort Effect." Journal of Gerontology, 25(3), 1970.
- Beach, Steven and Joan E. Broderick. "Commitment: A Variable in Women's Response to Marital Therapy." Paper presented at the Annual Convention of the American Psychological Association, 1982.
- Benton County Department of Health, Education and Welfare: Vital Statistics. "1982 Vital Statistics Report." Benton County, Oregon, 1983.
- Bergen, Gerald Roy. "Quality of Marriage of University Students in Relation to Sources of Financial Support and Demographic Characteristics," 1976.
- Berman, Edwin A. "Compatibility and Stability on the Dyad." Paper presented before the American Psychological Association, New York, 1966.
- Berkove, G. "Effects on Marriages when Wives Return to School." Paper presented at National Council on Family Relations Annual Meeting, New York, October, 1976.
- Berkove, Gail. "Returning Women Students: A Study of Stress and Success." Paper presented at the Annual Convention of the World Social Sciences Association, Tempe, Arizona, April 30, 1976.

- Bienvvenu, M. "Measurement of Marital Commitment." The Family Coordinator, 1970.
- Bier, E. G. and D. P. Sternberg. "Marital Communication: Subtle Cues between Newlyweds." Journal of Communication, 1977.
- Bier, E. G. and D. P. Sternberg. "Changing Patterns of Conflict." Journal of Communication, 1977.
- Beutell, Nicholas J. and Jeffery H. Greenhaus. "Interrole Conflict among Married Women: The Influence of Husband and Wife Characteristics on Conflict and Coping Behavior." Journal of Vocational Behavior, August, 1982.
- Blood, R. O. and D. M. Wolfe. Husbands and Wives: The Dynamics of Married Living. Glencoe, Illinois: Free Press, 1960.
- 1982: The National Investment in Higher Education. Prepared by Associated Council for Policy Analysis and Research, October, 1982.
- Blackwell, William L. and Muriel T. Blackwell. Working Partners, Working Parents. Nashville, Tennessee: Broadman Press, 1979.
- Bowerman, Charles E. "Adjustment in Marriage; Overall and in Specific Areas." Sociology and Social Research, April, 1957.
- Broderick, J. "A Method for Deviation of Areas of Assessment in Marital Relationships." The American Journal of Family Therapy, 1981.
- Brehm, J. W. and A. R. Cohen. "Choice and Charge Relative Deprivation as Determined of Cognitive Dissonance." Journal of Abnormal Psychology, 1959.
- Broderick, Joan and K. D. O'Leary. "Contributions of Behavior and Attitudes to Marital Adjustment." Reference notes for paper presented to American Psychology Association, 1982.
- Broderick, Joan. "Attitudinal and Beahvioral Components of Marital Satisfaction." State University of New York at Stony Brook. Dissertation Abstracts, 1980.
- Busselen, Harry Julius. "A Comparison and Differentiation of Social Factors of Married and Single Undergrad University Students." Dissertation Abstract, 1970.
- Calhoun, Robert. "Stress, Strain, and Coping Styles among Married Graduate Students and Their Spouses." Dissertation Abstract, 1979.

- Centra, John A. Women, Men and the Doctorate. Princeton: ETS, 1975.
- Carter, H. "Eight Myths about Divorce." In William J. Goode (ed.). The Contemporary American Family. Chicago: Quadrangle Books, 1971.
- Christenson, Harold T. and Robert E. Philbrick. "Family Size as a Factor in the Marital Adjustment of College Couples." American Sociological Review, 1952.
- Conger, John Janeway. "Freedom and Commitment." American Psychologist, December, 1981.
- Cox, Frank D. "Separation, Divorce and Remarriage: A Changing Scene?" Frank D. Cox (ed.). Dubuque, Iowa: William C. Brown Co., 1972.
- Cross, Patricia. Adults as Learners. San Francisco: Jossey-Bass, 1981.
- Dangerfield, David Emergy. "The Effects of Attendance at the University of Utah, on the Marital Satisfaction of Full-time Students." Dissertation Abstracts, 1972.
- Darkenwald, G. G. "Adult Part-time Learner in Colleges and Universities: A Clientele Analysis." Research in Higher Education, June, 1979.
- DeYoung, Chris Anthony. American Education. New York: McGraw-Hill, 1960.
- Dean, Dwight C. "Emotional Maturity and Marital Adjustment." Journal of Marriage and the Family, 1966.
- DeGroot, Susan. "Changes in Conjugal Relationships of Adult Female Students." Monclair State College, 1977.
- Dressel, Fred B. "Logic, Research and the Married College Student." Personnel and Guidance Journal, May, 1965.
- Epstein, Laura Mason et al. "Couples in Transition: Relocation and Graduate School Influences in Development." Symposium presented at Annual Meeting of the American Psychological Association, 1982.
- Erikson, E. H. Identity: Youth and Crisis. New York: Norton, 1974.
- Farner, Helen S. "Spencer Foundation Study, Conflict between Home and Career Experienced by Mothers Returning to College." Chicago, Illinois, May, 1978.

- Feldman, Saul. "Impediment or Stimulant? Marital Status and Graduate Education." Carnegie Commission on Higher Education. American Journal of Sociology, Vol. 78, January, 1973.
- Finchman, Frank and K. Daniel O'Leary. "Affect in the Eighties: A New Direction in Behavioral Marital Therapy." Paper presented at Annual Convention of the American Psychological Association, 1982.
- Fischer, Suzanne Elizabeth. "A study of the Self-perceived Relationship between Doctoral Study and Divorce." Dissertation Abstract among Married Students Graduating from the College of Education of the Florida State University from 1965-1975.
- Fromm, Eric. The Sane Society. New York: Holt, Rinehart & Winston, 1960.
- Gerber, Gwendolyn. "The Effects of Competition on Stereotypes about Sex-role and Marital Satisfaction." Journal of Psychology, 1977.
- Gerstein, Martin and Michele Papen-Daniel. "Understanding Adulthood." A Review and Analysis of the Works of Three Leading Authorities on the Stages and Crises in Adults. California Personnel and Guidance Association. Monograph No. 15, 1981.
- Glenn, N. D. and C. N. Weaver. "A Multivariate, Multisurvey Study of Marital Happiness." Journal of Marriage and Family, 1978.
- Glick, Paul C. and Arthur J. Norton. "Marrying, Divorcing and Living Together in the U.S. Today." Washington, D.C.: Population Reference Bureau, Inc., 1977. [updated February, 1979.]
- Gruver, G. G. and S. K. Labodie. "Marital Dissatisfaction among College Students." Journal of College Street, Personnel Students, 1975.
- Haley, Jay. Strategies of Psychotherapy. New York: Grune and Stratton, Inc., 1963.
- Hall, William Malvern. "The Relationship between Self-concept and Marital Adjustment for Commuter College Students." Dissertation Abstract, 1975.
- Hamer, Joseph William. "The University Married Student: An Overview of the Subculture and a Model for Positive Adjustment." University Microfilm. Ann Arbor, Michigan, 1963.
- Hansen, Russell Warren. "A Study of Role Conflict: The Case of the Married College Student." Dissertation Abstract, 1970.

- Harman, W. W. "Sizing up Social Revolution." Phi Delta Kappan, 1976.
- Havinghurst, R. J. Developmental Tasks and Education. New York: David McKay, 1972.
- Heller, Richard. "Married Students at the University of Texas at Austin: An Environmental Needs Assessment." Dissertation Abstract, 1979.
- Hellerman, David. "The Peter Pan Principle." Esquire, Vol. 100, October, 1983.
- Hicks, Mary and Marilyn Platt. "Marital Happiness and Stability." Journal of Marriage and the Family, 1967.
- Hobart, Charles. "Commitment Value, 'Conflict and the Future of the American Family.'" Marriage and Family Living, November, 1963.
- Hogan, D. P. "The Variable Order of Events in the Life Course." American Sociological Review, 1975.
- Holmer, Rahe. "Social Readjustment Rating Scale." Journal of Psychomatic Research, 1967.
- Homan, G. G. Social Behavior: Its Elementary Forms. New York: Harcourt, Brace and World, 1961/1974.
- Hooper, J. O. "Returning Women Students and Their Families Support and Conflict." Journal of College Student Personnel, 1979.
- Hunt, Beverly English. "Characteristics, Perceptions and Experiences of Married Women Students at Lansing Community College, Michigan State University." Dissertation Abstract, 1966.
- Hurley, John R. and Donna P. Palonen. "Marital Satisfaction and Child Density among University Student Parents." Journal of Marriage and Family, 1967.
- Hurvitz, Nathan. "The Component of Marital Roles." Sociology Research, 1961.
- Hurvitz, Nathan. "The Marital Roles Inventory as a Counseling Instrument." Journal of Marriage and the Family, 1965.
- Hurvitz, Nathan. "Marital Roles Strain as a Sociological Variable." Family Life Coordinator, 1965.
- Ibsen, C. A. "The Married College Student: A Problem in Role Congruences." Society and Social Research, LI, 1967.
- Immudo, L. V. "Problems Association with Managerial Mobility." Personnel Journal, 1974.

- Jacobson, A. H. "Conflict Attitudes towards the Role of Husband and Wife in Marriage." American Sociological Review, 1952.
- Jones, Worth Roosevelt. "A Study of Affective Tolerances and the Typical Problems of Married and Unmarried Female College Students." Dissertation Abstract, 1955.
- Kallen, Horace Meyer. The Education of Three Men: An Essay toward a Philosophy of Education for Americans. New York: Farrar, Straus, 1949.
- Kanter, R. M. "Work in America." Daedalus, Winter, 1978.
- Katz, J. "Life of Women in Continuing Education: Some Action of Her Own." H. Astin (ed.). Lexington, Massachusetts: Lexington Books, 1976.
- Khan, Janet A. and Chris F. Sharpley. "Marital Adjustment and Values Systems in Student Marriages." Journal of College Student Personnel, Vol. 21, #1.
- Keith, Pat M. and Timothy H. Brubaker. "Sex-role Expectations Associated with Specific Household Tasks: Perceived Age and Employment Differences." Psychological Reports, 1977.
- Kimmel, D. and F. Van Der Veen. "Factors of Marital Adjustment in Locke's Marital Adjustment Test." Journal of Marriage and Family, 1974.
- King, Donald N. and Frederick E. Tess. "A Pilot Program for Married Students." Journal of College Student Personnel, September, 1969.
- Klasman, Jerome J. Living with Equals. New York: Delacorte Press, 1976.
- Kneller, G. Educational Anthropology. New York: Wiley, 1965.
- Koltar, S. L. "Middle-class Marital Role Perceptions and Marital Adjustment." Sociology and Social Research, 1965.
- Kramer, Maurice Stephen. "Relationship of Marital Status of Selected Characteristic Activities of Male Undergraduate Students at Iowa State University." Dissertation Abstract, 1971.
- Lange, Suzanne. "An Anxiety--Support Model for Graduate Education." Journal of College Student Personnel, Vol. 21, #1, March, 1980.

- Levinger, G. "Sources of Marital Dissatisfaction among Applicants for Divorce." American Journal of Orthopsychiatry, 1966.
- Levinger, G. and L. Hussmann. "An 'Incremented Exchange' Perspective on the Pair Relationship: Interpersonal Reward and Level of Involvement." K. J. Gergen, M. S. Greenberg and R. H. Willis (eds.). Social Exchange: Advances in Theory and Research. New York: Plenum, 1980.
- Levinson, D. J. and P. E. Huffman. "Traditional Family Ideology and Its Relation to Personality." Journal of Personality, 1955.
- Lewis, Linda H. "A Study of the Sex Role Attitudes and Marital Adjustment of Female Doctoral Candidates and Their Spouses during the Course of Doctoral Study." Diss. Abstr., 1981.
- Lingren, Herbert, Sally Van Zuwalt, Nick Stinnett, and George P. Rowe. "Competencies Needed in Marriage and Family Life by Category of Adult Development." Paper presented at the Annual Meeting on Family Relations, 1981.
- Locke, H. J. Predicting Adjustment in Marriage: A Comparison of a Divorced and a Happily Married Group. New York: Henry Holt, 1951.
- Locke, H. J. and R. C. Williamson. "Marital Adjustment: A Factor Analysis Study." American Sociological Review, 1958.
- Locke, H. J. and K. M. Wallace. "Short Marital Adjustment and Prediction Tests: Their Reliability and Validity." Marriage and Family Living, 1959.
- Locke, Harvey J. Unpublished papers on Locke-Thomes Marital Adjustment Test, 1979.
- Locke, Harvey J., Georges Sabagh, and Mary Margaret Thomes. "Correlates of Primary Communication and Empathy." Research Studies State College of Washington, VXXIV, 1956.
- Luckey, Eleanor B. "Number of Years Married as Related to Personality Perception and Marital Satisfaction." Journal of Marriage and Family, February, 1966.
- Luckey, Eleanor B. and Joyce Koym Bain. "Children: A Factor in Marriage Satisfaction." Journal of Marriage and Family, XXXII, January, 1970.
- Mace, D. and V. Mace. Marriage East and West. New York: Doubleday, 1959.

- Marine, Margaret Mooney. "The Order of Events in the Transition to Adulthood." Paper presented at the Annual Meeting of the American Sociological Association, 1982.
- Marris, Peter. "Individual Achievement and Family Ties: Some International Comparisons." Journal of Marriage and Family, 1967.
- Marvin, Gilbert. "Impact of Graduate School on the Family: A Systems View." Christian Center Counseling Services. Journal of College Personnel, December, 1976.
- Maslow, A. H. Toward a Psychology of Being. New York: Van Nostrand, 1962.
- McDonald, Gerald W. "Marital Jealousy: A Structured Exchange Perspective." Paper presented at Annual Meeting of the National Council on Family Relations, 1982.
- McKeon, D. M. and F. P. Piercy. "Factors in Marital Adjustment of Graduate Students." Journal of the National Association for Women Deans, Administrators, and Counselors, 1980.
- McMillin, Marvin R. "Attitudes of College Men toward Career Involvement of Married Women." Vocational Guidance Quarterly, September, 1972.
- McRoy, S. and V. L. Fisher. "Marital Adjustment of Graduate Student Couples." Family Relations, 1982.
- Morgan, Marabelle. The Total Woman. Old Tappan, New Jersey: Revell, 1973.
- Mueller, Kate. "The Married Student on Campus." College and University, 1960.
- Murstein, B. I. and G. D. Beck. "Personal Perception, Marital Adjustment and Social Desirability." Journal of Consulting and Clinical Psychology, 1972.
- Murray, John Richard. "Selected Characteristics and Problems of Married Students at the University of Oklahoma." Dissertation Abstract, 1961.
- Namir, Sheila. "Stresses Associated with a Major Life Transition." ERIC Research Report, 1982.
- National Council for Health Statistics, "Monthly Vital Statistics Report," 1983.
- Navin, Sally. "Future Planning of College Women: Counseling Implications." Vocational Guidance Quarterly, 1972.

- Navren, Leslie. "Communication and Adjustment in Marriage." Family Process, 1967.
- Neal, A. G. and H. T. Groat. "Social Class Correlates of Stability and Change in Levels of Alienation: A Longitudinal Study." The Sociological Quarterly, 1974.
- Nye, T. J. "Role Structure and Analysis of the Family." Beverly Hills, California: Sage Publications, 1976.
- Nygreen, Glen. "Marital Adjustment in University of Washington Married Student Community." Dissertation Abstract, 1954.
- O'Leary, K. D. and G. T. Wilson. Behavior Therapy: Application and Outcome. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975.
- Oppelt, Norman T. "Characteristics and Activities of Married College Students." Journal of College Student Personnel, VI, June, 1965.
- Oregon Department of Vital Statistics, Benton County Health Department Bulletin, 1983.
- Packard V. A Nation of Strangers. New York: McKay, 1975.
- Peplau, Letitia Anne and Karen Rook. "Dual-Career Relationships: The College Couple Perspective." Presented at the Annual Meeting of the W. Psychology Association, 1978.
- Preston, Samuel H. "Estimating the Proportion of American Marriages that End in Divorce." Sociological Methods and Research, Vol. 3, #4, May, 1975.
- Price, Sharon June. "Factors Related to Marital Adjustment of Married College Students at Iowa State University. Dissertation Abstract, 1979.
- Raush, H. L., W. Goodrich, and J. D. Campbell. "Adaptation to the First Years of Marriage." Psychiatrist, 1963.
- Reisman, David. "Work and Leisure in Post-industrial Society." E. Larrabe and R. Meyersohn (eds.). Mass Leisure. Glencoe, Illinois: Free Press, 1958.
- Renne, K. S. "Correlates of Dissatisfaction in Marriage." Journal of Marriage and Family, 1970.
- Renshaw, Jean R. "An Explanation of the Dynamics of the Overlapping Worlds of Work and Family." Family Process, 1980.

- Rhodes, Frank. "Is Our Higher Education System under Siege?" Footnotes, Spring, Vol. 1, #2, 1984.
- Rice, J. K. "Spouse Support: Couples in Transition." Lifelong Learning: The Adult Years, Vol. 6, #1, 1982.
- Rice, J. K. "Self-esteem, Sex Role Orientation and Perceived Spouse Support for a Return to School." Journal of Adult Education, 1979.
- Richardson, J. G. "Wife Occupational Superiority and Marital Troubles: An Exam of the Hypothesis." Journal of Marriage and the Family, 1979.
- Robinson, Carl. "Men's Sex Role Attitudes as a Function of Maturity, Trust, and Experience of Women." Dissertation Abstract, 1982.
- Rogers, Everett M. "The Effect of Campus Marriages on Participation in College Life." Journal of College and University, 1958.
- Rogers, Dorothy (ed.). Issues in Adult Development. Monterrey, California: Brooks/Cole Publishing Co., 1980.
- Sabatelli, Ronald M., Erin Cecil-Pigo, and John Pearce. "Marital Cohesiveness and Family Life Transitions: A Social Exchange Perspective." Paper presented at the National Council of Family Relations Theory and Methodology Workshop, 1982.
- Satir, V. Conjoint Family Therapy. Palo Alto: Science and Behavior Books, 1964.
- Sauber, Richard S. "Money and Marriage in College." College and University, April, 1971.
- Scanzoni, John H. Opportunity and the Family: A Study of the Conjugal Family in Relation to the Economic Opportunity Structure. New York: Free Press, 1970.
- Schlaflly, Phyliss. The Power of the Positive Woman. New York: Jove/HJV Books, 1978.
- Selby, James E. "Marital Adjustment and Marital Communication of Doctoral Students and Their Wives." University of Missouri. Dissertation Abstract, 1973.
- Sheehy, Gail. Passages: Predictable Crises of Adult Life. New York: Free Press, 1977.
- Sonn, Mary Brennan. "Sex Role Orientation and Dyadic Decision Making." Dissertation Abstract, 1981.

- Stebbins, L. B. "Stress and Satisfaction in Graduate Student Marriages." Dissertation Abstract, 1974.
- Stein, Sandra Ginsberg. "Sex Role Attitudes and Marital Adjustment among Married Graduate Students." Dissertation Abstract, 1979.
- Steinman, A. and D. J. Fox. "Male-Female Perceptions of the Female Role in the U.S." Journal of Psychology, 1966.
- Stephenson, Mary J. "The Integration of School and Family Needs by Women Returning to College." Paper presented at Lifelong Learning Research Conference (College Park, Maryland), February 1, 1980.
- Stone, Victor. "The Conflict: Less than Meets the Eye." Footnotes, Vol. 1, #2, Spring, 1984.
- Stuckert, R. P. "Role Perception and Marital Satisfaction: A Configurational Approach." Marriage and Family Living, 1963.
- Swoboda, Marian J. "Factors Impeding the Completion of the Ph.D. Degree among Ph.D. Candidates: Focus on Sex-related Differences." Dissertation Abstract, 1978.
- Taylor, A. B. "Role Perception, Empathy, and Marital Adjustment." Sociology and Social Research, Vol. 52, 1967.
- Taylor, A. T. "The Graduate School Experience." Personnel and Guidance Journal, 1975.
- Taylor, Richard Blain. "Money Management Practices and Attitudes of Married University Students." Dissertation Abstract, 1968.
- Terman, Lewis M. et al. Psychology Factors in Marital Happiness. New York: McGraw-Hill Book Co., 1938.
- Thacker, Andrew. "The Impact of Graduate and Professional Education on the Perceived Marital Adjustment of Married Students." Dissertation Abstract, 1977.
- Tharp, Roland G. "Dimensions of Marriage Roles." Marriage and Family Living, November, 1963.
- Trivett, David A. "Graduate Education in the 1970s." ERIC Higher Education Research Report, No. 7, 1977.
- Threlkeld, Frances Ashley. "Residence and Interaction Patterns between Selected Louisiana State University Married Students and Their Kin." Dissertation Abstract, 1976.

- Travis, Carol. "How to Make Changes that Set You Free." Redbook, Vol. 159, February, 1982.
- Tucker, A. "Factors Related to Attrition among Doctoral Students." [CRP 1146.] East Lansing, Michigan: Michigan State University, 1964.
- Walker, K. E. and M. E. Woods. Time Use: A Measure of Household Production of Family Goods and Services. Washington, D.C.: Center for the Family of the American Home Economics Association, 1976.
- Weathersby, George. Outputs of Higher Education: Their I.D. Measurement and Evaluation. Papers presented from a seminar held in Washington, D.C., May 3-5, 1970.
- Weil, Mildred W. Sociological Perspectives in Marriage and the Family. Danville, Illinois: The Interstate Printers and Publishers, 1972.
- Welch, S. and A. Booth. "Employment and Health among Married Women." Sex Roles: A Journal of Research, 1977.
- Whitmer, D. K. "Sex Role Strain as a Factor in Marital Adjustment and Academic Success of a Group of Married College Students." Dissertation Abstract, 1965.
- Williams, Art. "A Quality Called Commitment." Saturday Evening Post, Vol. 255, December, 1983.
- Williams, Dana and Michael King. "Sex Role Attitudes and Fear of Success as Correlates of Sex Role Behavior." Journal of College Student Personnel, November, 1976.
- Williams, Ricky Eugene. "The Perception of Impact of a Doctoral Program upon the Marriage Relationships of Doctoral Students at the University of Northern Colorado." Dissertation Abstracts, 1977.
- Winch, Robert T. "Another Look at the Theory of Complementary Needs in Mate Selection." Journal of Marriage and the Family, 1967.
- Wright, C. R. "Success or Failure in Earning Graduate Degrees." Sociology of Education, 1964.
- Yorburg, G. The Changing Family. New York: Columbia University Press, 1973.
- U.S. Department of Commerce: Bureau of the Census. "Social and Economic Characteristics of Americans during Midlife." Government Printing Office, 1979.

- U.S. Department of Commerce: Bureau of the Census. "Projections of the Population of the U.S. 1977 to 2000." Current Population Reports, Series p-25, No. 704. Washington, D.C.: U.S. Government Printing Office, 1977.
- U.S. Department of Commerce: Bureau of the Census. "Statistics Abstract of the U.S., 1982-1983." 103rd Annual Edition, 1982.
- U.S. Department of Health, Education and Welfare. Divorces: Analysis of Changes. [DHEW No. PHS.] Hyattsville, Maryland: National Center for Health Statistics, April, 1973.
- U.S. Department of Health, Education and Welfare. "Data on Earned Degrees." National Center for Education Statistics, Vol. 1, 1979.
- Zabloski, Benjamin and Rosabeth Kantor. "Differentiation of Life Styles." Annual Review of Sociology, 1976.
- Ziegler, Barbara. "Relationship of Sex Roles and Marital Adjustment." ERIC, 1982.

APPENDICES

APPENDIX A

Introductory Letter

School of Education



Corvallis, Oregon 97331

March 16, 1984

Dear Doctoral Student:

I am a fellow doctoral student at OSU in the primary stages of my research on the effect of doctoral study upon the marriages of doctoral students.

The doctoral process presents challenges and stresses for any doctoral student but past research shows a particularly negative impact on the lives of those who are married. As a married student myself, I want to examine this important area in the hope that those of us currently involved in the process may provide information which might help incoming couples anticipate and better deal with the married graduate experience.

I have obtained your name from a list of current doctoral students and wish to identify married doctoral students who, along with their spouses, are willing to participate in this study. The research findings will be held in strictest confidence and will involve separate interviews with both spouses. The responses of each spouse will also be kept confidential from the other. Areas of questioning will involve commitment to the idea of doctoral study, communication and marital adjustment.

If you are a married doctoral student, please consider helping me in this research. I am asking you to set aside a small portion of your time to help me. I will be very happy to work around your schedules in order to meet with you at your convenience. I have enclosed a post-card consent form to be returned to me.

If you have further questions or concerns, please contact me at 754-3648 (OSU) or 757-0616 (home).

Sincerely,

Shirley Dudzik

APPENDIX B

Postcard

We are interested in participating in research on the effects of doctoral study upon the marriages of doctoral students. We understand that this research will be confidential and that we may withdraw at any time.

Student

Spouse

I will participate but my spouse will be unable to do so.

I am at candidacy stage in my program ☐yes ☐no
My course work is primarily finished ☐yes ☐no

Contact phone: _____ home _____ work

APPENDIX C

Agreement/Disagreement Scale

Always agree	Almost always agree	Occasionally disagree	Frequently disagree	Almost always disagree	Always disagree
(5)	(4)	(3)	(2)	(1)	(0)

AGREEMENT/DISAGREEMENT SCALE FOR SCORING MARITAL ADJUSTMENT

APPENDIX D

Locke-Thomes Marital Adjustment Test

APPENDIX D

Interviewer's Documentation Scale

LOCKE-THOMES MARITAL ADJUSTMENT TEST

Directions: Answer the questions for the time period immediately prior to and during the time you have been in the doctoral program.

Check the dot on the scale which best describes the degree of agreement or disagreement between you and your spouse on the following items:

-
1. Handling of family finances
 2. Demonstration of affection
 3. Good, right and proper behavior (conventionality)
 4. Friends
 5. Time spent together
 6. Aims, goals and things believed to be important (philosophy)
 7. Using the same scale, but going from always to never, tell me how frequently you and your spouse get on each other's nerves.

Now set aside the scale.

8. Do you and your mate engage in outside activities together?
 - a. none of them
 - b. few of them
 - c. some of them
 - d. all of them
9. In leisure time which do you and your mate prefer?
 - a. one to be on the go and the other to stay home
 - b. both to be on the go
 - c. both to stay home sometimes and to go out sometimes
 - d. both to stay at home
10. When disagreements arise they generally result in:
 - a. neither giving in
 - b. wife giving in
 - c. husband giving in
 - d. agreement by mutual give-and-take
11. How many things have caused serious difficulties in your marriage?
 - a. six or more
 - b. four or five
 - c. three

(continued)

- d. two
 - e. one
 - f. nothing
12. What is the total number of times you have left mate or mate left you because of conflict?
- a. three or more times
 - b. two times
 - c. one time
 - d. no times
13. Have you ever wished you had not married?
- a. frequently
 - b. occasionally
 - c. rarely
 - d. never
14. How happy would you rate your marriage?
- a. very unhappy
 - b. unhappy
 - c. slightly happy
 - d. happy
 - e. very happy
15. If you had your life to live over again would you:
- a. not marry at all
 - b. marry a different person
 - c. marry the same person

APPENDIX E

Broderick Commitment Scale

APPENDIX E

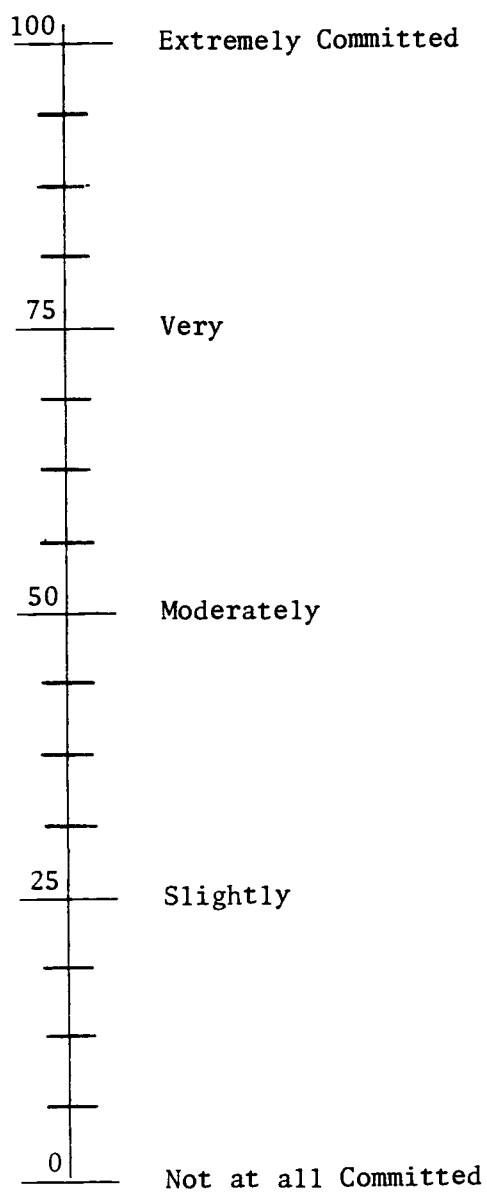
Interviewer's Documentation Scale

BRODERICK COMMITMENT SCALE

Commitment can be viewed as the degree to which an individual is willing to stand by another even though that may mean putting aside one's own needs and desires for the sake of the other; it can mean a time of accepting the other person in spite of his/her faults or problems which may make one's own life more difficult; it can mean thinking less about the immediate advantages and disadvantages of the relationship and working to make the relationship last in the long run.

Directions: Point to the number on the scale which indicates how "committed" you are to your marriage.

number _____



BRODERICK COMMITMENT SCALE

APPENDIX F

Primary Communication Inventory

APPENDIX F

Primary Communication Inventory

Below is a list of items on communication between you and your spouse. You are asked to express the extent to which you and your spouse behave in a specified way.

Please mark next to the item number the alternative which best represents your opinion.

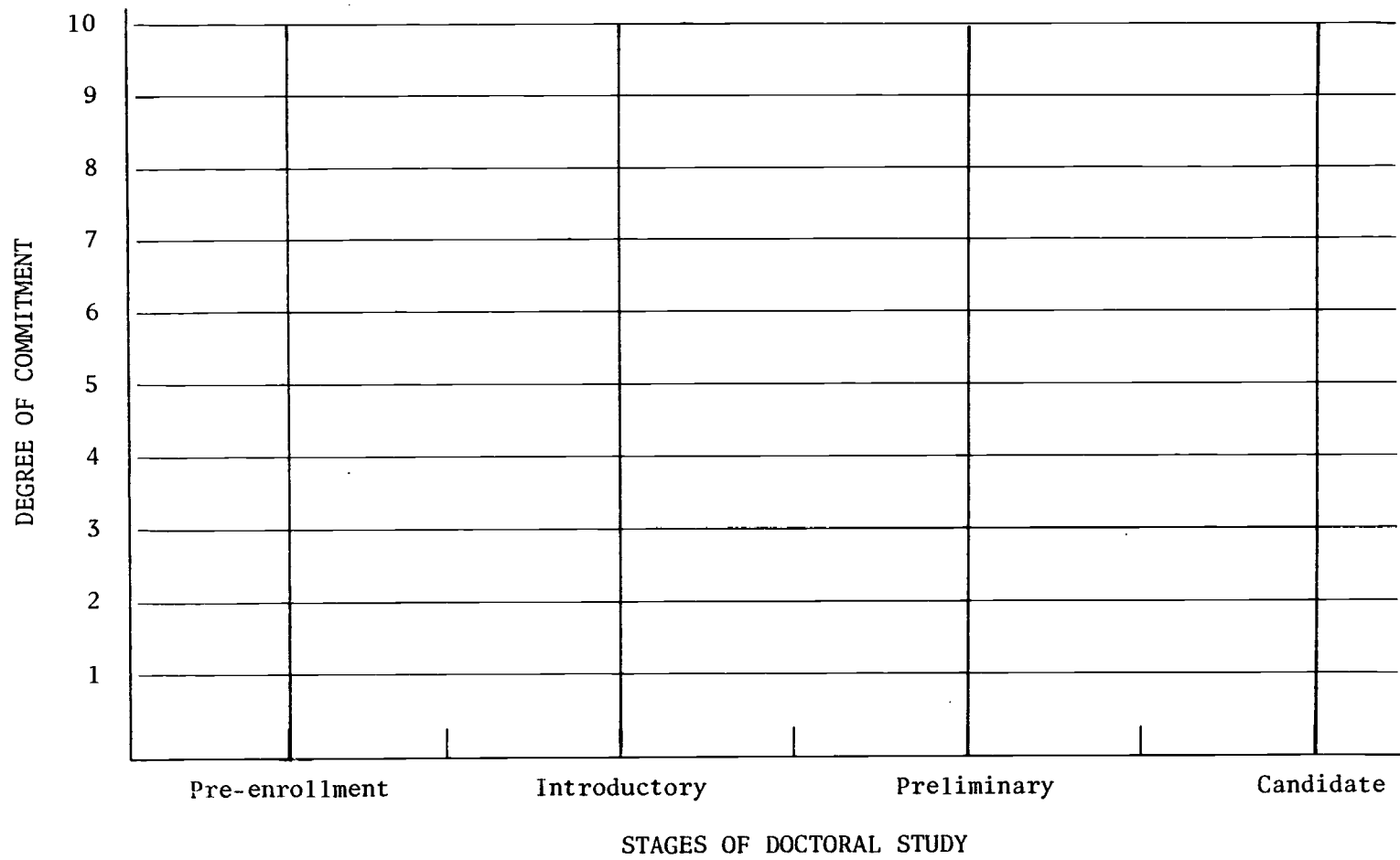
- | | | |
|---------------------|------------------|------------|
| (a) very frequently | (c) occasionally | (d) seldom |
| (b) frequently | | (e) never |

- ___ 1. How often do you and your spouse talk over pleasant things that happen during the day?
- ___ 2. How often do you and your spouse talk over unpleasant things that happen during the day?
- ___ 3. Do you and your spouse talk over things you disagree about or have difficulties over?
- ___ 4. Do you and your spouse talk about things in which you are both interested?
- ___ 5. Does your spouse adjust what he(she) says and how he(she) says it to the way you seem to feel at the moment?
- ___ 6. When you start to ask a question, does your spouse know what it is before you ask it?
- ___ 7. Do you know the feelings of your spouse from his(her) facial and bodily gestures?
- ___ 8. Do you and your spouse avoid certain subjects and conversations?
- ___ 9. Does your spouse explain or express himself(herself) to you through a glance or gestures?
- ___ 10. Do you and your spouse discuss things together before making an important decision?
- ___ 11. Can your spouse tell what kind of day you have had without asking?
- ___ 12. Your spouse wants to visit some close friends or relatives. You don't particularly enjoy their company. Would you tell him(her) that?

- ___ 13. Does your spouse discuss matters of sex with you?
- ___ 14. Do you and your spouse use words which have a special meaning not understood by outsiders?
- ___ 15. How often does your spouse sulk or pout?
- ___ 16. Can you and your spouse discuss your most sacred beliefs without feelings of restraint or embarrassment?
- ___ 17. Do you avoid telling your spouse things which put you in a bad light?
- ___ 18. You and your spouse are visiting friends. Something is said by the friends which causes you to glance at each other. Would you understand each other?
- ___ 19. How often can you tell as much from the tone of voice of your spouse as from what he(she) actually says?
- ___ 20. How often do you and your spouse talk with each other about personal problems?
- ___ 21. Do you feel that in most matters your spouse knows what you are trying to say?
- ___ 22. Would you rather talk about intimate matters with your spouse than with some other person?
- ___ 23. Do you understand the meaning of your spouse's facial expressions?
- ___ 24. If you and your spouse are visiting friends or relatives and one of you starts to say something, does the other take over the conversation without the feeling of interrupting?
- ___ 25. During marriage, have you and your spouse, in general, talked most things over together?

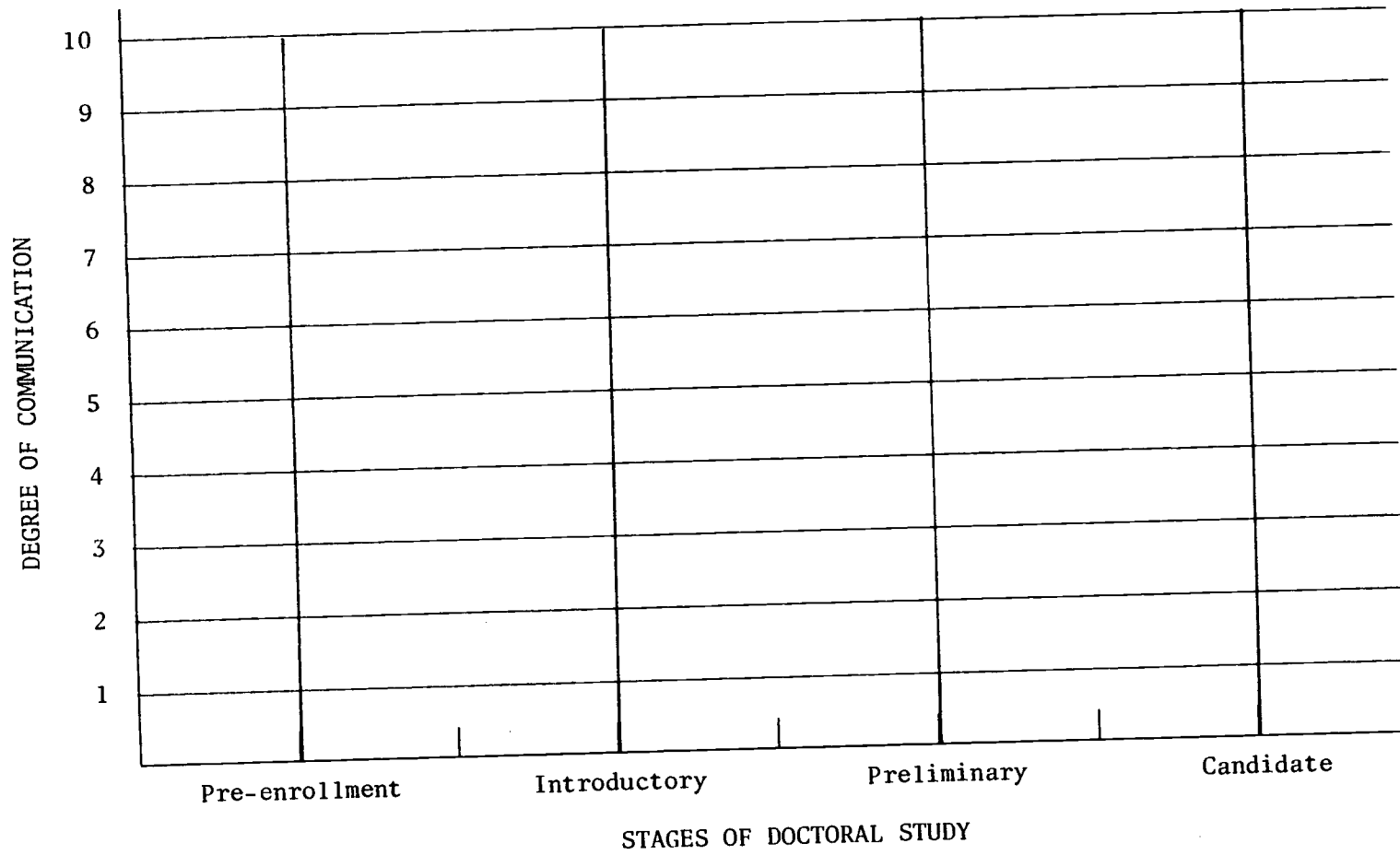
APPENDIX G

Graph - Degree of Commitment



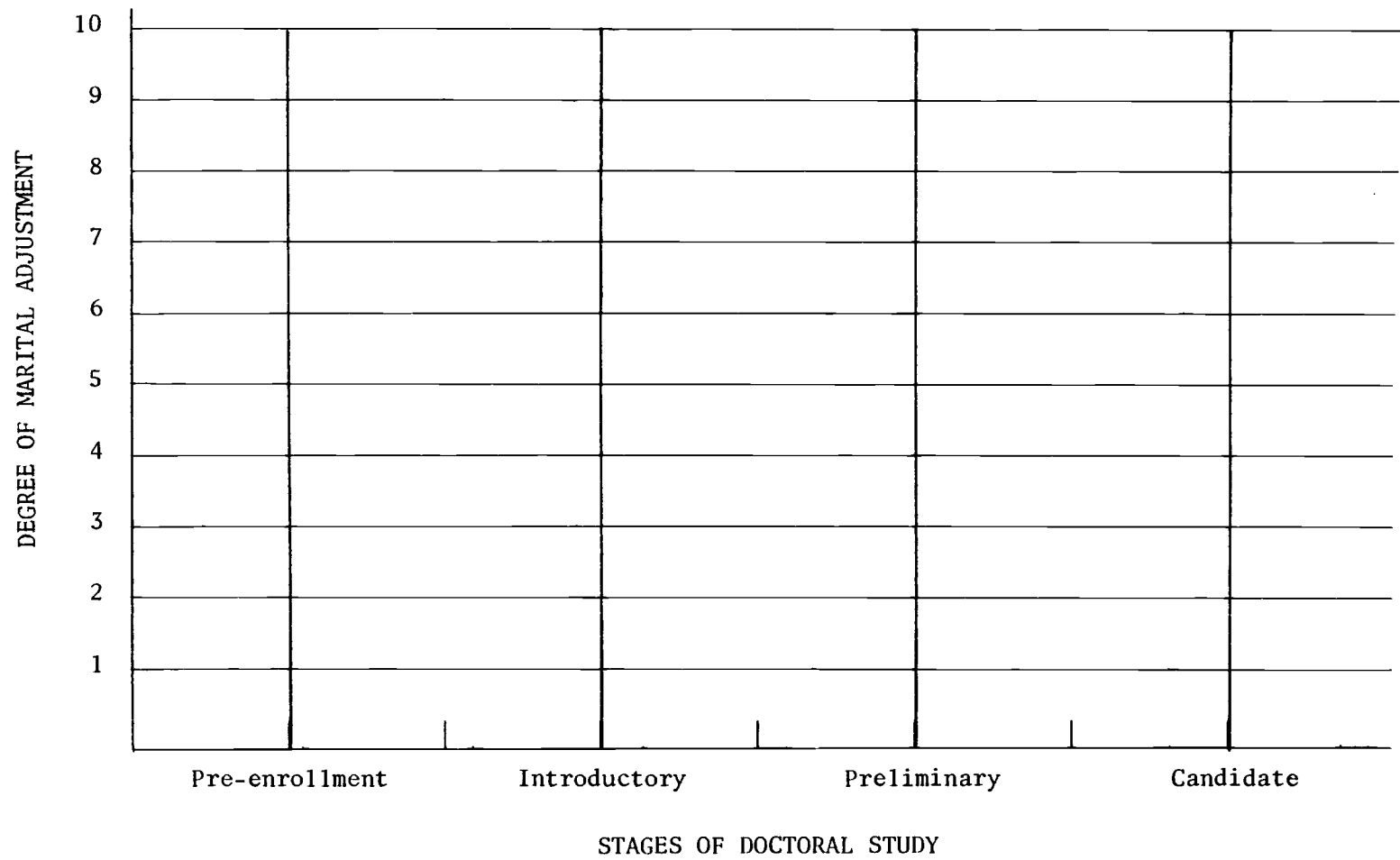
APPENDIX H

Graph - Degree of Communication



APPENDIX I

Graph - Degree of Marital Adjustment



APPENDIX J

Demographic Questionnaire

APPENDIX J

Demographic Questionnaire

1. Sex? ☐ M ☐ F
2. Age? 23-28 ☐ 29-35 ☐ 36-44 ☐ 45-55+ ☐
3. How long have you been in the doctoral program?
 1-2 yrs ☐ 3-4 yrs ☐ 5-6 yrs ☐ 6+ yrs ☐
4. How long have you been married to your current spouse?
 1-2 yrs ☐ 3-4 yrs ☐ 5-6 yrs ☐ 6+ yrs ☐
5. How old were you when you began this marriage?
 -23 yrs ☐ 23-28 yrs ☐ 29-35 yrs ☐ 36-44 yrs ☐
 45-55 yrs ☐
6. Are you presently living together?
 ☐ yes
 ☐ separated due to distance, finances, etc., involved in
 program completion
 ☐ separated due to marital problems
7. How many children do you have living with you?
 1 2 3 4+
8. Are you presently employed? ☐ F/T ☐ P/T
9. What is your main source of funding for your doctoral program?
 ☐ own employment
 ☐ spouse's employment
 ☐ savings
 ☐ loans
 ☐ scholarships, grants, other
10. What has been the degree of change in your socio-economic status
 and lifestyle since entering the doctoral program?
 ☐ very great
 ☐ somewhat changed
 ☐ very little
 ☐ no change

APPENDIX K

Narrative Questions Ending Interview

APPENDIX K

Narrative Questions Ending Interview

1. What, if any, has been a major source of stress since you have been in the program?
2. What has been the greatest adjustment that you have had to make in your marriage since entering the program?
3. What advice would you give couples beginning the doctoral program?
4. Would you enter the program if you had it to do over again?