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The Relationships of Family and Early Educational Experiences to College Student's Academic Self-Efficacy Beliefs

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THE RELATIONSHIP OF FAMILY AND EARLY EDUCATIONAL EXPERIENCES TO COLLEGE STUDENT'S ACADEMIC SELF-EFFICACY BELIEFS

by

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VITA

The author, Deanne Orput, was born on February 20, 1960, in Rockford, Illinois. Before entering college in 1980, Ms. Orput participated in a cross-cultural educational program in Dublin, Ireland. The following year, she began her undergraduate studies in cultural anthropology at Bennington College in Vermont, continuing on to receive her B.A. in anthropology from the University of Wisconsin-Madison in 1984.

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CHAPTER I

INTRODUCTION

The application of self-efficacy theory to the understanding and prediction of career and educational behavior has been an important focus of inquiry over the last several years. A review of the counseling psychology literature suggests that college students' self-efficacy beliefs relate to important educational and career criteria, including academic performance (Brown, Lent, & Larkin, 1989; Lent, Brown, & Larkin, 1984, 1986, 1987; Siegel, Galassi, & Ware, 1985) and persistence (Brown, Lent, & Larkin, 1989; Lent, Brown, & Larkin, 1984; 1986) as well as to range of perceived career options (Betz & Hackett, 1981; Lent, Brown, & Larkin, 1987; Rotberg, Brown & Ware, 1987). Moreover, the influence of self-efficacy on academic performance appears to be consistent and potent, accounting for approximately 15% of the variance in academic performance across student types, experimental designs, and performance measures (Multon, Brown, & Lent, 1989).

Although it is now clear that self-efficacy beliefs play an important role in the academic performance and career development of college students, it is as yet

unclear how students develop strong and robust academic self-efficacy beliefs. The overall goal of this study was to examine the utility of various family systems (e.g., parent-child overinvolvement, parent-child role reversal), social influence (e.g., adult and peer role models), and early school experience (e.g., teacher modeling) variables as predictors of college student academic self-efficacy.

The selection of dependent variables was guided by recent research on the importance of family dynamics and role models to the educational and career development of college students. Specifically, a number of investigators have begun testing the general hypothesis that features of the family's internal structure, or qualities of internal family relationships, are closely associated with late adolescent identity formation and college adjustment (Lopez & Andrews, 1987).

Similarly, a number of studies, particularly with women, have found that the availability of professional role models relates to career choice (Andersen, 1978; Auster & Auster, 1981; Basow & Howe, 1980; Hackett, Esposito, & O'Halloran, 1989; O'Donnell & Lunneborg, 1982) and career aspiration (Almquist & Angrist, 1971; Basow & Howe, 1980; Hackett, Esposito, & O'Halloran, 1989). This research, however, has yet to identify the mechanisms by which role models exert their influence on career aspiration and choices. Self-efficacy may be a critical

mediating mechanism. That is, it may be that effective role-modeling promotes strong occupationally-relevant self-efficacy beliefs which, in turn, promote relevant career aspirations and choices.

In addition, extant role-modeling research in the career domain has yet to identify the ingredients of effective role modeling (i.e., what it is that effective role models do that promote robust self-efficacy beliefs). Studies of role models typically assess either the presence or absence of specific types of role models (i.e., parents, professors, peers) or ask subjects to rate the degree to which various types of people (e.g., mother, father, teacher, etc.) influenced their career development (Hackett, Esposito, & O'Halloran, 1989). Left unanswered by these methods of operationalizing role model influences is what these sources of influence actually do to affect the career development process.

Thus, the primary purpose of this research was to begin investigating how important role models and qualities of internal family relationships relate to the development of women's academic self-efficacy beliefs. Specifically, we were first interested in identifying which specific role models (i.e., adults, teachers, peers) had the most influence on women's academic self-efficacy. Second, we were interested in identifying the important ingredients of role model influences on women's self-efficacy beliefs

(i.e., what these various role models do that relates to the development of academic self-efficacy beliefs). Third, we were interested in how these salient role model dimensions or behaviors related to the self-efficacy beliefs of first semester college women. And finally, we were interested in exploring how feature's of the family's internal structure related to the academic self-efficacy beliefs of these college women.

CHAPTER II

REVIEW OF THE LITERATURE

The major focus of this study was to first examine which role models (i.e., teachers, peers, and parents) had the strongest influence on college women's academic self-efficacy beliefs, and then to examine what specific behavioral features of these role models related to or predicted college women's academic self-efficacy beliefs. Therefore, the conceptual framework for surveying the literature involved two major areas.

First, a short introduction to Bandura's concept of self-efficacy is followed by a review of the academic and career self-efficacy literature. Second, a short introduction to Bandura's concept of modeling/ identification is followed by a review of the academic and career role modeling literature.

Finally, a second goal was to begin examining how various family systems may have an impact on the development of early college student academic self-efficacy beliefs. Therefore, a brief survey of the literature documenting the relationship between family dynamics and academic/career behavior will follow the review of the role model literature.

Bandura's Self-Efficacy

Self-efficacy was first postulated by Albert Bandura (1977), who defined self-efficacy expectations as beliefs about one's own ability to successfully perform a given behavior. Based upon the view that cognitions are important in the mediation of behavior, Bandura postulated that behavior changes are mediated by these expectations of personal efficacy. These self-efficacy expectations are hypothesized as helping to determine whether behavior will be initiated, how much effort will be expended, and how long it will be maintained in the face of obstacles or aversive experiences (Bandura, 1977).

Bandura (1977, 1982) conceptualized self-efficacy as varying along three dimensions (magnitude, generality, and strength) which have important performance implications. First, self-efficacy expectations differ in magnitude, which refers to the degree of difficulty of the tasks or behaviors that an individual feels capable of performing. Thus, when tasks are ordered in level of difficulty, the efficacy expectations of different individuals may be limited to the simpler tasks, to the more intermediate tasks, or to include the most difficult tasks.

Second, self-efficacy expectations differ in strength, which refers to the confidence a person has in his or her performance estimates. Weak expectations are more easily influenced by disconfirming experiences,

whereas strong expectations are not easily influenced or altered, even in the face of disconfirming experiences. Finally, efficacy expectations also differ in generality, which concerns the range of situations in which a person considers him or herself efficacious. Some experiences create more circumscribed feelings of mastery expectations, whereas others create a more generalized sense of efficacy that extends well beyond the specific mastery situation.

Finally, Bandura (1977, 1982) hypothesized that efficacy expectations are acquired via four major sources of information. The first source, performance accomplishments, is especially influential since it is based on personal mastery experiences. The second, vicarious experience, is the second most influential and involves modeling, or learning from the performances or accomplishments of others. The third informational source, verbal persuasion, involves learning through suggestion, coaching, and encouragement. And finally, the fourth source, physiological arousal, involves the impact of emotional arousal on feelings of personal competence or self-efficacy.

While performance based accomplishments are the strongest source of self-efficacy, each of these four informational source of efficacy continually and reciprocally interact to affect performance judgements which, in turn, influence human action (Lent & Hackett,

1987). Moreover, self-efficacy beliefs are both learned and modified from these four informational sources (Bandura, 1977; 1982).

Academic and Career Self-Efficacy

One of the many areas to which Bandura's self-efficacy theory has been applied and has received considerable attention over the last decade has been in the area of career development and vocational choice. In their seminal paper, Hackett & Betz (1981) postulated that self-efficacy may be viewed as a major mediator of career choice. According to the authors, career self-efficacy expectations refers to beliefs about one's own capabilities to perform vocationally relevant behaviors, and that these self-efficacy beliefs may influence the educational and career decisions, achievements, and adjustments of men and women.

The authors, however, stressed that career-related self-efficacy expectations may be of particular importance in understanding and modifying women's career development. For example, they postulated that, largely as a result of socialization experiences, women may lack strong expectations of personal efficacy in relationship to many career-related behaviors. Therefore, the authors hypothesized that career-related self-efficacy expectations may be lower, weaker, and less generalized among women than among men (Hackett & Betz, 1981). As a consequence, women

may fail to fully realize their capabilities and talents in career pursuits.

Finally, the authors hypothesized that expectations of self-efficacy may be the mechanism linking socialization experiences and subsequent academic/career choice and achievement behaviors (i.e., the mechanism or variable through which societal beliefs and expectations become manifested in women's vocational behavior). This cognitive process mediating behavior has been similarly suggested by Krumboltz, Mitchell, and Jones (1976) in their application of social learning theory to career decision making processes.

In an extension of their original paper, Betz & Hackett (1981) began testing many of their original theoretical formulations by closely examining the relationship between vocational interests, ability measures, and self-efficacy measures. With a sample of college undergraduates, the authors obtained measures of self-efficacy expectations in relation to 20 occupations, where 10 were defined as traditional (i.e., occupations traditionally chosen by females) and 10 were defined as non-traditional (occupations traditionally chosen by males). In addition, measures of academic self-efficacy expectations, vocational interests, and extent of consideration of career options were obtained for each of the 20 occupations.

The results indicated significant and consistent sex differences in self-efficacy with regard to traditional versus nontraditional occupations; males were found to have equivalent efficacy expectations for both traditional and non-traditional occupations, however women tended to have higher efficacy expectations for traditional careers and lower efficacy expectations for the non-traditional careers. Moreover, self-efficacy expectations were related to expressed interest in occupations for both males and females. For example, females indicated that they would consider a significantly greater number of traditional options than would males, whereas males reported considering more nontraditional options than did females.

Thus, findings regarding sex differences in range of career options as measured by expressed occupational interests parallel those reported for self-efficacy expectations. These findings supported two of their original propositions. First, self-efficacy is significantly related to occupational considerations. Second, gender differences in self-efficacy are predictive of gender differences in occupational consideration for certain types of occupations.

Since Betz and Hackett's (1981) original application of self-efficacy theory to career and vocational theory, subsequent studies have consistently found that gender differences in self-efficacy do exist, and are most evident

in decisions about traditional and nontraditional academic courses, majors, and occupational choices (range of perceived career options). For example, three other studies investigating occupational self-efficacy with other college student populations replicated the Betz & Hackett's findings. Layton (1984) found that women's self-efficacy expectations for traditionally female occupations were significantly higher than were their nontraditional occupational self-efficacy expectations, and that these differences in self-efficacy were moderately correlated with the range of traditional or nontraditional careers considered.

Rotberg, Brown and Ware (1987) also found that career self-efficacy expectations were related to range of occupational or career choices. However, in contrast to Betz and Hackett's (1981) first study, these authors did not find that gender was a significant predictor of range of perceived career choice. Finally, Matsui, Ikeda, Ohnishi, (1989) found in a Japanese college student sample that males had equivalent expectations of academic self-efficacy in traditional and nontraditional majors, however females reported higher expectations of self-efficacy in traditionally female dominated occupations but lower expectations of self-efficacy in male dominated occupations.

Similarly, two other studies have investigated how self-efficacy beliefs may impact choice of college major. For example, Betz and Hackett (1983, 1987) developed a questionnaire which focused on self-percepts of math ability as an important element of career self-efficacy research. The authors found math self-efficacy to be significantly related to the extent to which students selected science-based college majors.

In addition to research examining Hackett and Betz's (1981) hypotheses on the relation between career self-efficacy and academic/occupational choice, several investigations have explored the utility of self-efficacy in predicting college students' academic achievement and persistence. For example, Lent, Brown, and Larkin (1984) examined the relationship between self-efficacy beliefs and subjects' success in pursuing college science and engineering majors. The sample consisted of 42 undergraduate students who were participating in a 10-week career-planning course on science and engineering fields.

Participants completed several measures of self-efficacy involving their perceived ability to fulfill the educational requirements and job duties of a variety of technical and scientific occupations. The results indicated that subjects reporting high self-efficacy ratings in their ability to complete technical/scientific majors generally achieved higher grades and persisted

longer in the technical/scientific majors over the following academic year than those reporting low-self efficacy beliefs.

In contrast to Betz and Hackett's (1981) study, this study did not find gender differences in academic self-efficacy expectations. Rather, they found that male and female students were comparable in their perceived ability with regard to technical/scientific fields (areas that have been traditionally male). The authors, however, suggested that the difference in findings may have been due to the fact that the subjects were primarily considering technical/scientific careers, whereas Betz and Hackett's subjects apparently represented a wider variety of academic majors and career aspirations (Lent, Brown, & Larkin, 1984).

In an extension of the previous study, Lent, Brown and Larkin (1986) assessed the extent to which self-efficacy beliefs, in concert with measures of ability (PSAT scores) and achievement (high school rank and college grades), predicted academic grades, retention, and persistence. A sample of 105 undergraduates enrolled in the same career/educational planning course (mentioned above) participated in the study. Hierarchical regression analyses indicated that self-efficacy did contribute significantly to the prediction of technical grades and persistence, even when the variance attributed to objective

math ability (as measured by PSAT) and high school achievement (high school rank) had been removed from the regression equation. The authors concluded that, although self-efficacy added significant but small (3-9%) unique variance beyond objective ability and achievement measures in predicting academic performance and persistence, the pattern of relations were generally consistent with the career self-efficacy model.

Finally, in order to explore in greater detail the nature of the relationship between academic self-efficacy, aptitude, and performance (as described in the above two mentioned studies), Brown, Lent and Larkin (1989) investigated the moderating effects of academic self-efficacy beliefs on the relationship of scholastic aptitude to academic achievement and persistence. In particular, the authors were interested in finding out whether efficacy beliefs served to moderate the relationship between aptitude and performance, and whether the influence of self-efficacy on academic performance might be stronger at some levels but not at all levels of aptitude. The authors did find that one measure of academic self-efficacy was a strong predictor of academic outcome regardless of aptitude level, whereas the other moderated the relationship of aptitude and academic performance/persistence. The authors concluded that self-efficacy beliefs generally do have facilitative effects on academic performance and

persistence, however it did depend on how self-efficacy was measured.

In conclusion, the results of the studies discussed above provide strong support for the major mediational role played by academic self-efficacy expectations. Academic or occupational self-efficacy expectations do appear to be a critical filter, particularly for women, in the pursuit of certain academic majors or careers.

Just as Betz & Hackett (1981) hypothesized, Bandura's belief that expectations of self-efficacy will determine whether or not someone chooses or enters a particular occupation and amount of effort put into occupational commitments can be applied to career behavior. This may be particularly relevant to women, who have stronger self-efficacy beliefs in the traditionally held female academic majors and careers; this may also help explain why women continue to be underrepresented in the non-traditional occupational fields. Since women have been shown to have consistently weaker self-efficacy expectations in non-traditional areas than do men and this may affect the nature and range of career alternatives being considered by women.

Finally, it has similarly been shown that academic and career self-efficacy beliefs do influence the levels of performance and levels of persistence exerted. The above studies attest to the fact that academic self-

efficacy expectations are related to academic achievement and persistence. To wit, the influence of self-efficacy on academic performance appears to be consistent and potent, accounting for approximately 15% of the variance in academic performance across student types, experimental designs, and performance measures (Multon, Brown, & Lent, 1989).

In the remaining section of this review, the literature on role models will be reviewed as a means of establishing its influence on women's career development. The reasons role models have been chosen for exploration in investigating background variables that may relate to or impact academic-self efficacy are threefold. First, a review of the literature suggests that important adult role models, especially same-sex role models, have been influential in women's career choices and development, influencing such variables as career choice (Auster & Auster, 1981; Basow & Howe, 1980; Hackett, Esposito, & O'Halloran, 1989; Lunneborg, 1982; O'Donnell & Andersen, 1978) and career aspirations (Almquist & Angrist, 1971; Basow & Howe, 1980; Hackett, Esposito, & O'Halloran, 1989). It was hypothesized that role models may similarly affect women's academic self-efficacy beliefs.

Second, Bandura (1977) suggests that modeling or identification is one of the four informational sources of self-efficacy, and second in importance to performance

based accomplishments. To date, only one other study has looked at how some of these four informational sources apply to career self-efficacy. This study (Hackett, Betz, O'Halloran, & Romac, 1990), however, focused on performance based accomplishments, and investigated the effects of failure at a math or verbal task on general and specific measures of math self-efficacy.

And finally, both the career-related role model literature and the career self-efficacy literature have addressed two continuing problems related to women's career development. First, Betz & Hackett (1981) originally hypothesized that the continued underrepresentation of women in many male-dominated career fields may be related to the traditionality of women's self-efficacy beliefs. Similarly, the role model literature hypothesizes that, on account of inadequate professional female models in the non-traditional occupations, women will continue to be underrepresented in traditionally male occupations.

And second, in a related way, both career literatures have addressed the serious underutilization of women's abilities and talents in career pursuits. It is on the basis of the above formulations that we suggest self-efficacy and role modeling may be related, that self-efficacy may be a critical mechanism mediating the impact of role modeling on women's career development. That is, it may be that effective role-modeling promotes strong

occupationally-relevant self-efficacy beliefs which, in turn, promote relevant career aspirations, choices, performances, and persistence.

Role Models and Modeling Theory

A role model is a person who possesses skills and displays techniques which another individual may lack. This individual, by observing and comparing his or her own performance with that of the model's, may acquire the sought after skills. For example:

> Students select as a role model a person who possesses the skills or qualities that he or she lacks yet admires and desires to emulate. By overseeing the role model's performance and its consequences, the student develops a concrete image of the task and then initiates the behaviors needed for task accomplishment. Learning is appraised by comparing one's performance with the standards set by the role model; modeling, identifying, observing, imitating and comparing all can take place without direct exchange between the student and role models (Rogers, 1986, p.80).

The importance of role models is in part based on developmental theories of identification and modeling in childhood, and has been discussed by Freudian theorists (Blum, 1965), cognitive developmental theorists (Kohlberg, 1969), and social learning theorists (Bandura, 1969). These theorists suggest that the self develops within a social nexus of relationships and that a great deal of human behavior is developed through identification and modeling.

While parents serve as decisive role models, particularly during the early developmental period, siblings, peers, and non-familial adults are also important sources of social behavior. As children grow older, they frequently must draw more heavily upon peers and other extra-familial models. For example, under conditions of social and technological change, many parental interests, attitudes, and role behaviors that were accommodating at an earlier generation may have little functional value for members of the younger generation (Bandura, 1969).

Similarly, during later periods of development people must continue to draw extensively upon a variety of non-familial models in preparing themselves for vocational, professional, and social roles that are not often or cannot be transmitted within the family. Identification, therefore, should be viewed as a continuous process involving multiple modeling, rather that a phenomenon that primarily occurs in relationship to parents (Bandura, 1969).

Role Models and Women's Career Development

Over the past two decades researchers have become increasingly interested in investigating the influences of role models on college women's professional development. The kinds of models hypothesized to influence women's career development have included professors and teachers, parents and family, peers, and other significant adults

(Hackett, Esposito, & O'Halloran, 1989). While several investigations have looked at the relative impact of parents, teachers, and peers (Basow & Howe, 1980; Hackett, Esposito, & O'Halloran, 1989; Lunneborg, 1982) on the career development of women, the majority of the investigations have focused primarily on the relative influence of same versus opposite sex (often professorial) role models on the career development of women. This focus may predominate because the lack of female professorial and occupational role models has been identified as a significant barrier to women's career development while conversely, the availability of female role models has received support as an important and positive influence (Hackett, Esposito, & O'Halloran, 1989).

In beginning to assess the exact nature, extent, and relative impact of each of these role models on the career development of women, the following section will provide a summary of the role model literature, broken down between the relative influence of parents, teachers, and peers. A final section will focus on the relative importance or impact of each of these role model types, as well as on specific behavioral or role characteristics of these models.

Peer Role Models

The role of peers has been generally viewed as increasing in importance in our society. Second only to

parental influence, peer influence is likely to be of particular importance during periods of rapid (social) change. It is believed that adolescents' dependence on their peers for validation of personal worth can play an important role in their future plans, including the choice of an occupation (Auster & Auster, 1981).

Unfortunately, there has not been much research devoted to investigating the impact of peers on college student's career development. Moreover, what research that has been done seems to present conflicting findings. These conflicting findings, characteristic of all role model literature, may be due to the different ways "role models" has been operationalized and measured.

A substantial narrowing of occupational options may occur during adolescence, a time when stereotyped images of masculine for men and feminine for women are quite pronounced. While this adolescent-period may exert a negative influence on young women's level of achievement by encouraging them to conform to more traditional values, a more intellectual social climate may exert a positive influence on women's academic and career aspirations (Auster & Auster, 1981).

For example, Lopate (1968) reported that, at an elite science school in the Bronx, both male and female students encouraged and motivated one another to high levels of aspirations. At the university level, Tangri (1972) found

that female friends exerted a positive influence on women's role innovation. The author also noted that, in comparison to more traditional women, role innovative women reported a significantly larger number of males among their closest friends.

In contrast to these findings, however, other authors have found somewhat different results. For example, O'Donnell and Anderson (1978) did not find peers to play a key role in the traditionality or innovativeness of women's choice of college major. Similarly, Lunneborg (1982) found that peers were not particularly influential in affecting women's decision to pursue a non-traditional career in high school or college, however peers did have an impact on women's decision to pursue nontraditional careers in graduate school.

In contrast, Hackett, Esposito, & O'Halloran, (1989), found that male friends exerted a negative influence on the career salience of college seniors, while female friends were found to exert a significant negative influence on the educational aspirations of these women. Several other authors (Cohen, 1977, 1983; Kandel, 1978) however, have found a weak relation between peer influence and college aspirations.

In sum, the research findings relating the influence of peers to women's career development have been mixed. As mentioned above, these mixed findings are in part a result

of the different ways role models have been operationalized. In addition, there has been little uniformity in measuring how peers influence women's career development. For example, each of the above mentioned studies measured how peers related to different dimensions of the career process (i.e., career choice, career salience, career aspirations). Moreover, each of the studies assessed the impact of peers at different stages (i.e., at the freshman, sophomore, junior, senior, and post-college levels) of women's college and career development. Therefore, very few generalizations can be set forth regarding peers impact on women's career development. To date, peer influence remains a relatively untapped resource in understanding the forces and dynamics in women's career development.

Professorial Role Models

The importance of teachers in the lives of college women is not limited to their didactic role; faculty may be as important as parents in helping students make career choices (Davis, 1964). Moreover, it has been hypothesized that same-sex faculty may be highly influential in the lives of career aspiring women. By demonstrating and hence legitimizing a professional role, female professors may encourage female students to seek similar achievements (Basow & Howe, 1980).

The literature on professorial role models as well as on the respective importance of same versus opposite sex role models has provided inconsistent results, primarily due to methodological weaknesses. In general, however, there is considerable evidence to suggest a positive and more influential role of female professors.

To begin, a number of studies ask participants to indicate whether or not they had an influential role model during college. These investigators then ascertain whether certain career behaviors (i.e., choice of non-traditional majors) are related to the type of role model influence (i.d., parents or teachers). Gilbert, Gallessich, and Evans (1983), for example, found that female graduate students who identified female professors as the important role model viewed themselves as being more career-oriented, career-confident, and instrumental than did female students identifying male role models. Moreover, the female students identifying same-sex models reported higher satisfaction with their student role than did women identifying male role models. Unfortunately, because of the correlational design of this study, it is impossible to conclude whether female students with high career aspirations and self-esteem choose same-sex models, or whether same-sex models influence college womens'career aspirations and self-esteem.

Similarly, Gilbert (1985) investigated the importance of same versus opposite sex professors on the career

development of doctoral students. The author found that women as compared to men indicated that same sex role models had more impact on their career development. Unfortunately, the authors did not assess how women who had chosen opposite sex role models compared with women who had chosen same-sex role models, nor did they discuss what types of influence (i.e., motivation, confidence) professors had on college women.

Stake and Noonan (1978) looked at the differential impact of same versus opposite sex role models on college students motivation and confidence. Freshman students were assessed on measures of confidence and motivation during the fall and again in the spring. During the spring assessment, students were asked to indicate the sex of the teacher who had most influenced them over the past academic year. Results indicated that students who identified same sex professors AND who indicated a desire to be like that professor had the greatest improvements in motivation and confidence scores. Unfortunately, because of the correlational nature of the study design, it cannot be determined whether same-sex professorial models positively impact college students motivation and confidence, or whether confident and motivated college students choose same-sex models.

Finally, Hackett, Esposito and O'Halloran (1989), using the Role Model Index Scale (Basow & Howe, 1980) with

graduating senior women, found the influence of female teachers to be the most important predictor for both the career salience and the level of educational aspirations in these women. In contrast, the influence of male teachers was found to be minimal but negatively related to the science-relatedness of women's college major choice.

Each of the above four studies attest to the overall importance of female professorial models, however methodological limitations in all of the studies mentioned above obscure the exact nature of the role model relationship. For example, the correlational design of these studies makes it impossible to determine the direction of causality, i.e., do more career-oriented and career satisfied women choose same-sex role models or do same-sex role models enhance college students' career orientation and satisfaction?

These four studies, however, are an improvement over those discussed below as the above studies directly ask about and assess the importance of professorial role models. The following studies, on the other hand, do not specifically ask about role models but rather gather information on role models indirectly through semi-structured interviews. As a result, the findings are confounded by methodological flaws and are therefore highly inconsistent.

Tangri (1972), for example, interviewed college women who had chosen nontraditional majors and asked what factors had influenced their choice of major. Women in this study identified female faculty and friends as providing some role support, however a tolerant or supportive boyfriend was the most influential factor.

Almquist and Angrist (1971) conducted a similar interview. However these researchers focused on the relationship between background factors (including influential others) and career salience. These researchers found that women who were more career salient identified professors as being the most influential in their attitudes toward college and career (as compared to family being most influential on non-career salient women), however the sex of the teacher was unrelated to career salience.

Almquist (1974) conducted a study three years later and asked undergraduate women about factors influencing their choice of non-traditional majors. The author found that women who had chosen non-traditional majors cited teachers and people working in the field as being most influential, however the relative importance of role model sex was not discussed. In a similar type of study, however, O'Donnell (1978) found that professors had neither positively nor negatively effected women's choice of non-traditional majors.

Similarly, studies with graduate student populations reveal equally inconsistent results. For example, Lunneborg (1982) examined the influences of women's choice of nontraditional careers and found that graduate students reported professors as being important models in graduate school but not in college. However the sex of the professorial role model did not matter, Similarly, Roeske and Lake (1977) examined the importance of role models in medical school and found that female students in their first two years of medical school reported that they needed more role models, while female students in the final two years of medical school indicated that they no longer needed role models. The importance of same versus opposite sex role models for medical students, however, was not addressed.

Because the methodology in the above mentioned studies varied widely, it is difficult to draw conclusions or make generalizations. When students are specifically asked about important role models, female professors are associated with college women's feelings of satisfaction, confidence, and career salience. As stated earlier, however, the direction of this relationship cannot be ascertained due to the correlational nature of the study design.

It is important to note, however, that none of the studies assessing similar variables (i.e., the impact of same versus opposite role models on choice of non-traditional majors) found consistent relationships between

the role models sex and traditionality of major. These inconsistent findings, as mentioned above, are largely due to the differences in how information on role models was ascertained.

Parental Role Models

The family is the first and foremost influence on its children and acts as both the primary agent of socialization and the determination of the child's initial place in the social stratification system (Auster & Auster, 1981). Therefore, parents, being the head of the family unit, exert a powerful and persistent influence on its children's life.

The majority of studies assessing the influence of parents on their children's development have been conducted when the children are young. Fewer studies have focused on the influence of parents on older children. This has been particularly true in the role modeling and career development literature, as most role modeling studies during the college years focus on the impact of professors rather than on the impact of parents. Speizer (1981) has suggested that the lack of focus on parents as important role models during their children's college development may be because socialization by parents has been primarily accomplished by the time students are in their late teens. Therefore, the influence of professorial models may become more important during the college years.

What studies of parental role models that do exist have shown inconsistent results, again on account of methodological weaknesses. For example, when asking college women who had chosen nontraditional careers what people had influence their career choice, Tangri (1972) found that neither parents were identified as influential figures. Only background characteristics of the parents including parent's education and work history, as well as role innovation by mom was significantly related to the student's non-traditional career choice.

Two replications of Tangri's study found nearly identical results. Both Almquist (1974) and O'Donnell and Andersen (1978) found that nontraditional college women did not identify parents as being influential in their choice of major, however mom's educational level and work experience was again strongly related to daughter's choice of nontraditional major.

Methodological problems in these studies may in part explain the lack of direct influence parents have on their daughter's career choice. For example, none of the above mentioned studies employed specific measures of role model influence. Rather, subjects were asked during a semi-structured interview what factors or people had influenced their choice of college major. The researchers then review the transcripts, and coded information pertaining to the impact of role models. Whether parents were identified as

important influences may have depended entirely on how and what questions were asked by the interviewer, rather than on their actual importance.

In contrast to the above, a number of studies using Basow & Howe's (1980) Role Model Index Scale (RMIS) found that both parents had a significant impact on their daughter's career decisions. However these studies provided little if any information on the respective influence of mother and father. For example, Basow & Howe (1980) administered the RMIS to a group of freshman through senior women and found that, overall, parents were identified as having the most influence on daughter's career decisions. The relative influence of male versus female models, however, was not addressed in this study.

Similarly, Lunneborg (1982) administered the RMIS to women six months after college graduation and found that these women indicated their parents as having the most influence on their choice of nontraditional majors. No sex differences were found in this study, as both parents had been identified as occupational role models, and as being highly supportive of their daughter's non-traditional career choice. Finally, Hackett, Esposito, and O'Halloran (1989), in contrast to the above mentioned studies, found that only the father's influence was significantly related to the daughters' choice of a non-traditional major, although father and mother influences were highly intercorrelated.

In summarizing the literature on parental role models, it appears that, when directly assessing the impact of parents as role models using Basow and Howe's Role Model Index, both parents are identified as being highly influential on their daughter's career decisions. This finding that both parents exert a strong influence on their daughter's career development is not surprising; the appropriate question may not be "which parent is most influential" but rather "in what aspects or stages of their children's career development are mothers versus fathers most influential?" As Parson's (1959) suggested long ago, the father's and mother's role in the family are complimentary but not equivalent. Therefore, it is important to find out what it is that fathers and mothers do to promote or retard their children's career development.

The Relative Importance of Parents and Teachers

Contrary to Speizer's (1981) hypothesis that parental influence may diminish and be replaced by other sources of influence as children grow older, college women continue to recognize the overall importance and influence of their parents. Because of the extreme differences in study methodology, however, it is very difficult to assess the relative importance of parens versus teachers on the career development of college women. For example, all but three studies (Basow & Howe, 1980; Hackett, Esposito, & O'Halloran, 1989; Lunneborg, 1982) lacked systematic methods

for collecting and assessing role model information. In most instances, college students were asked via semi-structured interview what factors had influenced their career decisions.

As pointed out earlier, these studies provide little (if any) information on how interviewers were trained, what questions were asked, and how data was coded. Whether parents or teachers were indicated as important figures may have depended entirely on how and what questions were asked, rather than on their actual impact. Given these methodological limitations, it is not yet possible to assess the relative importance of parents versus teachers across study type.

The above mentioned three studies which did employ comparable designs assessed the impact of adult role models via Basow and Howe's (1980) Role Model Index. This scale assess, on a seven point scale, the relative influence of parents, teachers, and other important adults on college women's career development.

These three studies, however, continue to provide inconsistent results. For example, the results of Basow and Howe's (1980) two part study found that among college women in general, both parents but not teachers were rated as being most influential on choice of nontraditional majors, however among senior women only mothers continued to be influential and female teachers became less influential on

traditionality of career choice.

Similarly, Lunneborg (1982) found that female graduate students with nontraditional majors rated their parents as being equally (i.e., mom and dad) and most influential throughout college. During graduate school, however, these women rated professors (same versus opposite sex not indicated) as being most influential.

Finally, Hackett, Esposito, and O'Halloran (1989) found that parents and teachers were equally influential, however they influenced different aspects of college student's career development. For example, parents were found to significantly influence their daughter's choice of a non-traditional major, whereas female professors were found to significantly influence career salience and educational aspirations. The authors concluded that different role models (i.e., parents versus teachers) influence different aspects of the career development process (i.e., career choice, level of aspiration, etc.).

This point is well taken as it may explain the apparently inconsistent findings of these studies. In other words, the relative impact of role models must be studied developmentally. This developmental perspective will be examined in greater detail later on in this section.

Importance of Same and Opposite Sex Role Models

Overall, same-sex rather than opposite-sex role models are more frequently mentioned as having a significant and

positive affect on women's career development. As noted above, however, few studies systematically assess the respective importance of same- versus opposite-sex role models.

In general, female professorial models are identified as being more influential, particularly on career aspirations, than are male professorial models during the college years, however the influence of both parents remains equal during this time. Because of the varying study designs and methodological flaws, however, few conclusive statements can be provided. As mentioned previously, a developmental perspective investigating the role of same versus opposite sex parents and teachers during different stages of women's career development may provide a better framework from which to understand the inconsistencies and intricacies of these relationships.

Behavioral Characteristics of Role Models

In order to begin to understand what kind of impact role models have on the career development process, it is important to look to the literature in terms of identifying behavioral characteristics discussed in the role model literature.

As pointed out in the introduction, very little work has been done on identifying the mechanisms by which role models exert their influence on career aspirations and choices. Moreover, what little work that has been discussed

has focused primarily on the importance of same-sex role models in the career development of college women.

The importance of certain female role models generally is attributed to their role in successfully combining personal and professional roles. For example, Gilbert (1985) suggests that the importance of female professors lies in the fact that they are examples of individuals who can successfully carry out a life-style previously not sanctioned for women without sacrificing more traditional aspects of their femininity. Similarly, Erkurt & Mokros (1984) believe that women professors have special significance as role models for college women. These authors suggest that by demonstrating, and hence legitimating, a professional role, women professors encourage college women to seek similar achievements.

Mothers, just as are female professors, are thought to be very important in modeling important career behavior. A mother's educational level and work orientation have been found to strongly relate to their daughter's career development (Almquist & Angrist, 1971; Astin, 1967; Siegel & Curtis, 1963; Tangri, 1972; White, 1967). In general, the findings from these studies indicate that working mothers, women who serve as role models successfully combining family and career AND expressing satisfaction with their lifestyle, have daughters who are similarly oriented. These daughters apparently learned a favorable definition of the employed

mother role.

Role models may also serve as negative or "antimodels" who provide college women with a model of what they do not want to be. For example, a teacher may influence students by either helping them to accept or reject his/her way of life (Adelson, 1962). Similarly, parents may similarly serve as anti-role models. For example, mothers who are unhappy with their traditional roles, or who have unsuccessfully combined career and family roles, may serve as negative influences on similar career developments processes in their daughters (Basow & Howe, 1980).

Only one study has asked subjects how they felt role models actually helped or influenced their academic and career development. Erkurt and Morkos (1984) operationalized the effects of modeling as observational learning and general forms of influence. Three-fourths of their college sample claimed that observing their role model helped them learn how to formulate their thoughts better. About half said they learned how to set priorities in life, to interact with people more effectively, and to better communicate with others. Only a third said they learned to better organize their time by observing their model. The models were not considered an important source of influence in decisions about graduate school, careers, jobs, lifestyles, personal values, or outside interests. The models were said to have had only a moderate influence in

decisions about the major and scholarly interests, but more of an influence in academic performance.

It is important to note, however, that this study was only assessing the impact or influence of professorial models. Moreover, the authors themselves mentioned that the absence of career-related mentoring is surprising, and may be attributed in part to the nature of the sample. For example, half of the sample were sophomores for whom careers were not yet a salient focus. Moreover, the authors suggested that the reason the other half, college seniors, did not report much in the way of career-related mentoring may be that these seniors turn to others (i.e., career counselors, parents, peers) for that kind of career information.

The importance of these qualifying statements is that it appears that different types of role models (i.e., parents, teachers, peers, etc.) may differentially impact the career development process. That is, peers, for example, may be important in supporting college women's career choices, whereas parents and teachers may be more important in promoting career aspirations. Similarly, the career needs of students change over time (i.e., from freshman to senior year), so the type of influence certain role models (i.e., parents, teachers, peers) exert may also change according to the students age and career development needs.

Family Dynamics and Academic Behavior

The influence of the family on college students' academic and career behavior has been long recognized as an important factor by most counseling psychologists (Osipow, 1983). As outlined in the preceding section, a considerable amount of research suggests that parents affect their children's academic and career behavior by acting as role models. More recently, however, a number of investigators have begun testing the general hypothesis that features of the family's internal structure, or qualities of internal family relations, are closely associated with late adolescent identity and adjustment (Lopez & Andrews, 1987).

Several of these theorists have begun looking at the relation between structural family characteristics and students' academic behavior and college adjustment. As a result, poor college adjustment has been linked to excessive family conflict (Hoffman & Weiss, 1987; Schwarz & Zuroff, 1979), parent-child role reversals (Held & Bellows, 1983), inappropriate intergenerational coalitions (Fleming & Anderson, 1986; Schwarz & Getter, 1980), emotional dependence on parents (Hoffman, 1984), weak marital alliances and marital discord (Lopez, Campbell, & Watkins 1988; Teyber, 1983a, 1983b), and parental divorce (Faber, Primavera, & Felner, 1983). From examining these findings, some researchers hypothesize that college students may face emotional and adjustment difficulties as the result of an

underlying struggle in separating from their parents.

Teyber (1983a), for example, found that successful psychological separation from one's parents was related to an adolescent's successful academic adjustment in college. Similarly, Hoffman (1984) found that greater emotional independence was related to better academic adjustment of college women. Both Teyber and Hoffman define academic adjustment in relation to success with academic course work. Finally, Fleming and Anderson (1986) found that adolescents who perceived themselves more fused and triangulated with their families were more likely to experience poorer college adjustment, lower self-esteem and sense of mastery, and lower academic averages than their more emotionally independent peers.

The presence of parental marital conflict has also been linked to difficulties in student's adjustment to college. Teyber (1984) found that primacy of the marital relationship was positively and significantly associated with objective indices of college student's academic success. For example, students who did not rate their parents marital relation as being primary and intact were more likely to fail academically in their first year of college than were students who rated their parents marital relationship as being primary. Similarly, Lopez, Campbell and Watkins (1989) found that students from maritally-distress families evidenced significantly lower scores on

all measures of college adjustment than did college students from maritally- stable families.

It is possible, however, that parental marital conflict adversely impacts student's adjustment to college only indirectly. Marital conflict and the associated dysfunctional interaction patterns (i.e., triangulation, enmeshment, intergenerational coalitions, parent-child role reversals, etc.) that often develop in families as a result of marital conflict may impede students' psychological separation (Lopez, Campbell, & Watkins, 1988). These separation difficulties, in turn, may adversely impact student's adjustment to college.

Researchers have drawn on the principles of structural family theory to explain the relationship between marital conflict, psychological separation, and college adjustment (Teyber, 1983a). According to structural family theory, healthy families are characterized by a strong marital coalition that is the primary emotional bond. In dysfunctional families, the marital relationship is not the primary emotional bond or alliance. What frequently happens is that, instead of the parents and their marital relationship being the primary bond, cross generational alliances (i.e., the development of mother-child attachments and alliances that do not include a close relationship with dad) develop in these families.

In these dysfunctional families with intergenerational coalitions, parents whose primary emotional bond is met through their children may experience more of a loss as offspring emancipate (Teyber, 1983). These parents may be more conflicted about helping their offspring to develop the sense of efficacy and inner control that is necessary for autonomous functioning. In contrast, if the mother and father provide the primary emotional bond for each other, they may have fewer needs for their children to continue to depend on them. It may be easier for these parents to train their children to feel more independent and in control of their own lives (Teyber, 1986).

Therefore, lack of strong marital allegiance and the presence of cross-generational primary alliances are maladaptive because they do not allow offspring to disengage from parental relationships and successfully negotiate developmental tasks such as differentiation, individuation, separation, and adjustment. Transition to college is one of these developmental needs, and successful college transition requires academic adjustment, success, and self-efficacy.

Therefore, there appears to be general support, based on the models of structural family theory, that certain features of a family's internal structure or qualities of internal family relations (i.e., marital conflict and other dysfunctional interactions including intergenerational alliances, parent-child overinvolvement, etc.) are

associated with late adolescent adjustment, including college adjustment.

These findings lead to the important question of whether family interaction patterns may similarly relate to college student's academic self-efficacy. Thus, the general hypothesis that dysfunctional family interaction patterns may impact college adjustment was extended to include one other aspect of college adjustment, namely, academic self-efficacy.

Summary

In summarizing the preceding literature review sections, it appears that both role models and internal family dynamics influence college students' academic and career development. Role models were found to be influential on college student's academic and career choices, aspirations, and persistence. Similarly, certain internal family dynamics were found to be influential on college student's academic adjustment.

The purpose of the present research was to begin investigating how role models and family dynamics may relate to another important influence on academic and career development, namely academic self-efficacy. Specifically, we were interested in identifying which specific role models and role model behavior, as well as which features of the family's internal structure, relate to the academic self-efficacy beliefs of college women.

CHAPTER III

METHODOLOGY

Subjects

Participants were 147 female introductory psychology students enrolled in a private midwestern university. All received extra credit for their participation. Demographic information is displayed in Table 1.

Procedures and Instruments

Participants completed measures of academic self-efficacy, family structure, social relations, and college events. The means, standard deviations, range, and internal consistency estimates for each of these scales are displayed in Table 2. These measures were administered in small groups during participants' first college semester.

Self-Efficacy Measures

The two self-efficacy measures used were modeled after the Lent et al. (1987) measures. The Educational Requirements Self-efficacy Measure (ERS) asked students to rate on a 10-point scale their confidence (1 = completely unsure, 10 = completely sure) in their ability to complete the educational requirements for the 27 academic majors available at the University. ERS strength scores were calculated for each participant by dividing the

TABLE 1

DEMOGRAPHICS

First Semester College Women
N=147

AGE	Mean: 18.03	St. Dev: 1.10	Range: 17-28

	FREQUENCY	PERCENT
RACE		
Asian	24	16.4
African American	13	8.9
Caucasian	76	52.1
Hispanic	21	14.4
Native American	2	1.4
Other	9	6.2
TOTAL:	147	100.0

summed confidence ratings by 27 (the number of majors included on the measure).

The second self-efficacy measure (academic milestones, AMS) required students to rate their confidence, on the same 10 point scale, in their abilities to perform specific accomplishments (academic milestones, AMS) critical to completion of their degree (e.g., "complete the social sciences core requirements with a C or above"). Confidence ratings were summed across items and divided by the total number of items (13) to obtain an AMS strength score.

TABLE 2

Scale Means, St, Deviations, Range, and Reliability

Scale	M	SD	Range	r
AMS	7.80	1.55	1.00 - 10.0	.90
College Events				
positive	5.95	2.44	0.00 - 20.0	.72
negative	3.07	1.95	0.00 - 20.0	.72
FSS total	126.46	21.93	50.00 - 250.00	.87
Role Reversal	28.14	6.95	12.00 - 60.00	.73
Marital Conflict	28.12	12.07	13.00 - 65.00	.92
Fear of Separation	36.98	6.25	13.00 - 65.00	.57
P/C Overinvolvement	33.29	5.76	12.00 - 60.00	.46
Role Model Scale				
Female Supporter/ Encourager	8.29	1.49	0 - 10.00	.83
Female Model	5.89	1.50	0 - 7.00	.67
Male Challenger	5.05	1.27	0 - 6.00	.64
Male Model	4.54	.97	0 - 5.00	.75
Male Friend	4.89	1.54	0 - 6.00	.79
Teacher Teacher	6.94	1.37	0 - 8.00	.72
Teacher Challenger	7.61	1.56	0 - 9.00	.62
Peer Model	7.77	1.63	0 - 9.00	.67
Peer Friend	4.69	.70	0 - 5.00	.57
Peer Antagonist	3.01	1.32	0 - 4.00	.56

Family Structure Survey

The Family Structure Survey (FSS) assesses the presence of inappropriate family interactions that have been previously associated with college student maladjustment (Lopez, 1986). The scale's 50 items were rationally grouped into four subscales measuring marital conflict, parent-child role reversal, parent-child overinvolvement, and fear of separation. Respondents indicate how descriptive each item is of their current family environment by using a five point rating scale (1 = completely false to 5 = completely true). Higher subscale scores indicate greater frequencies of dysfunctional family interactions.

Role Model Influence Scale

A Role Model Influence Scale (RMIS), modelled after the Social Relations Scale (Blyth, Hill, & Theil, 1982), assessed the impact of important social relations. Respondents were first asked to complete demographic information on family structure and living arrangements, parental educational level and employment, and respondents' high school curriculum and location. Next, participants were asked to name an important adult male, adult female, peer, and teacher. Finally, participants were instructed to answer yes or no to a series of thirty four questions (i.e.,"I admire things about this person, "I have learned new things from this person") about their relationship with

each specified individual (i.e., important male, teacher, etc).

The thirty four items on this scale had previously been chosen by Blyth (1982) to operationalize 10 different functional roles that could be played by each target person in the life of the respondent. These 10 functional roles included teacher, supporter, challenger, competitor, antagonist, guide, controller, companion, junior partner, and model. A higher score on each of the 10 functional roles or subscales indicate the extent to which each specified social relationship (i.e., teacher, parent, peer) filled a given role (i.e., role as challenger, competitor, antagonist, etc.).

College Events Survey

Finally, a college events survey was constructed to control for the possible influences of early college experiences on obtained relationships. This instrument consisted of 20 possible positive and negative college events (i.e., "did better on a test than you expected", "was criticized by a professor for academic performance") to which respondents indicated whether the event had occurred, and whether that event was perceived as having a positive or negative effect. The number of positive and negative events was summed separately, with a higher score on each scale indicating a greater frequency of positive and negative events.

CHAPTER IV

DATA ANALYSIS

Before any major data analyses were performed, the social relations/role model influence scale was factor analyzed to determine the important behavioral characteristics comprising each of the role model scales (i.e., peer, male adult, female adult, and teacher scales).

Next, the major analyses of family structural systems (FSS) and role model influences (RMIS) included a series of regression analyses to predict academic self-efficacy (AMS and ERL). However, an inspection of the FSS and RMIS revealed low reliability, intercorrelations, and range restrictions on several of the original scales.

Therefore, a factor analysis involving all FSS and RMIS subscales together was performed, resulting in five supervariables. Each of these five variables were found to be more reliable and independent, and less restricted in range than the original scales. The distribution characteristics of these supervariables, as well as the bivariate correlations of the major independent and dependent variables were also explored, and are listed in Tables 3 and 4, respectively.

Thereafter, analyses of these five variables included a series of regression analyses to predict academic self-efficacy (AMS and ERL). To control for the possible confound of college events on obtained relations, positive and negative college events were first entered in as a block, followed by a simultaneous block entry of the five supervariables.

TABLE 3

Super Variable Means

Variable	M	SD	Range	r
Adult Factor	28.69	4.92	0 - 34	.89
DFS Factor	93.02	20.19	38 - 190	.89
Peer Factor	12.47	1.90	0 - 14	.69
Teacher Factor	14.56	2.27	0 - 17	.70
Relational Factor	36.30	5.83	12 - 64	.40
Performance Factor	18.28	3.25	0 - 22	.84
Model Factor	10.44	2.13	0 - 12	.78

Table 4

Bivariate Correlations
Relations between Independent and Dependent
Variables used in Regression

Variable	1	2	3	4	5	6	7	8	9
1. AMS									
2. + College Events	.14*								
3. - College Events	-.17*	-.10							
4. Adult Factor	.21*	.31*	-.02						
5. DFS Factor	-.15	-.06	.01	-.26*					
6. Peer Factor	.11	.18*	-.02	.27*	-.16*				
7. Teacher Factor	-.09	.06	-.06	.13	-.06	.03			
8. Relational Factor	.03	-.02	.07	-.04	.12	.03	.06		
9. Performance Factor	.23*	-.10	-.10	.94*	-.20*	.18*	.11	-.18*	
10. Model Factor	.12	.32*	-.02	.86*	-.30*	.34*	.10	.12	.63*

*p<.05

CHAPTER V

RESULTS

Factor Analysis of Role Model Influence Scale (RMIS)

In contrast to Blyth's (1982) Role Model Scale structure, which had been rationally constructed to reflect ten possible functional roles comprising each of the peer, teacher, and male/female adult scales, our factor analysis revealed different scale structures.

Data from each of the role model scales were factor-analyzed by principal factor analysis using a varimax rotation. Factor solutions were chosen using Cattell's scree test and a mineigen criterion. Items were assigned to various factors when they had loadings of at least .30. Factor analysic results of each of the role model scales are discussed below.

RMIS: Adult Male

Three factors were generated. Factor 1 accounted for considerably more of the total variance (23%) than either Factor 2 (8%) or Factor 3 (5%) (Table 6). Combined, the three factors accounted for 35% of the total variance for all the measures combined. Table 5 presents the means, st deviations, and factor loadings for each.

TABLE 5

Factor Analysis
Adult Male Role Model
N = 147

	F1	F2	F3
Mean	4.89	4.54	5.05
Standard Deviation	1.54	.97	1.27
This person was there when I needed him.	.75536	.08809	.27890
This person helps me feel good about myself.	.68154	.26832	.14111
This person is fun to be with.	.65329	.27928	.01566
I want to be like this person.	.63416	.43889	.11117
Makes me do things without caring how I feel.	-.61478	-.02703	-.15277
This person tries to push me around.	-.52726	-.00731	.08152
We enjoy a lot of the same things.	.52709	.21808	.09622
This person has given me good advice.	.52091	.47374	.37086
When we are together I take the lead.	.42570	.41055	.01878
This person keeps me from doing what I want.	-.33856	-.01210	-.05918
This person has hurt my feelings.	-.33787	.00619	.15173
I have learned new things from this person.	31500	67242	.17818
I want to do things as well as this person	.13025	.67004	.19136
I have learned info/skills from this person.	-.10891	.64375	.06311
I admire a lot of things about this person.	.29250	.52321	.17061
I have learned things by watching this person.	.22932	.39123	.21070
This person takes lead when we are together.	-.35409	.36161	-.06267
This person has helped me make hard decisions.	.28747	.33301	.61146
Criticized me in ways that were helpful.	.13276	.30268	.58187
I have gotten mad at this person.	-.08982	.03727	.50931
This person pushes me to do things on my own.	.01660	.11880	.50467
This person supported me in what I did.	.41970	.06170	.48367
This person makes me think for myself.	.02369	.15164	.43931
Person has given me ideas about right/wrong.	.11863	.22688	.43811
I have helped this person learn new things.	.15562	.20077	.36129
We do things that are new and exciting.	.28441	.33829	.34634

TABLE 6

Adult Male Role Model
Three Extracted Factors, PAF Rotation

Factor	Eigenvalue	Percent Variance	Cumulative Variance
1	6.81	22.7	22.7
2	2.28	7.6	30.3
3	1.35	4.5	34.8

Factor 1 consisted of eleven items and was labeled **"male supporter"** since each of the significant factor loadings reflect "supportive" behavioral qualities. For example, having an adult male "be there when needed, helping one to feel good about him/herself" are supportive qualities which important adult models may provide to the relationship.

Factor 2 consisted of five items and was labeled **"male model"** since each of the significant factor loadings reflect imitative or modeling behavior. For example, "learning new things, including skills and information from this person," as well as "wanting to do things as well as this person" exemplify a relationship where one is modeling the actions or behavioral qualities of a significant other.

Finally, **Factor 3** consisted of six items and was labeled **"male challenger"** since each of the significant factor loadings reflect challenging behavior. For example, "helping one to make hard decisions, criticizing in helpful ways, and pushing one to do things on his/her own" are actions which may challenge an individual to persist and persevere.

RMIS: Adult Female

Two factors were generated. The first factor accounted for 18.8 % of the total variance and the second factor accounted for 5.3% of the total variance (Table 8).

TABLE 7

Factor Analysis
Adult Female Role Model
N = 147

	F1	F2
Mean	8.29	1.49
Standard Deviation	5.89	1.50
This person helps me feel good about myself.	.86154	-.21707
This person has given me lots of good advice.	.75418	.16107
This person tries to put me down.	-.65513	.32802
This person was there when I needed her.	.62656	-.23036
This person makes me think for myself.	.61228	.18756
This person is fun to be with.	.59213	-.09992
This person has supported me in what I was doing.	.51403	-.21040
I have learned new things from this person.	.49986	.27505
This person makes me do things without caring how I feel.	-.44302	.18700
I want to be like this person.	..31087	.61441
A lot of ideas about right/wrong came from her.	.00730	.59443
I want to do things as well as she does them.	.23036	.59011
I admire a lot of things about this person.	.29702	.53055
I have helped this person learn new things.	.03729	.46101
We do things that are new and exciting.	.23389	.44311
Person criticized me in ways that were helpful.	.08834	.40301

TABLE 8

Adult Female Role Model
Two Extracted Factors, PAF Rotation

Factor	Eigenvalue	Percent Variance	Cumulative Variance
1	3.63	18.8	18.8
2	1.59	5.3	24.1

Together, the two factors accounted for 24.1% of the total variance. Table 7 presents the means, standard deviations, and factor loadings for the two principal factors.

Factor 1 consisted of nine items and was labeled **"female supporter-encourager"** since each of the significant factor loadings reflect both supportive and encouraging behavioral qualities. For example, "helps me to feel good about myself" is a supportive quality and "makes me think for myself" is an encouraging quality that important adults may provide the relationship.

Factor 2 consisted of seven items and was labeled **"female model"** since each of the significant factor loadings reflected imitative or modeling behavior. For example, "want to be like this person, and want to do things as well as this person" exemplify a relationship where one is emulating the actions or behavioral qualities of a significant other.

RMIS: Teacher

Two factors were generated. The first factor accounted for 15% of the variance and the second factor accounted for 8% of the variance (Table 10). Together, the two factors accounted for 23% of the total variance for all the measures combined. Table 9 presents the means, standard deviations, and factor loadings for these items.

TABLE 9

Factor Analysis
Teacher Role Model
N = 147

	F1	F2
Mean	6.94	7.61
Standard Deviation	1.37	1.56
Teacher makes me do things without caring how I feel.	-.71357	-.16538
This teacher has hurt me feelings.	-.58601	-.05749
This teacher helped me feel good about myself.	.53418	.34408
Teacher kept me from doing things I wanted to do.	-.53309	-.10553
This teacher tried to push me around.	-.49242	.04117
Learned how to do things by watching this teacher.	.45298	.26013
I admire a lot of things about this teacher.	.42421	.15336
I got mad at this teacher.	-.39303	.30364
We do things that are new and exciting.	.36095	.25985
This teacher is fun to be with.	.33673	.14623
This teacher supported me in things I was doing.	.18295	.68446
I sometimes protected or stood up for this teacher.	.18515	.50602
This teacher made me think for myself.	-.25985	.49958
This teacher pushed me to do things on my own.	-.19353	.45408
Teacher stimulated me to do better than her/him.	-.18069	.40377
We like to do/talk about the same things.	.34570	.39885
This teacher helped me make some hard decisions.	.07686	.39647
I want to do things as well as this teacher does.	.11512	.37651
This teacher has given me lots of good advice.	.14566	.35183
When we are together I usually take the lead.	.15525	.31409
This teacher was there when I needed him/her.	.15712	.27896

TABLE 10

Teacher Role Model
Two Extracted Factors, PAF Rotation

Factor	Eigenvalue	Percent Variance	Cumulative Variance
1	3.69	14.8	14.8
2	1.87	7.5	22.2

Factor 1 consisted of nine items and was labeled **"supporter"** since the marker items (e.g., "this teacher helped me to feel good about myself" and "have learned how to do new things by watching this teacher") reflect supportive qualities teachers often bring to the teacher-student relationship.

Factor 2 consisted of ten items and was labeled **"challenger"** as its marker items (e.g., "this teacher made me think for myself, this teacher stimulated me to do better than him/her") reflect ways in which teachers often challenge students to persist and achieve.

RMIS: Peer

Three factors were generated. Factor 1 accounted for more of the total vairance (13%) than either Factor 2 (8%) or Factor 3 (5%) (Table 12). Combined, the three factors accounted for 26% of the total variance. Table 11 presents the means, standard deviations, and factor loadings of these items.

Factor 1 consisted of eight significant items and was labeled **"peer model"** as its marker items (e.g., "want to do things as well as this peer, have learned new things by watching this peer") reflect statements in which one individual has benefitted or learned from modeling the behavior of a peer.

TABLE 11

Factor Analysis
Peer Role Model
N = 147

	F1	F2	F3
Mean	7.71	4.69	3.01
Standard Deviation	1.63	.70	1.32
I admire a lot of things about this peer.	.75385	-.12246	.21888
This peer has supported me.	.66389	.33266	.05450
I want to do things as well as this peer.	.51720	.03976	.04539
I have learned new things from watching peer.	.49647	.11004	.26536
This peer has given me lots of good advice.	.46579	.44712	-.28550
This peer makes me think for myself.	.46232	.05128	-.33929
I have learned skills/info from this peer.	.35514	.04936	-.02333
This peer pushes me to do things on my own.	.34061	.21623	-.18748
This peer pushes me to do my best.	.32249	.01605	.11172
I want to be like this peer.	.30021	-.07263	.03854
We do things that are new and exciting.	-.03923	.70067	.02444
I have helped this peer learn new things.	.03519	.54100	.01380
I sometimes take care of/protect this peer.	.17907	.50641	.05725
This peer was there when I needed him/her.	.23231	.40377	-.34396
We like to do/talk about similar things.	.05469	.39385	-.20188
Peer kept me from doing what I wanted to do.	-.04286	-.03475	.55412
This peer has hurt my feelings.	.23796	.01166	.52881
I have gotten mad at this peer.	.41470	.01111	.51841
Makes me do things without caring how I feel.	-.05077	.12740	.36522
Peer usually takes lead when we are together.	.14282	-.15017	.33774

TABLE 12

Peer Role Model
Three Extracted Factors, PAF Rotation

Factor	Eigenvalue	Percent Variance	Cumulative Variance
1	3.29	12.6	12.6
2	2.14	8.2	20.9
3	1.26	4.8	25.7

Factor 2 consisted of four significant items and was labeled **"peer friend"** as its marker items (e.g., I sometimes take care of this peer, this peer was there when I needed him/her) reflect the reciprocal friendship qualities of the peer relationship.

Finally, **Factor 3** consisted of four items and was labeled **"peer antagonist"** as its items (e.g., peer has kept me from doing things I wanted to do") exemplify behaviors which are counter to a positive peer relationship.

Factor Analysis of Supervariables

As indicated earlier in the data analysis section, aninitial inspection of the Family Structure Survey (FSS) and Role Model Scale (RMS) revealed low reliability, intercorrelations, and severe range restrictions on several of the original scales. Therefore, a factor analysis involving all FSS and RMS subscales together was performed, resulting in five new supervariables. The results of this factor analysis are presented and discussed below.

Supervariables

Five factors were generated. The first factor accounted for 25% of the total variance and the second and third factors accounted for 16% and 9% of the total variance; factor four accounted for 9% of the variance and factor five accounted for 7% of the variance (Table 14). Table 13 presents the means, standard deviations, and factor loadings of the items on the five principal factors.

TABLE 13

Factor Analysis
Supervariables
N = 147

	F1	F2	F3	F4	F5
Mean	93.02	28.69	12.47	36.30	14.56
Standard Deviation	20.19	4.92	1.90	5.83	2.27
FSS/Total	.95752	-.13639	-.02592	.20954	-.00861
FSS/Fear of Seperation	.78510	-.13125	-.02246	.32471	-.06529
FSS/Marital Conflict	.78289	-.29394	-.07669	-.20774	.10312
FSS/Parent-Child Role Reversal	.76920	.18859	-.14567	.09067	-.12108
Important Female Friend (Sup.-Encourg.)	.06827	.80401	-.08727	-.15789	.11807
Important Female Model	.01822	.77080	.28515	.01076	.12365
Important Male Challenger	-.10798	.69338	.22780	.13887	.09606
Important Male Model	-.33531	.68607	.05866	.07536	-.13644
Important Male Friend	-.08915	.64390	-.38598	-.05119	-.18030
Important Peer Friend	-.23090	.03611	.69990	.07684	-.00859
Important Peer Model	.05991	.23932	.58795	-.45252	-.03706
FSS/Parent-Child Overinvolvement	.27017	.00168	.26039	.77211	-.02847
Important Peer Antagonist	-.06959	-.06060	.18766	-.59508	-.13547
Important Teacher Challenger	-.11857	.16176	.31749	-.01140	.76916
Important Teacher Model	.02161	-.05682	-.29475	.15110	.69876

TABLE 14

Supervariables
Five Extracted Factors, PAF Rotation

Factor	Eigenvalue	Percent Variance	Cumulative Variance
1	3.77	25.1	25.1
2	2.39	15.9	41.0
3	1.40	9.3	50.3
4	1.34	8.9	59.3
5	1.02	7.3	66.5

Factor 1 consisted of four scales and was labeled **"dysfunctional family structure (DFS)"** as it is comprised of all but one of the FSS subscales. As noted previously, these subscales (e.g., marital conflict, parent-child overinvolvement) reflect the extent to which families exhibit dysfunctional family dynamics.

Factor 2 consisted of five scales and appeared to be an **"adult social influence (ADULT)"** factor as it is comprised entirely of both the Important Adult Male (i.e., model, friend, and challenger components) and Important Adult Female (i.e,. model and encourager components) Role Model scales.

Factor 3 consisted of two scales and was labeled **"positive peer factor (PEER)"** since it is comprised of the two positive factors, friend and model, of the Peer Role Model Scale.

Factor 4 consisted of two significant scales and was labeled **"RELATIONAL."** It is comprised of the peer antagonist factor of the (Peer) RMS and the parent-child overinvolvement subscale of the FSS.

Finally, **Factor 5** consisted of two scales and was labeled **"TEACHER"** as it is comprised of both factor scales (i.e., teacher, challenger) of the Teacher Role Model Scale.

Regression Analyses

Next, we explored the relationship of the five super variables to academic self-efficacy (ERS and AMS). In terms of the five variables, only the peer factor correlated significantly with ERS (r=.19, p=.001), and only the adult factor correlated significantly with AMS (r=.21, p=.01). The regression analysis of the five variables to predict ERS was found to be non-significant, however the regression analysis to predict AMS was significant.

Results of the hierarchical regression analysis predicting AMS are displayed in Table 15. After controlling for the effects of positive and negative college events, in which only negative events were significantly related to AMS, both the adult and teacher factors contributed significantly to the prediction of AMS.

TABLE 15

Hierarchical Regression Predicting Academic Self-Efficacy

Variable	R	R2	R2ch	Fch	R(sigch)	Beta	T
+ college events						.06	.60
- college events	.24	.06	.04	3.26	.04	-.19	-2.00*
Adult Factor						.21	2.19*
FSS Factor						-.13	-1.33
Peer Factor						.04	.44
Relational Factor						.09	.96
Teacher Factor	.41	.17	.11	2.66	.03	-.21	-2.28*

*p<.05

Next, we were interested in finding out what specific components of the adult factor were most facilitative of academic self-efficacy beliefs (AMS). According to Bandura (1977), performance based experiences followed by modelling, verbal persuasion, and physiological arousal have the strongest impact on the facilitation of self-efficacy. Therefore, we examined the components of the Adult Factor (male model, friend, challenger and female model, supporter/encourager), and created two new variables in accordance with Bandura's concepts of performance and modeling.

The first variable, called "Performance", was comprised of the male challenger and friend, and of the female supporter/encourager. Each of these components involved performance related activities including pushing, encouraging, and supporting. The second variable, labeled "Model", was comprised of the female and male model, both of which reflected modelling characteristics (i.e., "I want to be like this person", "I admire this person").

To test Bandura's theory in terms of our academic self-efficacy model, a forward regression analysis of the Performance and Modeling variables to predict AMS was performed. Results of these analyses are displayed in Table 16. The results indicated that only the Performance variable contributed significantly to the prediction of

TABLE 16

Forward Regression to Predict
Academic Self-Efficacy

Variable	R	R2	R2ch	Fch	R(sig)	Beta	T
Performance	.24	.06	.06	7.93	.01	.27	2.41*
Model	.24	.06	.00	.15	.70	-.04	- .39

*p<.05

academic self-efficacy (AMS). In accordance with Bandura's theory, performance based variables appear to be the facilitative sources of academic self-efficacy.

Finally, we were interested in further exploring the specific nature of the "Performance" variable in order to more accurately identify the component(s) most important in predicting academic self-efficacy (AMS). Therefore, we broke down the Performance factor into its component parts (female supporter/encourager, male challenger, and male friend). Next, we performed an all possible regression analysis on each of the three variables, independently and in combination, to predict academic self efficacy (AMS).

Results of this analysis are displayed in Table 17. The results indicated that all three variables were roughly equivalent in predicting academic self-efficacy (AMS), however all three variables in combination were most predictive of AMS.

TABLE 17

All Possible Regression
Predicting Important Mentor Characteristics

Variable	R	R2	R2ch	Fch	R(sig)	Beta	T
Female Supporter/ Encourager (FSE)		.030					
Male Supporter (MS)		.028					
Male Challenger (MC)		.038					
FSE + MS		.043					
FSE + MC		.048					
MS + MC		.051					
FSE + MS + MC		.056					

CHAPTER VI

DISCUSSION

Factor Analysis: RMIS

The results from factor analyzing our role model scale have been presented and discussed in the preceding results section. For the most part, the specific compositions of the Important Teacher, Adult and Peer role model scales are self explanatory. It is important, however, to highlight some of the more important distinctions (i.e., in behavioral influences) between variables.

First, while "modeling" is an important component in each of the relationships with adults, teachers, and peers, it is not the only important behavioral influence role models provide to the relationship. For example, important adult males do act as models, however they also provide support and challenge to the relationship. Therefore, role models are not simply people to be emulated; the role model relationship is not a passive one. Rather, the relationship between an individual and role model involves interaction and, frequently, reciprocity.

Second, functional roles or behavioral influences across role model types are not uniform. Recall that Blyth,

in his rationally constructed Role Model Scale, operationalized 10 different functional roles (i.e., supporter, challenger, etc.) that each of the teacher, adult and peer role models could provide the relationship. In contrast, our results from factor analyzing the role model scales highlight differences in the behavioral influences across role model type. For example, each of the three role model relationships are characterized by a modeling component, however only the peer relationship is characterized by an "antagonistic" component.

Our findings are not surprising, given the different types of influences and roles our friends, parents, and teachers provide throughout our lives. For example, the behavioral influences of our teacher factor (i.e., support and challenge) are what one might expect in a teacher-pupil relationship. That is, teachers generally are involved in supporting and challenging the educational growth and development of their students. Similarly, our peer factor is comprised of modeling, friendship, and antagonistic components. Given the more intimate, reciprocal, and interactive nature of peer relations, one would expect more conflicts or antagonistic episodes to develop in peer rather than in a teacher-pupil relations.

Finally, it is important to point out some distinctions in the behavioral influences of important male versus important female role models. First, it is worth

noting that in our sample parents were the most freq identified important adult role model (91% mothers, 65% fathers). Therefore, what we are really looking at is how college student's describe their relationships with their mothers and fathers.

In our sample, both mothers and fathers provided important "modeling" influences in the lives of their children. Similarly, both provided "supportive" qualities in their relationship with their children. It is important to note, however, that while both mothers and fathers provided support, only mothers mixed in with the supportive relationship a high level of "encouragement." Therefore, one of the primary distinctions between parental role model influence was the additional encouragement mothers provided to an already existing supportive relationship.

Another distinction between parental role model influences was that only fathers provided a challenging component to the relationship with their child. Therefore, fathers may be distinguished from mothers on basis of more instrumental involvement with their children. Fathers may go one step further in their involvement with their children. That is, while fathers (like mothers) may be supportive and serve as influential models, fathers may be more demanding in terms of challenging their children's educational goals and development.

Factor Analysis: Supervariables

The results from factor analyzing the Family Structure Survey and Role Model Influence scales were also presented and discussed in the preceding section. Overall, the rationale behind the clustering of scales into five supervariables appears straight forward and predictable. The two components, supporter and challenger, of the teacher role model scale, for example, remain clustered together and now make up the Teacher supervariable. Similarly, both the important male and female role model factors clustered together to form the Important Adult supervariable.

However, the three remaining supervariables, the unhealthy family, peer, and relational factors, deserve some specific attention. All but one of the FSS subscales (parent-child overinvolvement) clustered together to form the dysfunctional family System (DFS) supervariable. Similarly, all but one of the peer components (peer antagonist) of the Peer role model scale cluster together to form the Peer supervariable. At face value, it would have been assumed that all four subscales of the FSS would have hung together and comprised the DFS, and all three peer components would have hung together to comprise the Peer supervariable.

In our sample, however, parent-child overinvolvement clustered together with the antagonistic component of the Peer Role Model Scale to form our

Relational supervariable. Moreover, these two variables were inversely related, with peer antagonist loading negatively and parent-child overinvolvement loading positively. While this appears somewhat perplexing, it may be that in a relationship where a child and parent are highly overinvolved or enmeshed, the parent will not allow their child to be intimately and intensely involved in peer relationships.

As noted earlier, more intimate relationships frequently imply more intense interaction and reciprocity, with the possibility of antagonistic encounters between friends. Therefore, children who are so intensely involved with one or both parents do not have the emotional energy or opportunity to be involved in a more intimate and, at times, antagonistic peer relationship.

Regression Analysis: Five supervariables and AMS

The results of this investigation support the importance of role model influences on the development of strong academic self-efficacy beliefs. The two supervariables, "important adult" followed by "teacher", contributed significantly to the prediction of college student's academic self-efficacy (AMS).

Important adult role models were found to be positively related to college student's academic self-efficacy. As noted previously, parents were the most frequently identified adult role model (91% mothers, 83%

fathers) in our sample. The importance and influence of parent's on their children's academic and career development has shown up consistently in the role model literature (Basow & Howe, 1980; Hackett, Esposito, & O'Halloran, 1989; Lunneborg, 1982). In sum, parents appear to influence their children's college aspirations, academic and career choice, as well as academic self-efficacy.

Our finding that teachers were identified as important role model influences is also consistent with previous research (Gilbert, 1985; Gilbert, Gallessich, & Evans, 1983; Hackett, Esposito, & O'Halloran, 1989; Lunneborg, 1982). Contrary to expectations, however, teacher's influence was negatively related to students' academic self-efficacy. This finding may appear surprising, particularly in terms of a teacher's position and influence throughout the educational process, however a few areas of research may help clarify this appealingly paradoxical relationship.

One possible explanation for this relationship comes from studies on test anxiety. For example, researchers have shown that students high on test anxiety compared their knowledge base and preparation of test materials to that of their teachers, not their peers. In application to our study findings, student's may compare their knowledge base or performance abilities to those of their professors, however in coming up short, students may lower their

academic self-efficacy beliefs. It is important to note, however, that a teacher's influence in lowering students' self-efficacy beliefs may not be negative; such a process may help student's become more realistic about their performance abilities.

Second, Adelson (1962) suggested that teachers may serve as negative or "antimodels" who provide their students with a model of what they do not want to be. Hence, a teacher may influence students by either helping them to accept or reject his or her way of life. In application to our academic self-efficacy model, teachers may influence a student's confidence in their abilities or academic choices simply by being a negative model.

Research in the career related literature has shown that male teacher models may negatively influence female student's academic and career behavior, particularly in terms of non-traditional majors and career goals (Hackett, O'Halloran, & Esposito, 1989). This process may similarly be at work in relation to college women's academic self-efficacy beliefs. Unfortunately, we were unable to explore this hypothesis since we did not have information on the sex of the teacher nor on the traditionality of student's academic self-efficacy beliefs.

Teacher role models were found to be only slightly less influential than were other adult (parental) role models. Peer role models, however, were not found to be

related to student's academic self-efficacy. While much of the role model literature indicates mixed findings regarding the relative importance of parents and teachers, both teachers and parents as compared to peers are more consistently indicated as being more influential in college student's academic and career development.

However, our study findings as well as those in the role model literature regarding the relative importance of parents, teachers, and peers should be interpreted with caution. First, it is possible that different role models impact different aspects of college students academic and career behavior. For example, Hackett, Esposito, & O'Halloran (1989) found that both mothers and fathers influence their daughter's academic and career choices. However, fathers were more influential on the traditionality of their daughter's occupational choice, whereas mother's were more influential on their daughter's academic persistence.

In addition, it is possible that different role models are impactful at different stages of student's career development. For example, Lunneborg (1982) found that teachers were less impactful during first years of college while parents were, but later, by senior year, teachers more influential than parents. This may also apply to the influence of peers, who may impact academic self-efficacy at an earlier or later stage of career

development. Therefore, it is very important to study role models and their behavioral influences developmentally.

Finally, we did not find a significant relationship between the unhealthy family structure (DFS) and academic self-efficacy. However, marital conflict was found to be significantly and negatively correlated with academic self-efficacy (AMS, r=-.17, p=.05). Although a number of researchers have begun to link dysfunctional family interaction patterns with college student's maladjustment, a number of methodological limitations may cloud this relationships.

First, it may not simply be one dysfunctional interaction pattern (i.e., parental marital conflict) that impacts college student's self-efficacy but rather other aspects of the family structure that, in combination with, for example, marital conflict, may influence self-efficacy. Recall from the family literature section that several theorists hypothesized a similar kind of relationship between parental marital conflict, psychological separation, and college adjustment. In our model, dysfunctional family interaction patterns as a whole were not predictive of academic self-efficacy, however different combinations of dysfunctional patterns (i.e., marital conflict together with parent-child overinvolvement) may have differentially impacted academic self-efficacy.

Second, Hoffman (1984) found that the relation between parent-child separation and a child's academic adjustment may be mediated by the sex of both the student and parent. To date, however, the Family Structure Survey (FSS) does not test different combinations of family interaction patterns (i.e., daughter and mother, daughter and father). Rather, the FSS asks students to indicate how descriptive each survey item is of their family environment without regard to which parent it may apply. Thus, the complexity of the relation between family interaction patterns and adjustment (i.e., mediated by the sex of both the parent and student) may be similarly found in the relation between family interaction patterns and college student's academic self-efficacy. Unfortunately, we were unable to test this in our study.

Components of Adult Role Model

The obtained relationship between the Performance component (in contrast to the Modeling component) of the Important Adult Variable and academic self-efficacy is in concert with Bandura's self-efficacy theory (1977, 1982). Recall that Bandura hypothesized that efficacy expectations were acquired via four major sources of information, with performance based accomplishments being most influential on efficacy expectations.

Similarly, the results of this analysis provided important information regarding the kinds of behavioral

influences role models exert. Recall that, although a considerable amount of literature has focused on the respective influences of different role models (i.e., teachers versus parents), very little has been written about what role models actually do to influence college student's career behavior.

Our results indicate that simply modeling the behavior of important adults does not sufficiently impact college student's efficacy expectations. The influence of important role models is not a passive process; rather, it is an active process between two individuals that demands interaction and feedback. Important adults (i.e., parents) appear to be most impactful when they are actively encouraging, supporting, and challenging their children's activities and performances.

Components of Performance

Unfortunately, we were unable to more specifically identify which behavioral components (i.e., challenging, supporting, supporting/encouraging component) of the Performance Variable was most predictive of academic self-efficacy. Recall that the results of the regression analyses indicated that all three variables were roughly equivalent in predicting academic self-efficacy. However all three variables (female supporter/encourager, male supporter, and male challenger) in combination were most predictive of academic self-efficacy (AMS).

These results are not surprising, however, given the moderate but significant bivariate correlations between each of the three variables (see table 3). Moreover, as discussed in the factor analysis discussion, these three variables (particularly the male supporter and female supporter/encourager) are strongly related (i.e., they are composed of many of the same scale items) .

Unfortunately, the supportive factor of the adult male and female variables are not parallel, as the important "supportive" female factor also includes an "encouraging" component. Similarly, there is no female factor comparable to the male challenging factor. If we had parallel variables, we may have been able to more accurately conclude whether the behavioral component (i.e., challenging or supporting), the sex (male or female), or an interaction of these two, was most predictive of academic self-efficacy. Based on our current findings, however, it is best to conclude that each of the three variables in interaction are most predictive of college student's self-efficacy.

Our results and interpretation may be accurate, as they have considerable support in the role model literature. That is, the role model literature suggests that mothers and fathers are equally important but differentially influence the career development of their daughters (Hackett, Esposito, & O'Halloran (1989). The

important question to ask may not be "which parent, or which behavioral influence of that parent most influences women's academic and career development." Rather, the important question may be "during which stage and in relation to which aspect (i.e., career salience, career self-efficacy) of the career development process do parents exert their strongest influence." As Parson's (1959) suggested long ago, the father's and mother's role in the family are complimentary but not equivalent.

SUMMARY

In the beginning of this thesis, attention was focused on the literature linking self-efficacy to academic and career behavior. This extensive review provided clear evidence for the major mediational role played by academic self-efficacy. In sum, expectations of self-efficacy were found to influence academic achievement and persistence as well as occupational choice.

These findings are particularly relevant to the academic and career development of women, who frequently have stronger self-efficacy beliefs in the traditionally held female academic majors and careers (Betz & Hackett, 1981). These findings may help explain why women continue to be underrepresented in the non-traditional occupational fields, and may fail to fully realize their capabilities and talents in their career pursuits (Hackett & Betz, 1981).

Given these findings and their implications on the career development of women, it appeared particularly important to begin exploring what background variables give rise to or influence the development of strong self-efficacy beliefs. Although no prior research had focused specifically on this area of inquiry, several areas of

related research indicated the potential importance of family dynamics and role model influence to the educational and career development of college students. Thus, these two areas formed the basis of our research project.

Our findings support the important influence that role models, particularly parents and teachers, have in the lives of college students. Moreover, our research has begun to shed light not only on who the important role models are, but also on what behavioral influences these important figures exert on college students. For example, in our sample of first year college women, the presence of both a challenging and supportive father, as well as a supportive-encouraging mother was found to be most predictive of student's self-efficacy beliefs.

Thus, college student's academic self-efficacy beliefs not only develop in the context of a modeling relationship, but also are developed through the encouragement, support, and challenge of their parents. Our research is just a starting point, but should help provide some ideas and guidelines for future research inquiries. Therefore, the remaining section will outline possible improvements on our research and some ideas for future research.

First, there needs to be more uniformality in how role models are operationalized and measured. Most of the literature linking role model influence to career behavior

use non-specific role model measures. Therefore, it is very difficult to compare and generalize role model influence across studies. Similarly, more attention needs to focus not only on which role models impact career development, but more specifically on what these role models actually do (i.e., their behavioral influences) to influence college student's career development. Our findings through factor analyzing the Role Model Scale have begun to illuminate the kinds of behavioral influences role models exert, however our study is only one of two studies (Erkurt & Mokros, 1984) which has focused on this important area of inquiry.

More importantly, we need to begin looking developmentally at how college student's academic and career behavior are shaped. Academic and career needs change over time (i.e., from freshman to senior year), so the type of influence certain role models (i.e., parents, teachers, peers) exert may also change according to the students career stage and developmental needs.

For example, Lunneborg (1982) found that female students with nontraditional majors rated their parents as being most influential throughout their early college years. During their senior year and in graduate school, however, these women rated their professors as being most influential. Similarly, our study found parental influence to be the most predictive of college freshman's academic

self-efficacy. When studied developmentally, it is possible that teachers influence on student's self-efficacy beliefs becomes more important as the students progress through the more academically intense and demanding years of college.

Similarly, research has shown that different role models influence different aspects of career behavior. Hackett, Esposito, & O'Halloran (1989), for example, found that both mothers and fathers influence their daughter's academic and career choices. However fathers were more influential on the traditionality of their daughter's occupational choice, whereas mother's were more influential on their daughter's academic persistence.

In sum, we need to begin collecting more data concerning the effects of different types of role models, alone or in interaction, on varying aspects of the career development process. Similarly, we need to look at how role model influences interact with other important influences of career development. For example, we need to look further at how dysfunctional family interaction patterns may interact with role model influence, and how these together impact college student's self-efficacy.

Finally, with these recommendations in mind, we need to begin replicating these study findings with diverse college samples. Our study sample was very homogeneous, as it was comprised of first semester college women who were

predominately caucasian. Again, a developmental and longitudinal study with a more ethnically diverse population would provide a greater wealth of information.

More causally driven studies on the relation between role model influences, academic self-efficacy beliefs, and career behavior should also be explored. We suggest that self-efficacy may be a critical mediating mechanism. Specifically, it may be that effective role-modeling promotes strong occupationally relevant self-efficacy which, in turn, promotes relevant career aspirations and choices. But again, more causally-driven studies are needed to identify the mechanisms and processes by which role models influence academic and career related behavior.

It is through these recommended improvements and suggestions for future research that we may begin to develop effective intervention strategies. That is, we need to better understand the forces and variables that influence the development of college student's self-efficacy so that we may begin to develop intervention methods for student's with low or inadequate efficacy expectations. Intervention strategies may be particularly relevant to women, whose academic and career opportunities may be restricted on account of their weaker self-efficacy expectations in non-traditional areas.

REFERENCES

Adelson, J. (1962). The teacher as model. In N. Sanford (ED.), The American college: A psychological and social interpretation of higher learning. New York: Wile.

Astin, H. (1967). Factors associated with the participation of the woman doctorate in the labor force. Personnel and Guidance Journal, 1967, 240-246.

Almquist, E.M. (1974). Sex stereotypes in occupational choice: The case for college women. Journal of Vocational Behavior, 5, 13-21.

Almquist, E.M., & Angrist, S.S. (1971). Role model influences on college women's career aspirations. Merrill-Palmer Quarterly, 17, 263-279.

Auster, C.J., & Auster, D. (1981). Factors influencing women's choice of nontraditional careers: The role of family, peers, and counselors. The Vocational Guidance Quarterly, 18, 253-263.

Bandura, A. (1969). A social learning theory of identification process. In David A. Goblin (Ed.), Handbook of Socialization Theory and Research. Chicago: Rand McNally.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84(2), 191-215.

Bandura, A. (1982). Self-efficacy theory in human agency. American Psychologist, 37, 122-147.

Basow, S.A., & Howe, K.G. (1980). Role-model influence: Effects of sex and sex-role attitude in college students. Psychology of Women Quarterly, 4(4), 558-572.

Bell, A.P. (1970). Role modelship and interaction in adolescence and young adulthood. Developmental Psychology, 2(1), 123-128.

Betz, N.E. & Hackett, G. (1981). The relationship of career-related self-efficacy expectations to perceived career options in college women and men. Journal of Counseling Psychology, 28, 399-410.

Betz, N.E., & Hackett, G. (1983). The relationship of mathematics self-efficacy expectations to the selection of science-based college majors. Journal of Vocational Behavior, 23, 329-345.

Betz, N.E., & Hackett, G. (1986). Applications of self-efficacy theory to understanding career choice behavior. Journal of Social and Clinical Psychology, 4, 279-289.

Betz, N.E., & Hackett, G. (1987). The concept of agency in educational and career development. Journal of Counseling Psychology, 34, 299-308.

Blyth, D.A., Hill, J.P., & Thiel, S.M. (1982). Early adolescents' significant others: Grade and gender differences in perceived relationships with familial and nonfamilial adults and young people. Journal of Youth and Adolescence, 11, 425-449.

Brown, S.D., Lent, R.W., & Larkin, K.C. (1989). Self-efficacy as a moderator of scholastic aptitude-academic performance relationships. Journal of Vocational Behavior, 35, 64-75.

Cohen, J.M. (1977). Sources of peer group homogeneity. Sociology of Education, 30, 277-241.

Cohen, J.M. (1983). Peer influence on college aspirations with initial aspirations controlled. American Sociological Review, 48, 728-734.

Davis, J.A. (1964). Great aspirations. Chicago: Aldine.

Erkut, S. & Mokros, J.R. (1984). Professors as models and mentors for college students. American Educational Research Journal, 21, 399-417.

Farber, S.S., Primavera, J., & Felner, F.D. (1983). Older adolescents and parental divorce: Adjustment problems and mediators of coping. Journal of Divorce, 7, 59-75.

Fleming, W.M., & Anderson, S.A. (1986). Individuation from the family and personal adjustment in later adolescence. Journal of Marital and Family Therapy, 12, 311-315.

Gilbert, L.A. (1985). Dimensions of same-gender student-faculty role-model relationships. Sex Roles, 12, 111-123.

Gilbert, L.A., Gallessich, J.M., & Evans, S.L. (1983). Sex of faculty role model and students' self-perceptions of competency. Sex Roles, 9, 597-607.

Hackett, G., & Betz, N.E. (1981). A self-efficacy approach to the career development of women. Journal of Vocational Behavior, 18, 326-339.

Hackett, G., Betz, N.E., O'Halloran, M.S., & Romac, D.S. (1990). Effects of verbal and mathematics task performance on task and career self-efficacy and interest. Journal of Counseling Psychology, 37(2), 169-177.

Hackett, G., Esposito, D. & O'Halloran, S. (1989). The relationship of role model influences to the career salience and educational and career plans of college women. Journal of Vocational Behavior, 35, 164-180.

Held, B., & Bellows, D. (1983). A family systems approach to crisis reactions in college students. Journal of Marital and Family Therapy, 9, 365-373.

Hoffman, J.A. (1984). Psychological separation of late adolescents from their parents. Journal of Counseling Psychology, 34, 157-163.

Hoffman, J.A., & Weiss (1987). Family dynamics and presenting problems in college students. Journal of Counseling Psychology, 34(2), 157-163.

Kandel, D.B. (1978). Homophily, selection, and socialization in adolescent friendships. American Journal of Sociology, 84, 427-436.

Kohlberg, L. (1969). Stage and sequence: The cognitive developmental approach to socialization. In D.A. Goblin (ed.), Handbook of Socialization Theory. Chicago: Rand McNally.

Krumboltz, J.D., Mitchell, A.M., & Jones, B.G. (1976). A social learning theory of career selection. Counseling Psychologist, 6(1), 71-81.

Layton, P.L. (1984). Self-efficacy, locus of control, career salience, and women's career choice. Unpublished doctoral dissertation, University of Minnesota.

Lent, R.W., Brown, S.D., & Larkin, K.C. (1984). Relation of self-efficacy expectations to academic achievement and persistence. Journal of Counseling Psychology, 31, 356-362.

Lent, R.W., Brown, S.D., & Larkin, R.C. (1986). Self-efficacy in the prediction of academic performance and perceived career options. Journal of Counseling Psychology, 33, 265-269.

Lent, R.W., Brown, S.D., & Larkin, B.C. (1987). Comparison of three theoretically-derived variables in predicting career and academic behavior; Self-efficacy, interest congruence, and consequence thinking. Journal of Counseling Psychology, 34, 293-298.

Lent, R.W., & Hackett, G. (1987). Career self-efficacy: Empirical status and future directions. Journal of Vocational Behavior, 30, 347-382.

Lopate, C. (1978). Women in medicine. Baltimore: John Hopkins Press.

Lopez, F.G. (1986). Family structure and depression: Implications for the counseling of depressed college students. Journal of Counseling and Development, 64, 508-511.

Lopez, F.G., & Andrews, S. (1987). Career indecision: A family systems perspective. Journal of Counseling and Development, 65, 304-307.

Lopez, F.G., Campbell, V.L., & Watkins, C.E. (1988). Family structure, psychological separation, and college adjustment: A canonical analysis and cross-validation. Journal of Counseling Psychology, 35, 402-409.

Lopez, F.G., Campbell, V.L., & Watkins, C.E. (1989). Effects of marital conflict and family coalition patterns on college adjustment. Journal of College Student Development, 30, 46-52.

Lunneborg, P.W. (1982). Role model influencers of non-traditional professional women. Journal of Vocational Behavior, 20, 276-281.

Matsui, T., Hiroshi, Ikeda, & Ohnishi, R. (1989). Relations of sex-typed socializations to career self-efficacy expectations of college students. Journal of Vocational Behavior, 35, 1-16.

Multon, K.D., Brown, S.D., & Lent, R.W. (1989, June). Relationships of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. Paper presented at the meeting of the American Psychological Society, Alexandria, VA.

O'Donnell, J., & Andersen, D.G. (1978). Factors influencing choice of major and career of capable women. The Vocational Guidance Quarterly, 22, 214-221.

Osipow, S. (1983). Theories of career development (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Parson, T. (1959). The social structure of the family. In R.N. Anshen (ed.), In the Family: It's function and destiny. New York: Harper and Row.

Roeske, N.A., & Lake, K. (1977). Role models for women medical students. Journal of Medical Education, 52(6), 459-466.

Rogers, J.C. (1986). Mentoring for career achievement and advancement. The American Journal of Occupational Therapy, 40(2), 79-82.

Rotberg, H.L., Brown, D., & Ware, W.B. (1987). Career self-efficacy expectations and perceived range of career options in community college students. Journal of Counseling Psychology, 34, 167-170.

Schwarz, J., & Getter, H. (1980). Parental conflict and dominance in late adolescent adjustment: A triple interaction model. Journal of Abnormal Psychology, 89, 573-580.

Schwarz, J., & Zuroff, D. (1979). Family structure and depression in female college students: Effects of parental conflict, decision-making power, and inconsistency of love. Journal of Abnormal Psychology, 88, 398-406.

Siegel, A., & Curtis, E. (1963). Family correlates of orientation toward future employment among college women. Journal of Educational Psychology, 54, 33-37.

Siegel, R.G., Galassi, J.P., & Ware, W.B. (1985). A comparison of two models for predicting mathematics performance: Social learning versus math aptitude-anxiety. Journal of Counseling Psychology, 32, 531-538.

Speizer, J.J. (1981). Role models, mentors, and sponsors: The elusive concepts. Signs: Journal of Women in Culture and Society, 6(4), 692-693.

Stake, J.E., & Noonan, M. (1985). The influence of teacher models on the career confidence and motivation of college students. Sex Roles, 12, 1023-1031.

Tangri, S.S. (1972). Determinants of occupational role innovation among college women. Journal of Social Issues, 28, 177-199.

Teyber, E. (1983a). Effects of parental coalition on adolescent emancipation from the family. Journal of Marital and Family Therapy, 9, 305-310.

Teyber, E. (1983b). Structural family relations: Primary dyadic alliances and adolescent adjustment. Journal of Marital and Family Therapy, 9, 89-99.

White, K. (1967). Social background variables related to career commitment of women teachers. The Personnel and Guidance Journal, 45, 648-653.

APPENDIX

AMS Self-Efficacy Scale

INSTRUCTIONS: Assuming you were motivated to do your best, please indicate whether or not you feel you could do each of the following:

				If yes, how sure are you? Completely Unsure									Completely Sure
1.	Complete the Communicative and Expressive Arts core requirements with a C or above	Yes	No	1	2	3	4	5	6	7	8	9	10
2.	Complete the History core requirements with a C or above	Yes	No	1	2	3	4	5	6	7	8	9	10
3.	Complete the Literature core requirements with a C or above	Yes	No	1	2	3	4	5	6	7	8	9	10
4.	Complete the Mathematical Science core requirements with a C or above	Yes	No	1	2	3	4	5	6	7	8	9	10
5.	Complete the Natural Science core requirements with a C or above	Yes	No	1	2	3	4	5	6	7	8	9	10
6.	Complete the Philosophy core requirements with a C or above	Yes	No	1	2	3	4	5	6	7	8	9	10
7.	Complete the Social Science core requirements with a C or above	Yes	No	1	2	3	4	5	6	7	8	9	10
8.	Complete the Theology core requirements with C or above	Yes	No	1	2	3	4	5	6	7	8	9	10

				If yes, how sure are you? Completely Unsure								Completely Sure
9.	Remain at institution over the next semester	Yes	No	1	2	3	4	5	6	7	8	9 10
10.	Remain at institution over the next two semesters	Yes	No	1	2	3	4	5	6	7	8	9 10
11.	Excel at institution over the next semester	Yes	No	1	2	3	4	5	6	7	8	9 10
12.	Excel at institution over the next two semesters	Yes	No	1	2	3	4	5	6	7	8	9 10
13.	Graduate from institution	Yes	No	1	2	3	4	5	6	7	8	9 10

ERS Self-Efficacy Measure

INSTRUCTIONS: For each major listed below, please indicate whether or not you feel you could complete the education and/or training required to graduate with this major--assuming you were motivated to make your best effort. For each YES, indicate how sure you are on a 10-point scale.

	Major	Could you complete?		If yes, how sure are you that you can complete the required education and/or training? Completely Unsure ... Completely Sure
1.	Anthropology	Yes	No	1 2 3 4 5 6 7 8 9 10
2.	Biology	Yes	No	1 2 3 4 5 6 7 8 9 10
3.	Business	Yes	No	1 2 3 4 5 6 7 8 9 10
4.	Chemistry	Yes	No	1 2 3 4 5 6 7 8 9 10
5.	Classical Studies	Yes	No	1 2 3 4 5 6 7 8 9 10
6.	Communications	Yes	No	1 2 3 4 5 6 7 8 9 10
7.	Criminal Justice	Yes	No	1 2 3 4 5 6 7 8 9 10
8.	Dental Hygiene	Yes	No	1 2 3 4 5 6 7 8 9 10
9.	Economics	Yes	No	1 2 3 4 5 6 7 8 9 10
10.	Education	Yes	No	1 2 3 4 5 6 7 8 9 10
11.	English	Yes	No	1 2 3 4 5 6 7 8 9 10
12.	Fine Arts	Yes	No	1 2 3 4 5 6 7 8 9 10
13.	History	Yes	No	1 2 3 4 5 6 7 8 9 10
14.	Mathematical Sciences	Yes	No	1 2 3 4 5 6 7 8 9 10
15.	Military Science	Yes	No	1 2 3 4 5 6 7 8 9 10

Major	Could you complete?		If yes, how sure are you that you can complete the education and/or training? Completely Unsure ... Completely Sure	
16.	Modern Languages	Yes	No	1 2 3 4 5 6 7 8910
17.	Natural Science	Yes	No	1 2 3 4 5 6 7 8910
18.	Nursing	Yes	No	1 2 3 4 5 6 7 8910
19.	Philosophy	Yes	No	1 2 3 4 5 6 7 8910
20.	Physical Education	Yes	No	1 2 3 4 5 6 7 8910
21.	Physics	Yes	No	1 2 3 4 5 6 7 8910
22.	Political Science	Yes	No	1 2 3 4 5 6 7 8910
23.	Psychology	Yes	No	1 2 3 4 5 6 7 8910
24.	Social Work	Yes	No	1 2 3 4 5 6 7 8910
25.	Sociology	Yes	No	1 2 3 4 5 6 7 8910
26.	Theatre	Yes	No	1 2 3 4 5 6 7 8910
27.	Theology	Yes	No	1 2 3 4 5 6 7 8910

Social Relations Questionnaire

Instructions: In order to complete this section we would like you first to select one person from each of the following categories who is important to you. This may be somewhat difficult since you may have many important people in your life. But please select one person in each category. Place a check next to the one person from each category whom you chose. We will then ask you some questions about each of these people on the following page.

Important Adult Male (Check One)	Important Adult Female (Check One)	Important Peer (Check One)
__Father	__Mother	__Brother
__Stepfather	__Stepmother	__Sister
__Foster Father	__Foster Mother	__Male
	Relative	
__Grandfather	__Grandmother	__Female
		Relative
__Other Adult Male	__Other Adult	__Male Friend
Relative	Female Relative	
__Adult Male Friend	__Adult Female	__Female Friend
of Family	Friend of Family	
__Other (Please	__Other (Please	__Other (Please
Specify:	Specify:	Specify:
_____)	_____).	_____).

Social Relations Questionnaire (continued)

Instructions: Read each of the statements below and decide if it is like your relationship with each of the three people you checked as being important to you on the preceeding page. If your relationship is like what is described in the statement, circle Y for yes. If your relationship is not like what is described in the statement, circle N for no. Be sure to answer each question for each person.

		IMPORTANT ADULT MALE		IMPORTANT ADULT FEMALE		IMPORTANT PEER	
1.	I have learned how to do things by watching this person.	Y	N	Y	N	Y	N
2.	This person helps me feel good about myself.	Y	N	Y	N	Y	N
3.	I have gotten mad at this person.	Y	N	Y	N	Y	N
4.	This person tries to push me around	Y	N	Y	N	Y	N
5.	This person has helped me make some hard decisions.	Y	N	Y	N	Y	N
6.	This person is fun to be with.	Y	N	Y	N	Y	N
7.	This person pushes me to do my best.	Y	N	Y	N	Y	N
8.	A lot of ideas about right and wrong have come from this person.	Y	N	Y	N	Y	N
9.	I have helped this person learn new things.	Y	N	Y	N	Y	N

10.	This person tries to put me down.	Y	N		Y	N		Y	N
11.	This person was there when I needed him/her.	Y	N		Y	N		Y	N
12.	I want to be like this person.	Y	N		Y	N		Y	N
13.	I have learned new things from this person.	Y	N		Y	N		Y	N
14.	This person kept me from doing things I wanted to do.	Y	N		Y	N		Y	N
15.	This person usually takes the lead when we are together.	Y	N		Y	N		Y	N
16.	This person pushes me to do things on my own.	Y	N		Y	N		Y	N
17.	We like to do and talk about a lot of the same things.	Y	N		Y	N		Y	N
18.	I want to do things as well as this person does them.	Y	N		Y	N		Y	N
19.	When we are together I usually take the lead.	Y	N		Y	N		Y	N
20.	I have learned skills or information from this person.	Y	N		Y	N		Y	N
21.	This person makes me think for myself.	Y	N		Y	N		Y	N
22.	This person has hurt my feelings.	Y	N		Y	N		Y	N
23.	This person makes me do things without caring how I feel.	Y	N		Y	N		Y	N

24.	This person has given me lots of good advice.	Y	N		Y	N		Y N
25.	This person criticized me in ways that were helpful.	Y	N		Y	N		Y N
26.	We do things that are new and exciting.	Y	N		Y	N		Y N
27.	I admire a lot of things about this person.	Y	N		Y	N		Y N
28.	I sometimes take care of or protect this person.	Y	N		Y	N		Y N
29.	This person has supported me in what I was doing.	Y	N		Y	N		Y N
30.	I always try to do better than this person.	Y	N		Y	N		Y N

NOW CIRCLE THE LETTER THAT BEST ANSWERS EACH OF THE FOLLOWING QUESTIONS ABOUT EACH PERSON

N= NONE **S= SOME** **AL= A LOT**

31.	How much do you go to this person for advice?	N	S	AL	N	S	AL	N	SAL
32.	How much do you share your inner feeling with this person?	N	S	AL	N	S	AL	N	SAL
33.	How much does this person understand what you are really like?	N	S	AL	N	S	AL	N	SAL
34.	How much does this person accept you no matter what you do?	N	S	AL	N	S	AL	N	SAL

Social Relations Questionnaire Supplement

TEACHER ROLE MODEL

Instructions: In order to complete this section we would like you to first select one teacher from your first 12 years of school who was the most important to you. This may be somewhat difficult since many of your teachers may have been important to you or because none of your teachers were that important. But please select the one teacher who was most important to you. Then indicate below the grade in which you had this person as a teacher. We will then ask you some questions about this teacher on the following page.

My most Important Teacher taught me in the following grade:

Check One:

___Preschool	___6th
___Kindergarten	___7th
___1st	___8th
___2nd	___9th
___3rd	___10th
___4th	___11th
___5th	___12th

NOW TURN THE PAGE AND ANSWER THE QUESTIONS ABOUT THIS TEACHER.

Social Relations Questionnaire (continued)

Instructions: Read each of the statements below and decide if it describes the most important teach you checked as being important to you on the preceeding page. If the teacher was like what is described in the statement, circle Y for yes. If the teacher was not like what is described in the statement, circle N for no. Be sure to answer all of the questions.

	STATEMENT	ANSWER
1.	I learned how to do things by watching this person.	Y N
2.	This teacher helped me feel good about myself.	Y N
3.	I got mad at this teacher.	Y N
4.	This teacher tried to push me around.	Y N
5.	This teacher helped me make some hard decisions	Y N
6.	This teacher pushed me to do my best.	Y N
7.	This teacher was fun to be with.	Y N
8.	A lot of my ideas about right and wrong came from this teacher.	Y N
9.	I helped this teacher learn new things.	Y N
10.	This teacher tried to put me down.	Y N
11.	This teacher was there when I needed them.	Y N
12.	I want to be like this teacher.	Y N
13.	I learned many new things from this teacher.	Y N
14.	This teacher kept me from doing things I wanted to do.	Y N
15.	This teacher usually took the lead in class.	Y N
16.	This teacher pushed me to do things on my own.	Y N
17.	I like a lot of the same things that this teacher liked.	Y N

18. I want to do things as well as this teacher did them. Y N

19. This teacher often allowed me to take the lead in class. Y N

20. I learned a lot from this teacher. Y N

21. This teacher made me think for myself. Y N

22. This teacher hurt my feelings. Y N

23. This teacher made me do things without caring how I felt. Y N

24. This teacher gave me a lot of good advice. Y N

25. This teacher criticized me in ways that were helpful. Y N

26. This teacher had me do things that were new and exciting. Y N

27. I admire a lot of things about this teacher. Y N

28. I sometimes protected or stood up for this teacher. Y N

29. This teacher supported me in things I was doing Y N

30. This teacher stimulated me to be better than him/her. Y N

NOW CIRCLE THE LETTER THAT BEST ANSWERS EACH OF THE FOLLOWING QUESTIONS ABOUT THIS TEACHER

N= NONE S= SOME AL = A LOT

31. How much did you go to this teacher for advice? N S AL

32. How much did you share your inner feelings with this teacher? N S AL

33. How much did this teacher understand what you were really like? N S AL

34. How much did this teacher accept you no matter what you did? N S AL

Family Structure Survey

Directions: Using the scale below, respond to each item below by indicating how true each item is of you and your parent.

Please Note: This questionnaire seeks to clarify family processes in the home environment with which you are currently most closely associated. Therefore, if your biological parents are divorced and remarried and you either A.) live with a parent and a stepparent or B.) have closer contact with one parent-stepparent pair than the other, refer to the closer parental pair when answering these questions. Otherwise, answer all questions by referring to your biological parents.

Completely False	Mostly False	Not Sure	Mostly True	Completely True
1	2	3	4	5

1. My mother depends on me for emotional support.
2. Once I'm on my own, things in my family won't be the same.
3. My parents argue a lot.
4. I spend more time with my family than with my friends.
5. I worry about my parents' future.
6. My father seeks me out for advice.
7. Time is passing too quickly.
8. I think I've been sheltered from the real world.
9. My parents let me make my own decisions.
10. I'm anxious about leaving home.
11. I wonder if my parents will divorce.
12. I don't keep any secrets from my mother.
13. My father tells me things that he won't tell my mother.
14. I consider my mother to be a mature adult.

Completely False	Mostly False	Not Sure	Mostly True	Completely True
1	2	3	4	5

15. I want to live close to my parents' home.

16. My mother expects to know everything I'm doing.

17. My father respects my rights as an individual.

18. I feel that my parents can work out their differences.

19. I can't wait to be totally on my own.

20. My mother often acts like a child.

21. My parents seem to be drifting apart.

22. My father will be very hurt if I don't live near him.

23. I worry about my family's future.

24. My father depends on me for emotional support.

25. I'm prepared to move whereve I can find a good job.

26. My parents are in love with one another.

27. My folks look forward to their kid(s) growing up.

28. I consider my father to be a mature adult.

29. My mother worries too much about me.

30. My father expects to know everything I'm doing.

31. There are matters my parents won't discuss with one another.

32. My parents seem happier than they really are.

33. I want to stay close to my family.

34. My mother seeks me out for advice.

35. My father often acts like a child.

36. My family seems to be breaking apart.

37. My parents stay together for the children.

Completely False	Mostly False	Not Sure	Mostly True	Completely True
1	2	3	4	5

38. My father worries too much about me.

39. I worry about the rest of my family more than my parents do.

40. There is tension in my parents' relationship.

41. My parents usually consult me before making household decisions.

42. I'm not sure why my parents are together.

43. My mother respects my rights as an individual.

44. I don't keep any secrets from my father.

45. My mother tells me things that she won't tell my father.

46. My mother will be very hurt if I don't live near her.

47. My parents can handle stress.

48. I wish I were younger.

49. My parents' marriage is solid.

50. My parents know what is best for me.

APPROVAL SHEET

The thesis submitted by Deanne Orput has been read and approved by the following committee:

Dr. Steven D. Brown, Director
Professor, Counseling Psychology, Loyola

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The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of M.A., Community Psychology.

12/1/92
Date

Director's Signature