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Underachieving Women and Girls: A Choice Between Career and Family

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**UNDERACHIEVING WOMEN AND GIRLS:
A CHOICE BETWEEN CAREER AND FAMILY**

Annie Dunavan, B. S.

An Abstract Presented to the Faculty of the Graduate School
Of Lindenwood University in Partial Fulfillment of the
Requirements for the Degree of
Master of Art

8/30/99

ABSTRACT

The purpose of this study was to explore the relationships between gender, self-efficacy and career development. Sixty-three high school freshmen completed questionnaires pertaining to these areas. Results indicated that self-efficacy is related to gender and career development.

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Dedication

This thesis is dedicated to my family and friends who have supported me during my many years in school. Especially my husband Michael, whose love and faith have sustained me.

Acknowledgment

I would like to acknowledge the LCIE counseling faculty for their encouragement and support. I would also like to acknowledge the staff at the St. Charles County Prosecuting Attorney's Office, Victim of Crime Assistance Program for giving me my first opportunity to practice the art of counseling. Their dedication to the cause of Victim's Rights has had a tremendous influence on me.

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Chapter 1

Introduction

Background and History

The traditional view of women's roles has changed since the 1960's. At that time a woman's role was seen as primarily homemaker. In 1960 only 30 percent of women worked outside of the home. Due to economic and societal pressures women began working outside the home in increasing numbers. By 1985 the number had increased to 55 percent. Nevertheless women are still primarily responsible for household chores and child-rearing duties (Bielby & Bielby, 1989, Duxbury & Higgins, 1991, Luzzo, 1995).

Although women are working outside the home in increasing numbers, equality in pay and status between men and women has yet to be achieved. Women are under represented in occupations in science and mathematics. Less than two percent of patentees, and 36 percent of National Merit Scholarship finalists are women. There are few women in Congress and only one woman on the Supreme Court (Reis, 1991).

The economic impact of the underemployment of women is emphasized by the fact that households headed by women are among the poorest in this nation. Additional economic impact may be felt if the prediction of a decline in traditionally female occupations becomes a reality. Underemployment can also have an effect on women's career satisfaction and psychological well being (Bartholomew & Schnorr, 1994).

Women are often socialized to find satisfaction in relationships rather than accomplishments. For women who choose to pursue full-time careers, conflicts between family relationships and career attainment may

cause them to attempt to do it all. This superwoman approach to life may cause stress, burnout, depression and other problems (Hollinger, 1991).

Women's career development can be seen as gender specific. Women make career decisions earlier in life than their male counterparts. These decisions tend to encompass more than career. Marriage, children and the responsibilities engendered in those are also considered. As early as adolescence, women are well aware of the difficulties involved in having a career and a family. Evidence shows that many young women still expect to carry the principal duty of housework and child-rearing. They are, in fact, socialized in this belief by being held responsible for more housework than their brothers while students. This socialization may be one of the reasons women continue to choose careers that are not as demanding in terms of educational preparation and time on the job as those chosen by their male peers (Curry, Trew, Turner, & Hunter, 1994).

Implications for Research

The research into career development has traditionally been from the male perspective. Typically, this research has been conducted by industrial/organizational psychologists. Family responsibilities have been researched from the female perspective by developmental psychologists and family and marriage sociologists. This separation of occupational and family systems has been questioned in social and psychological research. Dual earner families have brought together these two systems and shown the need for more integrated research in this area (Burley, 1991).

One research study, the Illinois Valedictorian Project, studied the career development of high-school valedictorians and salutatorians for 10 years. Upon graduation from high school, the women estimated their

intelligence as similar in relation to their male peers. By their sophomore year of college, these women began reporting a decline in their intellectual self-esteem. This reporting was not supported by any evidence, as the women's grades were as high or higher than the men's. This discounting of ability by women may lead to a lower level of achievement in careers (Arnold, 1993).

More than twice the number of women in the study married in their early twenties as compared to the men. This resulted in lower levels of career attainment. While 48 percent of the women and 34 percent of the men earned graduate degrees, females were unequally represented in the lower occupational levels. Only females held positions in traditional female fields or were full time homemakers. Females also were found to hold non-professional positions more often than the men (Arnold, 1993).

In another research study, Luzzo (1995) investigated gender differences in career maturity of college students. Sixty percent of the women in the study reported that children and family responsibilities were a concern when discussing future career challenges. Only six percent of the men indicated these concerns.

Curry, et al. (1994) also investigated gender differences in career development. Adolescent subjects were classified as careerist, or non-careerist. Careerists were defined as being work centered while non-careerists were defined as being home centered. This study indicated that 54 percent of the girls and 86 percent of the boys were classified as careerists. 46 percent of the girls and fourteen percent of the boys were classified as non-careerists. Careerist girls were more apt to take science and mathematics courses. They also expressed a higher level of

confidence in their academic abilities than non-careerists. More of the careerists had mothers who worked full time. However they tended to identify more with their father. Careerist tended to identify themselves as less feminine than non-careerists on sex role orientation scales. Many of these tendencies seem to indicate that the adolescent who sees herself as career oriented will achieve a higher level of success.

Theoretical Framework

Career development can be seen from the viewpoint of self- efficacy theory. Self-efficacy theory assumes that career choices are made on the premise of a person's belief in his/her ability. These beliefs are established through past experiences, and the cultural environment. The social norms of the cultural environment have been found to have a strong effect on women's perceived self efficacy and thus on their career choices. Women's career choices may also be influenced by their perceived possible selves. These are impressions of all likely roles a person may play in his/her lives. These roles may be positive or negative. Possible selves may motivate women to pursue activities which will allow them to achieve positive roles (Curry et al. ,1994).

Bandura (in Ancis & Phillips,1996) surmised that perceived self efficacy was "derived from four principal sources of information: personal performance accomplishments, vicarious learning, verbal persuasion, and emotional arousal" (Ancis & Phillips,1996, p.132). Consequently, perceived self-efficacy in women may be influenced by gender bias in academic environments. This bias may include, "disparaging comments, a lack of positive support from faculty members, a perception by the faculty that female students are less serious and capable in comparison with male

students, differential treatment, and sexual harassment" (Ancis & Phillips, 1996, p 132).

Purpose of the Study

Adolescents, especially girls, may have many perceived barriers to educational achievement and career attainment. Studies have indicated that in adolescence career decisions are crystallized. Many factors influence that crystallization, including gender and self-efficacy. Thus, the purpose of this study is to investigate the relationships between gender, self-efficacy, and career development.

The null hypotheses' for this study are:

There is no significant difference between male and female students plans to attend college.

There is no significant difference between male and female students taking advanced math.

There is no significant difference between taking advanced math and perceived self-efficacy for females.

There is no significant difference between taking advanced math and perceived self-efficacy for males.

There is no significant difference between future plans to attend college and career plans (careerist/noncareerist).

There is no significant difference between male and female students career plans (careerist/noncareerist).

There is no significant difference between career plans (careerist/noncareerist) and perceived self-efficacy.

There is no significant difference between male and female students perceived self-efficacy.

Chapter 2

Literature Review

Career Development

Early research by Roe (1956) on the personality traits of artists led to the formulation of her theory of career development. Roe's theory suggests a genetic predisposition in the way individuals expend psychic energy. When this predisposition is combined with childhood experiences it forms the way in which an individual satisfies needs. This in turn impacts career development by influencing an individual's level of motivation and thus the occupational level achieved. Roe (1956) also theorized that parenting styles influenced occupational choices. According to Roe's occupational classifications individuals in service occupations, most likely had parents who were loving and overprotective, leading to an orientation towards people. Scientist's parents most likely rejected and avoided the child, leading to an orientation away from people.

Another early theorist, Super (1957) focussed on self-concept as it relates to career development. Super believed that an individual chooses an occupation that allows them self expression. According to Super self-concept is developed as an individual differentiates self from others, and also recognizes similarities between self and others. This self concept changes over the life span. An individual develops a vocational self-concept in the same way. In childhood a vocational self-concept may be developed through role playing. In adolescence an individual begins to identify with role models and to assess their own abilities to perform the tasks related to their vocational aspirations.

Recently, Super (in Brown & Brooks, 1990) expanded his theory to emphasize certain aspects of self-concept that may influence career development. These aspects are self-esteem and self-efficacy. Self-esteem is important to career development because individuals with low self-esteem may fail to make career choices which match their self-concept. Self-efficacy influences career development by determining whether an individual will attempt a activity and how long that activity will be sustained when faced with difficulties.

In research by Manaco and Gaier (1992) it was found that women consistently score as high as men on self-esteem scales from kindergarten through college. However, the type of self-esteem which they possess may be very different. Self-esteem scales test for two types of self-esteem. Self-acceptance indicates a "passive willingness to accept oneself as one is, despite any weaknesses..."(p. 585). This type of self-esteem is thought to be more typical of women. Self-regard, on the other hand, is seen as an active assertion of one's values and capabilities. It is most typically allied with males. These differences in self-esteem may indicate that women are less motivated to achieve and do not expect to perform well (Manaco & Gaier, 1992).

Career development has traditionally been studied from a male viewpoint. As more women entered the work force it became clear that this male perspective of career development did not explain women's career development. The issues that women face when choosing career paths are not the same as men's issues. Therefore, researchers began to study women's career development as a separate entity. (Ancis & Phillips, 1996, Luzzo, 1995, Hollinger, 1991).

Hackett and Betz (1981) explored career development and self-efficacy as it related to gender role socialization. They found that women tend to limit career choices due to low perceived self-efficacy. Low self-efficacy in areas such as math, writing and science may lead to avoidance of those subjects, thus limiting career choices. Betz (1992) also believes that assertiveness, job search self-efficacy and self-efficacy as it relates to combining home and career can also affect career development. If these types of self-efficacy are low individuals may avoid making decisions or postpone acting on decisions that are made.

The relationship between self-esteem and self-ratings of abilities and skills was studied by Swanson and Lease (1990). The research indicated that self-esteem was not significantly related to self-ratings of skills for men. Women, however, showed a positive correlation between level of self-esteem and self-rating of career related skills. In another study, Munson (1992) explored the differences between self-esteem level, gender on measures of vocational identity and career salience. Career salience includes participation, commitment and values expectations. The research indicated that there was no significant difference in self-esteem level by gender. Those individuals with high self-esteem scored significantly higher on vocational identity. This may indicate that these individuals have a clearer view of goals, interests, personality and talents. Those individuals with high self-esteem also scored higher on career salience. This may indicate that those individuals participate more, have more commitment and higher value expectations toward home, school and community than those with low self-esteem. Gender differences were found in career salience. Females scored higher than males in the areas of

school, home and community. Males score higher than females only in the area of work. This may indicate that women are socialized to be more involved in school, home and family while males are socialized to be more work oriented.

Role models also play an important role in women's career development. Many women lack strong female role models in high school which is a time when they are making career decisions. Women rely on role models more than men, and same sex role models are more likely to be imitated. Women whose mothers are highly educated and have a career, have an increased chance of being successful in education and careers (Manaco & Gaier, 1992).

One longitudinal study of career development followed high school valedictorians. In this study, Arnold (1993) found that those women who planned to marry did not plan to build a career. Those women who planned to pursue a career, had predicted that they would marry later in life. Later findings indicated that those women who planned to pursue a career did, in actuality, marry at the same rate and time as the other group. They did, however, postpone child-rearing for a longer period of time. This study supports the assumption that a woman's plans for marriage and children may impede her progress towards career success.

Bonett (1994) studied the relationship between career self-efficacy, marital status and gender. Research indicated that women had lower self-efficacy in regard to traditional male occupations. This occurred regardless of marital status. Thus, Bonett concluded that marital status was not a significant predictor of career self-efficacy. However, gender was

significantly related to career self-efficacy. The research indicated that women tended to have lower career self-efficacy than men. The research also indicated lower self-efficacy expectations for men in traditionally female occupations. This may impede occupational desegregation by limiting the number of males interested in pursuing these occupations.

Research on career development has shown that women's work commitment is lower than men's. Work commitment can be measured by answering the question: Would you engage in paid work if the financial necessity was removed? (Curry et al. 1994). Commitment can be seen as the extent to which an individual's sense of self is attained through the roles which one performs. Work and family commitment can be seen as two distinct forms of commitment. The "scarcity" view of commitment maintains that in order to have a strong work commitment one must yield a strong family commitment. The "multiplicity" view maintains that individuals can make strong commitments in multiple roles. The reality presumably lies somewhere between the two. Societal norms of the role of wife and mother can often cause women to trade off one role against another. Men are not forced to make this trade off because of the societal norms of husband as father and provider (Bielby & Bielby, 1989).

In a study of the career development of 216 full-time graduate and undergraduate business students, it was found that women were more likely than men to take a hiatus from their career for children and spousal commitments. Women hoped that their spouse or partner would share equally in household chores and child-rearing, but did not expect that hope to be realized. Women also expected to be employed in less demanding and less prestigious jobs than their male peers (Burke, 1994).

Education

The adolescent years are a time of identity formation. Erickson (in Hergenhahn, 1994) described this psychosocial stage as the transition period between childhood and adulthood. During this stage adolescents reflect on information about themselves and commit themselves to a life strategy. Thus, identity is formed through crisis and commitment. Crisis is the time when adolescents begin choosing among occupations and beliefs. Commitment is the time when adolescents begin to identify with certain occupations and beliefs. This time period is one in which vocational and career education programs are of the greatest benefit. Considering this, Manaco and Gaier (1992) explored the benefits of same sex versus coeducational environments on the achievement of young women. They found that women in single sex environments tended to be given more recognition for achievements. These women were also more likely to hold leadership positions in the school. More female role models tended to be present in this environment. Higher expectations for women were present and tended to result in higher achievement.

On the other hand, Curry and Trew (1993), found that girls in coeducational schools showed decreased mathematics performance between grammar school and secondary school. The girls were less confident and had a more negative view of mathematics than the boys. Seventy-seven percent of the girls indicated that they would not pursue advanced mathematics courses. The reasons for this decision included the irrelevance of advanced mathematics in everyday life. Many of the girls indicated that advanced mathematics would not be necessary in the careers that they wished to pursue. Moreover, the girls considered other

life domains when choosing careers and, thus academic subjects. These life domain considerations included marriage and family.

Scheye and Gilroy (1994) found that women from same sex educational environments rated themselves higher in nontraditional career self-efficacy. These women also indicated that male teachers were the most influential during their high school years. This may indicate that the influence of male teachers in a same sex environment provides the vicarious learning experiences and verbal persuasion necessary to build a sense of self-efficacy. O'Brien, Martinez-Pons & Kopala (1999) researched mathematics self-efficacy as it related to ethnic identity and gender. Results of their research indicate that science/mathematics self-efficacy is the sole predictor of career interest in science. The research also indicated that self-efficacy can be predicted by academic performance and ethnic identity, and that academic performance can be predicted by income level. Interest in science and engineering careers was found to be directly predicted by gender, with more males than females showing interest in these areas. Self-efficacy beliefs in the areas of science and engineering was also found to be directly related to interest in these areas. These results indicate that females will not be likely to pursue careers related to science or engineering.

Project Choice was a longitudinal study designed to identify barriers to career fulfillment of gifted women. One hundred twenty-six gifted women participated in the study which began in 1978. Participants took part in career workshops and counseling while attending high school. These programs were designed to address the barriers faced by women in pursuit of their career goals. Barriers were considered to be both internal and

external. Internal barriers included "low self-esteem, fear of success, low achievement motivation and lack of assertiveness" (Hollinger & Fleming, 1992, p. 156). The women in the study graduated from high school in 1979. After graduation, follow up studies were conducted in 1981, 1984, and 1990. In 1994 at 27-29 years of age, 90.4% of the participants were found to have completed post-secondary education. More than 45% had gone beyond a bachelors degree, with 11.2% having obtained a doctoral or professional degree. This was reflected in their career achievements. Nineteen percent of the women reported careers at the highest level such as physician or lawyer. Over 50% reported careers such as mid-level corporate managers, teachers and nurses. This record is remarkable when compared with the fact that only 19.2% of all women who graduated from high school in the U. S. in 1980 went on to receive bachelors degrees (Hollinger & Fleming, 1992).

In contrast, Arnold's (1993) longitudinal study of valedictorians found that 48% of the women had earned graduate degrees. Although about half of these were in the highest career levels, females were unequally represented in non-professional occupations, such as clerical positions. Most of the women in the lower level positions cited family responsibilities as the major reason for their lack of career achievement.

In a study by Kerr (cited in Reis, 1991) it was found that gifted females had achieved more honors and received higher grades than their male peers. Yet by adolescence these young women had lower career aspirations than their male peers. Kerr also found that by the age of twenty-nine the gifted women had a lower level of achievement than the males. These women had begun to deny their giftedness.

This lack of career aspiration may be a short lived phenomenon in women's life span. There is a growing trend for college reentry by women ages thirty-five and older. The U. S. Department of Education predicts that women will earn more doctoral degrees than men by 2001. Women are already earning more masters degrees than men and this trend is expected to continue. This reentry into college is presumably due to the fact that many women delay their career roles until after having a family. Many, "reentry women" state that their reasons for returning to school include "the desire to have a new career, or become self-supporting." Other reasons include "job dissatisfaction and better employment" (Padula, 1994, p. 11).

Reentry women have been found to be more independent and have less ambivalent attitudes about achievement than traditional students. These women report conflicts in regard to family responsibilities. However, their spouses report that they show "increased confidence, reduced anxiety and better relationships with their children and their partners since they had returned to school" (Padula, 1994, p. 12).

Family Responsibilities

The extent to which an individual identifies self with roles at home or at work is seen as work and family identity. In a study by Bielby & Bielby (1989), it was discovered that women with school age children, and those who work part of the year, such as teachers, have a strong family identity. They further found that women who have work positions that are traditionally male have the same level of work identity as men. A woman whose husband is unemployed will have a stronger work identity.

Nevertheless, married women tend to give precedence to their family identity. This may be one reason for continuing gender inequities in the work place (Duxbury & Huggins, 1991).

Work and family identity may also be related to self-esteem. Women's self-esteem is often tied to their role of wife and mother, while men's self-esteem is often tied to their role as provider. Sensitization theory maintains that women will experience more family conflict while men will experience more work conflict due to societal expectations. Work-family conflict or role conflict can occur when two sets of demands are placed on an individual. This occurs especially when the roles at work and at home are incompatible in some way (Duxbury & Huggins, 1991).

In a study by Burley (1991) the occurrence of work-family and family-work spillover were investigated. Spillover occurs when aspects of one area spill over and negatively affect the other. In this study it was found that when spouses perceived inequity in time spent on family work, there was a reported decrease in marital satisfaction and psychological well-being. Furthermore, the study found that women spent significantly more time on family work and less time on paid work than their spouses. Women indicated more of a family-work spillover in contrast to men who indicated more of a work-family spillover.

Burley (1991) cited "asymmetrical permeable boundaries" as an explanation for the differences in spillover between men and women. This suggests that women are allowed and expected to have family encroachment in the work environment while men are not. Another explanation for this is that men perceive themselves to be fulfilling family

roles while working. This is because many men see their role in the family as that of provider.

Women's career development may be impeded by family responsibilities. Inglis and Greenglass (1989) reported that women who planned to marry placed less importance on their career. This study suggests that stereotypes surrounding sex roles still exist. Women planned to spend more time on housework and child-rearing than men. Career considerations were made with the role of wife and mother in mind. "Second shift work" or household and parenting responsibilities were also seen as the responsibility of wife and mother in a study by Burke (1994). Women expected to work harder for less pay than men. They also expected to take on less demanding jobs, so that they could fulfill their obligations of wife and mother.

Another deterrence to women's career development is their unwillingness to relocate. Male and female managers' career progression were examined to discover if they advanced at an equal pace. It was found that the female managers did not advance as rapidly as male managers due in part to their unwillingness to relocate. Family power theory suggests that women may be unwilling to relocate because of their lack of power within the family system. Family power theory works from the supposition that the higher wage earner will have the most power within the family (Stroh, Brett & Reilly, 1992).

In another study, Bielby & Bielby (1992) examined the reasons that women in dual earner marriages were less willing to relocate. They found that relocation often reduced the income of the woman while increasing the income of the man. In the labor market, the husband's profits from

relocating exceed the wives' losses. This causes the wives' to be referred to as "tied movers". Women are also tied movers due to their generalized skills. These skills are much easier to transfer to another location. Men, on the other hand, tend to have more specific skills which can be relocated easily only within the firm in which they are employed. Women are also often "tied stayers" because their profits from relocating do not exceed their husbands losses; thus, they do not relocate. Over half of the women and sixteen percent of the men reported a reluctance to relocate due to family considerations.

Plans to marry and begin a family may impede career development as early as adolescence. In a study by Curry et al. (1994), it was found that individuals who did not plan to pursue a career full-time or non-careerists thought more often about the age to marry and start a family. Sixty-three percent of the non-careerists believed that it was important for young children to have a full time at home parent. Sixty-seven percent felt that women can be as satisfied by having a family as having a career. These choices were made early in high school and had a significant impact on career development and academic subject choices.

In conclusion, the literature review indicates that females and males career development differs in many areas. Many variables affect females' career development. These include, self-esteem, self-efficacy, and family responsibilities.

Chapter 3

Method

Subjects

The sample for this research study were enrolled in three required freshman courses at a suburban high school. The final sample consisted of 33 girls and 33 boys. Eight subjects were eliminated from the sample. Five were eliminated because they did not complete the questionnaire and two because they were not freshman. Ages ranged from 14-16. The sample was considered random because all freshman are required to take these courses.

Procedures

A questionnaire was given to the students by their instructor during class time. The only verbal instructions were to follow the written directions and to fill out the questionnaire completely. Students were allowed as much time as they needed to complete the questionnaire.

Instruments

The questionnaire titled "The Masters Research Questionnaire" (Appendix) was taken from a study by Trew and Curry (1993). It included sections on educational background, future plans, and career, marriage and family. The section on educational background asked students if they were taking advanced math courses. Those students taking advanced math were then asked if they planned to take more advanced math, and what their main reason was for taking advanced math. Those students who were not taking advanced math were asked their reasons for not taking advanced math.

The future plans section asked students to indicate whether they planned to go to college/university, vocational/technical school, leave school completely and start a career, or do a combination of working and school. Those students who were planning on going to college/ university were asked which degree or course of study they planned to pursue. Students planning to go to vocational/ technical school were asked which course of study they planned to pursue. All students were asked to indicate which job or career they wished to pursue.

The career, marriage and family section asked students to indicate the amount of time spent thinking about the age at which they would like to marry and start a family. Students were also asked to indicate what would be the most likely pattern of their working life.

The General Perceived Self-efficacy Scale was given as part of the questionnaire. It was not identified as a self-efficacy scale and was included in the educational background section. The English version of this ten item scale was developed by Ralf Schwarzer and Matthias Jerusalem in 1993. Norming information indicates a mean of 28.57 with a standard deviation of 5.21, for women, and a mean of 29.84 with a standard deviation of 5.15 for men on the English version of the scale. Due to the 1 to 4 response format, the ten item sum score has a range of ten to forty. Schwarzer reports "a slight ceiling effect, that is, extremely self-efficacious individuals are less well identified than low self- efficacious individuals" (Schwarzer & Born, 1998, p. 6). The distribution of the scores had a skew of -.42 and kurtosis of -.19. Research indicates an internal consistency between alpha , .75 and .91. Schwarzer reports that "the scale

is not only parsimonious and reliable, it is also proven valid in terms of convergent and discriminant validity" (Schwarzer, 1998, p.2).

The future plans section asked students to indicate whether they planned to go to college/university, vocational/technical school, leave

Data Analysis

Students were classified as career or non-careerist according to their answer to the question "If you intend to marry /have children, what do you think will be the most likely pattern of your working life?" Those students who responded: Will work full-time for most of my married life , were considered careerist. All other responses were classified non-careerist. Students that didn't respond to this question because they did not plan to marry / have children were classified careerist. One and two-sided t-tests using a significance level of .05, were then performed to investigate relationships between the variables.

Chapter 4

Results

There is no significant difference between male and female students' future plans to attend college. The means for both male and female was .73 ($t=1.645$).

There is no significant difference between future plans to attend college and career plans (careerist/non-careerist) ($M1=.72$, $M2=.74$, $t=-.2743$).

Table 1

Future Plans to Attend College

Careerist				Non-careerist			
Males		Females		Males		Females	
N	M	N	M	N	M	N	M
18	.75	13	.69	6	.67	11	.7

There is a significant difference between male and female students taking advanced math. The mean for males was .36, while the mean for females was .18 ($t=1.96$).

Table 2

Taking Advanced Math

Careerist				Non-careerist			
Males		Females		Males		Females	
N	M	N	M	N	M	N	M
11	.46	4	.21	1	.11	2	.14

There is no significant difference between male and female students' career plans (careerist/non-careerist) (careerist, $M=.73$, $t=.113$, $p=.90$, non-careerist, $M=.27$, $t=.697$).

Table 3

Classification as Careerist/Non-careerist

<u>Careerist</u>				<u>Non-careerist</u>			
<u>Males</u>		<u>Females</u>		<u>Males</u>		<u>Females</u>	
<u>N</u>	<u>M</u>	<u>N</u>	<u>M</u>	<u>N</u>	<u>M</u>	<u>N</u>	<u>M</u>
24	.73	19	.38	9	.27	14	.42

There is a significant difference between career plans (careerist/non-careerist) and perceived self-efficacy (careerist, $M=.66$, $t=-7.89$, non-careerist, $M=.34$, $t=-8.05$). There is a significant difference between male and female students' perceived self-efficacy ($M_1=30.5$, $M_2=29.2$, $t=4.14$).

Table 4

General Perceived Self-Efficacy Scale

<u>Careerist</u>		<u>Non-careerist</u>	
<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>
30.9	29.6	29.2	28.4

There is a significant difference between taking advanced math and perceived self-efficacy for females ($M=.18$, $t= -5.85$). There is also a significant difference between taking advanced math and perceived self-efficacy for males ($M=.36$, $t= -5.7839$).

Table 5

Taking Advanced Math/General Perceived Self-efficacy

Advanced math		No advanced math	
Males	Females	Males	Females
M	M	M	M
32.5	31.5	29.2	28.6

Chapter 5

Discussion

The following null hypotheses were rejected:

There is no significant difference between taking advanced math and self-efficacy for females.

There is no significant difference between taking advanced math and self-efficacy for males.

There is no significant difference between career plans (careerist/non-careerist) and perceived self-efficacy.

There is no significant difference between male and female students' perceived self-efficacy.

There is no significant difference between male and female students taking advanced math.

These results may indicate that perceived self-efficacy impacts career development and academic subject choices for both males and females. Females may be less likely than males to take advanced math courses which may limit their career choices. The literature review supports these conclusions.

Super (in Brooks & Brown, 1990) believed that self-efficacy influenced career development by determining how long an individual will persevere when faced with obstacles. Low rating of self-efficacy may be related to low self-esteem. Swanson and Lease found that for women, self-esteem and self rating of skills and abilities was significantly related. Bonett (1994) found that women had lower self-efficacy in regard to

traditional male occupations. The research also indicated that women had lower career self-efficacy than men. Hackett and Betz (1981) found that women tend to limit career choices due to low perceived self-efficacy. Their research also indicated low self-efficacy in math may lead to avoidance of that subject thus limiting career choices. Curry and Trew (1993) found that girls were less confident and had a more negative view of math than boys. Seventy-seven percent of the girls in the study indicated that they would not pursue advanced mathematics courses.

The following null hypotheses' were accepted:

There is no significant difference between male and female students' future plans to attend college.

There is no significant difference between future plans to attend college and career plans (careerist/non-careerist).

There is no significant difference between male and female students' career plans (careerist/non-careerist).

The research indicates that career plans (careerist/non-careerist) and future plans to attend college are not related to gender, and that future plans to attend college are not related to career plans (careerist/ non-careerist). This indicates that females and other non-careerists may not limit career choices due to future plans to marry or have children. This is in direct contrast to research results obtained by several researchers. Arnold (1993) found that women who planned to marry did not plan to build a career. Women in this study in lower level occupations cited family responsibilities as the major reason for their lack of career achievement. Inglis and Greenglass (1989) reported that career considerations were made with the role of wife and mother in mind. Curry et al. (1994) found

that plans to marry and have children may impact career development as early as adolescence. Bonett (1994), however, found that marital status was not a significant predictor of career self-efficacy.

Limitations of the Study

The discrepancies found in between this research and the literature review may be related to the age of the research subjects. Research by Arnold, Inglis and Greenglass used college aged students. Other limitations of this study may be the sample size. Seventy-four subjects were administered the questionnaire with eight of them being eliminated. Students parents were also given the option of excluding them from the study. No records were obtained that indicated number or gender of those who opted not to participate.

Implications for Research

Further research with adolescents in this area would be useful. Since career planning is started earlier, information about the variables which affect career development would be a valuable resource for counselors. Research has indicated that career programs during high school, which identify and discuss barriers women face in career development, may increase the achievement level of the female participants (Hollinger & Fleming, 1992). Information on differences by gender on self-efficacy scales could provide insight into the need for less gender bias in education, which could lead to higher self-efficacy for females (Ancis & Phillips, 1996).

FORT ZUMWALT SCHOOL DISTRICT

O'Fallon, Missouri 63366

Dr. Bernard J. DuBray
Superintendent

Dear Parents,

Your child's class will be participating in a research study. As part of the study they will be asked to fill out a questionnaire that explores academic subject choices and future plans. There will be no identifying information given by the students.

This research will be used for my Masters thesis. My thesis investigates the relationship between gender, academic subject choices and future plans. Thank you for allowing your child to participate in this study. If for any reason you do not want your child to participate in the study, please notify their teacher.

Sincerely,

Annie Dunavan

Annie Dunavan

Special Education Teacher

Board of Education

Doyle Stokes, President
Scott Lewis, Member

Bob Fisher, Vice President
Mary Givens, Member

Barbara Unger, Member
Lisa Leake, Member

Leo Kreider, Member

Q1. How do you usually spend your leisure time?

Circle the appropriate number (1 = Never, 2 = Sometimes, 3 = Often)

Are you a member of?

YES _____ NO _____

Q2. **Attitudes towards the subject** Masters Research Questionnaire

If you are still undecided please check the box at the end of the questionnaire

This questionnaire forms part of a research project which is designed to examine the attitudes, beliefs and intentions of pupils towards various educational topics.

Q3. I am writing in the answer space provided

I assure you that any information you may give me will be treated in the strictest confidence by the researcher and I thank you for your cooperation. Please answer the questions carefully following the instructions given.

PLEASE COMPLETE THESE DETAILS ABOUT YOURSELF

Name (print name clearly)

Year _____

Q4. I am a member of the appropriate number

Are you a member of? (circle the appropriate number)

YES _____ NO _____

Adapted from Trew & Curry (1993)

All the following questions can be answered by:

Circling the appropriate number, like this example:

Are you a freshman? YES.....1 NO.....2

OR By checking the appropriate line like this example:

If you are still undecided, please check which one of the following you will probably take:

Science _____ Technology _____

Or by writing in the answer space provided

PLEASE COMPLETE THESE DETAILS ABOUT YOURSELF:

(Use capitals and write clearly)

NAME: _____

SEX: (Circle the appropriate number) FEMALE.....1 MALE.....2

Are you a freshman? (circle the appropriate number)

YES1 NO2

Section 1: Educational Background

1 Complete the following sentence to sum up the way you feel about math as a subject

in general:

As far as I am concerned, Math is _____

2 Are you taking advanced or honors mathematics ? (Circle appropriate number)

YES.....1

NO.....2

If YES, Continue

If No, Go to Question 3

a) Will you be taking more advanced or honors math courses?

YES.....1

NO.....2

b) Please complete:

My **MAIN** reason for taking advanced math courses is _____

NOW GO ON TO QUESTION 4

3 Questions for those not taking advanced or honors math courses:

a) When you decided not to take advanced or honors math courses was this because you did not want to do math in general or was there part of the course that really discouraged you?

I didn't want to do math in general.....1

There was one particular part of the course that discouraged me.....2

If you circled 1, go on to part (c) of this question.

If you circled 2, continue:

b) Which particular part of the course really discouraged you from taking math?

c) My **MAIN** reason for not taking advanced or honor math courses is _____

4 Each of these statements expresses a belief about self. Please choose how true these statements are for you, by circling the correct number.

	Not at all true	Hardly true	Moderately true	Exactly true
I can always manage to solve difficult problems if I try hard enough.	1	2	3	4
If someone opposes me, I can find the ways and means to get what I want	1	2	3	4
It is easy to stick to my aims and accomplish my goals.	1	2	3	4
I am confident that I can deal efficiently with unexpected events.	1	2	3	4
Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
I can solve most problems if I invest the necessary effort.	1	2	3	4
I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
When I am confronted with a problem, I can usually find several solutions.	1	2	3	4
If I am in trouble, I can usually think of a solution.	1	2	3	4
I can usually handle whatever comes my way.	1	2	3	4

SECTION 2:

FUTURE PLANS

1 When you have completed high school which of the following describes what you most want to do? (Circle one number only).

- Go on to College or University and pursue a degree.....1
- Go on to Vocational/Technical school and take a non-degree course.....2
- Leave school completely and start a career.....3 ✓
- Do a combination of working and school.....4
- Other plan (please specify) _____

2 If you circled 1 in question 1 above continue, if not go on to Question 3
Which degree course do you hope to take at University/ college?

Name of preferred course _____

(e.g. Medicine, Law, Engineering, English, etc.)

If you are still undecided, please check which one of the following types of course you will probably take:

- | | | | |
|---------|-------|-----------------|-------|
| Science | _____ | Technology | _____ |
| Arts | _____ | Social Sciences | _____ |

Now go on to Question 4

3 If you answered 2 in Question one above, continue, if not go to Question 4
Which vocational/technical school course (not degree level) do you hope to take?

Name of preferred course _____

If you are still undecided, please check which type of course you will probably take:

- | | | | |
|---------|-------|-----------------|-------|
| Science | _____ | Technology | _____ |
| Arts | _____ | Social Sciences | _____ |

Now go on to Question 4

4 Thinking about your future career (whether you intend to go to University/college or vocational/technical school or not)

Which job or career do you hope to pursue? (please be as specific as possible)

Section 3

CAREER, MARRIAGE AND FAMILY

2 Have you thought much about the age at which you would like to marry?

Circle the number of the appropriate statement.

- A great deal.....1
- A fair amount.....2
- From time to time.....3
- Hardly at all.....4
- No wish to marry.....5

3 Have you thought much about the age at which you would like to start a family?

Circle the number of the appropriate statement.

- A great deal.....1
- A fair amount.....2
- From time to time.....3
- Hardly at all.....4
- No wish to have children.....5

4 If you intend to marry/have children, what do you think will be the most likely pattern of your working life?

Circle the number of the appropriate statement.

- Will work full-time for most of my married life.....1
- Will work full-time from time to time.....2
- Will work part-time for most of my married life.....3
- Will work part-time from time to time.....4
- Do not intend to work for more than a few years at most.....5

Sometimes completing a questionnaire can be a frustrating experience if you feel you do not fit neatly into many of the given categories. Now is your chance to express your views in your own words. The questions so far have been mostly concerned with your advanced and honors level subjects especially Math, and your future career and family plans. I have left these pages blank as I would like you to tell me a little more about your plans and whether you are optimistic or pessimistic about your future as a young person in the U.S. If you have felt strongly about some of the issues raised in the questionnaire then I would be pleased to hear your views on these topics also.

**THANK YOU VERY MUCH FOR YOUR COOPERATION,
IT IS VERY MUCH APPRECIATED.**

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