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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

DIRECT AND INDIRECT EFFECTS OF SOCIAL
CLASS ON CAREER EXPECTATIONS AND
LIKELIHOOD OF COMPROMISE IN AN
ADOLESCENT SAMPLE

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

Sarah Louise Wilson

College of Education and Behavioral Sciences
School of Psychological Sciences
Educational Psychology

December, 2011

This dissertation by: Sarah Louise Wilson

Entitled: *Direct and Indirect Effects of Social Class on Career Expectations and Likelihood of Compromise in an Adolescent Sample*

has been approved as meeting the requirement for the Degree of Doctor of Philosophy in College of Education and Behavioral Sciences in School of Psychological Sciences, Program of Educational Psychology

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ABSTRACT

Wilson, Sarah Louise. *Direct and Indirect Effects of Social Class on Career Expectations and Likelihood of Compromise in an Adolescent Sample*. Published Doctor of Philosophy dissertation, University of Northern Colorado, 2011.

The current study investigated the application of classic attainment models, both direct and indirect effects, in the predication of career expectations and likelihood of compromise. The results indicated that among high school students ($N=200$) in grades 10-12 there is no direct effect of socio economic status (SES; as measured by parent education and occupation) on career compromise (aspirations exceeding expectations). Similarly, educational expectations are not directly related to the compromise of occupational expectations. Results of exploratory analysis suggest that career compromise is best explained by academic achievement and parent expectations.

In an analysis of the process by which social class is transmitted to occupational expectations, results suggested no direct effect of SES on occupational expectations. However, there was a direct effect of educational expectations on occupational expectations. Given the finding demonstrating a direct effect of SES on educational expectations, the path from SES to occupational expectations appears to be indirect and mediated through educational expectations. Building on the importance of educational expectations in the prediction of occupational expectations, the results indicated that self-efficacy, aligned expectations, and perceived parent expectations explain educational expectations. Of the variables, perceived parent expectations were significantly related to increased levels of educational expectations.

Overall it appears that the effect of SES on occupational expectations is mediated by educational expectations; therefore, individuals of lower SES who have increased educational expectations are more likely to have occupational expectations similar to

those of their higher SES peers. Moreover, increasing parent expectations is positively associated with educational expectations among individuals of various SES levels. The results of the current study provide insight into the mechanism involved in the intergenerational transmission of social class, notably the importance of educational expectations and significance of the educational expectations parents of various SES levels have for their children.

ACKNOWLEDGEMENTS

I move forward humbly acknowledging that this achievement represents the efforts of many people and I would like to thank them for their contributions. First I thank God for giving me the opportunity; I only hope that I will use my time, talent, and treasure to do your will. To my pastor, Brother Johnny, thank you for your lessons, for without your messages I would not be where I am today.

I want to thank my committee. To my faculty advisor Dr. Marilyn Welsh, thank you for the time and knowledge you have shared with me. I may be the most persistent graduate student you will ever have; thank you for putting up with me. To Dr. McDevitt, thank you for challenging me to ask difficult questions and for helping me to grow as a writer. To Dr. Hutchinson, thank you for the invaluable contributions you made to my development as a statistician and a writer; I truly appreciated all of your feedback. To Dr. Murdock, thank you for sharing your theoretical knowledge and career wisdom with me.

There are many individuals who have made contributions to my research over the past four years. Thank you to Dr. Sherlock Hering, Dr. Michael Flicek, Mr. Brad Diller, Mrs. Ramona Hucke, and Mr. Mike Ruyle, for without your support my doctoral research would not have been possible. Thank you to Ms. Janet DeVries, Ms. Erin McCormick, and Mr. Wesley Bertagnole for your time and career coding expertise. I want to extend a

heartfelt thanks to Lori, Crystal, Rena, Becky, Katie, Tina, Sunny, Luke, Karyl, Jen, and Christine; for I could not imagine going through this process without you.

I was once told that God would put people in your life to take you to the next level. I would not be where I am today without mentors who have shown me the way. Thank you to Dr. Carina Beck, Dr. Dawn Gallinger, Dr. Carolyn Edwards, and Dr. Jayne Downey for sharing your wisdom with me and making me believe that I too could achieve lofty dreams.

Last, but certainly not least, I would not be where I am today without the support of my amazing family. Thank you to Bob and Anna, for allowing me to do my work and for your encouragement in this process. I would like to thank Ken and Jackie for treating me like one of their own; Grandma and Grandpa Weitzel for their support of me and my dreams; and Grandma and Grandpa Schmitt, because I know you thought the day would never come, but I am finally done with school (I wish you were here to see it, because I know you would be so proud). To my siblings and their significant others: Tyler, thank you for never asking questions and just being my brother; Kim, thank you for calming my anxious heart; and Lisa, we have come a long way, my sister thanks for being there. To Daisy, Cory, Addison, Mattea, Joey, and Ali: you inspire me to ask questions with the glimmer of hope that I can find answers that may one day serve you as you pursue your own “career dreams.”

I would like to extend a special thank you to Chuck, Susie, David, Robbie, and Julie for sharing your home with us. Thank you for allowing us to be part of “your family.” We could not have done this without you and can never repay you for your kindness.

To my parents: Vicki, for sharing your knowledge of education with me, because your insight was invaluable during this process; Jon, for being the parent who just “gets me” and for being my biggest cheerleader; Dad, for his encouragement of a daughter whose dreams were nothing like what you imagined, but throughout this process your love never wavered. Mom, I study the role of parents in the career development process because of you and the value of education that you instilled in me; thank you for giving me roots *and* wings. A special thanks to Mom and Dad, for instilling in me the value of hard work and for the many sacrifices you made so that I could pursue my goals.

Finally, to my Chris; thank for giving me the freedom to go back to school, quiet when it was time to “go to work,” endless encouragement along the way, and a healthy dose of reality when I needed it most. I am humbled by the amazing kindness, patience, and love you have shown me the past four years; I can never repay you for the sacrifices you made to make my dream a reality. Each day, when I wake up, I am truly blessed to have you as my husband and best friend.

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CHAPTER I

INTRODUCTION

What do you want to be when you grow up? What made you decide to become a (fill in the blank)? They seem like simple questions. Interestingly, when asked these questions many people mention careers similar to those of their parents. Even when the occupations differ, individuals tend to select jobs that will allow them to maintain the same level of socio-economic status in which they were raised, thus suggesting that social class is transmitted from generation to generation. These observations align with previous research suggesting evidence of the intergenerational transmission of social class (Blau & Duncan, 1967; Sewell, Haller, & Ohlendorf, 1970; Sewell, Haller, & Portes, 1969).

The intergenerational transmission of social class presumably occurs through family influences. Families are instrumental in the career development of children, adolescents, and adults (Whiston & Keller, 2004). Research suggests that families influence both educational expectations and attainment (Hossler & Stage, 1992; Isaac, Malaney, & Karras, 1992) as well as career aspirations (Kalil, Levine, & Ziolk-Guest, 2005) and attainment (Poole, Langan-Fox, Ciavarella, & Omodei, 1991).

Although the transmission of social class has been established in the research literature, there is a need to understand exactly how this process takes place. Gottfredson (1981) proposed a theory of circumscription and compromise, suggesting that occupational attainment is the result of a process of identifying unacceptable careers and

making compromises. Prior research indicates that individuals of lower socio-economic status are more likely to compromise expectations (Cook, Church, Ajanaku, & Shadish, 1996). The current study examined whether the compromise of occupational expectations was related to the transmission of status among generations, addressing both direct and indirect pathways of social class transmission.

In an attempt to understand the process involved in the intergenerational transmission of social class, this study explored the relationship between educational expectations and compromise. It has been shown that there is a relationship between educational expectations and career expectations, which in turn predicts career attainment (Arbona, 2000; Argyle, 1994; Hotchkiss & Borrow, 1996; Johnson et al., 1983; Lent, Brown, & Hackett, 1994; Rojewski & Yang, 1997; Schoon & Parsons, 2002). Based on the relationship between educational expectations and career expectations, this study explored whether variables such as parental expectations, self-efficacy, and aligned expectations explained educational expectations and mediated the relationship between social class and career expectations. Furthermore, the study investigated whether educational expectations mediated the relationship between SES and likelihood of career compromise. Such an analysis will expand on our knowledge of the potential mechanisms underlying the intergenerational transmission of social class.

Statement of the Problem

Currently there is a lack of research examining how social class is transmitted from generation to generation. Furthermore, there is a need to understand the intergenerational transmission of social class, among individuals of varying levels of socio-economic statuses, with a particular emphasis on the mechanisms involved in this

process. The current study incorporated classic attainment models to see if there was a direct and indirect transmission of social class on the career expectations and likelihood of compromise among adolescents. Furthermore, the study was designed to investigate exploratory variables of educational expectations, specifically parental expectations, self-efficacy, and aligned expectations, in an attempt to provide additional information as to the processes by which social class is transmitted.

Rationale for the Study

Classical attainment theory, as proposed by Blau and Duncan (1967), suggests that social class is transmitted directly from parents' occupations to the occupation of the child. In contrast to direct transmission, indirect transmission occurs when the effects of parents' occupation on the child's selected occupation are mediated by educational level (Blau & Duncan, 1967). The Wisconsin Model of Status Attainment (Sewell et al., 1970; Sewell et al., 1969) expanded on the status attainment model (Blau & Duncan, 1967) to incorporate structural and psychological variables influencing social class attainment, most notably the influence of aspirations. The model suggested that educational attainment is the best predictor of occupational attainment, which provides the rationale for exploring whether increasing levels of educational aspirations are related to career expectations and likelihood of compromising plans for the future.

Whereas the relationship between parents' social class and child's attainment has been well documented, there is a gap in the literature with regard to the mechanisms by which this process takes place. In order to understand this process further, there is a need to investigate occupational aspirations, which precede occupational attainment (Patton & Creed, 2007; Schoon, 2001). Furthermore, research has suggested that there is a

difference between occupational aspiration, the job to which an individual aspires, and occupational expectation, the job an individual actually expects to obtain (Beal & Crockett, 2010). When individuals expect to obtain careers of lower prestige than those to which they aspire, compromise has taken place (Gottfredson, 1981; Rojewski, 2005).

According to Gottfredson's (1981) theory of circumscription and compromise, occupational development involves the progression of occupational aspirations, which provide the foundation for future career decisions. As individuals develop across childhood and adolescence they eliminate occupations characterized by fantasy (ages 3-5); instead selecting occupations based on their gender appropriateness (ages 6-8), social appropriateness (ages 9-13), and those of personal interest (ages 14-15). The final process involves compromise, which occurs when individuals give up their ideal careers for jobs they view as attainable and available.

This study was designed to explore one process by which social class is transmitted, by investigating the direct and indirect transmission of social class in the explanation of career expectations and likelihood of compromise among adolescents. Moreover, the study examined the role of educational expectations in the transmission of social class, specifically, their effect on career aspirations, expectations, and likelihood of compromise. According to Lareau (2003) "one of best predictors of whether a child will one day graduate from college is whether his or her parents are college graduates; with two-thirds of individuals' reproducing their parents' levels of educational attainment" (p. 8). This study examined whether educational expectations is one of the mechanisms involved in the compromise of career expectations thus investigating whether there is a

relationship between likelihood of compromise and expected education among individuals of various levels of SES.

Conceptual Framework

The current study incorporated theories proposed by psychologists and sociologists to explore how social class is transmitted from generation to generation. As noted by Hotchkiss and Borrow (1996), there is a significant difference between how career development typically has been studied in the psychology and sociology literatures. The authors highlight theories, such as Gottfredson's (1981) theory of occupational selection that appear to bridge the two disciplines. This study examined whether classical attainment models as proposed by Blau and Duncan (1967) and further refined by others (Sewell et al., 1969; Sewell et al., 1970) explain career expectations and likelihood of compromise, as suggested by Gottfredson (1981). Building on the theoretical foundation established by the classical attainment models, the study incorporated variables traditionally studied by psychologists including parent expectations, self-efficacy, and aligned expectations to determine if they explain variance in level of educational expectations.

Purpose

The purpose of the current study was to investigate whether principles involved in classical status attainment theory can be applied to the understanding of career aspirations, expectations, and the likelihood of compromise among adolescents of various socio-economic statuses. The study then expanded on current theory by investigating whether a relationship exists between educational expectations and the career aspirations,

expectations, and likelihood of compromise among adolescents, and whether this relationship is mediated by self-efficacy, aligned expectations, and parental expectations.

This study has the potential to contribute to the fields of psychology and sociology by informing parents, teachers, and counselors who work with students as to the processes underlying the decisions these adolescents make regarding their career aspirations and expectations. Likewise, this information will help educators work with students who come from low SES and who may be of low achievement, with the goal of helping them to make their career aspirations a reality. The goal of this study is to understand mechanisms involved in the intergenerational transmission of social class in order to assist individuals of lower SES to aspire to and attain occupations that will allow them to increase their social standing for generations to come.

Research Questions/Hypothesis

Direct Relationship

- | | |
|----|--|
| Q1 | What is the degree to which social class (SES) explains adolescents' career expectations? |
| H1 | It is hypothesized that there will be a direct relationship between social class and the career expectation of the adolescent with social class being a significant exploratory variable of career expectations. Individuals' socioeconomic status would explain variance in their career expectations, with adolescents from lower socioeconomic backgrounds expecting to obtain careers of lower prestige than their peers of higher social class. |
| Q2 | What is the degree to which social class (SES) explains adolescents' compromising of career expectations? |
| H2 | It is hypothesized that there will be a direct relationship between social class and the likelihood of compromise with social class significantly explaining variance in likelihood of compromising career expectations. Individuals from lower socioeconomic backgrounds would demonstrate increased levels of compromise, whereas, children from higher SES families would be less likely to compromise career expectations. |

- Q3 Do educational expectations explain an adolescent's career expectation?
- H3 It is hypothesized that there will be a direct relationship between educational expectation and career expectation, such that adolescents with higher educational expectations would aspire to careers of higher levels of prestige.
- Q4 Do educational expectations explain an adolescent's likelihood of career compromise?
- H4 It is hypothesized that there will be a direct relationship between educational expectations and likelihood of compromise. Individuals possessing higher educational expectations would be less likely to compromise their career expectations than those with lower educational expectations.
- Q5 What is the degree to which parental expectations, self-efficacy of adolescents, and aligned expectations explain variability in expected education?
- H5 It is hypothesized that parental expectations, self-efficacy, and aligned expectations will explain variability in expected education. Specifically, increases in parental expectations, self-efficacy, and aligned expectations would explain an increased level of educational expectations.

Mediation of Social Class Transmission: Indirect Relationship

- Q6 What is the degree to which expected education mediates the relationship between social class and career expectations?
- H6 It is hypothesized that expected education will mediate the relationship between social class and career expectations, such that the pathway in which social class affects expected education which in turn affects career expectations explains more variance than the direct effect between social class (SES) and career expectations.
- Q7 What is the degree to which expected education mediates the relationship between social class and likelihood of career compromise?
- H7 It is hypothesized that expected education will mediate the relationship between social class and likelihood of compromise, such that the pathway in which the effects of social class on career compromise through the mechanism of educational expectations would explain more variance than the direct relationship between social class and career compromise.

Mediation of Social Class Transmission

- Q8 What is the degree to which parental expectations, self-efficacy, and aligned expectations mediate the relationship between social class (SES) and career expectations?
- H8 It is hypothesized that increases in parental expectations, self-efficacy, and aligned expectations will mediate the relationship between social class and career expectations.
- Q9 What is the degree to which parental expectations, self-efficacy, and aligned expectations mediate the relationship between social class (SES) and likelihood of compromise?
- H9 It is hypothesized that increases in parental expectations, self-efficacy, and aligned expectations will mediate the relationship between social class and likelihood of compromise.

Delimitations

As the researcher, I am setting several parameters for my study. I, the researcher, only studied adolescents in high school from school districts that allowed me to conduct my study and those who returned signed parent consent forms. I obtained information from participants from two schools located in different communities for the current study. Adolescent participants were selected based on the literature documenting that expectations formed in late adolescence are relatively stable and are highly related to eventual career attainment. It may be possible to look at mechanisms involved in the compromise of career expectations of younger children, but that was not the aim of the current study.

The variables used to measure the constructs in question are those that can be reliably assessed through surveys administered to the participants, their parents, and the school district. Further, there may be additional measures that could be used (specifically to measure academic achievement and socio-economic status), but given the constraints

related to accessibility and time these were not utilized for this particular study. For example, it may have been beneficial to determine if intelligence or standardized test scores were related to educational and occupational expectations, but school districts were not willing to disclose this information. In terms of analysis, the study would benefit from numerous measures of social class such as perceived social class or a detailed analysis of the families' resources, but based on feasibility this information was not collected for the current study. It should be noted that participant and parent information consisted of self-report data exclusively.

Definition of Terms

Aligned expectations/Aligned ambitions: whether their aspired level of education matched the education required for the job (Schneider & Stevenson, 1999)

Career aspirations: the occupations that an individual would ideally like to pursue (Whiston & Keller, 2004)

Career expectations: the occupations that individuals actually envision themselves pursuing in the future (Whiston & Keller, 2004)

Compromise: when "individuals give up their ideal, albeit inaccessible aspirations for more realistic assessable choices" (Rojewski, 2005, p.138)

Direct transmission: when child occupation is similar to parent occupation (Blau & Duncan, 1967)

Educational expectations: intended education level of attainment (Andres, Adamuti-Trache, Yoon, Pidgeon, & Thomsen, 2007)

Indirect transmission: when parents' status impacts child aspirations through the mechanism of children's education level (Blau & Duncan, 1967)

Parent education level: the highest level of education of the parents

Parent educational expectations for child: the level of education the parent would like the child to obtain as indicated by the parent (Looker & Pineo, 1983)

Parent occupation: the current occupation of the child's parents

Perceived parent educational expectations for child: children's perceptions of the level of education they think their parents would like them to obtain (Looker & Pineo, 1983)

Self-efficacy: "people's judgments about their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 291)

Social class/Socio-economic status: education level, occupational attainment, and income of family or origin (Diemer & Ali, 2009)

CHAPTER II

REVIEW OF LITERATURE

This chapter includes a thorough examination of literature addressing career expectations, educational expectations, and factors related to the compromise of occupational expectations, hence providing a foundation for research investigated in this dissertation. The review of literature begins by exploring the relationship between career aspirations and expectations, suggesting that they are two distinct constructs that need to be studied independently. The second section provides an in-depth examination into key insights in the study of career compromise culminating with rationale for exploring compromise among individuals of different socio-economic backgrounds. The third section focuses on research investigating the relationship between social class and career outcomes. The next three sections explain research exploring the direct and indirect transmission of social class; concluding with an explanation of the Wisconsin Model of Status Attainment. Building on the foundation of the role of educational expectations proposed by the Wisconsin Model of Status Attainment, the literature review examines the relationship between educational expectations and occupational outcomes. Due to the increased level of education required for jobs of higher status the review of literature then addresses educational expectations highlighting factors related to increased educational expectations, specifically, parental expectations, self-efficacy, and aligned expectations. The section concludes by demonstrating the need for the current study.

Career Aspirations, Expectations, and Compromise

As individuals develop across childhood and adolescence, one of the many decisions they will make involves the selection of a career or occupation. According to Whiston and Keller (2004), occupational (career, vocational) aspirations represent the occupation that an individual ideally would like to pursue, whereas occupational expectations are the occupations that individuals actually envision themselves pursuing in the future. Although career aspirations and expectations may be similar in origin, they are thought to be two distinct constructs. Beal and Crockett (2010) examined the relationship between career aspirations and expectations of 317 adolescents (grades 7-9) and their adult educational attainment. Occupational aspirations and expectations were coded using prestige scores from the National Opinion Research Center ranging from 10 to 100. Adolescents' educational expectations were measured on a six point scale ranging from 1 (some high school) to 6 (completing a professional degree). In the study, the authors controlled for mother's education, gender, age, and GPA. The results suggested that the career aspirations and expectations of the students predicted the level of adult educational attainment. In addition, aspirations and expectations were only moderately correlated at $r = .60$, suggesting that aspirations and expectations are related, but somewhat distinct, constructs supporting previous research by Gottfredson (1981) and Rojewski (2005). Similar results have been found among high school students. McNulty and Borgen (1988) investigated the degree to which adolescents' career aspirations matched expectations among 500 middle and upper middle SES male and female students equally distributed across the 8th through 12th grades at a Canadian school. In addition to aspirations and expectations, the authors inquired as to whether there were

differences in agreement by grade, gender, and locus of control. Both ideal and realistic occupational aspirations were coded by level and field using the Canadian Classification and Dictionary of Occupations (CCDO, 1976). The results indicated no significant relationship between the aspired and expected occupations. Additionally differences could not be explained by participants' "gender, grade, or locus of control" (McNulty & Borgen, 1988, p.222), suggesting the need to look to other variables in order to understand what may be causing the nonalignment of aspirations and expectations. It should be noted that these findings were based on a homogenous sample in terms of socio-economic status, and further research is needed to see if similar findings emerge from a more diverse sample. These findings suggest that there are differences between aspired to and expected careers of adolescents in high school, but the variables studied do not provide an explanation as to why this may be taking place. Furthermore, Rojewski (2005) concluded that "the literature makes the clear distinction between idealized aspirations and realistic expectations" (p.133). These findings suggest the need to recognize what happens when aspirations do not match expectations.

Career Compromise

Gottfredson (1981) proposed a theory of circumscription and compromise. Circumscription is the process of narrowing career preferences as the individual progresses from childhood into adolescence (Hesketh, Elmslie, & Kaldor, 1990). Compromise occurs when "individuals give up their ideal, albeit inaccessible aspirations for more realistic accessible choices" (Rojewski, 2005, p.138). Compromise is evident when occupational aspirations do not equal occupational expectations, most commonly measured by level of occupational prestige. "When discrepancies exist most people enter

into occupations that require less education and offer lower socioeconomic benefits and prestige” (Rojewski, 2005, p.133). Occupational compromise is classified into two categories: (1) anticipatory, when individuals do not feel that their ideal occupation is accessible to them, and (2) experimental, when aspirations are changed because of failing to gain employment in their desired field (Gottfredson, 1996). The current study examined possible factors associated with anticipatory compromise among adolescents, whereas experimental compromise may occur in adulthood and could not be measured in adolescents.

The study of career compromise began by looking at differences in gender traditionality of occupations. Davey and Stoppard (1993) conducted one of the original studies researching career compromise when they investigated factors influencing women who expected to enter occupations that were more traditional than the occupation to which they aspired. The sample consisted of 180 tenth- through twelfth-grade female students. The results suggested that there was a significant difference in the traditionality (measured by the percentage of same-sex individuals in the occupation) of the desired occupation compared to the expected occupation. Overall 47% of the participants aspired to a career in the same category of gender traditionality as the career they expected to have; whereas 33% expected to have a less traditional career than the one to which they aspired (discrepant-nontraditional). Parental support and cost of education (in terms of number of years of education required) were significantly different among women with discrepant-nontraditional expectations compared to those whose aspirations matched their expectations. Participants who were discrepant-nontraditional perceived less support from significant others than those whose aspirations matched expectations. Furthermore,

female participants who desired less traditional careers entered careers requiring lower levels of education than the careers they desired to have. These findings suggest the need for understanding the role of parents in the congruence of aspirations and expectations. Whereas there was no official measure of SES in the study, Davey and Stoppard suggested that cost of education was a factor among individuals who aspired to less traditional careers than they expected to have. It is fair to hypothesize that perceptions of the cost of education may be affected by SES level and it would be of benefit to understand the role of SES in these decisions. Although these findings suggest a relationship between parental factors and cost of education in the influence of traditionality of career expectations among women, it would be of interest to see if these same factors are influential in adolescents' selections of occupations of different prestige levels.

Building on the work of Davey and Stoppard (1993), researchers began investigating when the occupation to which participants aspire does not equal the occupation expected in terms of occupational prestige. For example, Rojewski (1995) studied the relationship between at-risk behaviors and career aspirations, expectations, and the aspiration-expectation discrepancy among 129 rural high school students in grades 9-12. Participants completed a demographic questionnaire consisting of gender, age, grade level, educational aspirations, occupational aspirations, and expectations along with self-reported risk behavior, such as frequency of detention, school suspension, trouble with the law, etc. Occupations were coded using the Stevens and Cho (1985) index ranging from 13.98 to 90.45, with higher scores indicating increased levels of prestige, and six categories reflecting the highest level of prestige (managerial and

professional specialties) to the lowest level of prestige (operators, fabricators, and laborers). The average socioeconomic index (SEI) score of (34.48) was used to differentiate white collar (those falling above) and blue collar occupations.

The results of Rojewski's (1995) study revealed a noteworthy difference between the mean aspiration and expectation SEI scores with half of the students aspiring to occupations of significantly higher levels of prestige than they expect to have; the mean score for career aspirations was 58.64, whereas the mean score for occupational expectations was 49.70, ($t=4.97, p <.001$). Overall, gender and at-risk behavior predicted only 4% of the variance in the aspiration-expectation discrepancy, thus indicating that other factors may be influencing this process. These findings suggest that among students in rural communities, there are significant differences in aspirations and expectations, but it is unclear as to why these differences may exist.

The attempt to understand differences in aspirations and expectations included the investigation of background and socio-economic factors. Cook et al. (1996) studied boys in the second, fourth, sixth, and eighth grades in an attempt to understand participants' occupational aspirations and expectations, which were coded using Nakao and Treas's (1990) SEI scores. Half of the participants were recruited from a predominately low-income school and the remainder of the sample was from middle-income schools. The authors gathered data on the children's educational expectations, perceptions of parental educational expectations, expected educational obstacles, benefits attributed to finishing high school and college, and level of neighborhood safety. The results suggested that the more advantaged boys in terms of SES had higher aspirations and expectations and that the gap between aspirations and expectations was higher for the intercity boys, who were

of lower SES. Overall, there was a higher prevalence of compromise among inner city youth compared to suburban youth in all four grade levels. Regarding expectations, there were several moderating factors including self-cognitions about their own educational expectations, further demonstrating a link between educational expectations and the likelihood of career compromise. These findings support the need to understand how contextual and personal factors affect the career aspirations and expectations.

Additionally, it is of importance to examine whether similar factors influence the career aspirations, expectations, and likelihood of compromise among girls, as well as to investigate cognitive factors related to the relationship between educational expectations and career compromise.

Early research investigating career aspirations and expectations established that aspirations do not equal expectations (Beal & Crockett, 2010; Cook et al., 1996; Davey & Stoppard, 1993; Gottfredson, 1981; Rojewski, 1995). Recently research has attempted to understand exactly how this process takes place and the implications for career attainment. Armstrong and Crombie (2000) conducted a longitudinal study investigating the aspiration-expectation discrepancy among adolescents ($N=502$) as they progressed from the eighth to the tenth grades. Participants were classified into two groups: non-discrepant (when aspirations matched expectations) and discrepant (those whose aspirations were either higher or lower than their expectations) for both gender traditionality (indicated by the percentage of females working in the occupation) and SES (based on mean annual salary, mean educational level, and prestige score of occupation). The results indicated that the overall percentage of individuals showing discrepant aspirations decreased over time with individuals most commonly changing their

aspirations to match the expectations of the previous year in both gender traditionality and occupational prestige; thus providing support for Gottfredson's (1981) theory of compromise. In contrast, individuals who were non-discrepant were not likely to change their aspirations over time.

Armstrong and Crombie (2000) further reiterated the importance of studying aspirations and expectations separately because during adolescence these may not be the same. Moreover, adolescence is a time when modifications to plans and goals for the future are being made (Armstrong & Crombie, 2000, p. 97). This study was instrumental because it was one of the first studies to explore aspirations-expectation patterns over time among an adolescent sample. Although the study had many strengths, it failed to look at possible factors that may be influencing these processes, specifically the role of variables such as SES, self-efficacy, and educational requirements. Armstrong and Crombie's study provides the rationale to explore further career aspirations and career expectations, as well as factors influencing discrepancies in these processes, among adolescents as they approach the age of making decisions about their futures.

In addition to influencing aspirations and expectations, the results of compromise may be evident in occupational selections. Schoon (2001) conducted a longitudinal study of teenagers in Great Britain to examine whether occupational aspirations at age 16 predicted careers at age 33; specifically, the author investigated children aspiring to careers in natural science, medical science, and engineering. At the age of 16, approximately 16% of the students ($n=7,649$) aspired to careers in science-related fields, specifically as scientists (3.5%), health professionals (1.8%), and engineers (10.7%), with a majority of these students being male. Of the 3% of the population who obtained jobs

in scientific fields, a significant number of them had aspired to these occupations when they were teenagers (33% of natural scientists, 51% of health professionals, and 20% of engineers), thus demonstrating relative consistency between aspirations and career obtainment. The results indicated that 41% of aspiring engineers became skilled craft persons, an occupation with lower levels of prestige (Stevenson & Featherman, 1981), providing further support for Gottfredson's concept of compromise and demonstrating the implications of career compromise on occupational attainment.

Previous research suggests that adolescents may be compromising their occupational aspirations (Armstrong & Crombie, 2000; Beal & Crockett, 2010; Davey & Stoppard, 1993; Gottfredson, 1981; McNulty & Borgen, 1988; Schoon, 2001). There is a need to recognize influences contributing to the difference in aspirations and expectations (Rojewski, 1995). Furthermore, it is necessary to understand the relationship between SES and career compromise among adolescents with Cook et al. (1996) suggesting that SES is significantly related to career compromise among adolescents. These findings provide the need for the further exploration of factors influencing career compromise, thus effecting subsequent career attainment.

Socio-Economic Status (SES)

Social class has been found to influence career related constructs such as vocational/educational aspirations and occupational expectations (Diemer & Ali, 2009; Mello, 2009; Rojewski, 2005; Rojewski & Yang, 1997; Schoon & Parsons, 2002). Research by Rojewski and Yang (1997) found that SES, calculated with a composite score containing five measures, including family income, parents' educational levels, and parents' occupations, had a significant effect on occupational aspirations. SES was a

stronger predictor of aspirations than gender and race/ethnicity at all three-grade levels. The Rojewski and Yang findings indicated that SES accounted for almost 10% of the variance in the construct of occupational aspirations.

In addition to investigating the relationship between SES and occupational aspirations, research has examined whether SES is related to educational expectations and occupational attainment. Schoon and Parsons (2002) found that parental social class was significantly related to both educational achievement and teenage occupational aspirations; specifically that the best predictors of occupational status at age 33 were teenage aspirations, parents' social class, and educational achievement. Family SES had a significant effect on educational aspirations and attainment, as well as career aspirations and attainment. The results of Schoon and Parson's study established the relationship between teenage aspirations and adult attainment; moreover, they suggested that parental social class and educational achievement are important factors in the occupational attainment of a large sample.

Similarly, Mello (2009) investigated the relationship between educational and occupational expectations among adolescents differing in ethnic group membership and SES and their adult occupational attainment at age 26 using the longitudinal data set from the National Education Longitudinal Study (NELS:88/2000) ($N=10,282$). Socioeconomic status was measured using a composite score based on fathers' and mothers' education and occupation levels, as well as family income. Educational expectations were measured at ages 14, 16, and 18, and 20 on a scale from 1 (less than high school) to 6 (graduate school including MA, PhD, and MD); educational attainment was measured at age 26 using the same categories. Based on the relationship between

academic achievement and expectations, the author controlled for academic achievement (as measured by standardized test scores for reading and math), grade point average, and drop out status.

The results of Mello's (2009) study suggested that SES was positively associated with levels of both educational and occupational expectations, such that higher SES adolescents were more likely to aspire to increased educational and occupational aspirations and more likely to attain those levels than their lower SES counterparts. This association was observed across adolescence and adulthood, after controlling for academic achievement. The implications of this study were that SES differences in levels of occupational and educational expectations in adolescents are maintained into adulthood, representing different levels of occupational attainment in adulthood, thus substantiating and expanding on the research established by Schoon and Parsons (2002).

Occupational expectations developed in adolescence are relatively stable (Mello, 2009) and they are significantly related to adult occupational attainment (Schoon, 2001; Schoon & Parsons, 2002); therefore, there is a need to recognize factors influencing career aspirations and expectations in adolescents. The SES of an individual is a significant predictor of occupational aspirations (Mau & Bikos, 2000; Rojewski & Yang, 1997; Schoon & Parsons, 2002), expectations (Mello, 2009), and adult attainment (Schoon & Parsons, 2002). Lareau (2003) studied SES differences and found that middle-SES parents primed their children for the future by guiding them through a process of "concerted cultivation" that prepares them for future careers; whereas, working class and poor parents feel that children develop naturally. The effect of social class on career development provides a need to understand the relationship between

educational and occupational expectations and likelihood of compromise, which may affect individuals, families, and communities for generations to come.

Status Attainment Theory

Blau and Duncan (1967) proposed the classical status attainment model. According to this model, social status is thought to be transmitted when a father's occupational status is directly related to his son's occupational status. In addition, fathers' education is also considered in the model predicting occupational status, but it is mediated by fathers' occupation. A direct effect of social class on children's occupational status may imply that fathers of greater social status will have children, specifically sons, with higher occupational status than fathers of lower social status. Based on the relationship between education and career attainment, a second model explaining intergenerational transmission was proposed; and is favored in terms of explaining intergenerational status and mobility. This model suggests that the father's occupation has an indirect effect on the child's occupational attainment by affecting the level of education attained by the child, which in turn affects the occupational opportunities available. Thus, individuals of higher social status ultimately obtain the higher levels of education necessary to get a higher status job. Further investigation by Blau and Duncan (1967) revealed that although there is a relationship between fathers' occupation and the careers of their sons, education had the greatest direct effect on occupational attainment (path coefficient=.39) (p. 403). To investigate the direct transmission of social class, specifically whether children's occupational aspirations relate to the careers of their parents, researchers have studied the relationship between careers of parents and aspirations of children.

Direct Transmission of Career Aspirations and Attainment

The direct transmission of career aspirations has been studied in both children and adolescents. Trice, Hughes, Odom, and Woods (1995) conducted interviews with 949 kindergarten-sixth graders (168 kindergarten children, 239 second graders, 272 fourth graders, and 270 sixth graders) from four different states in an attempt to understand how children develop career aspirations. The results suggest that children selected careers in the same Holland classification (1985) category as their parents when both of their parents were in the same occupational category. This pattern generally increased as the children progressed from kindergarten (40%) to the sixth grade (44%). Furthermore, research designed to determine influences on children's career aspirations, as well as the stability of their aspirations over time found that over 80% of the participants mentioned careers of their parents, their own, or those of their classmates, further suggesting that the direct transmission of career aspirations occurs among children (Trice, 1991a).

Similar results were obtained among a sample of junior high students. Otto (2000) studied high school juniors and asked students to whom they turned for advice on careers and their futures. The author found that while growing up children report an interest in occupations similar to those of their parents. These studies demonstrate the direct transmission of occupational values and provide a rationale for the continued study of direct transmission of occupational aspirations, as children become adolescents, the age at which they actually begin making occupational decisions.

Direct effects also have been found in studies investigating the relationship between parents' occupation and aspirations of college students. Hitlin (2006) investigated whether factors that influenced adolescent values mediated the relationship

between SES and career aspirations of students at a large Midwestern university ($N=314$). Three models were analyzed, each utilizing different measures of SES including: (1) parental education, measured on a nine point scale ranging from high school to completion of advanced degree obtained during the participants' first year of college, (2) parents' occupational prestige scores (Nakao & Treas, 1994), and (3) gender-appropriate prestige scores (TSEI, Hauser & Warren, 1997). The results of the study suggest that fathers' job has a direct effect on the career aspirations of their college-age children.

Although research has studied the relationship between children's aspirations and the occupations of their parents, comparatively few studies in the career development literature have addressed whether children's adult occupations are influenced by the jobs their parents had while they were growing up. Trice (1991b) retrospectively studied the career aspirations of 620 adults (ages 40-55) to understand when they first formed their career aspirations (in childhood vs. adolescence) and the relationship between current occupations, childhood aspirations, and parents' occupations. All careers were classified using Holland's (1985) categories, which group jobs into realistic, investigative, artistic, social, enterprising, and conventional categories. Of those who formed aspirations in childhood, 40% matched their fathers' occupational classification whereas only 23% of aspirations during adolescence matched their fathers' classification, suggesting that paternal influence may decrease as the child gets older. Individuals whose childhood aspirations were similar to their fathers' occupations were more likely to obtain jobs in that category; whereas, those who differed were less likely to have a job similar to the career to which they aspired. This implies the direct transmission of social class from parent to child and the relationship between parental occupation and adult job attainment.

Furthermore, the Trice (1991b) study only investigated the relationship between the child's career and the occupation of the father, not taking into account the occupation of the mother. Another limitation of Trice's study was that it was retrospective in nature and could be improved by conducting a longitudinal or cross-sectional study investigating the relationship between children's aspirations and attainment and the occupation of their parents (both mothers and fathers). In contrast to previous research suggesting a relationship between parents' occupation and child aspirations (Otto, 2000; Trice, 1991a; Trice et al., 1995), parental influence may weaken during adolescence. Research inquiring as to the direct influence of parental occupation on childhood aspirations and expectations during adolescence would provide additional information as to the accuracy of these claims and the process involved in the direct transmission of occupational aspirations and expectations. Trice (1991b) suggested that there may be a relationship between parents' occupation and the occupational attainment of children, but further research is needed to understand the nature of this relationship and how it may change during the course of development.

Direct Transmission of Educational Attainment

Research has found evidence for the direct effects of parents' occupation on the occupation of their children (Blau & Duncan; 1967; Trice, 1991b) with similar results found the study of the direct effect of educational transmission. Andres, Adamuti-Trache, Yoon, Pidgeon, and Thomsen (2007) used a longitudinal study of 1,055 high school seniors and studied them to identify the influences of post-secondary attainment 10 years after high school. Educational aspirations include the curriculum individuals "hope to study in preparation for their dream careers," whereas "expectations are

grounded in the relatively clear assessments of the value of their intended education and deep understandings of structural, as well as personal constraints, operating in their everyday lives” (p. 136). Andres et al. (2007) classified educational attainment into seven levels, and coded parents’ education and occupations using three levels. Children attaining the highest level of education were likely to have parents with higher levels of education and higher status occupations suggesting the direct transmission of educational attainment.

In an attempt to determine how education is transmitted, Cohen (1987) studied the role of parents as “models and definers” in terms of children’s educational attainment with models representing the direct transmission of social class. According to Cohen (1987), “models serve as a basis for children to emulate whereas definers establish expectations for which behaviors are appropriate” (p. 339) and although there have been numerous studies investigating defining, modeling on the other hand has been researched less frequently. Participants were those included in the longitudinal study using the Adolescent Society Sample ($n=2,485$ males and 3,013 females), which began in 1957-1958. Participants were asked about their college aspirations, coded on a 3-point scale ranging from will not attend college to yes will attend college, and educational attainment, rated on a 6-point scale from some high school to PhD. Educational attainment was measured 15 years later. The results indicated that parents’ modeling was significantly related to child’s attainment with children obtaining educational levels similar to those of their parents. Similarly Isaac et al. (1992) found that parents, specifically fathers’, educational levels were related to the children’s educational aspirations among students graduating from a large public university.

Research suggests that there is a relationship between parents' occupation and the occupational aspirations (Hitlin, 2006; Otto, 2000; Trice et al., 1995), occupational attainment (Trice; 1991b), and educational attainment of children (Andres et al., 2007; Cohen, 1987; Isaac et al., 1992). The exact nature of the relationship between parents' occupation and the occupational aspirations and attainment of their children is unclear. Specifically, it is unclear whether parents' occupations directly influence the career and educational aspirations and expectations of their children in late adolescence and young adulthood as they begin making decisions about their futures, as well as whether they influence children's likelihood of compromising occupational expectations. Further research is needed to understand the direct effect of parents' occupation on the career aspirations and expectations of children, adolescents, and young adults of varying socio-economic statuses.

Indirect Transmission of Career Aspirations and Attainment

In contrast to direct transmission, indirect transmission occurs when the effect of parents' occupation on the child's selected occupation is mediated by a child's educational level (Blau & Duncan, 1967). Indirect effects are based on the supposition that educational attainment is related to level of career aspirations. Rojewski and Yang (1997) proposed that there is a relationship between educational aspirations and occupational attainment based on the premise that many higher levels of occupations require greater levels of training and education. Individuals with higher educational aspirations will subsequently put themselves in the position for a more diverse level of occupational opportunities. Arbona (2000) suggested that without "educational attainment the range of career choices individuals have is very constrained" (p. 270).

Moreover, education is vital to social mobility based on the relationship between the level of education required and higher paying and higher prestige jobs (Argyle, 1994).

Schoon and Parsons (2002) found that teenage aspirations, followed by educational attainment, were the strongest predictors of their occupational attainment in the cohort born in 1970. Therefore, studying parental and child aspirations for education, as well as occupation, is increasingly relevant to the study of vocational development, perhaps due to the increasing importance of a college education for occupational attainment. Schoon and Parsons determined that “educational credentials” (p. 279) were strongly associated with higher levels of occupational attainment. Hotchkiss and Borow (1996) further advised that the “status attainment literature has consistently documented the relationship between the number of years of schooling one completes and the status level of an individual’s parents” (p. 322), thus demonstrating the importance of educational attainment in occupational aspirations, expectations, and attainment especially for individuals of low SES and for members of minority groups.

Indirect Transmission of Education

In an attempt to understand the transmission of education among generations, Marks (1992) investigated the role of ascription (direct transmission) in status attainment among a sample of men and women from nine cohorts between 1965 and 1990. The cross-sectional study measured the relationship between father’s occupational status, classified by the Classified List of Occupations, when the child was 14, the level of education obtained by the participant, and the occupation obtained, although it did not specify at what age. The results demonstrated that over time the direct influence of parents’ occupation on status attainment decreased; whereas, the relationship between

educational level and status attainment increased for both men and women, suggesting a similar process of educational influence across gender. Although the study examined occupational attainment, it did not look at exactly how this process developed; that is, the role of aspirations and expectations and whether or not aspirations were compromised over the course of time.

A more recent study by De Graff and Kalmijn (2001) examined the intergenerational transmission of social class in the Netherlands. Their study investigated the relationships among parents' occupation, educational level, and the economic status, measured by the average income of members of the occupation, and cultural status, measured by the average level of education of the members of the occupation investigating both direct and indirect effects. The sample consisted of 5,921 men and 3,457 women collected from 1923 to 1984. Although the overall rate of direct transmission was significant for both the cultural and economic occupational status of men and women, the direct effect has decreased over time. The overall finding that there is more income mobility across generations, as opposed to educational mobility, suggests the need to study mechanisms involved in the indirect transmission of status. Such information would inform how to increase levels of educational mobility among individuals from various social classes. Whereas De Graff and Kalmijn's study investigated the transmission of cultural and economic status over time, the data are based on information collected between 1923 and 1984 and do not address whether intergenerational transmission of social class exists in current economic times. As suggested by Heppner and Scott (2004), there is a lack of research studying social class

attainment in the past 20 years and there is a need to understand how social class is transmitted across generations.

Wisconsin Model of Status Attainment

The Wisconsin Model of Status Attainment (Sewell et al., 1969; Sewell et al., 1970) expanded on the classic attainment model (Blau & Duncan, 1967) to incorporate structural and psychological variables influencing social class attainment. Research for the model was based on data on 929 male sons of farmers growing up in Wisconsin (Sewell et al., 1969). Further analysis by Sewell et al. (1970) utilized a sample of 4,388 males from communities of various sizes. The researchers investigated the relationship among SES (measured by a weighted combination of mothers' and fathers' education and occupation along with parents' income), mental ability, academic performance (percentile rank in high school class), and significant others' influence (combination of perceived parental and teacher encouragement to attend college, along with peer's college plans). Additionally the study included level of educational aspirations scored from 0- (not continuing after high school) to 2 (plan to attend college), and level of occupational aspiration, measured using Duncan's (1961) SEI index, and educational attainment (categories ranged from 0 for post high school education to 3 for college graduation) to predict occupational attainment. Given the relationship between educational attainment and occupational attainment, it is important to understand factors contributing to educational attainment. The Wisconsin Model of Status attainment proposed by Sewell et al. (1970) suggested that educational aspirations account for 57% of the variance in educational attainment and 40% of the variance in occupational attainment among a diverse sample (p. 1022).

Although the classical attainment theory was proposed in 1967 and the Wisconsin Model of Status Attainment soon after this (Sewell et al., 1969; Sewell et al., 1970), there is a need to recognize how the implications of the model relate to the current transmission of social status (De Graff & Kalmijn, 2001). Whereas, the Wisconsin Model of Status Attainment is based on the relationship between fathers and sons, the model does not take into account the role of mothers and the influence of their careers on the educational levels of both their sons and daughters. However, the model does provide a solid foundation for exploring the transmission of social class. Although there have been studies addressing the transmission of social class in terms of adult attainment, there is a need to investigate further how social class influences career aspirations, expectations, and the likelihood of career compromise. According to Heppner and Scott (2004), “rather than looking at the long-term effects of social class, our knowledge base of career issues would benefit from data on the process by which children and adolescents decide which careers they can pursue” (p. 600). Based on the classical attainment model, there is a relationship between parents’ occupation and the status obtained by their children, either directly or indirectly. However, it is now necessary to identify the pathways, both direct and indirect, predicting career aspirations, expectations, and the likelihood of compromise in adolescents.

According to the 1970 Wisconsin model (Sewell et al., 1970), educational attainment is highly correlated with occupational attainment, with occupational aspirations also contributing significantly to occupational attainment. This model provides a foundation for examining career and educational aspirations and expectations specifically, each of which is related to educational and occupational attainment. There

is a need to determine the mechanisms involved in the transmission of status of occupational and educational expectations. Although the Wisconsin model takes into account level of occupational and educational aspirations, it does not address occupational expectations. It is possible that some of the unexplained variance in the prediction of occupational and educational attainment results from occupational and educational expectations; that is, what the individual actually envisions himself/ herself obtaining. Furthermore, the Wisconsin Model proposed that there are structural variables that may influence career aspirations and attainment; the current study investigated whether similar variables influence career aspirations, expectations, and the likelihood of compromise through the pathway of educational expectations.

Educational Expectations

The Wisconsin Model of Status Attainment (Sewell et al., 1969; Sewell et al., 1970) proposes that educational aspirations and expectations are related significantly to occupational aspirations and attainment. Haller and Virkler (1993) studied the difference in educational aspirations for rural ($n=6,849$) and non-rural ($n=13,768$) students using the high school seniors participating in the High School and Beyond Study which began in 1980. SES was measured using family education, income, and occupation. Occupational aspirations were classified into high, medium, and low categories based on education required. Educational aspirations were categorized into nine categories ranging from less than high school to PhD or equivalent. The results indicated that there were only small differences in educational aspirations, between rural and non-rural students, and most of the difference can be explained by SES, with the authors suggesting that rural students

have lower SES than non-rural students. Haller and Virkler's study insinuates that among rural populations SES is important in predicting educational aspirations.

Comparable results were obtained among an urban sample. Ou and Reynolds (2008) found that mother's education was a significant predictor of overall completed education of low-income minority children, thus demonstrating the importance of parents' education on educational expectations. Similarly, Hill et al. (2004) researched the relationship between parents' involvement and variations in SES (as measured by parents' education, family income, and parents' occupational status) of 463 adolescents over a five-year period beginning in the participants' seventh grade year. The results of a MANCOVA indicated that there was a difference between high and low socio-economic status families for their children's educational but not occupational aspirations. The results suggest that parents' educational level does not directly influence occupational aspirations, but is related to levels of educational aspirations, consistent with the assumption that parents' education level influences occupational aspirations indirectly through the educational aspirations required for higher level jobs.

It has been suggested that family characteristics are related to educational expectations (Haller & Virkler, 1993; Hill et al., 2004; Ou & Reynolds, 2008). Moreover, researchers propose that educational expectations are predictive of educational and occupational attainment. Rojewski and Kim (2003) studied factors predicting education/labor force status two years following high school among individuals participating in the National Educational Longitudinal Study of 1988-1994 ($N=14,376$) and found SES to be a significant predictor of status with higher SES individuals more likely to be enrolled in college and lower SES individuals predominately in the work

bound category. The authors noted the importance of expected educational attainment on occupational aspirations, further highlighting the importance of educational expectations on the career development of adolescents.

Recently, Dubow, Boxer, and Huesman (2009) investigated the relationship between parents' educational levels and the occupational and educational attainment of individuals' at age 48 ($N=268$ males and 255 females) beyond the contribution of SES, IQ, family interactions, child behavior, and adolescent aspirations. Parents' educational level was measured when participants were eight years old on a seven-point scale ranging from 1 (under 7 years of education) to 7 (graduate or professional training). In addition, measures of late adolescent educational achievement and aspirations were measured at age 19 with educational level ranging from 1 (less than high school) to 3 (at least one year of education beyond high school) and educational aspirations on a six-point scale (less than high school to graduate education). The two dependent variables, educational attainment (measured on a seven point ranging from 0 did not finish high school to 7 doctorate or law degree) and occupational attainment, measured on Stevens and Hoisington's 1987 prestige scale, were recorded when participants were 48 years old.

The results of structural equation modeling indicated that although parents' education does not have a direct effect on child education or occupational attainment it has a significant indirect effect as mediated through child's educational aspirations and educational attainment at age 19. Individuals whose parents had higher levels of education demonstrated greater educational attainment at 19 and were more likely to aspire to greater educational attainment, which in turn was related to increased educational attainment at 48. Correspondingly, parents' educational level was associated

with increased educational attainment in adolescence, which was significantly related to increased occupational prestige.

Educational expectations are of critical importance for individuals of low SES. Jacobs, Karen, and McClelland (1991) studied the relationship between occupational aspirations of young men over time between ages 15 and 27 ($N=5,125$) using data from the Longitudinal Survey of Young Men which began in 1966. The authors measured aspirations of young men asking them in which occupation they hoped to be employed when they turned 30. Occupations were coded using ten categories ranging from professions to laborers. The authors found a significant relationship between educational attainment and occupational attainment (Jacobs et al., 1991). The results suggested that, over time, aspired occupations declined in terms of status and became more stable as the young men progressed. Additionally, SES positively correlated with the prestige of the occupational aspirations. However, individuals with low SES who possessed higher levels of education had career aspirations that were similar to or above those of their high SES peers. This proposes that increased levels of education may influence career aspirations for low SES individuals, making them more similar to their high SES peers. Although these results were found for an exclusively male sample and the results are dated, they do provide the rationale for investigating whether increased levels of education may affect career aspirations among a contemporary cohort of males and females and demonstrate the importance of educational expectations and attainment in career aspirations and attainment.

Andres et al. (2007) found a direct relationship between educational expectations and educational attainment. According to Mortimer, Lorence, and Kumka (1986)

education is viewed as the primary mediating variable in the transmission of social class. Previous research has demonstrated that educational expectations are related to educational attainment (Andres et al., 2007; Dubow et al., 2009; Hill et al., 2004; Jacobs et al., 1991; Ou & Reynolds, 2008; Rojewski & Kim, 2003) and that educational attainment is related to career attainment (Arbona, 2000; Argyle, 1994; Hotchkiss & Borrow, 1996; Johnson et al., 1983; Lent, Brown, & Hackett, 1994; Rojewski & Yang, 1997; Schoon & Parsons, 2002). Educational expectations provide a foundation for career development with greater levels of education necessary for occupations of greater prestige. As noted by Jacobs et al. (1991) increasing educational aspirations is a possible mechanism for increasing occupational aspirations among individuals of low SES. The current study investigated whether self-efficacy, parental expectations, and aligned expectations influence educational expectations; an implication of this would be that increasing levels of educational expectations in individuals, regardless of their SES, would lead to a lower likelihood of compromise in their career expectations.

Factors Influencing Educational Expectations

Parent Expectations.

Based on the relationship among parents' expectations, children's aspirations, and their eventual career attainment (Schoon & Parsons, 2002) it is important to examine the research addressing the role of parents' expectations in the development of educational aspirations and expectations. Rhea and Otto (2001) studied the association between family connection, defined as agreement between adolescent and parent on plans for the future and similarity of ideas for the future, and educational outcome beliefs among high school juniors ($N=203$). They found that adolescents who agreed with their parents about

the importance of a college education had more confidence in their abilities to meet their educational outcomes. A chi-square analysis found a strong correlation among adolescents who talked to their parents about career concerns and their beliefs in their abilities to meet educational and career goals (Rhea & Otto). The results of Rhea and Otto's study suggest that parents are instrumental in the transmission of educational values to their children, which in turn provides a foundation for the transmission of social class.

The transmission of parents' educational values most often occurs through the mechanism of parents' expectations. For example, Hossler and Stage (1992) sampled 2,497 ninth grade students and found that parents' expectations explained 18% of the variance in students' aspirations. Although the other factors (such as mothers' and fathers' education, parents' expectations, income, gender, ethnicity, students' activities, and students' achievement) were also related to students' expectations, none was as strong as the expectations of the students' parents. Similarly, Cohen (1987) investigated the relationship between parents' occupations and expectations of educational attainment of over 5,000 adolescents and found that parents' expectations had a larger influence on aspirations and attainment than did parents' occupation. Additionally, in developing a model to explain predictions of realized potential or lost talent Trusty and Niles (2004) concluded that parents' expectations, specifically whether or not students had parents who expected them to graduate from college, significantly predicted whether the students realized their potential, further reiterating importance of parents' expectations in the educational attainment of children.

Research has found that parents' aspirations are strongly associated with the educational expectations of their children (Cohen, 1987; Hossler & Stage, 1992; Rhea & Otto, 2001; Trusty & Niles, 2004). There have also been studies addressing the relationship between parents' expectations and children's occupational attainment. Poole et al. (1991) conducted a longitudinal study of 2,932 adolescents in an attempt to understand variables related to occupational attainment. The results suggest that there is a relationship between parental expectations and occupational status expectations and that parental expectations had the greatest influence of the factors investigated. Moreover, the study found that perceived parental expectations had a stronger influence on professional attainment than SES; however, the influence was mediated through students' occupational expectations.

Whereas several researchers have studied parents' expectations, others have researched perceived parental expectations. Trusty and Pirtle (1998), utilizing data from the High School and Beyond study 1988-1994, found that as level of SES (as measured by parents' educational levels, family income, and occupational prestige scores) increased so did both perceived parents' and actual adolescents' educational expectations. Additionally, as level of SES increased so did the agreement of goals between perceived parents' expectations and child's expectations. Overall, the transmission of educational goals from parents to children was strong among students as seniors in high school ($N=10,247$).

In order to investigate fully the relationship between parents' expectations and the aspirations and attainment of children there is a need to understand whether children accurately understand the expectations their parents have for them. Looker and Pineo

(1983) studied 400 teenagers (ages 17 and 18) and their parents to better understand the factors associated with status attainment of teenagers. The authors investigated whether self-direction and conformity, self-concept and ability, along with significant others' influence were related to basic status attainment (measured by educational attainment). Students were asked what level of education they think their parents expect them to complete; then actual expectations were obtained from the parents. In addition, students' educational aspirations and expectations were obtained from the participants. Aspirations and expectations (of both students and parents) were coded on a seven-point scale ranging from work to university education. Occupational aspirations were categorized using a four-digit census code. Other variables studied included parents' SES (as measured by status of fathers occupation), teenagers' academic performance (measured by self-reported grades), and teenagers' educational attainments (measured four years later).

Looker and Pineo (1983) found that perceived parental expectations, but not parents' educational attainment, were significantly related to educational and occupational aspirations of their children. The results also suggest a strong relationship between perceived parental expectation and the parents' actual expectation ($r=.68$). Looker and Pineo's study is important because it proposes that there is a strong relationship between perceived and actual parents' expectations providing rationale for studying exactly how parent expectations are transmitted and the effect of parents' expectations on career expectations of their children.

In studying factors influencing the career aspirations of 272 children (ages 11-15), Bandura et al. (2001) found that higher parental aspirations influenced all three forms of

child self-efficacy: “academic, social, and self-regulatory” (p. 187), and these, in turn, affected career aspirations. Although SES did not have a direct influence on occupational aspirations in Bandura et al.’s study, the influence was “indirect through the processes of parents’ aspirations and parents’ self-efficacy” (p. 187) as demonstrated by parents’ ability to support their children in their academic development (p. 198). These findings imply that parents are instrumental in the career development of their children and adolescents suggesting that we can improve children’s aspirations by increasing parent aspirations at all levels of SES.

Overall, researchers propose that parental expectations, both explicit (Cohen, 1987; Hossler & Stage, 1992; Rhea & Otto, 2001; Trusty & Niles, 2004) and perceived (Bandura et al., 2001; Looker et al., 1983; Mau & Bikos, 2000; Trusty & Pirtle, 1998), may influence the educational and occupational aspirations of their children. It remains unanswered whether parental expectations affect educational/career aspirations and expectations when adolescents are preparing to make occupational decisions and how this will influence the occupational attainment of children. Parents’ expectations are especially important for individuals of low SES (Elder, 1999). Juang and Vondracek (2001) found that parents who held higher educational expectations for their children had children who were more likely to go on to post-secondary education. Therefore, it is of great importance to understand whether parents’ expectations are related to educational expectations of the children, with the goal of developing methods of increasing educational expectations and reducing the likelihood of compromise.

Self-efficacy.

Diemer and Ali (2009) suggested “self-efficacy beliefs and outcome expectations are postulated to have a direct impact on the development of vocational interests which in turn drive vocational goals” (p. 255). According to Bandura et al. (2001), self-efficacy is thought to be important because “beliefs are influential in occupational development and pursuits” (p. 188) with individuals who possess higher beliefs in their abilities also aspiring to higher levels of education and occupational pursuits. Bandura et al. propose that it was not the children’s academic ability as much as their thoughts (self-efficacy) about their academic ability that influenced their career aspirations and expectations.

Researchers have examined the role of self-efficacy in the career development of adolescents. For example, Ali, McWhirter, and Chronister (2005) found a significant relationship between vocational self-efficacy and vocational outcome expectations. Additionally, Hannah and Kahn (1989) studied the effect of SES and gender in the occupational selection of seniors in high school (173 females and 166 males). Students indicated both their parents’ occupations and their own aspirations for the future. Self-efficacy expectations were measured for 20 specific occupations that were classified as female- and male-dominated. SES was determined using the measure of the highest parental socio-economic index and was classified into low, medium, and high categories. Hannah and Kahn found that students aspired to jobs that have an SES level similar to their current level of SES. Furthermore, regardless of the occupation, individuals of low SES held lower self-efficacy expectations for occupations of all levels of prestige. The research by Hannah and Kahn demonstrates the importance of exploring self-efficacy as

it relates to career expectations and the transmission of social class among individuals of various levels of SES.

Previous research has found that self-efficacy is related to the development of career aspirations and expectations (Bandura et al., 2001; Diemer & Ali, 2009). Further investigations have found that individuals of lower socio-economic status exhibit decreased levels of self-efficacy in making vocational decisions (Ali et al., 2005; Hannah & Kahn, 1989). According to Armstrong and Crombie (2000) future research would benefit from the investigation of factors related to career compromise including components of self-concept, which would include self-efficacy, in order to understand the variables that “mediate the magnitude of discrepancy between career aspirations and expectations” (p. 96).

Aligned expectations.

Aligned expectations, when the aspired level of education matches the education required for the job aspired to (Schneider & Stevenson, 1999), have been studied in children and adolescents as they make plans for the future. Blackhurst and Auger (2008) studied the educational and occupational aspirations of children in the first, third, and fifth grades (wave 1), and then interviewed them two years later (wave 2) ($N=115$) to observe how their aspirations/expectations had progressed. Researchers asked participants questions about their educational and occupational aspirations for the future, along with general questions about post-secondary education. Occupational aspirations and expectations were coded for both gender traditionality and whether or not they required post-secondary or a post-baccalaureate degree based on information obtained from the Occupational Outlook Handbook (U.S. Bureau of Labor Statistics, 2006). The

results indicated that participants were not accurate in their estimation of the need for a college degree to obtain their aspired occupation with 76% of individuals in wave 1 suggesting that a college degree was necessary when in actuality only 38% of the respondents needed a college degree to obtain their desired position. Two years later, 41% of the aspired occupations required a degree, but 83% of the participants suggested that a degree was necessary for their desired occupation. There were no significant effects of gender on accuracy of these estimations.

Blackhurst and Auger's (2008) study provides an important investigation of the accuracy of children's views on whether their aspired occupation requires post-secondary education. The results demonstrate that overall children are not very accurate in understanding the steps necessary to obtain their aspired career. Although participants were asked for both their occupational aspiration and expectation it is unclear from the analysis whether students' understanding of the need for a college education differed between expectations and aspirations. Furthermore, there was no investigation of whether social class was related to students' accuracy. The accuracy of children and early adolescents' understanding regarding the levels of education required for their future careers is important, given information suggesting that individuals decide whether or not to attend college by the time they enter high school (Hossler & Stage; 1992).

In addition to studying the accuracy of children, research has further inquired into how adolescents view the relationship between education and their occupational goals for the future. Shepherd Johnson (2000) studied the perceptions of the relevance of school in the development of occupational plans among adolescent students. The researcher administered a pen and paper interview questionnaire to a sample consisting of 389 sixth

and ninth grade students enrolled at a middle class suburban school district. Shepherd Johnson found that overall students lacked an understanding of the knowledge and skills necessary for their aspired occupation. From the analysis it was unclear as to whether students' educational aspirations and expectations matched their occupational aspirations and expectations, as well as whether students were accurate in identifying the education required for their future occupations. This research begs the question of how students' accuracy in understanding the steps for obtaining their aspired and expected career may differ among individuals of different levels of SES.

Although it has been proposed that there is a strong relationship between occupational expectations and educational attainment, (Jacobs et al., 1991; Rojewski & Kim, 2003) there is a need to identify how "occupational expectations may influence educational expectations" (Goyette, 2008, p. 464). Goyette used three data sets (High School and Beyond, 1980, National Educational Longitudinal Study 1990, and Educational Longitudinal Study, 2002) to study the relationship between educational and occupational aspirations and the future educational and occupational attainment. The author investigated individuals who possessed bachelor's degrees. SES was measured by the highest level of education obtained by their parents. Occupational expectations were measured by asking students in the 10th grade what job they would like to have at age 30, with each job classified into 14 Census categories and the percentage of individuals in each category possessing a bachelor's degree computed. Additionally, Goyette controlled for demographic characteristics, students' tests scores, and school characteristics.

The results of Goyette's (2008) study suggest that over time, the students' educational and occupational expectations have increased, substantiating the research of Schneider and Stevenson (1999) who found that the participants were "highly ambitious, with over 90% expecting to attend college and over 70% expecting to work in professional jobs" (p. 5). In addition, it appears that parents' education level and students' occupational expectations may be less related to their educational plans than they were in earlier cohorts. The findings led Goyette to speculate that there may be a disconnect between the educational and occupational plans, demonstrating a rationale for examining students' accuracy in understanding the education required for their aspired and expected occupations.

It is imperative to understand the lack of congruence between educational and occupational plans described by Goyette (2008). Schneider and Stevenson (1999) utilized data from the Alfred P. Sloan Study of Youth and Social Development to investigate whether participants' aspired level of education matched the education required for the job (as determined by U.S. Census Bureau Information). The results indicate that only 43% of the participants have aligned ambitions with 40% aspiring to greater levels of education than those needed for their job and 16% expecting to obtain fewer years of education than those needed for their job.

Schneider and Stevenson (1999) went on to investigate the relationship between families and schools in the alignment of expectations. According to the authors, aligned expectations are important because they assist adolescents in making "meaningful choices" and they propose that adolescents with aligned expectations are in a better position to make their occupational dreams a reality by better preparing themselves for

the post-high school transition. Schneider and Stevenson further suggest that parents are instrumental in this process, providing the rationale for investigating whether there is a difference in aligned expectations among individuals of varying SES, further examining the relationship between aligned expectations and educational expectations.

Prior research has found that children (Blackhurst & Auger, 2008) and adolescents (Goyette; 2008; Schneider & Stevenson, 1999; Shepherd Johnson, 2000) are not very accurate in identifying the skills and level of education required for their expected careers. The established relationship between educational expectations and occupational attainment (Andres et al., 2007; Dubow et al., 2009; Hill et al., 2004; Jacobs et al., 1991; Ou & Reynolds, 2008; Rojewski & Kim, 2003) provides a foundation for further understanding the level of education required for their desired occupation. This may, in turn, influence adolescents' aspirations to attend college, as well as their occupational aspirations, expectations, and likelihood of compromise. The current study examined the accuracy of participants in identifying the requirements necessary for their aspired and expected careers, as well as whether accuracy differs by SES and influences the likelihood of compromise.

Control variables: academic achievement, grade, and gender

The goal of the current research was to investigate the relationship between SES and career outcomes after controlling for academic achievement. In a longitudinal study of participants obtained from the National Education Longitudinal Study of 1988 (NELS: 88) database Rojewski and Yang (1997) found that academic achievement, measured by standardized reading, mathematics, and science achievement scores, and self-evaluation, composed of self-esteem and locus of control measures, had significant influences on

both educational and occupational aspirations. Moreover, it was suggested that “the best predictor of occupational aspirations was academic performance” (Rojewski, 2005, p. 147). Similarly, Mau and Bikos (2000) found that academic ability, measured using a composite of a 21-item reading test and a 40-item math exam developed by Educational Testing Services was a predictor of both educational and occupational aspirations. Similar to protocols used by several research groups (Beal & Crockett, 2010; Goyette, 2008; Mello, 2008; Trusty & Harris, 1999), academic achievement was controlled in an attempt to understand the effect of social class over and above the contribution of academic achievement.

In addition to academic achievement, grade level and gender differences were controlled for in the current study. The research on grade level and gender differences in career expectations is inconclusive. McNulty and Borgen (1988) found no significant differences based on gender or grade level among 8th-12th graders in agreement between aspirations and expectations. In contrast, Mello (2008) found that the educational and occupational expectations of females exceeded those of their male counterparts after controlling for differences in academic ability (p. 1077). Grade level and gender were controlled for in the current study pending results of preliminary analysis suggesting significant grade level and or gender differences in the outcome variables of educational expectations, career expectations, and likelihood of career compromise similar to protocols utilized by Beal and Crockett (2010).

Purpose of the Study

In summary, classic attainment models as proposed by Blau and Duncan (1967) suggest that social class is transmitted either directly as indicated by an association

between parents' occupation and occupation of the child, or indirectly when parents' social status is transmitted through the educational attainment of the child, which then in turn influences the occupational attainment of the child. The current study investigated whether SES is directly or indirectly predictive of career expectations of adolescents. Although the transmission of social class has been established, there is a need to investigate the processes by which class is transmitted from generation to generation. In an attempt to look at possible mechanisms in the transmission of social class, the study investigated the relationship between SES and the likelihood of occupational compromise among adolescents, as proposed by Gottfredson (1981).

The Wisconsin Model of Status Attainment (Sewell et al., 1969; Sewell et al., 1970) suggests that educational attainment is the strongest predictor of occupational attainment, yet factors underlying educational expectations are not fully understood. The current study researched the relationship between parents' expectations, self-efficacy, and aligned expectations and the educational expectations of adolescents. Then it further examined whether parents' expectations, self-efficacy, and aligned expectations are related to educational expectations of adolescents among individuals of varying SES levels, with the goal of understanding whether increasing these factors can result in less career compromise among adolescents. This finding may provide a potential mechanism for understanding how intergenerational transmission of social class takes place.

CHAPTER III

METHODOLOGY

Overview

The current research was a correlational study that investigated the relationships among parents' social class and the intergenerational transmission of occupational expectations and likelihood of career compromise among adolescents. Social class information was obtained from a demographic questionnaire given to the parents of participants. The study then incorporated a survey that consisted of asking students questions about their educational expectations, occupational aspirations, and occupational expectations. Following the completion of the group-administered survey, participants completed a measure of educational and vocational self-efficacy. A separate logistic regression was used to examine the direct relationship between SES and educational expectations and likelihood of career compromise. Hierarchical linear regression was used to investigate the direct relationship between both social class and educational expectations and the child's career expectations, as well as the relationship between parental expectations, self-efficacy, and aligned expectations in the prediction of educational expectations. Further multivariate analyses were conducted to determine if educational expectations mediates the relationship between SES and career expectations and likelihood of compromise.

Participants

Participants were students from school districts in which superintendents and

principals allowed me, the researcher, to conduct the study. Initial contact was made with the Directors of Assessment and Instruction and District Superintendents to obtain their permission to conduct the study in their school system. Final permission was obtained and follow up took place with principals and individual classroom teachers agreeing to be involved in the study. Letters of consent informing parents about the study, as well as asking their permission to allow their child to participate, were disseminated by classroom teachers. Only participants whose parents or legal guardians signed the consent form and those students who signed an assent form at the time of the study were allowed to participate. Prior to data collection, IRB approval was obtained from the University of Northern Colorado.

Parental release forms were sent home to 640 parents with a response rate of 33%. Nine surveys were missing substantial data and were not included in the analysis. The final sample consisted of 200 students (108 females and 92 males) in the 10th-12th grades from two schools located in cities located in the Rocky Mountain Region of the United States. Among the participants 28 were in the 10th grade, 57 were in the 11th grade, and 115 were in the 12th grade. The average GPA among participants was 3.36 on a four-point scale; whereas, participants were 15 to 19 years old with an average age of 17.3. One hundred and two of the participants were from a high school of 1,800 students located in a community of approximately 40,000 people whereas 98 of the students were from a high school of 1,500 students in a community of 55,000 residents.

In the current sample, mothers' and fathers' education level ranged from high school or less up to PhD/professional degree with both mothers' and fathers' education levels averaging slightly above a two-year/associates degree. Mothers' occupation level

ranged from 22 (house cleaner) to 74 (college professor) with an average of 51.32.

Examples of occupations with a prestige score of 51-52 include electricians, business and promotion agents, social workers, and drafting occupations. Fathers' occupation ranged from 23 (food service worker) to 87 (surgeon) with an average of 54.49 similar to the prestige score of occupations such as: construction supervisors, forestry and conservation scientists, preschool and kindergarten teachers, librarians, and technical writers.

Instrumentation

Measures Completed by Parents: Socio-economic Status (SES)

Social class information was obtained from a demographic form completed by parents consisting of: mother's educational status, mother's occupation, parent's marital status, father's educational status, and father's occupation. This demographic form was sent home along with the study consent form. For this study, parents' socio-economic status was measured by collecting data on parents' education and occupation. The protocols utilized in the current investigation are consistent with what has been done in the career development literature by Hitlin (2006) and similar to methods utilized by other research groups (Diemer & Ali, 2009; Haller & Virkler, 1993; Hanson, 1994; Hill et al., 2004; Mello, 2009; Pirtle & Trusty, 1998; Rojewski & Yang, 1997; Sewell et al., 1969). Parents' education and occupations were converted to z-scores and standardized with a mean of 0 and a standard deviation of 1 based on protocols previously utilized by researchers in the field (Mello, 2009; Rojewski & Yang, 1997; Sewell et al., 1969). A factor analysis was completed investigating parents' education and parents' occupation, to determine whether the variables should be treated as one composite SES variable. The results of the factor analysis indicated that all four standardized measures loaded on one

factor with a Cronbach's alpha of .76. Z-scores were averaged to form a composite SES variable that was used in the study (Hill, 2004).

Measures Completed by Parents and Students:

Educational expectations/parent educational expectations.

Educational expectations reflect the intended educational level of the child (Andres et al., 2007). Parents' educational expectations represent the level of education the parents would like their children to obtain; whereas, perceived parental educational expectations represent the level of education children think their parents ideally would like them to achieve. In the current study, both parents' expectations and perceived parental expectations were measured. Parental educational expectations, parents' educational level, child's educational expectations, and expected level of education required for the aspired and expected occupation were coded on a six point scale ranging from high school education or less (1), some college (2), two year or technical degree (3), bachelor's degree (4), master's degree (5), and PhD or Professional degree (6) similar to protocols used by Hossler and Stage (1992). Parental educational expectations consisted of the parents' expectation designated by the parent completing the demographic form, a procedure previously utilized in studies measuring parents' expectations with adolescents (Cohen, 1987; Hossler & Stage, 1992; Trusty & Niles, 2004). In the current sample, the correlation between parents' expectations and perceived parental expectations (the students' perceptions of the education their parents would like them to obtain) was $r=.76$ supporting the findings of Looker and Pineo (1983) that perceived parents' expectations are strongly related to parents' expectations. Based on the high correlation between perceived parents' expectations and parents' reported expectations of the student;

perceived parental expectations were used in the current investigation similar to protocols utilized by previous researchers (Bandura et al., 2001; Mau & Bikos, 2000; Trusty & Pirtle, 1998).

Measures Completed by Students

Occupational aspirations/expectations.

Occupational aspirations represent the occupation that an individual would ideally like to pursue; whereas, occupational expectations are the occupations that individuals actually envision themselves pursuing in the future. Questions about occupational aspirations and expectations were based on protocols previously used by Looft (1971). Questions included the following:

What do you really want to be when you grow up? (measure of occupational aspiration)

What do you really think you will be when you grow up? (measure of occupational expectation)

I coded the occupations for their level of social prestige (Nakao & Treas, 1994), similar to protocols used by Dubow et al. (2009), Rojewski (1995), Rojewski and Kim (2003), and Schoon (2001) with potential scores ranging from ranging from 11 (panhandler) to 87 (surgeon). Only individuals giving an occupation were coded. This analysis was based on categories of occupational aspirations used with similar age students by Cook et al. (1996) and Hill et al. (2004). Several steps were taken to ensure reliability of scores used in the current study. Prestige scores were based on the NORC/GSS Occupational Prestige Scale (Nakao & Treas, 1994). This scale has been used previously to measure career aspirations and expectations of adolescents (Cook et

al., 1996; Hill et al., 2004). When individuals reported two occupations for aspirations and expectations the scores were averaged parallel to protocols established by Hill (2004).

In attempt to ensure reliability, I, as well as a trained career counselor, coded the participants' responses. After coding for 10 participants, we verified our consistency and if the agreement was at least 80% we continued with the coding. The overall interrater consistency was 94 % for career aspirations and 91% for career expectations. After all responses had been coded discrepancies were evaluated by a third party at which time a final decision was made.

Career compromise.

Career compromise was indicated on a dichotomous scale comparing expected and aspired occupations, measured by prestige scores (Nakao & Treas, 1994). If the occupational level of career aspirations was not equal to the occupational level of career expectations; specifically when aspirations were greater than expectations (Gottfredson, 1981; Hesketh et al., 1990; Rojewski, 1995; Rojewski, 2005), then career compromise was determined and indicated with a score of 1. In contrast, individuals whose occupation expectations matched their aspirations, or when expectations exceeded aspirations, then they were given a score of 0 for career compromise. Although not part of the research hypothesis, congruence (when aspirations equaled expectations) and total incongruence (all instances where aspirations did not equal expectations) were also dichotomously scored with 1 indicating congruence/incongruence and 0 for all other responses.

Self-efficacy.

Self-efficacy was measured using the Vocational/Educational Self-Efficacy Scale (VESES; Ali et al., 2005; Ali & Saunders, 2006; Ali & Saunders, 2009). The VESES is a 21-item instrument designed to measure an individuals' beliefs in their abilities to complete tasks preparing for post-secondary education and the workforce. Each question consists of a nine-point Likert scale ranging from (1) no confidence to (9) complete confidence and has previously been used with adolescents of various SES levels (Ali et al., 2009) with a Cronbach's alpha of .92. In the current study, the overall Cronbach's alpha for the VESES total score was .88. According to Ali et al. (2009) "Ali and Saunders (2006) provided evidence for concurrent validity by reporting the bivariate correlation between the VESES and Vocational Skills Self-Efficacy Scale (McWhirter, Rasheed, & Crothers, 2000) as .76 ($p < .001$)" (p. 178). The total score on the VESES was used as a measure of participants' vocational/educational self-efficacy.

Aligned expectations.

Aligned expectations investigated whether participants' aspired level of education matched the actual education required for the job (Schneider & Stevenson, 1999). I coded occupational expectations using Nakao and Treas (1994) prestige scores. Actual educational level for the expected job was determined using training required as indicated by the *Occupational Outlook Handbook* (Bureau of Labor Statistics, 2010) and the Occupational Information Network (O*NET) (US Department of Labor/Employment and Training Administration, 2010). Aligned expectations were determined when the level of education expected to complete matched the amount of education required for the occupation. Aligned expectations were dichotomously scored with participants whose

expected education matches the level of education required for the occupation receiving a 1 and those whose expected education did not equal the amount of education required for the job receiving a score of 0.

Academic achievement.

Previous research has examined the relationship between academic achievement and career aspirations (Creed et al., 2007; Phipps, 1995). Similar to protocols used by other researchers (Beal & Crockett, 2010; Goyette, 2008; Mello, 2008; Trusty & Harris, 1999), academic achievement was controlled for in the current study. Academic achievement was measured by the students' self-report of cumulative GPA.

Procedures

I solicited potential participants from school districts allowing me to conduct the study. Parental release forms were sent home to potential participants along with a demographic information sheet consisting of student's ID # (given by the school), grade level, gender, ethnicity, mother's educational status, mother's occupation, father's educational status, father's occupation, and parents' educational expectations for their children. Only students returning the signed parental consent forms and assent forms were allowed to participate. Participating schools were given the option of having the students complete the instruments in class (option a), having all students with signed release forms complete the instruments in the school auditorium (option b), or having students complete the study during their homeroom (option c). Students whose parents did not give consent and those students not giving assent were given an alternate career exploration activity by the classroom teacher. Students participating in the study at all grade levels were administered a survey consisting of a series of questions designed to

understand their educational and career aspirations and expectations along with their perception of the aspirations their parents have for them. The study concluded with a measure of the students' career and educational self-efficacy. Following the conclusion of the study, I verbally debriefed participants and thanked them for their time. Student identification numbers were used to link student questionnaires to the demographic information provided by the parents.

Data Analysis

Basic descriptive statistics and correlations were computed on the outcome variables of educational expectations, career aspirations, career expectations, likelihood of compromise, self-efficacy, parents' expectations, and aligned expectations. In addition, a two-way ANOVA was conducted to determine if there were any grade level and gender differences on the outcome variables of career and educational expectations. A chi-squared analysis was completed to see if there were grade level or gender differences in likelihood to compromise career plans. Significant differences in career/educational expectations and/or compromise by grade level and gender were controlled for in subsequent regression equations and mediation analysis.

Assumptions for ANOVA include independence of observations, normal distribution, and equal variances (Gravetter & Wallnau, 2002). Although the study did not consist of a random sample, true independence cannot be assumed; however, I attempted to address the independence assumption by including students from different classrooms and schools. Normality was investigated using histograms and the results

suggest normal distributions among the dependent variables. Equal variances were tested using Levene's test for equal variances.

The main assumption for the chi-squared test of independence includes independence of observations (Gravetter & Wallnau, 2009). According to Gravetter and Wallnau a chi-squared test should not be performed when any cell has an expected frequency of less than 5. The current study had four cells (two grade levels with two categories: yes and no) which all had expected frequencies of greater than 5.

Separate logistic regressions were used to examine the direct relationship between SES and educational expectations and likelihood of career compromise (research questions 2 and 4). Logistic regressions were tested for the following assumptions: that the dependent variable is dichotomous, independence of observations, specificity, exclusivity, and adequate sample size (Wright, 1995). The dependent variable was whether or not students' occupational expectations were less than their occupational aspirations and was coded 1 for compromise and 0 for non-compromise. Participants either had a score of 1 or 0 thus meeting the exclusivity assumption. Independence was investigated by analyzing the residual plot of observed vs. predicted residuals. Based on the exploratory nature of the investigation of career compromise, not all predictors of career compromise are known but I included two variables proposed to be related to career compromise (SES and educational expectations) in an attempt to meet the specificity requirement albeit acknowledging that there may be other possible variables to include. According to Wright (1995) "in practice the specificity assumption is rarely met" (p. 220).

Hierarchical linear regression was used to investigate the direct relationship between social class, educational expectations, and the child's career expectations, as well as the relationship between parental expectations, self-efficacy, and aligned expectations in the prediction of educational expectations. Data analyses of regression models were carried out using listwise deletion. Hierarchical regression was used to address the following issues: a) the relationship between social class and career expectations (research question 1), b) whether educational expectations explain career expectations (research question 3), and c) whether parental expectations, self-efficacy, and aligned expectations are related to expected education, with each variable being entered in the second step, after controlling for academic ability and gender (research question 5). The desired sample size of 109 participants would allow for the detection of a medium effect size ($R^2=.13$) for the eight exploratory variables in the study with a power of Power of .80 ($\alpha=.05$) (Green, 1991) for one SES variable. Sample size is based on Green's (1991) new rule of thumb, which takes into account number of predictors and effect size.

Multiple linear regression analysis was tested for the following assumptions: linearity, independence, normality of residuals, and equal variances (Montgomery, Peck, & Vining, 2001). A histogram was used to look for normality of the residuals. Furthermore, an examination of the residual plot and supplementary analysis of levels of skewness and kurtosis found slight deviations but none large enough to deviate from the assumption of normality (Tabachnick & Fidell, 1989). Equal variances, linearity, and independence were investigated by examining the residual plot of "predicted values of the dependent variable and standardized residuals" with "points clustered along the

horizontal line defined as $\Lambda_i = 0$ in a somewhat rectangular pattern” (Mertler & Vannatta, 2005, p. 173) indicating no major violations of the assumptions. Furthermore, when conducting multiple linear regressions it is assumed that all variables are measured without error (Licht, 1995). I addressed the previously mentioned assumption by incorporating procedures to examine the reliability and validity of measures used in the study. After checking for assumptions and noticing no significant violations, I proceeded with the analysis.

Separate regression analyses were conducted to examine the direct effects of SES and educational expectations on career expectations and likelihood of compromise as well as factors predicting educational expectations. Prior to the analysis, ANOVAs were conducted to determine if there were gender or grade level differences for each of the outcome variables. If significant differences existed then these variables were controlled along with academic achievement, in the first step of the hierarchical regression. Contingent on the research question, SES or educational expectations were entered in the second step of the analysis to determine if the variables significantly explained variance in career expectations and likelihood of compromise. For regression analysis explaining educational expectations, academic achievement was entered in the first step with perceived educational expectations self-efficacy, and educational expectations entered in the second step.

For all statistical tests, a Bonferroni adjustment was made by dividing .05 by the number of tests conducted (Glass & Hopkins, 1996). A significance level of $.05/5$ (.01) was used to test for the five hierarchical regression analyses utilized to examine direct effects (research questions 1-5). For regressions used in mediation analysis, a p value of

.05/4 (.0125) was used to indicate statistical significance. To ensure that independent variables were not highly correlated, all variables were tested for multicollinearity as indicated by variance inflation factors (VIF). VIFs exceeding ten (Mertler & Vannatta, 2005) as well as variables correlated at a level exceeding $r=.8$ were further investigated and possibly eliminated as suggested by (Licht, 1995).

Mediation analysis was conducted to determine if there is an indirect relationship among social class, educational expectations, and career expectations (research question 6) with educational expectations mediating the relationship between social class and career expectations. A second mediation analysis was completed to determine if educational expectations mediates the relationship between social class and likelihood of compromise (question 7). In addition, I investigated whether the relationship between social class and career expectations and likelihood of compromise is mediated by parents' expectations, self-efficacy, and aligned expectations (research questions eight and nine). According to Baron and Kenny (1986), testing for mediation involves three separate regression analyses; "first, regressing the mediator on the independent variable; second, regressing the dependent variable on the independent variable; and third, regressing the dependent variable on the both independent variable and on the mediator" (p. 1177). In order for mediation to take place the analysis must meet the following three conditions "(1) the independent variable must affect the mediator in the first equation, (2) the independent variable must affect the dependent variable in the second equation, and (3) the mediator must affect the dependent variable in the third equation" (p. 1177). Assumptions of mediation include all of the standard regression assumptions, including a lack of substantial measurement error, and that there is no causal relationship between the

dependent variable and the mediator (Baron & Kenny, 1986). These two assumptions reflect potential threats to the reliability and validity of the analysis. In order to ensure that the measurement of mediator variable is reliable, all codes were verified by a career counselor who served as an additional coder. The use of educational expectations as a mediator for the relationship between SES and occupational expectations is based on previous research by Dubow et al. (2009), Hill et al.(2004), Jacobs et al.(1991), and Sewell et al. (1969). According to MacKinnon, Warsi, and Dwyer (1995) single mediator models are adequate with samples sizes of approximately 50 participants; whereas, multiple mediator models require sample sizes of at least 100 (Stone & Sobel, 1990) in order to accurately detect standard error as cited by MacKinnon, Fairchild, and Fritz (2007). In an attempt to understand the role of social class as it explains both career expectations and likelihood of compromise, mediation analysis was conducted. Full models explaining career expectations and likelihood of compromise (including both direct and indirect effects), consisting of 10 independent variables would need 117 participants to detect a medium effect size with of power of .80 (alpha=.05) (Green, 1991).

CHAPTER IV

RESULTS

Basic descriptive statistics and correlations were computed on the outcome variables of educational expectations, career aspirations, career expectations, likelihood of compromise, self-efficacy, perceived parents' expectations, and aligned expectations. Career aspirations ranged from 25.41 to 87 with a mean of 61.53 whereas career expectations ranged from 28.07 (prep cook) to 87 (surgeon) with a mean of 59.58. To provide clarity in understanding the average career expectations among the sample, examples of careers with prestige scores ranging from 59-60 include mining engineers; managers, marketing, advertising, and public relations; editors and reporters; police and detectives; and licensed practical nurses.

Of the participants, 115 (62%) listed the same occupation for both their career aspiration and expectation. In terms of career compromise, 46 (25%) of the participants aspired to a career of higher prestige than the career they expect to have whereas 13% of the participants ($n=24$) expect to have an occupation of greater prestige than the career they aspire, bringing the total number of incongruent students to 70 (38%). Self-reported measure of educational/vocational self-efficacy, as measured by the VESES (Ali et al., 2005; Ali & Saunders, 2006; Ali & Saunders, 2009), ranged from 68 to 162 with a mean of 128.75. Student educational expectations, perceived parental educational expectations, and parents' educational expectations ranged from a high school education to a PhD or

professional degree with a mean for student educational expectations of 4.35, parental expectations of 4.25, and students' perceived parental educational expectations of 4.20 (Table 1). The results indicate that on average parents and students are expecting the participants to obtain at least a bachelor's degree. The results of the study indicate that 98 (53%) have aligned expectations such that their educational expectations match the amount of education required for the job they expect to have. In contrast, 64 respondents (35%) plan to complete more education required for the job they expect to obtain whereas 24 (13%) are planning to complete education that will not adequately prepare them for the career they expect to have.

Table 1
Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Academic Achievement	195	3.36	0.58	1.48	4
Career Aspirations	187	61.53	12.07	25.41	87
Career Expectations	185	59.58	11.97	28.07	87
Parental Educational expectations	195	4.25	1.12	1	6
Self-Efficacy	197	128.75	18.25	68	162
SES	199	-0.015	0.78	-1.63	1.76
Student Educational Expectations	199	4.35	1.12	1	6
Student Perceived Parent Educational Expectations	199	4.2	1.05	1	6

After controlling for academic achievement, career expectations were positively correlated with the following: educational expectations $r(178) = .482, p < .001$, parents' educational expectations $r(177) = .382, p < .001$, and student perceived parental educational expectations $r(178) = .395, p < .001$. Individuals with higher career

expectations were more likely to have increased educational expectations, parents' educational expectations, and student perceived educational expectations. Educational expectations were positively correlated with the following: career expectations $r(178) = .482, p < .001$, parents' educational expectations $r(187) = .714, p < .001$, student perceived parental educational expectations $r(191) = .759, p < .001$, and SES $r(191) = .248, p < .001$. Career Compromise was negatively correlated with career expectations $r(178) = -.251, p < .001$ with career compromise being more likely among individuals with decreased levels of career expectations (Table 2). Significance level for all correlations was based on a Bonferroni adjustment with a p value of $.05/.8 (0.006)$ indicating significance.

Two-way ANOVAs were conducted to determine if there were any grade level and gender differences in the outcome variables of career and educational expectations. The results of a two-way ANOVA investigating career expectations indicated there were no significant main effects of gender and grade level, and no interaction effect. For educational expectations there was a significant main effect of gender, $F(1,193) = 5.713, p = .018, d = .372$ (females Mean = 4.54, $SD = 1.12$ and males Mean = 4.13, $SD = 1.08$). In the current sample, females expected to have greater levels of educational attainment than their male counterparts. Results of two separate Chi-square tests of independence indicate no significant relationship between gender, grade level, and likelihood of compromise.

Table 2
Correlations

	Career Expectations	Student Educational Expectations	Compromise	Gender	Parent Educational expectations	Student Perceived Parent Educational expectations	Aligned Expectations	Self-Efficacy	SES
Career Expectations		.48**	-.25**	.03	.38**	.40**	.11	-.06	.16*
Student Educational Expectations			-.03	-.1	.71**	.76**	-.1	.17*	.25**
Compromise				.05	-.1	-.08	-.05	.05	.01
Gender					.03	.05	.11	.13	.14
Parent Educational Expectations						.76**	-.03	.04	.36**
Student Perceived Parent Educational Expectations							-.08	.13	.35**
Aligned Expectations								.08	.08
Self-Efficacy									.12
SES									

Note. Data displayed represent correlations after controlling for academic achievement.
*Significant at $p < .05$, **Significant at $p < .001$

Direct Relationship

Q1 What is the degree to which social class (SES) explains adolescents' career expectations?

A Hierarchical regression analysis was conducted to determine whether SES explained variance in adolescents' career expectations. Academic achievement was added in the first step, $F(1, 178) = 18.592, p = .001, R^2 = .095$. Once SES was added in the second step of the regression analysis the R^2 increased by .020 for a, once again, statistically significant model, $F(2, 177) = 11.487, p = .001, R^2 = .115$. A significance level of .05/5 (.01) was used to test for the five hierarchical regression analyses utilized to examine direct effects. Standardized beta weights suggest that academic achievement (the control variable) was a significant explanatory variable of career expectations $\beta = .262, p = .001$. In contrast SES did not significantly explain career expectations $\beta = .150, p = .045$ (Table 3) suggesting that individuals level of career expectations are not reflective of their social class.

Table 3
Hierarchical Regression Explaining Direct Effects of SES on Career Expectations

Model		Standardized betas	t-statistic	p value
Step 1	Academic Achievement	.308	4.312	.001
	Academic Achievement	.262	3.533	.001
Step 2	SES	.150	2.015	.045

Notes: $R^2 = .095, p = .001$ for Step 1; R^2 for Step 2 increased by .020; $R^2 = .115, p = .001$ for Step 2

Q2 What is the degree to which social class (SES) explains adolescent's compromising of career expectations?

A logistic regression analyses was conducted to determine whether SES explained variance in adolescents' career compromise. After controlling for academic achievement,

the overall model investigating whether SES was a significant exploratory variable of career compromise was not significant, $X^2(2, N=180) = 5.381, p=.068$. Odds ratio suggest only the control variable (academic achievement) was significantly related to likelihood of career compromise (Table 4). As academic achievement increases the likelihood of compromise decreases by .5 thus individuals who compromise expectations are likely to have GPA's a half a point below their counterparts who have aligned expectations.

Table 4
Logistic Regression Explaining Direct Effects of SES on Career Compromise

	B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
Constant	1.243	1.02	1.484	1	.22	3.467		
Academic Achievement	-0.694	0.305	5.18	1	.02*	0.5	0.275	0.908
SES	0.062	0.235	0.07	1	.79	1.064	0.672	1.686
Model Chi-Square	5.381							
-2LogL	199.228							
Nagelkerke R Square	0.043							
N	180							

* $p < .05$, ** $p < .001$

Note. The dependent variable was coded 1 if participants indicated compromise (when career aspirations exceeded career expectations) and 0 when career aspirations were either equal to or lower than career expectations.

Q3 Do educational expectations explain an adolescent's career expectation?

A hierarchical regression analyses was conducted to determine the direct effect of educational expectations on career expectations. In the first step, academic achievement was added, $F(1, 179) = 19.796, p = .001, R^2 = .100$. To investigate whether educational expectations explained career expectations beyond the contribution of academic achievement, the career expectations variable was added in the second step. The overall model was significant, $F(2, 178) = 38.515, p = .001, R^2 = .302$ with an R^2 increase of .202.

Standardized beta weights suggest that educational expectations was a significant exploratory variable of career expectations, $\beta=.483$ $p = .001$ (Table 5) with individuals aspiring to higher levels of education expecting to have careers of greater prestige.

Table 5
Hierarchical Regression Explaining Direct Effects of Educational expectations on Career Expectations

Model		Standardized betas	t-statistic	p value
Step 1	Academic Achievement	.316	4.449	.001
Step 2	Academic Achievement	.141	2.097	.037
	Educational expectations	.483	7.186	.001

Notes: $R^2=.100$ $p = .001$; R^2 for Step 2 increased by .202; $R^2=.302$ $p = .001$ for Step 2

Q4 Do educational expectations explain an adolescent's likelihood of career compromise?

A second logistic regression was completed to examine the direct effect of educational expectations on likelihood of career compromise. The overall model did not significantly explain career compromise, $X^2(2, N=181) = 4.83$, $p=.089$. Furthermore, students' educational expectations were not a significant exploratory variable of career compromise (Table 6).

Table 6
Logistical Regression Explaining Direct Effects of Educational expectations on Career Compromise

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
Constant	1.09	0.998	1.194	1	.27	2.976		
Academic Achievement	-0.584	0.306	3.648	1	.06	0.558	0.306	1.015
Student Educational expectations	-0.052	0.156	0.112	1	.74	0.949	0.699	1.289
Model Chi-Square	4.83							
-2LogL	200.367							
Nagelkerke R Square	0.039							
N	181							

* $p < .05$, ** $p < .001$

Note. The dependent variable was coded 1 if participants indicated compromise (when career aspirations exceeded career expectations) and 0 when career aspirations were either equal to or lower than career expectations.

Q5 What is the degree to which parental expectations, self-efficacy of adolescents, and aligned expectations explain variability in expected education?

A final hierarchical regression was performed to examine whether parental expectations, self-efficacy, and aligned expectations explain variance in expected education. Based on the results of an ANOVA indicating significant differences in educational expectations based on gender, both gender and academic achievement were controlled for in the regression analyses. After entering academic achievement and gender in the first step, the overall model was significant, $F(2, 175) = 12.293, p = .001, R^2 = .123$. In an attempt to understand whether educational expectations could be explained beyond the contribution of gender and academic achievement, parents' expectations, self-efficacy, and aligned expectations were entered in the second step, increasing the R^2 by .511 for an overall model of $F(5, 172) = 59.573, p = .001, R^2 = .634$. After accounting for a Bonferroni adjustment standardized beta weights suggest that

gender $\beta = -.171$ $p = .001$ and perceived parental expectations $\beta = .743$ $p = .001$ were significant exploratory variables of educational expectations (Table 7). The results suggest that being female and having greater perceived parental educational expectations are significant contributors of increased educational expectations for the adolescent.

Table 7
Hierarchical Regression Explaining Direct Effects of Aligned Expectations, Self-Efficacy, and Perceived Parent Expectations on Educational expectations

Model		Standardized betas	t-statistic	p value
Step 1	Gender	-.118	-1.592	.113
	Academic Achievement	.299	4.048	.001
	Gender	-.171	-3.490	.001
	Academic Achievement	-.023	-.426	.671
Step 2	Aligned Expectations	-.036	-.761	.448
	Self-Efficacy	.105	2.128	.035
	Perceived Parent Expectations	.743	14.694	.001

Notes: $R^2 = .123$ $p = .001$; R^2 for Step 2 increased by .511; $R^2 = .634$ $p = .001$ for Step 2

Mediation of Social Class Transmission

Q6 What is the degree to which expected education mediates the relationship between social class and career expectations?

In order for mediation to take place, there must be a direct effect of SES on occupational expectations. The direct relationship between SES and career expectations was not statistically significant; therefore, mediation analysis was unwarranted.

Additional analysis was conducted in an attempt to understand possible reasons for the lack of direct relationship between SES and career expectations and is included in the supplementary analysis section below.

Q7 What is the degree to which expected education mediates the relationship between social class and likelihood of career compromise?

Similarly, to the mediation of social class on career compromise, there was no direct relationship between educational expectations and likelihood of career compromise; therefore, mediation analysis was not conducted.

Q8 What is the degree to which parental expectations, self-efficacy, and aligned expectations mediate the relationship between social class (SES) and career expectations?

Mediation analysis cannot be conducted to test whether parental expectations, self-efficacy, and aligned expectations mediate the relationship between SES and career expectations due to the absence of a direct relationship between SES and career expectations.

Q9 What is the degree to which parental expectations, self-efficacy, and aligned expectations mediate the relationship between social class (SES) and likelihood of compromise?

Due to the lack of direct relationship between SES and likelihood of career compromise mediation analysis cannot be done to determine if parental expectations, self-efficacy, and aligned expectations mediate the relationship.

Supplementary Analysis

Relationship between SES and occupational expectations

The lack of direct relationship between SES and occupational expectations was contrary to my hypothesis. SES and career expectations were weakly correlated $r(178) = .163, p < .029$. Possible explanations for this finding will be discussed further in Chapter Five. There was, however, a direct relationship between SES and educational expectations, $\beta = .235, p = .001$ with individuals of higher SES expecting to obtain increased levels of education. Based on this relationship further analysis was performed

to see if aligned expectations, self-efficacy, or parental expectations mediate the relationship between SES and educational expectations. The second step in mediation requires there to be a significant relationship between the independent variable (SES) and the mediator (perceived parental expectations) $\beta=.326$ $p = .001$. Furthermore, the mediator (perceived parental expectations) was a significant exploratory variable of educational expectations $\beta=.769$ $p = .001$. When entering both SES and perceived educational expectations concurrently to explain educational expectations, SES was no longer significant $\beta=-.015$ $p = .770$, whereas, perceived parent expectations is a significant exploratory variable $\beta=.766$ $p = .001$ (Table 8).

Table 8

Hierarchical Regression Explaining Indirect Effects of Perceived Parent Expectations on the Relationship between SES and Educational Expectations

Model		Standardized betas	t-statistic	p value
Step 1	Academic Achievement	.284	3.930	.001
	Academic Achievement	.042	.852	.395
Step 2	SES	-.015	-.293	.770
	Perceived Parent Expectations	.766	14.713	.001

Notes: $R^2 = .60$, $p < .001$

I utilized the bootstrapping method (Preacher, & Hayes, 2008; Shrout, & Bolger, 2002) to measure the significance of the indirect effect of SES on educational expectations, with perceived parental expectations mediating that effect. The 95% confidence intervals, which ranged from (.21, .55), indicated that the mediator was significant since the confidence interval did not include 0 (Preacher & Hayes, 2008). Results of the mediation analysis are presented in Figure 1.

A second mediation analysis was conducted to see if self-efficacy mediates the relationship between SES and educational expectations. Although there was a significant relationship between SES and educational expectations, the relationship between SES

and self-efficacy was not significant, $\beta=.123$ $p = .089$; therefore, further analysis to measure mediation was not conducted. Similarly, there was no significant relationship between SES and aligned expectations.

Figure 1. Mediation of Educational Expectations

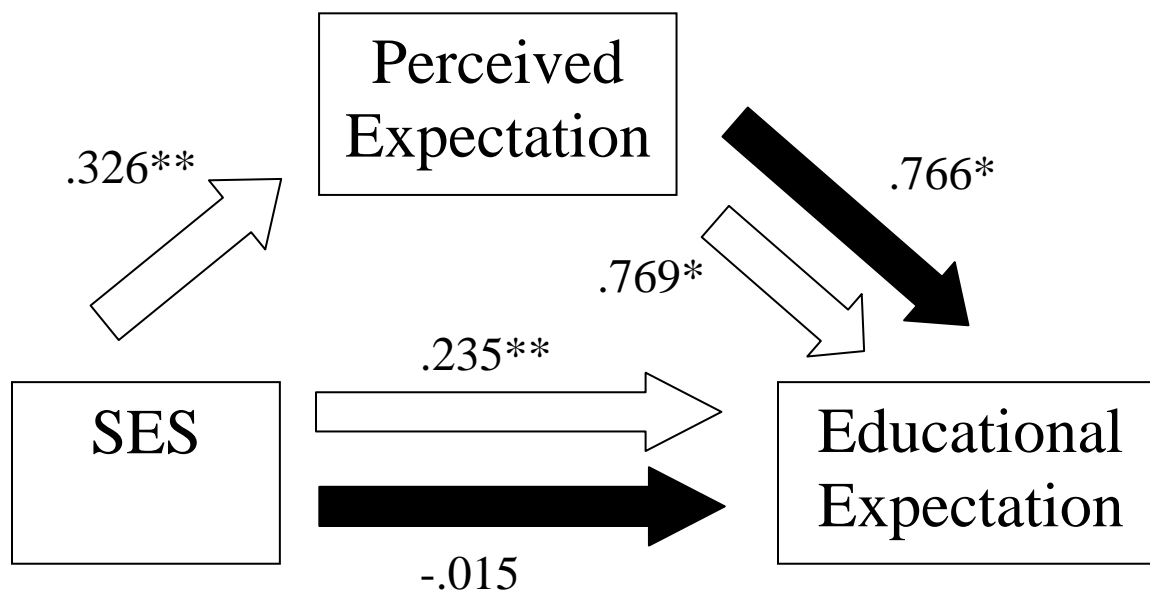


Figure 1. Mediation of Educational Expectations

Notes: * $p < .05$, ** $p < .001$

Standardized betas explaining educational expectations

Clear arrows represent initial analysis

Solid arrows represent results of mediation analysis

Exploratory variables of career compromise

As a result of the non-significant relationship between SES and career compromise, further analysis was performed in an attempt to understand the results. Additionally, separate t-tests investigating the relationship between SES levels and likelihood of compromise, as well as educational expectations and likelihood of compromise, were both not significant. Independent sample t-tests indicate differences in compromise among adolescents based on academic achievement, $t(179) = 2.24$, $p < .026$, Cohen's $d = .368$ (compromise Mean=3.21, $SD = .65$ and non-compromise Mean=3.43,

$SD=.54$) with individuals with lower GPAs being more likely to compromise occupational expectations. Similarly participants whose parents had lower educational expectations for them were more likely to compromise occupational expectations than those whose parents had increased educational expectations $t(178) = 2.09, p < .038$, Cohen's $d=.322$ (compromise Mean=3.94, $SD=1.41$ and non-compromise Mean=4.34, $SD=1.04$) (Table 9). It should be noted that neither was statistically significant after making a Bonferroni adjustment to account for the number of comparisons with a p value of $.05/.16(0.003)$ indicating significance. Results of logistic regression indicate that a model consisting of academic achievement and parents' expectations significantly explains likelihood of compromise $X^2(2, N=181) = 6.753, p<.034$ (Table 10).

By definition, compromise addresses individuals whose aspirations are greater than their expectations, whereas total incongruence occurs when aspirations are not the same as expectations. In an attempt to understand this misalignment, exploratory analysis was conducted to see if background characteristics (gender, mothers' and fathers' education and occupation, gender, SES, educational expectations, and parent educational expectations) were related to all students whose aspirations are not equal to their expectations. Of the variables, father's education level was significantly different between individuals with incongruent expectations than students with congruent expectations $t(172) = 2.52 p < .013$, Cohen's $d= 0.395$ (congruent Mean=3.56, $SD=1.58$ and incongruent Mean=2.94, $SD=1.56$) with students whose fathers have increased education being less likely to have incongruent expectations.

Table 9
Differences in Career Compromise by Academic Achievement and Parent Expectations

	Compromise		Non-Compromise	
	Mean	Standard Deviation	Mean	Standard Deviation
Academic Achievement	3.21	0.65	3.43	0.54
Parent Expectations	3.93	1.40	4.34	1.04

Table 10
Logical Regression Explaining Career Compromise

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Constant	1.502	1.006	2.229	1	.135	4.493		
Academic Achievement	-.549	.322	2.903	1	.088	.578	.307	1.086
Parent Expectations	-.172	.161	1.146	1	.284	.842	.615	1.154
Model Chi-Square	6.753							
-2LogL	195.463							
Nagelkerke R Square	.055							
N	176							

Note. The dependent variable was coded 1 if participants indicated compromise (when career aspirations exceeded career expectations) and 0 when career aspirations were either equal to or lower than career expectations.

Summary

Among the current sample of 10th-12th graders results of logistic regression suggest that, contrary to predictions, students of low SES are no more likely to compromise their plans for the future than their higher SES peers. Similarly, students aspiring to greater levels of education are no more likely to compromise their occupational expectations than those expecting to obtain lower levels of education.

Results of exploratory analysis suggest that a logistic regression model consisting of academic achievement and parents' expectations significantly explain likelihood of compromise.

Results of hierarchical regression analyses suggested no direct effect of SES on occupational expectations, although there was a significant relationship between SES and educational expectations, which in turn explain occupational expectations. Building on the importance of educational expectations in the explanation of occupational expectations, the results indicated that self-efficacy, aligned expectations, and perceived parent expectations significantly contribute to educational expectations. Furthermore, the effect of SES on the educational expectations of the adolescents was mediated by perceived parental expectations of the students' educational attainment.

CHAPTER V

DISCUSSION

The current study provides insight into the career development of high school students, notably the direct and indirect influences on career expectations and likelihood of compromise. Classical status attainment models proposed by Blau and Duncan (1967) suggest that status is transmitted through direct effects of parents' occupation on the occupation of the child or indirectly when the child's education mediates the relationship between parents' occupation and the occupation of the child. Although these pathways have been established through empirical research (Blau & Duncan, 1967; Sewell et al., 1969; Sewell et al., 1970), the current study looked at whether there were direct and indirect effects of social class on adolescents' occupational expectations, which are thought to precede occupational attainment (Schoon & Parsons, 2002). The study explored whether social class and educational expectations were related directly to likelihood of compromise and career expectations. The research explicitly examined whether children of higher social class are more likely to select occupations of increased prestige and less likely to compromise career expectations, whereas children of lower SES are more likely to compromise plans for the future and select occupations of lower prestige. The research then reconnoitered whether educational expectations mediate the relationship between SES and occupational expectations, with the implications that increased educational expectations may reduce the effect of SES on the occupational

expectations of adolescents. Additionally, in an attempt to determine processes involved in the formation of educational expectations, I investigated whether individuals with aligned expectations, higher levels of self-efficacy, and greater parental expectations demonstrate increased educational expectations. The overall goal of the current study was to understand mechanisms involved in the intergenerational transmission of social class.

In the discussion, I address factors explaining the compromise of career expectations. Secondly, I investigate whether there are direct effects between SES and occupational expectations. Similarly, I examine the relationship between educational expectations and career expectations. The results suggest an indirect pathway of social class transmission through the mechanism of student educational expectations. It appears that educational expectations is the strongest exploratory variable in explaining occupational expectations. In addition, the importance of aligned expectations, self-efficacy, and perceived parental educational expectations in the explanation of educational expectations was described. Moreover, I investigate how social class is transmitted to occupational expectations, exploring the relationships among SES, educational expectations, and perceived parental expectations as they relate to career expectations. As you will see, the findings highlight the importance of parental educational expectations in mediating the relationship between social class and educational expectations. Finally, I address the implications of the current study and possible areas for future research.

Career Expectations and Likelihood of Compromise

The results of the current study, indicating that almost 40% of the participants aspire to different careers than they expect to have, substantiates previous research proposing that, in adolescence, career aspirations and career expectations are in fact two distinct constructs (Armstrong & Crombie, 2000; Beal & Crockett, 2010; Davey & Stoppard, 1993; McNulty & Bergen, 1988). Additionally, the majority of students in the current sample aspired to careers of greater occupational prestige (Mean of 61.53) than they expect to achieve (Mean of 59.58). This finding replicates the result reported by Rojewski (1995) who found that students in a rural community aspired to occupations of greater prestige than they expect to obtain.

Of the total participant sample, 115 (62%) listed the same occupation for both their career aspiration and expectation thus indicating congruence between aspirations and expectations. In terms of career compromise, 46 (25%) of the participants aspired to a career of higher prestige than the career they expect to have, whereas, 13% of the participants ($n=24$) expected to have an occupation of greater prestige than the career to which they aspire, bringing the total number of incongruent students to 70 (38%). The results suggest that most of the incongruent students expect to have careers of lower prestige than the occupations to which they aspire, thus demonstrating compromise (Rojewski, 2005). In the current study almost one quarter of the participants were conceding their occupational plans for the future, providing further evidence for Gottfredson's (1981) theory of compromise.

Interestingly, 13% of the respondents expected to have an occupation of greater prestige than the career they aspire to have. This finding validates research conducted by

Armstrong and Crombie (2000) who found that students in the 8th and 9th grades had expectations that exceeded their aspirations. The demonstrated incongruence between aspirations and expectations warrants further investigation as to what may be causing students to have career expectations that exceed their aspirations. For example, is there a relationship between SES and “reverse compromise”? One potential explanation may be that adolescents expect to have jobs that meet others’ expectations of them (in terms of prestige or occupational field) when they would ideally like to do a job of their own personal interest. Similarly, the study of career development would benefit from a better understanding of the factors that cause adolescents to give up their ideal careers; thus providing information to answer the critical question of what exactly influences the career expectations of individuals as they prepare to make occupational decisions.

Direct Relationship Explaining Career Compromise

The current study attempted to explore whether SES and educational expectations explain likelihood of career compromise. The work of previous researchers suggests that adolescents’ aspirations are not congruent with their occupational expectations and further speculate that career compromise may be taking place during this stage of development (Armstrong & Crombie, 2000; Beal & Crockett, 2010; Davey & Stoppard, 1993; Gottfredson, 1981; McNulty & Borgen, 1988; Schoon, 2001). Rojewski (1995) advocated for research to determine mechanisms involved in this process. Building on research by Cook et al. (1996) suggesting a relationship between both SES and educational expectations and the career compromise of young men, the current study investigated whether SES and educational expectations were significant exploratory variables of career compromise among adolescents. It was hypothesized that there would

be a direct relationship between both SES and educational expectations and subsequent likelihood of compromise. Individuals of higher SES and those possessing higher educational expectations would be less likely to compromise their career expectations than those with lower levels of SES and educational expectations.

The result of logistic regression analysis suggests no direct relationship between SES and likelihood of compromise. The overall model was not significant, and only academic achievement, the control variable in the study, was significantly related to likelihood of compromise. Furthermore, results of a second logistic regression analysis determined that educational expectations did not explain likelihood of compromise.

The lack of direct effect of SES on career compromise is in contrast to results obtained by Cook et al. (1996), who found a significant relationship between SES and the gap between aspirations and expectations among boys in the second, fourth, sixth, and eighth grades. One of the possible reasons for the lack of relationship among SES, educational expectations, and likelihood of career compromise in the current study may be related to the different methods of measurement across the two studies. In the Cook et al. (1996) study SES was based on neighborhood composition, specifically the racial composition and income, whereas, in the current study SES was comprised of parents' occupation and education similar to previous research used in the career development literature (Hill, 2004; Mello, 2009; Rojewski & Yang, 1997; Sewell et al., 1969). Additionally, in Cook et al.'s study, compromise was measured using both open-ended questions, similar to those used in the current study, as well as close-ended questions asking them to select a career to which they aspire and expect to have from a list of nine chosen occupations. In the current investigation, likelihood of compromise and the

aspiration/expectation discrepancy were measured in ways that were consistent with protocols incorporated by Armstrong and Crombie (2000) and Rojewski (1995). Furthermore, explanations for the differences between the current findings and those obtained by Cook et al. (1996) may include the sample characteristics, notably dissimilarities in gender, the ages, and diversity of participants. For example, participants in the Cook et al. study consisted of 220 male students in the second, fourth, sixth, and eighth grades from racially, ethnically, and socioeconomically diverse schools in the southeastern U.S. In contrast, the current study consisted of male and female students in the tenth through twelfth grades from smaller communities located in predominately rural states located in the Rocky Mountain region of the United States. Additional research would benefit from investigating these contradictory findings by investigating children and adolescents of diverse ethnicities and in a range of geographical locations to see which factors are related to compromise of expectations.

The results of the current study suggest that children from lower SES are no more likely to compromise their occupational expectations than are their peers from families of higher socio-economic status. The findings do not support the hypothesized SES differences that derived from previous research focused on career aspirations (Mau & Bikos, 2000; Rojewski & Yang, 1997; Schoon & Parsons, 2002), expectations (Mello, 2009), and adult attainment (Schoon & Parsons, 2002). Furthermore, students' educational expectations was not a significant exploratory variable of whether they will compromise their occupational expectations, also conflicting with the findings of Cook et al. (1996) which indicated that the gap between occupational aspirations and expectations could be explained in part by educational expectations. In addition to different sample

characteristics, a possible explanation for the disparity in findings may be that educational expectations more strongly explain occupational level based on the increased level of education required for higher status jobs, but may not explain the compromising of career expectations that occurs at both low and high levels of prestige.

Moreover, it may be possible that SES is related more specifically to the compromise of educational expectations rather than to career expectations (Hanson, 1994; Trusty & Harris, 1999; Trusty & Niles, 2004). For example, Trusty and Harris (1999) investigated factors predicting stable or lowered educational expectations among a national sample of students six years after graduating from high school ($N=3147$). The logistic regressions indicated that SES and racial group membership are significant predictors of stable educational expectations among both males and females with SES being the strongest predictor. The authors suggest that parents' social class may influence individuals of low SES causing them to compromise their originally high expectations to meet the educational levels obtained by their parents. Similarly, Trusty and Niles (2004) determined that SES was strongly related to participants realizing their educational potential; with "every increase in SES by one standard deviation increase, participants were 64% more likely to obtain a college degree" (p. 9). Thus, it may be possible that SES influences the compromise of educational expectations, a question that was not investigated in the current study. By examining the relationship between the compromise of both educational and career expectations, researchers may provide invaluable information regarding the process involved in the alignment of educational and occupational plans. If there is a disconnect between educational compromise and

career compromise then perhaps adolescents do not possess a complete understanding of the level of education needed for certain careers.

Of the participants in the current study, 46 (25%) compromised their occupational plans for the future. This finding, along with the lack of relationships among SES, educational expectations, and career compromise, prompted the inquiry as to which factors are related to career compromise in an attempt to understand the process of career compromise. Results of the exploratory analysis indicated that there are significant differences between students who vary in likelihood of compromise based on their level of academic achievement and the aspirations their parents have for them. According to this analysis, students with higher grade point averages were less likely to compromise their plans for the future. Similarly, students whose parents have higher educational aspirations were more likely to have congruent occupational aspirations and expectations.

The significant difference in likelihood of compromise for individuals whose parents have increased educational aspirations highlights the importance of family, notably parents, in career development (Whiston & Keller, 2004). Davey and Stoppard (1993) found that participants whose aspirations differed from their expectations perceived less support from significant others than those whose aspirations matched expectations. Additional research is needed to understand exactly how parents influence their children and their likelihood of compromising their occupational plans. These results contribute to the emerging literature addressing the importance of parents' expectations on the career expectations of children, in particular, the relationship among parental aspirations and the educational and occupational aspirations of their children

(Bandura et al., 2001; Cohen, 1987; Hossler & Stage, 1992; Looker et al., 1983; Mau & Bikos, 2000; Rhea & Otto, 2001; Trusty & Pirtle, 1998; Trusty & Niles, 2004).

The discoveries highlight the importance of academic achievement in career outcomes, notably the explanation of occupational compromise. Although academic ability was a control variable in the current study, based on previous research citing its relationship to educational expectations, occupational aspirations, and expectations (Mau & Bikos, 2000; Rojewski, 2005), it is noteworthy to acknowledge the relationship between academic ability and career compromise on the part of the students. The finding that academic ability is related to likelihood of career compromise supports the need to work with students to be successful in their classes by means of tutoring or extra academic assistance. The current results suggest that students who demonstrate higher academic achievement are less likely to compromise their occupational goals.

In the current study, almost 40% of the respondents indicated aspirations that differed from their expectations. The obtained results parallel those of Rojewski (1995) who found that “slightly under half (47%)” (p. 41) of the students expect to have careers that are different than the careers they aspire to. Furthermore, Rojewski (1995) determined that gender and at risk behavior predicted only 4% of the variance in the aspiration-expectation discrepancy among rural high school students of similar ages to those investigated in the current study. In an attempt to discover possible explanations for difference in aspirations and expectations among adolescents, a further inquiry determined that the fathers’ average educational level was more than half a point higher (3.56 vs. 2.94) for individuals with congruent expectations. Although prior research has acknowledged that families are vital in the career development of adolescents and young

adults (Whiston & Keller, 2004), there is conflicting evidence on the importance of mothers versus fathers. The relationship between a fathers' educational level and congruency of expectations validates the results of Isaac et al. (1992) who found that fathers' education level was related to children's occupational aspiration level, but contrasts with views that mothers "may have the greatest impact on career choice of their children" (Whiston & Keller, 2004, p. 556). The results of the current investigation suggest that fathers' educational level may affect the aspiration/expectation congruence of the child. Additional research is needed to understand exactly how fathers' education influences the alignment of children's occupational goals.

In addition to the results discussed, there is one additional finding related to career compromise that is of interest. This study investigated the aspirations and expectations of students in the later years of high school. Whereas some students listed different career expectations than career aspirations, there was a sub-sample of students (n=9) who listed careers such as doctor, physical therapist, architect, professional athlete, musician, and pilot when asked about their aspirations. When asked what careers they expect to have, these same students said that they had no idea. Only students listing occupational expectations were included in the results of the study; therefore, these students indicated a level of incongruence that was not captured in the data analysis. Students who aspire to careers but cannot articulate what careers they actually expect to have are demonstrating a level of incongruence that needs to be investigated. Future research employing qualitative or mixed methods could be utilized to understand the reasons why students are not sure what careers they expect to have and whether there are perceived barriers that keep them from articulating a career expectation. Asking these questions, along with

others designed to understand the career uncertainty of adolescents, can provide much needed information regarding the processes involved in career compromise.

Based on the finding that over a third of the participants expect to have different careers than they aspire to suggests that the adolescents in this study view career aspirations and expectations as two different constructs. The explanation of career compromise among adolescents found in previous research (Armstrong & Crombie, 2000; Rojewski, 1995) continues to be unclear, strengthening the sentiments of Rojewski (1995) who called for further research investigating why aspirations do not equal expectations (p. 47). Future research could explore whether personal factors such as motivation, volition, identity, and the roles the individuals envisions themselves having in the future predict the incongruence between occupational aspirations and expectations.

Direct Relationship between SES and Career Expectations

A primary objective of the current study was to investigate the direct and indirect effects of social class on the career expectations of adolescents. Based on prior research demonstrating a relationship between SES and both career aspirations and expectations (Diemer & Ali, 2009; Mello, 2009; Rojewski, 2005; Rojewski & Yang, 1997; Schoon & Parsons, 2002), it was hypothesized that there would be a direct relationship between SES and career expectations with children from higher SES expecting to have occupations representing higher levels of prestige.

The results of the current study indicate that after controlling for academic achievement, SES is not a significant explanatory variable of career expectations. Although there was a sufficient range in SES, as indicated by the distribution of parents' education, occupation, and the overall SES variable used in the study, a further

investigation found that SES and occupational expectations were weakly correlated, thus eliminating the explanation of a possible lack of power in detecting the association. Similarly, I found that academic achievement was not highly correlated with SES further eliminating the possibility that academic achievement, the control variable, accounted for a large proportion of the variance that SES may explain in occupational expectations.

The absence of a direct association between SES and career expectations contrasts results of previous research examining the aspirations of adolescents (Diemer & Ali, 2009; Mau & Bikos, 2000; Mello, 2009; Rojewski, 2005; Rojewski & Yang, 1997), despite the fact that similar measures of SES (parents' occupations and educational levels) were utilized. Although the findings supported some research indicating the lack of relationship between SES and vocational outcome expectations (Ali et al., 2005), the results were still unexpected and contrary to my hypothesis. Prior research has suggested that there is a direct relationship between parents' occupation and children's occupational aspirations (Hitlin, 2006; Otto, 2000; Trice et al., 1995). The results of the current study support the notions of Trice (1991b), who suggested that direct parental influence might weaken during adolescence.

The findings indicate that there is no direct relationship between social class and career expectations, suggesting that socioeconomic background of adolescents does not co-vary with occupational expectations. Based on this information it is important to understand the factors that influence occupational expectations of individuals from varying levels of SES. Rather than direct effects, it is possible that the impact of SES on occupational expectations takes place indirectly through different educational

experiences, as proposed by Marks (1992), De Graff and Kalmijn (2001), and Hill et al. (2004), who found SES differences in educational, but not in occupational, aspirations.

Direct Relationship between Educational Expectations and Career Expectations

In an attempt to understand the direct contributions to occupational expectations, analyses were conducted to determine if there is a direct effect of educational expectations on career expectations. It was hypothesized that there would be a direct effect, with adolescents who indicate higher educational expectations also aspiring to careers of increased level of prestige. The results suggest that the overall model was significant with educational expectations explaining a significant proportion of the variance in occupational expectations. Similarly, Rojewski and Kim (2003) found that educational expectations were significant predictors of occupational aspirations. The results support previous research that suggests a relationship between educational expectations and career aspirations and attainment (Arbona, 2000; Argyle, 1994; Hotchkiss & Borrow, 1996; Johnson et al., 1983; Lent, Brown, & Hackett; 1994; Rojewski & Yang, 1997; Schoon & Parsons, 2002). Information gleaned from the study highlight the importance of educational expectations on the career expectations of adolescence. These findings demonstrate the need to understand factors related to increased educational expectations among adolescents with the ultimate hope of facilitating those expectations.

Aligned Expectations, Self-Efficacy, and Perceived Parental Expectations in the Explanation of Educational Expectations

In light of the education required for higher status occupations (Argyle, 1994; Rojewski & Yang, 1997), the study of career expectations is undeniably linked to

understanding factors predicting educational expectations. Furthermore, the Wisconsin Model of status attainment (Sewell et al., 1969; Sewell et al., 1970) suggests that educational aspirations and expectations are related significantly to occupational aspirations and attainment. Based on the relationship between educational expectations and career expectations it is necessary to determine factors that predict increased levels of educational expectations. The current study investigated whether aligned expectations, parents' expectations, and self-efficacy explained educational expectations. It was hypothesized that increases in parental expectations, self-efficacy, and aligned expectations would explain an increased level of educational expectations.

Among participants in the current study, the overall mean for educational expectations suggested that, on average, the participants are planning to obtain a bachelor's degree. The results corroborate research by Schneider and Stevenson (1999) who found that most adolescents anticipate attending college. The results of a two-way ANOVA suggested that females have significantly higher educational aspirations than their male counterparts, thus affirming previous findings that females aspire to increased levels of education (Hossler & Stage, 1992; Mau & Bikos, 2000; Mello, 2008). In light of gender differences found in educational expectations, gender, along with academic achievement, was controlled in subsequent regression analysis in the current study.

Based on the established relationship between educational expectations and occupational occupations (Andres et al., 2007; Dubow et al., 2009; Hill et al., 2004; Jacobs et al., 1991; Ou & Reynolds, 2008; Rojewski & Kim, 2003) it is imperative to understand factors related to the educational expectations. The results of hierarchical regression suggest that self-efficacy, perceived parental expectations, and aligned

expectations significantly explained educational expectations among the adolescents in the sample. Results indicate that from this set of variables, perceived parental expectations, along with the control variable of gender, significantly explained educational expectations, whereas, self-efficacy and the control variable academic achievement, only marginally contributed to the explanation of educational expectations in the full model.

The overall model accounted for almost 63% of the variance in educational expectations. The results also suggest that perceived parental expectations contribute to the explanation of educational expectations beyond the contributions of academic achievement and gender (Hossler & Stage, 1992). The finding that parents' expectations are important in explaining educational expectations further demonstrates the role of parents in the career development of children, such that higher parental expectations are related to increased levels of child educational expectations.

It should be noted that after controlling for academic achievement, the correlation between reported parents' expectations and perceived parental expectations was .76, supporting the findings of Looker and Pineo (1983). The strength of this correlation demonstrates the importance of parents' aspirations for their children and the accuracy of children's perceptions of the educational goals that their parents have for them. Further research could explore whether similar correlations are found between parents' occupational expectations and the occupational expectations of the child; specifically examining whether the occupational expectations parents have for their children are similar to the occupational expectations the children have for themselves.

Notwithstanding, students who perceive that their parents have high educational

expectations for them are more likely to have increased educational expectations themselves.

In addition to perceived parental expectations, students' self-efficacy may play a role in the formation of educational expectations. Research by Bandura et al. (2001) and Diemer and Ali (2009) found that individuals who exhibit more confidence in their ability to make educational and vocational decisions are more likely to have higher goals and aspirations; consistent with these findings, the present results suggest that increased levels of self-efficacy were associated higher educational aspirations. Among the current sample of high school students, there was not a significant correlation between self-efficacy and SES, contrasting with previous research by Ali et al. (2005) and Hannah and Kahn (1989). The results of the current study reiterate the importance of working with children and adolescents representing all socio-economic levels, to find ways to help them develop their confidence in making educational and occupational decisions. Furthermore, it would be noteworthy to investigate the processes involved in the development of educational and vocational self-efficacy among children and adolescents, specifically addressing the path in which these skills are acquired and utilized.

In addition to perceived educational expectations and self-efficacy, the current study investigated whether aligned expectations explained educational expectations. The results of the study indicate that 98 (53%) of the participants have aligned expectations such that their educational expectations match the amount of education required for the job they expect to have. In contrast, 64 respondents (35%) plan to complete more education required for the job they expect to obtain; whereas, 24 (13%) are planning to complete education that will not adequately prepare them for the career they expect to

have. The results of the current study substantiate the results of Schneider and Stevenson (1999) who found that 43% had aligned expectations, 40% aspired to greater education than necessary, and 16% aspired to less education than is required for their expected occupation.

In the current sample, only 53% of the students have educational expectations that match the education that is required for the occupation they expect to have. This is somewhat alarming given that these students are in their later years of high school. This result supports previous research by Goyette (2008) that for adolescents there is a disconnect between educational expectations and the amount of education required. The current study found that educational expectations were related to increased occupational expectations; furthermore, students are not always accurate in understanding the level of education and the steps necessary to align their expectations. Although aligned expectations was not a significant exploratory variable of educational expectations they do pose a problem for the implementation of educational and career plans. A pathway for future research would be an investigation of whether aligned expectations have direct or indirect effects on educational and career expectations of high school students. Furthermore, information about the students' abilities to prepare for and execute plans for the future will address whether they understand the steps necessary to align the educational and occupational pursuits.

Mediation of Social Class Transmission-Indirect Relationship

As previously mentioned, the primary goal of the current study was to determine if classical attainment models demonstrating the relationship between social class and occupational attainment could be utilized to explain occupational expectations with such

expectations preceding occupational attainment. In addition, the relationship between social class and likelihood of career compromise was explored; specifically, whether parental social class was transmitted directly or indirectly. Due to the lack of direct effect between SES and likelihood of career compromise, it did not make sense to explore an indirect effect between these two variables. Contrary to my hypothesis, it appears that classic attainment models do not explain likelihood of compromise among the high school students included in the current sample.

Results of this study found no direct effect between SES and occupational expectations. In contrast, educational expectations were significantly related to career expectations. Furthermore, there was a significant relationship between SES and educational expectations; thus, one could speculate that SES may be indirectly related to occupational expectations through the mechanism of educational expectations (De Graff & Kalmijn, 2001; Dubow et al., 2009; Hill et al., 2004; Jacobs et al., 1991; Marks, 1992; Sewell et al., 1970). However, it is important to note that this hypothesized pathway could not be tested in the current study due to the lack of a direct relation between SES and career expectations. Nevertheless, it is of great interest to examine this possible pathway in future research in which such a direct SES – career expectation link is observed.

The finding that SES is related to educational expectations aligns with findings by Haller and Virkler (1993) who determined that SES accounted for observed differences in educational expectations among a mostly rural sample of high school students. Furthermore, the possible role of education in mediating the relationship between SES and occupational expectations supports previous research by Dubow et al. (2009) and

Hill et al. (2004) who found differences in educational, but not occupational, aspirations among adolescents based on family SES. The results of this study indicate that although there is no direct effect between SES and occupational expectations there may be an indirect effect suggested by the relationship between SES and educational expectations and the subsequent relationship between educational expectations and occupational expectations. In understanding the influence of SES on career expectations, it appears to be indirect rather than direct.

In an attempt to determine how education could potentially mediate the relationship between SES and occupational expectations, additional analyses were conducted to understand whether variables explaining educational expectations, aligned expectations, self-efficacy, and/or perceived parental expectations, mediated the relationship between SES and educational expectations. In order for mediation to take place there must be a significant relationship between the independent variable and the mediator (self-efficacy and aligned expectations), which was not the case in this study. There was, however, a significant relationship between SES and perceived parental expectations, with higher levels of SES associated with increased levels of parental expectations. The current results correspond with findings reported by Trusty and Pirtle (1998). These researchers found that that higher levels of SES were related to increases in both perceived parental and adolescents' educational expectations, further stating that as "SES increased the goal transmission became stronger" (p. 64). Although SES significantly explains educational expectations when entered into the model alone, when perceived parental expectations were entered into the model explaining educational expectations, SES was no longer significant. This suggests that perceived parental

educational expectations may mediate the relationship between SES and educational expectations.

The findings highlight the importance of parental expectations in the career development of children (Cohen, 1987; Hossler & Stage, 1992; Rhea & Otto, 2001; Trusty & Niles, 2004). Hossler and Stage (1992) that found that parental expectations was the strongest predictor of educational expectations among high school students. Cohen (1987) determined that parent expectations had a larger influence on aspirations and attainment than did parental occupation. Similarly, Looker and Pineo (1983) found that perceived parental expectations, but not parental educational attainment, were significantly related to educational and occupational aspirations of their children.

It is necessary to understand the importance of parents' educational expectations on the educational and occupational expectations of adolescents. Bandura et al. (2001) suggested that SES influenced children's careers indirectly through parents' aspirations and parents' confidence in their abilities to assist their children in planning for the future. This parental confidence contributed to increased academic ability and aspirations, thus influencing the fields students entered. Furthermore, Bandura et al. noted the importance of self-efficacy. In an attempt to clarify how each of the variables, self-efficacy and SES, contributed to educational expectations, an additional regression analysis was performed for the purpose of examining the explanation proposed by Bandura et al. (2001). When entered into a model explaining educational expectations, SES ($\beta=.234$ $p = .001$) still significantly accounted for educational expectations, even with self-efficacy in the model. It should be noted that divergent findings between the current investigation and Bandura et al. (2001) could be explained by the age of participants and measures of self-efficacy,

which differed between the two studies. The current study consisted of students in the tenth-twelfth grades and measured educational and vocational self-efficacy whereas Bandura et al.'s study investigated children ages eleven through fifteen and measured their perceived occupational self-efficacy. It is possible that the measurement of self-efficacy could affect the relationship among self-efficacy, SES, and educational expectations thus contributing to the contradictory findings. Notwithstanding, the current research proposes that parental expectations alone mediate the relationship between SES and educational expectations, even after controlling for academic achievement. A possible avenue for future research could be the examination of the exact nature of the relationships among SES, self-efficacy, and educational expectations in the realm of this important developmental period of adolescence.

One must consider parents' expectations when explaining students' level of educational expectations. A recent longitudinal study by Ashby and Schoon (2011) found that individuals whose parents had high educational expectations performed better on exams and were more likely to have increased educational and occupational expectations after controlling for background characteristics such as parents' occupational status and education levels. The importance of parents' expectations in the transmission of social class is important to understand. We may yield invaluable information from identifying the factors related to parental expectations; specifically how, as educators, we can increase educational expectations among individuals of various socio-economic levels.

Limitations

Although the current study has potential implications for the understanding of career development among adolescents, several limitations should be noted. The sample consisted of participants obtained from a convenience sample, specifically those whose districts, principals, and classroom teachers agreed to participate in the study. Although data were obtained from two different districts, similar protocols were used for data collection in attempt to make the study as reliable and valid as possible. Only students with signed parental consent forms were allowed to participate so there is the chance that students who did not have parental consent were different on some of the exploratory and outcome variables. Furthermore, all of the data used in the current study consisted of self-report data and could contain bias if participants were concerned about how they presented their socio-economic status, or how goals and aspirations for the future (as stated by both parents and children) may be communicated and perceived. The use of self-report data is common in the career literature and therefore was used in the current study.

Additionally, it should be noted that the study took place in communities of approximately 40,000 and 54,000 residents and therefore may not be representative of students in other rural locations or urban communities. Although the sample was diverse in SES, as indicated by the range of parents' education and occupation levels, the sample consisted of primarily Caucasian students (96%) and was not ethnically diverse; therefore, it would be beneficial to see if similar results were obtained from a more ethnically diverse sample.

One of the primary goals of the current study was to understand the intergenerational transmission of social class. As noted by Sirin (2005) there is a great amount of disagreement about how to best measure SES. The original plan was to measure SES using parents' occupation, education, and family income based on procedures previously utilized by Mello (2009), Rojewski and Yang (1997), Sewell et al. (1969). In working with the districts to obtain permission to conduct the study, the decision makers were not comfortable with my requesting income information from parents. To accommodate the needs of the district, the SES variable was comprised of education and occupation levels similar to protocols established by Hitlin (2006). Although the current study incorporated measures of SES (parents' occupation and education) commonly used in career research (Goyette, 2008; Hannah & Kahn, 1989; Looker & Pineo, 1983), it is possible that the measurement of the variable was not sufficiently sensitive to detect possible relationships with career decision making. Additionally, it should be noted that in the region where the study took place it is possible for individuals to make money in jobs that do not require large amounts of education or in careers of low prestige, thus influencing both the SES variable utilized in the study as well as the career expectations of the participants. Finally, due to the status of the economy retirement or recent job loss may complicate the measure of SES.

Although this cross-sectional study was designed to examine the variables explaining adolescents' career expectations and compromise, the fact that it was not a longitudinal study precludes the exploration of how these factors are related to eventual career attainment. Additional research is necessary to understand the relationship between career compromise and eventual occupational attainment. Finally, the current

study examined correlational relationships and although it allowed for the determination of whether a relationship exists, it did not provide the type of data that can be used unambiguously to imply causation.

Recommendations for Future Research

Limitations aside, the current study provides invaluable insights into the intergenerational transmission of social class. The findings of the current study suggest that there is a difference between career aspirations and expectations among high school students. Furthermore, the findings indicate that educational expectations and SES do not explain the likelihood of career compromise. That being said, there is a need to determine factors related to this apparent discrepancy between aspirations and expectations. What is causing students of all SES levels to compromise their expectations of the future? Some factor or factors play a role in this process and we as educators need to have a better idea of these mechanisms so that we can help our students to align their future plans.

These findings demonstrate the importance of educational expectations in the intergenerational transmission of social class; therefore, it is critical to determine the diverse factors related to educational expectations and persistence. The current study found that perceived parental expectations were exploratory variables of educational expectations. In addition, self-efficacy was moderately related to educational expectations. Future research should be designed to determine whether other mechanisms such as motivation, risk behaviors, identity development, goals, and volition may contribute to educational expectations. What factors predict students' educational expectations and their likelihood to work toward these goals? Findings by Hossler and

Stage (1992) suggest that over “70% of children have determined if they want to go to college by the time they enter the ninth grade” (p. 466), thus demonstrating the need to identify these factors prior to students entering high school. Furthermore, what factors are related to the persistence of educational goals in high school and college students? How do we educate students in adolescence to prepare them for the educational pursuits necessary for the attainment of their occupational goals, as well as help them to align the education required for the job they expect to have in the future. The results of the current study suggest that educational expectations may be the vehicle in which social mobility takes place and we need to work with students of all SES levels to facilitate the achievement of the level of education necessary for their future endeavors.

Finally, although there was not a direct relationship between SES and occupational expectations of children, parents do matter. Granted there was a relationship between SES and educational expectations; but when parents have high expectations for their children, the children are likely to have increased levels of educational expectations irrespective of SES. Based on the importance of parents’ expectations in mediating the relationship between SES and educational and subsequent occupational outcomes, it is imperative to investigate factors related to parents’ expectations among individuals of varying levels of socioeconomic status. Future research needs to focus on understanding factors that influence parental expectations among individuals of various levels of SES. A first step would be to investigate factors that predict parents’ expectations, and following this, a consideration of which of these factors we, as a society, can influence. Specifically, what can concerned individuals, such as teachers, counselors, and community members, do to communicate the

importance of having high educational expectations for children? Furthermore, what can we do to provide the support for parents of various levels of SES in assisting their children with their educational and occupational pursuits?

Educators can use information gleaned from this study, particularly the importance of educational expectations on the career expectations of adolescents, in assisting students with their future plans. It is crucial for children and adolescents to understand the importance of education in preparing for their future careers. Finally, steps should be taken to incorporate parents when designing career development activities. It is imperative for parents to realize the significance of having high educational expectations and the effect they will have on the goals of their children. Furthermore, it is not simply the parents' actual expectations for their kids' education, but those expectations that are perceived by their children, thus suggesting that children are "picking up" cues that may or may not be intended by the parents. It is essential for parents to be cognizant of the messages they send due to the potential effect of these messages on the educational and occupational decisions of their children.

Conclusion

The current study provides new insights into the career development of adolescents. The central goal of the study was to determine whether classical attainment models could be applied to the explanation of educational expectations, career expectations, and likelihood of compromise among adolescents, thus providing a more complete understanding of the intergenerational transmission of social class. The findings indicate that among high school students ($N=200$) almost 40% of the participants aspire to different careers than they expect to have with 25% indicating career

compromise, defined as aspirations that exceed expectations. Among the current sample, there was no direct effect of SES, as measured by parents' educational level and occupation, on likelihood of compromise. Contrary to predictions, it appears that students of low SES are no more likely to compromise their plans for the future than their higher SES peers. Although these findings are promising, further research is needed to understand factors related to the discrepancy between career aspirations and expectations. Additional analysis indicated that parents' expectations and academic ability, a control variable in the current investigation, were significant exploratory variables of career compromise, indicating that families do play a role in this process; however, the exact mechanisms remain unclear. Furthermore, the results suggest there is no direct relationship between educational aspirations and likelihood of compromise. Students aspiring to greater levels of education are no more likely to compromise their occupational expectations than those aspiring to lower levels of education.

There was no direct effect of SES on occupational expectations, although there was a direct effect of educational expectations on occupational expectations. These findings, along with the direct effect of SES on educational expectations, suggest that the path from SES to occupational expectations may be indirect, mediated through educational expectations. The factor of educational expectations is significantly related to career expectations; therefore, it is imperative to understand factors related to increased educational expectations. Results of the current analysis suggest that perceived parental expectations, aligned expectations, and self-efficacy significantly explain increased levels of educational expectations after controlling for academic ability and

gender. In addition, it appears that perceived parental expectations have the greatest direct effect on educational expectations.

Overall, the findings of the current research study do not support the assumption of a direct influence of SES on career expectations and likelihood of compromise, suggesting instead that SES may influence career outcomes through the indirect process of educational expectations. Moreover increasing parents' expectations is positively associated with educational expectations among individuals of various SES levels (Figure 2). This study contributes to the current literature on the intergenerational transmission of social class by making the following contributions:

1. It addressed at the applicability of classic attainment models in explaining career expectations and likelihood of compromise and determined that there was no direct association between SES and likelihood of compromise or educational expectations and likelihood of compromise among the current sample of high school students.
2. Parents' expectations, along with gender, significantly explained educational expectations whereas self-efficacy was moderately related to the explanation of educational expectations.
3. After controlling for academic achievement, SES is not directly related to occupational expectations but is directly related to educational expectations, which in turn explains occupational expectations.
4. After controlling for academic achievement, the influence of SES on the explanation of educational expectations is mediated by parental expectations.

The results of the present study suggest that the path of intergenerational transmission is not direct but rather social class is transmitted to occupational expectations through educational expectations. Therefore, regardless of social standing and controlling for academic achievement, individuals who have high educational expectations for themselves and whose parents have expectations for them are more likely to expect to have careers of increased levels of prestige. It appears that education is the key for children of low socio-economic status. Furthermore, parents who have high educational expectations for their children, regardless of their background, are more likely to have children who have high educational expectations for themselves. Moving forward it is critical to work with children and adolescents of all backgrounds in the process of making their educational and occupational dreams a reality.

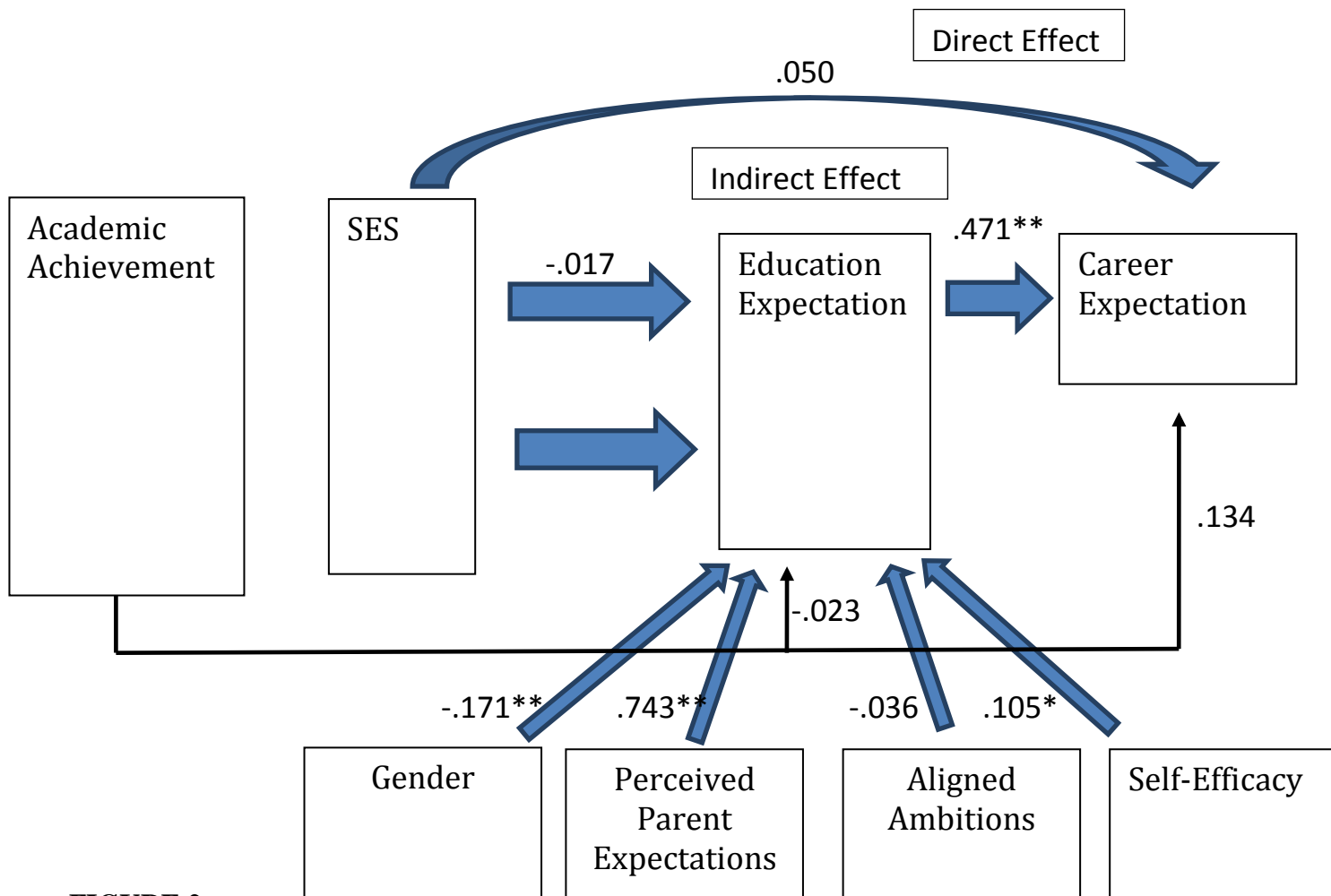


FIGURE 2
Direct and Indirect Effects Explaining Career Expectations

Notes: * $p < .05$, ** $p < .001$

Please note, the standardized betas reported in figure 1 were obtained through a series of hierarchical linear regressions explaining educational and career expectations

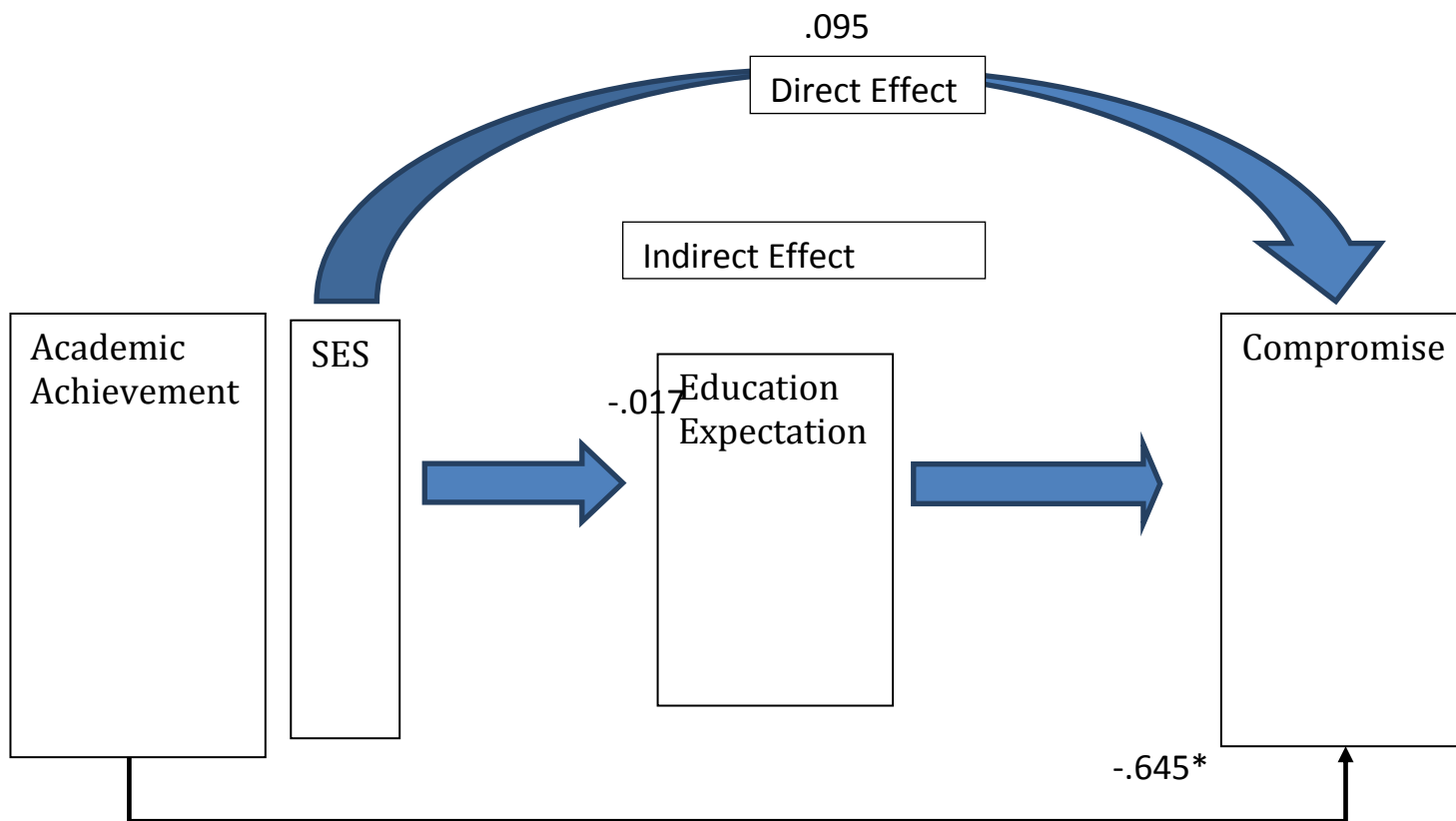


FIGURE 3
 Direct and Indirect Effects Explaining Career Compromise

Notes: * $p < .05$, ** $p < .001$

Please note, unstandardized Betas listed in figure explaining Career Compromise represents results of several separate Logistic Regressions, represents

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APPENDIX A
UNC IRB APPROVAL

Sarah -

Hello. Thank you for the very prompt and thorough reply.

You now have IRB approval pending the filing of district approval with UNC OSP. Official notice of IRB approval will be sent to your advisor from Sherry May in OSP but you may proceed in the interim. Please be sure to implement and use all revised protocols and materials developed in the review process.

Please contact me if you have any questions or concerns with the IRB approval process for this application.

Best wishes with your research!

Sincerely,
Dr. Stellino

Dr. Megan Babkes Stellino
Professor
Social Psychology of Sport and Physical Activity
School of Sport and Exercise Science
Co-Chair IRB
University of Northern Colorado
Greeley, CO 80639
(970) 351-1809
megan.stellino@unco.edu

APPENDIX B
PARENT CONSENT FORMS



CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
University of Northern Colorado.

Project Title: Career Aspirations, Expectations, and Educational Expectations
 Researcher: Sarah Schmitt-Wilson, School of Psychological Sciences PhD student
 e-mail: sarahschmittwilson@gmail.com
 Research Advisor: Dr. Marilyn Welsh, Professor of Psychology, (970) 351-2236
 Email: Marilyn.Welsh@unco.edu

Dear Parent or Guardian,

I am a graduate student working on my PhD in Educational Psychology and I am interested in understanding how people decide what they want to be when they grow up. I am currently working on a study to understand the occupational aspirations and expectations of students as well as their educational plans for the future. During this study, your child will simply be asked a few questions about his/her career and educational goals and a measure indicating their confidence in making decisions about their future. There are no right and wrong answers. The process will take approximately 15 minutes and will not take away from the quality of your child's education. In addition, information regarding the student's GPA will be obtained from the school using your child's school identification number. Your child will be identified only by number and responses will not be linked to your child's name. I will make every effort to ensure complete confidentiality of your child's information and responses. I foresee no risks to participants beyond those that are normally associated with thinking about the future and answering questions about careers.

If you would like to allow your child to participate, please sign this form and fill out the enclosed demographic information sheet in the two envelopes provided. Your child will also be asked if (s)he would like to participate using written assent. If you have any questions about the study; please feel free to contact me at sarahschmittwilson@gmail.com. This is a great opportunity to help your child to think about their future career and educational plans.

Participation is voluntary. You may decide not to allow your child to participate in this study and if begins participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask any questions, please sign below if you would like to participate in this research. A copy of this form will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Sponsored Programs, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-2161.

Thank you for your time.

Sincerely,

Sarah Schmitt-Wilson,
PhD Student

Your Full Name (please print)

Child's Name

Your Signature

Date

Researcher's Signature

Date

APPENDIX C
STUDENT CONSENT FORMS



ASSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
UNIVERSITY OF NORTHERN COLORADO

Project Title: Career Aspirations, Expectations, and Educational Expectations

Researcher: Sarah Schmitt-Wilson, School of Psychological Sciences PhD student
 e-mail: sarahschmittwilson@gmail.com
 Research Advisor: Dr. Marilyn Welsh, Professor of Psychology, (970) 351-2236
 Email: Marilyn.Welsh@unco.edu

Dear Student,

I would like to understand what you want to be when you grow up and factors influencing these decisions. I will ask you a few questions about your career and educational plans for the future and then fill out a questionnaire regarding your confidence in your ability to make these decisions. There are no right or wrong answers. Your participation will not affect your grade in any way. In addition, information regarding your GPA will be obtained from the school using your school identification number. Throughout the study you will be identified only by number and not by name. The study will take approximately 15 minutes. I foresee no risks to you beyond those that are normally involved in thinking about your future and answering questions about careers.

Your parents have said it is okay for you to participate. If you have any questions about the study, please feel free to contact me at sarahschmittwilson@gmail.com for I am more than willing to answer any questions you may have.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask any questions, please sign below if you would like to participate in this research. A copy of this form will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Sponsored Programs, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1907.

Sincerely,

Sarah Schmitt-Wilson,
PhD Student

Your Full Name (please print)

Your Birth Date (month/day/year)

Your Signature

Date

Researcher's Signature

Date

APPENDIX D

STUDY INSTRUMENTS: DEMOGRAPHIC QUESTIONNAIRE

Demographic Information- To Be Completed by Parents

Student Grade: _____

Student Age:

Student Gender (please circle one): Female

Male

Student Ethnicity (please circle) African American

Asian

Hispanic

Native American White/ Caucasian Other (please list)

What level of education do you expect your child will complete? (please circle one)

Less than High School	4 year/Bachelors/College Degree
High School	Master's Degree
Some College	PhD/Professional Degree
2 year/Technical Degree	

Mother's/Female Guardian's Current Occupation:

Mother's/Female Guardian's Highest Education Level (please circle one):

Less than High School	4 year/Bachelors/College Degree
High School	Master's Degree
Some College	PhD/Professional Degree
2 year/Technical Degree	

Father's/Male Guardian's Current Occupation:

Father's/Guardian's Highest Education Level (please circle one):

Less than High School	4 year/Bachelors/College Degree
High School	Master's Degree
Some College	PhD/Professional Degree
2 year/Technical Degree	

Student School ID Number: _____

APPENDIX E

STUDY INSTRUMENTS: CAREER ASPIRATIONS AND EXPECTATIONS

9. If you answered yes to question 8, how do you know this person?

(Please circle one or more)

Family

Friend

T.V./Movies

Internet

News/Newspaper

School

10. How much education is required to obtain this job? (please circle one):

Less than High School	4 year/Bachelors/College Degree
High School	Master's Degree
Some College	PhD/Professional Degree
2 year/Technical Degree	

Student GPA: _____

Student Identification Number _____

APPENDIX F

STUDY INSTRUMENTS: CONFIDENCE QUESTIONNAIRE

CONFIDENCE QUESTIONNAIRE

For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of the following tasks. Mark your answers on the following 9-point scale.

No		Very Little		Some		Much			
Confidence	Complete	Confidence		Confidence		Confidence			
1	2	3		4	5	6	7	8	9

How much confidence do you have that you could:

- | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. Find information about vocational technical training programs (for example, computer technician or electrician) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2. Successfully pass courses in vocational technical training (for example, electrician or auto mechanics) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3. Get good grades in college preparatory classes | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4. Know what to expect in a job interview | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 5. Successfully complete a college degree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 6. Successfully complete an apprenticeship in a vocational technical area that you are interested in (for example, plumbing or carpentry) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 7. Write a college essay as part of a college application | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 8. Find information about how to obtain certification in technical career (example certification as a computer technician or electrician) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 9. Get a good score on the ACT or SAT | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10. Talk with a person who has received vocational technical training about their job responsibilities | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 11. Find a job after high school | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 12. Talk to your teachers or guidance counselors about your vocational/educational plans after high school | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 13. Work in a retail store | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 14. Demonstrate positive work habits to an employer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 15. Successfully complete on-the-job training | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

16. Find information about becoming a licensed contractor
1 2 3 4 5 6 7 8 9
17. Find information about applying to colleges and universities
1 2 3 4 5 6 7 8 9
18. Make a decision about which branch of the military to enlist in
1 2 3 4 5 6 7 8 9
19. List 3 occupations that you might like that you could enter with a high school diploma
1 2 3 4 5 6 7 8 9
20. List 3 occupations that you might like that you could enter after receiving vocational technical training
21. List 3 occupations that you might like that you could enter with a college diploma

APPENDIX G
DEBRIEFING SCRIPT

De-Briefing Form:**Career Aspirations, Expectations, and Educational Expectations**

Thank you for your participation in our study. Today I asked you what you several questions about what you want to be when you grow up. You also filled out a questionnaire looking at your confidence in making decision about your future. I was curious to see if there was a relationship between your career aspirations and expectation and the role of educational expectations in your future plans. If you would like more information about the study please feel free to contact me at sarahschmittwilson@gmail.com or your teacher.

APPENDIX H
DEBRIEFING LETTER

De-Briefing Letter for Participation in Research: *Please keep this copy for your records*
University of Northern Colorado
Project Title: Career Aspirations, Expectations, and Educational Expectations

Researcher: Sarah Schmitt-Wilson, School of Psychological Sciences PhD student
e-mail: sarahschmittwilson@gmail.com
Research Advisor: Dr. Marilyn Welsh, Professor of Psychology, (970) 351-2236 Email:
Marilyn.Welsh@unco.edu

Dear Parent or Guardian,

Thank you for allowing your child to participate in our study. The study consisted of asking a few questions about their career and educational plans for the future their confidence in making these decisions. The study allowed me to look at whether educational expectations predicted students' career aspirations and expectations. Moreover, I looked at whether self-efficacy (confidence in ability to make future plans), parent expectations, and aligned expectations (whether the amount of schooling expected to obtain matches the education required for the job they expect to have) predicted student educational expectations. This information will assist in understanding the relationship between educational expectations and career aspirations and expectations among individuals of diverse backgrounds.

If you have any questions about the study or would like to view the results please feel free to contact me at sarahschmittwilson@gmail.com Thank you again for allowing your child to participate.

Sincerely,

Sarah Schmitt-Wilson,
PhD Student