

AMERICAN UNIVERSITY OF BEIRUT

THE IMPACT OF DYSFUNCTIONAL CAREER THOUGHTS,
PARENTAL ATTACHMENT BONDS AND CAREER
EXPLORATION ON GRADE ELEVEN STUDENTS' CAREER
DECISION MAKING SELF-EFFICACY

by
NADINE WALID GHALAYINI

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for the degree of Master of Arts
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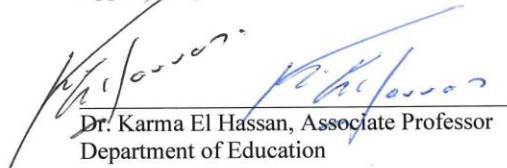

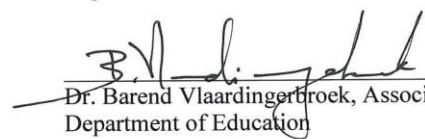
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Completing my thesis was an experience that cannot be really compared to any other one. I have to admit, the support of the important people in my life empowered me.

“Call it a clan, call it a network, call it a tribe, call it a family. Whatever you call it, whoever you are, you need one” Jane Howard

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AN ABSTRACT OF THE THESIS OF

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Major: Educational Psychology

Title: The impact of dysfunctional career thoughts, parental attachment bonds and career exploration on grade eleven students' career decision making self-efficacy

The transition of secondary students to higher education is a process that entails effective career decision making skills (Krass & Hughey, 1999). Career decision making self-efficacy, or an individual's belief about his ability to perform tasks related to the career decision making process (Taylor & Betz, 1983), is a sort of perceived self-efficacy which is itself a contributor to one's cognitive development and functioning (Bandura, 1993). An overview of previous empirical research on career decision making self-efficacy in secondary students shows that the latter is linked to career exploration, dysfunctional career thoughts and parental attachment bonds.

Studies in the Lebanese context have demonstrated narrow career knowledge in secondary students (Oweini & Abdo, 1999; Vlaardingerbroek, Dallal, Rizkallah, & Rabah, 2007) and high parental influence on their career decision making process and career indecision levels (Mugharbil, 2012; Vlaardingerbroek et.al, 2007). Students' limited career maturity (Fleihan, 2011; Theodory, 1982) is highly influenced by the shortage in career education services offered to them (Abdel Latif, 2012). However, previous research did not attempt to study the effect of the combination of the cognitive, psychological and behavioral profiles on career decision making self-efficacy levels in university bound students.

The present research study investigates the relationship between career decision making self-efficacy and each of dysfunctional career thoughts, career exploration and parental attachment, and determines the relative weight of each of the factors in predicting career decision making self-efficacy, in a representative sample of Lebanese grade 11 students drawn from ten English speaking private schools that provide career guidance to secondary students. The four variables were assessed with the following tools: Career Decision Making Self-Efficacy Scale – short form (CDMSE-SF), the Career Exploration survey (CES), the Career Thoughts Inventory (CTI) and the Parent and Peer Attachment Bonds (IPPA). Data was analyzed using Pearson correlation and stepwise multiple regression. Subsequently, the theoretical significance of the study and practical implications for career counselors are discussed.

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CHAPTER I

INRODUCTION

Career development is a critical aspect that characterizes adolescents' lives (Nawaz & Gilani, 2011; Rogers & Creed, 2011). Secondary school years revolve around a phase during which students set personal and professional goals that are harmonious with their self-concepts (Oweini & Abdo, 2000). Therefore, they need extensive support through schools' provision of career guidance programs that help them overcome the challenge of selecting a prospective university major (Gysbers, 1996). The choice of a career is affected by a variety of personal, behavioral and environmental factors (Lent, Brown, & Hackett, 1994). Some of the prominent factors that may influence the career choice include negative career thoughts (cognitive), strong parental attachment bonds (affective) and the lack of career exploration (behavioral).

An overview of literature on career decision making self-efficacy reveals that this construct has been linked to various psychological, cognitive and behavioral factors in high school students. Previous research studies offer a descriptive account of the connection between career decision making self-efficacy and dysfunctional career thoughts (Bullock-Yowell, Andrews, & Buzzetta, 2011 b; Bullock-Yowell, Peterson, Reardon, Leierer, & Reed, 2011 a), career exploration (Brown, Darden, Shelton, & Dipoto, 1999; Gushue, Clarke, Pantzer, & Scanlan, 2006 a; Gushue, Scanlan, Pantzer, & Clarke, 2006 b), and attachment bonds (Cenkseven-Onder, Kirdok, & Isik, 2010; Germeijs & Verschueren, 2009; Nawaz & Gilani, 2011). Nevertheless, they did not examine the integration of behavioral, psychological and cognitive factors, as possible predictors of career decision making self-

efficacy levels in the Lebanese context. Bandura (1993) has discussed the association of diverse factors and their impact on self-efficacy levels. He explains how self-efficacy is influenced by thoughts (cognitions) that, in turn, affect the behaviors and affections (Bandura, 1993). Much human behavior is regulated by cognized goals, and is affected by the beliefs people hold about change in abilities (Bandura, 1993). Abilities refer to generative capabilities where cognitive, social, motivational and behavioral skills should be effectively organized to serve several purposes (Bandura, 1993, p.118). This suggests that a mixture of cognitions and behaviors, in addition to social and motivational aspects result in one's beliefs in his abilities, hence positively or negatively affecting his self-efficacy and consequently his behaviors. Bandura adds that "self-efficacy beliefs result from a complex process of self-persuasion that relies on cognitive processing of diverse sources of efficacy information delivered enactively, vicariously, socially, and physiologically" (145). With regard to career decision making, Bandura (1993) states that "the stronger people's belief in their efficacy, the more career options they consider possible, the greater the interest they show in them, the better they prepare themselves educationally for different occupations, and the greater their staying power and success in difficult occupational pursuits" (p. 135). The last statement implies that the process of choosing a career is linked to cognitive, affective and behavioral aspects. The belief in one's efficacy represents a cognitive process; the consideration for more career options and the self-preparation educationally for occupations denote behavioral activities; and the "greater interest" reflects an affective activity. Therefore, an effective combination between the behavioral, cognitive and affective aspects during the career decision making process would result in high self-efficacy levels, leading in turn to good career decision making.

Career decision making self-efficacy (CDMSE) refers to “expectations of self-efficacy with respect to the specific tasks and behaviors required in making career decisions” (Taylor & Betz, 1983, pp. 64-65). The term “career decision making self-efficacy” denotes one’s belief about his capabilities in performing career related decisions (Taylor & Betz, 1983). Taylor & Betz (1983) were the first to explore career decision making self-efficacy, in a study aiming at investigating Bandura’s theory of self-efficacy in the understanding and treatment of career indecision. Their study involved the development of the measure of self-efficacy expectations with regard to fifty career decision making related behaviors in a sample of college students. According to Gushue et.al (2006 a), decision making self-efficacy is an important variable in the career development of high school students. Betz & Hackett (1986) state that self-efficacy expectations with respect to career competencies are among the central factors that can influence vocational success and satisfaction (Betz & Hackett, 1986). Hence, career decision making self-efficacy has implications for one’s success in the career development process (Bullock- Yowell et.al, 2011 b; Gushue et.al, 2006 a).

A psychological factor that we will consider in the present study is parental attachment. Armsden & Greenberg (1987) define attachment as “an enduring affectional bond of substantial intensity” (p.33). They postulate that the needs of belonging and connection with others are important aspects of development and socialization (Armsden& Greenberg, 1987). Nawaz & Gilani (2011) argue that the career decision making process becomes challenging when the parents relate children’s success only to a narrow range of careers. According to Nawaz & Gilani (2011), the career choice “is often considered a family matter in many cultures where individuals’ career may be considered a reflection of

the family as a whole. Career is often an expression of an inter-dependent self that is connected with significant others” (p.36). The last statement highlights the influence of parental attachment on the career decision making process of adolescents. It is postulated that strong parental attachment bonds lead to high levels of career decision making self-efficacy (Nawaz & Gilani, 2011).

Career exploration is the behavioral factor to be investigated in this study. It is a fundamental aspect of the career development process (Rogers & Creed, 2011). Career exploration is essential in the career decision making stage, as it involves learning about available fields of study and employment opportunities (Stumpf, Colarelli, & Hartman, 1983). Career exploration is defined as “purposive behavior and cognitions that afford access to information about occupations, jobs, or organizations that was not previously in the stimulus field” (Stumpf et.al, 1983, p. 192). School counselors have a crucial role in enriching students’ career knowledge by exposing them to a wide range of majors and their pertinent professions (Rowland, 2004). In addition to equipping students with better career decision making skills, career guidance activities provided at school influence their career indecision and career decision making self-efficacy levels (Krass & Hughey, 1999). The study of Gushue et.al (2006 b) has shown that students who have greater confidence in making career decisions show greater engagement in career exploratory activities.

A cognitive factor that we will consider in the present study is dysfunctional career thinking. Sidiropoulou-Dimakakou, Mylonas, Argyropoulou, & Tampouri (2012) define dysfunctional career thoughts as “prejudiced or twisted career beliefs, unreasonable expectations, various career myths, negative estimations regarding the individual’s actions

and professions, which influence each one's ambitions and his actions, leading to self-defeating experiences" (p. 118). Dysfunctional career thoughts may result in ineffective decisions and decision making abilities (Bullock-Yowell et al., 2011 b) , complicating the decision making procedure and jeopardize one's overall career development (Sidiropoulou-Dimakakou et al., 2012). Previous research has also demonstrated a relationship between dysfunctional career thoughts and depression symptoms (Walker & Peterson, 2012), indecisiveness (Austin, Wagner, & Dahl, 2004), and a negative relationship with emotional intelligence (Dahl, Austin, Wagner, & Lucas, 2008).

This study builds on past research to advance our understanding of career development of Lebanese secondary students, by exploring new dimensions of the career decision making process. Career development is "viewed as the accomplishment of a series of vocational tasks in an orderly sequence of life stages" (Super, Crites, Hummel, Moser, Overstreet, & Warnath, 1957; as cited in Super, 1973). Previous research indicates that Lebanese adolescents lack career knowledge (Oweini & Abdo, 2000; Vlaardingerbroek, Dallal, Rizkallah, & Rabah, 2007), have either general or uncertain career goals (Fleihan, 2011) and make immature career decisions as a result of the lack of formal guidance programs in schools (Theodory, 1982). Similarly, a positive correlation was found between parental lack of engagement and parental lack of interferences with students' career indecision (Mugharbil, 2012). To date, no systematic investigation has been carried out to address Lebanese secondary students' behavioral, psychological and cognitive profiles as predictors of career decision making self-efficacy.

Purpose of the Study

For several years, the great effort devoted to the study of the career development of Lebanese adolescents has demonstrated that students have high career indecision levels (Fleihan, 2011), they lack career information and knowledge (Oweini&Abdo, 1999; Vlaardingerbroek et.al, 2007), and that immature career decisions emerged as a result of the lack in school career guidance (Theodory, 1982). Some of the factors that were found to affect the career decision making process include students' perceptions of barriers (Mugharbil, 2012) and the influence of parents (Fleihan, 2011). In other geographical contexts, research has linked career decision making self-efficacy to other affective, cognitive and behavioral variables , some of which include parental attachment bonds (Nawaz &Gilani , 2011) , dysfunctional career thoughts (Bullock-Yowell et.al, 2011 b) and career exploration (Brown et.al, 1999; Gushue et.al , 2006 a). However, literature on career development of Lebanese secondary students has focused almost exclusively on one aspect of career development, leaving no record of study outlining how the combination of psychological, behavioral and cognitive factors might affect career decision making self-efficacy. Therefore, there is a need for a study assessing the relationship between career decision making self-efficacy and parental attachment bonds, dysfunctional career thoughts and career exploration in Lebanese secondary students, given the importance of combining the cognitive, behavioral and psychological aspects during the career decision making process.

Accordingly, the purpose of the present study is to investigate the relationship between career decision making self-efficacy and each of parental attachment bonds,

dysfunctional career thoughts and career exploration, and to determine the relative weights of each of the factors in predicting CDMSE, in a sample of Lebanese grade eleven students enrolled at English speaking private schools that provide high school career guidance. The following instruments will be used to assess the constructs: the Career Decision Making Self Efficacy Scale – Short Form (CDMSE-SF), the Career Exploration Survey (CES; self-exploration and environmental exploration subscales), the Career Thoughts Inventory (CTI) and the Parent and Peer Attachment Bonds (IPPA).

This study was guided by five research questions:

- 1- Is there a significant relationship between career decision making self-efficacy and the level of dysfunctional career thoughts, as measured by the Career Thoughts Inventory, in grade 11 students?
- 2- Is there a significant relationship between career decision making self-efficacy and the level of parental attachment bonds, as measured by the Inventory of Parent and Peer Attachment Bonds (IPPA), in grade 11 students?
- 3- Is there a significant relationship between career decision making self-efficacy and the level of career exploration, as measured by the Career Exploration Survey (CES), in grade 11 students?
- 4- How well do parental attachment bonds, dysfunctional career thoughts and career exploration predict career decision making self-efficacy in grade 11 students?
- 5- What is the relative weight of each of parental attachment bonds, dysfunctional career thoughts and career exploration in predicting grade 11 students' career decision making self-efficacy?

Significance of the study

The results of the present study will give practitioners in the career guidance field some insights on the difficulties encountered by students during the career planning process. The evaluation of such difficulties is useful in career counseling, since it is the responsibility of counselors to help young people identify their personal characteristics, interests and preferences (Sidiropoulou- Dimakakou et.al, 2012). The development and application of effective career planning courses at the high school level can reduce the pressures associated with the process of career decision making (Budden, Bush, & Wood, 2006). Investigating the relationship between career decision making self-efficacy and a set of cognitive, psychological and behavioral aspects in secondary students helps counselors shed light on the factors that may positively or negatively interfere with the career decision making process and to enhance them accordingly. School counselors may put more effort in the reduction of dysfunctional career thoughts in students through the provision of career guidance courses (Budden et.al, 2006; Osborn, Howard, & Leierer, 2007). They may need to assist in the improvement of students' relationships with their parents (Germeijs & Verschueren, 2009; Nawaz & Gilani, 2011), or to include more career exploratory activities in the high school guidance curriculum (Gushue et.al, 2006 b). Theoretically, this study will build on Bandura's (1993) view regarding the career decision making process by investigating the influence of a variety of cognitive, psychological and behavioral factors on career decision making self-efficacy in a sample of Lebanese secondary students.

Methodology

This study is based on a quantitative correlational design, determining the correlations between career decision making self-efficacy and each of parental attachment bonds, dysfunctional career thoughts and career exploration , and the relative weights of each of the factors in predicting `career decision making self-efficacy levels. Participants are grade 11 Lebanese students, enrolled at ten private English speaking schools that offer career guidance and counseling services to their secondary students. The following instruments will be used to assess the constructs: the career decision making self-efficacy scale – short form (CDMSE-SF; Betz, Klein, & Taylor, 1996), the environmental exploration (EE) and the self-exploration (SE) subscales of the career exploration Survey (CES; Stumpf, Colarelli, & Hartman, 1983), the career thoughts inventory (CTI; Sampson, Peterson, Lenz, Reardon, & Saunders , 1998) and the inventory of parent and peer attachment bonds (IPPA; Armsden& Greenberg, 1987).

Limitations

Despite the importance of this study in investigating the link between career decision making self-efficacy and behavioral, cognitive and psychological factors, there are some limitations to be noted. First, the selected sample does not represent all grade eleven students in Lebanon, since only schools that provide formal career guidance services at the high school level will be included. It would have been interesting to compare students who received career guidance versus those who did not receive, on the four chosen constructs for the study. Moreover, since the selected schools are located in Greater Beirut, the study

will not investigate schools in rural and impoverished areas. In addition, since counseling services at public schools are restricted to elementary and middle school levels (Ayyash Abdo, Alamuddin, & Mukallid, 2010), public schools will not be included in the study. Finally, all of the four questionnaires that will be used in the present study are based on self-report answering (likert type). According to Furnham (1986), a major disadvantage of self-report questionnaires is response bias, which possibly includes faking, lying and dissimulating.

Conclusion

This introductory chapter presented the research study in terms of the adopted constructs, the purpose of the study, the intended research questions, the statement of the problem, the significance of this research, the methodology and the limitations. The next chapter will present a literature review on the relationships between the main construct of the study (career decision making self-efficacy) and each of the other factors (dysfunctional career thoughts, parental attachment bonds and career exploration). It will also briefly expose previous research on the career development of Lebanese adolescents.

CHAPTER II LITERATURE REVIEW

The present chapter will define and explore the concepts of career decision making self-efficacy, dysfunctional career thoughts, career exploration and parental attachment bonds. It will also examine previous research pertaining to the link between the main construct of this study (career decision making self-efficacy) to each of dysfunctional career thoughts, career exploration and parent attachment bonds. Furthermore, it will provide a brief overview of the situation of career guidance in the Lebanese context.

A review of the empirical literature on career decision making self-efficacy in high school students proves that this construct is influenced by behavioral, cognitive and psychological factors. Career decision making self-efficacy is negatively correlated with dysfunctional career thoughts (Bullock-Yowell et.al, 2011 b), and positively correlated with strong parental attachment bonds (Nawaz & Gilani, 2011) and high levels of career exploration (Gushue et.al, 2006 b). In the Lebanese context, research on the career maturity and the career development of secondary students shows that they are undecided (Fleihan, 2011), they lack career knowledge and guidance (Oweini & Abdo, 1999; Vlaardingerbroek et.al, 2007) and they make immature career decisions as a result of the lack of school career guidance (Theodory, 1982) .

The Concept of Self-Efficacy: a Theoretical Background

Albert Bandura's (1977) concept of self-efficacy expectations is one of the most theoretically and practically useful concepts that were formulated in modern psychology

(Betz, Klein & Taylor ,1996) . In general, this theory implies that the beliefs in one's abilities to successfully perform a certain behavior will influence the types of behaviors attempted or avoided (Bandura, 1977). Bandura (1977) defines efficacy expectations as “the conviction that one can successfully execute the behavior required to produce the outcomes” (p.193). In other words, self-efficacy expectations refer to our beliefs in our capabilities to successfully perform certain behaviors, and thus they influence our choices, performance and persistence (Betz et.al, 1996). People's views of their own effectiveness affect their decision to handle certain situations (Bandura, 1977).This explains why people avoid situations they perceive as threatening, whereas they get involved in situations that they think they can handle (Bandura, 1977). Thus, efficacy expectations constitute a major determinant of people's choice of activities and how much effort they will expend (Bandura, 1977).

According to Bandura (1977), there exist four sources of efficacy expectations: performance accomplishments, vicarious experience, verbal persuasion and physiological states. The importance of performance accomplishments lies in personal mastery experiences, implying an effect of successes or repeated failures on the raise or reduction of mastery expectations (Bandura, 1977). After repeated success, strong efficacy expectations are developed, reducing the negative impact resulting from occasional failures (Bandura, 1977). Self-efficacy beliefs contribute to one's performance accomplishments due to of their role in helping individuals interpret, organize and apply their skills (Lent, Brown, & Hackett, 1994).The second source of efficacy expectations is “vicarious experiences”. Bandura (1977) explains that “seeing others perform threatening activities without adverse

consequences can generate expectations in observers that they too will improve if they intensify and persist in their efforts” (p. 197). The third source of efficacy expectations, verbal persuasion, occurs when individuals are led by means of suggestions to have faith in their own abilities to effectively handle what used to overwhelm them previously (Bandura, 1977). Efficacy expectations resulting either from vicarious experiences or verbal persuasion are not as strong as those produced by one’s own accomplishments, since they are not based on authentic experiences (Bandura, 1977). The fourth source of efficacy expectations is emotional arousal. The latter weakens performance, causing individuals to expect success when they are not overwhelmed by aversive arousal than if they are tense (Bandura, 1977).

Career Decision Making and Career Decision Making Self-Efficacy

To start with, a comprehensive definition of the term “career” is needed. According to Kennedy & Haines (2008), a career is the series of paid and unpaid work roles executed throughout one’s lifetime. Super (1980) defines a career as “the combination and sequence of roles played by a person during the course of a lifetime” (p. 282). These roles include those of child, student, citizen, worker, spouse, homemaker, parent and pensioner. Examples of other less common roles include criminal, reformer and lover (Super, 1980). However, Super (1980) argues that not everyone plays all of the nine roles, pointing out to those who never marry or those who do not reach retirement for some reason (Super, 1980). Super explains that the sequence of the roles varies among people, since for instance a student may marry before leaving school and before becoming a worker.

Career Decision Making

Hilton (1962) describes the process of career decision making as “imperfect”. According to Betz & Hackett (1986), the career choice includes “what the individual considers” (e.g. careers in science) and “the process refers to how decisions are made” (e.g. the nature of the exploration and decision making activities engaged in) (p. 284). Unlike the concept of career development that has been widely studied, the concept of career decision making and its process has received little attention (Hilton, 1962). Career development refers to “total constellation of psychological, sociological, educational, physical, economic, and chance factors that combine to shape the career of any given individual over the lifespan”(Herr & Cramer, 1996; as cited in Abdul Latif, 2012).

Hilton (1962) summarizes five possible conceptions of the process of career decision making. The Attribute Matching model assumes that the individual “first takes an inventory of his personal attributes, then he ascertains the attributes required for successful adjustment in each of some set of occupations; and lastly he selects that occupation the requirements of which best match his attributes” (p. 291). The second model, the “Need Reduction Model”, assumes that individuals with varying awareness degrees seek out the occupations that satisfy their needs because the goal of the process is to reduce need tension (Hilton, 1962). For example, the decision maker may select teaching because he perceives it as satisfying his need to nurture young people (p. 291). In the third model entitled the “Probable Gain Model”, an individual chooses one of some set of alternatives ,each having certain value to the individual and a probability of occurring, which will maximize his gain. This model is related to the various models of rational behavior, used in economics (p.

291). The fourth model, the “Social Structure Model”, “emphasizes the mobility provided and the limits imposed by the various social structures through which an individual’s career carries him” (p. 292). The last model discussed by Hilton is the “Complex Information Processing Model”. It assumes that the individual has several behavioral alternatives, but his limited capacity to handle information about them limits the rationality of the decision making (p.292).

Career Decision Making Self-Efficacy

Taylor & Betz (1983) define career decision making self-efficacy as “expectations of self-efficacy with respect to the specific tasks and behaviors required in making career decisions” (pp. 64-65). In other words, career decision making self-efficacy is an individual’s belief about his ability to perform career related decisions (Taylor & Betz, 1983). The concept of career decision-making self-efficacy is derived from Bandura’s self-efficacy theory (Taylor & Betz, 1983). The study of career decision making self-efficacy is one of the most popular applications of the self-efficacy theory (Betz et.al, 1996), and one of the most studied self-efficacy variables in vocational psychology (Chung, 2002). Decision making self-efficacy is an important variable in the career development of high school students (Gushue et.al, 2006 a). Self-efficacy expectancies with respect to career competencies are among the central factors that can influence vocational success and satisfaction (Betz & Hackett, 1986).

In an attempt to investigate Bandura’s theory of self-efficacy in understanding and treating career indecision, Taylor & Betz (1983) conducted a study that involved the

development of the measure of self-efficacy expectations with regard to 50 career decision making related behaviors. A sample of 346 college students were administered the career decision making self-efficacy scale and the career decision scale. Career decision making self-efficacy expectations were measured by asking the respondents to rate their confidence in their abilities to complete each task on a 10 point scale. Results revealed confidence in college students' ability to complete tasks related to career decision. Levels of self-efficacy did not differ according to gender. Also, it was found that self-efficacy expectations with regard to career decision making (or otherwise called "career decision making self-efficacy") predicted levels of career indecision in participants. In other words, students who reported less confidence in their ability to complete decision making tasks were more undecided than those who reported higher confidence levels (Taylor & Betz, 1983).

Mugharbil (2012) investigated the relative importance of various contextual, individual and cognitive variables associated with the social cognitive career theory in predicting Lebanese adolescents' career indecision, using multiple regression analysis. She found that career indecision was significantly negatively correlated with career decision making self-efficacy levels in the participants ($p \leq .01$). Predictor variables were entered into the regression equation in this order (barriers, parental support, person input and cognitive variables). The findings show that the final regression equation accounted for 29% of the variance associated with career indecision $F(15,351) = 9.41$, $p < .01$. Parental support was an important predictor of career indecision with $\Delta R^2 = .06$ while cognitive variables (career decision making self-efficacy and career outcome expectations) had the least predictive power in accounting for the variation in career indecision with $\Delta R^2 = .03$ for each.

Measurement of Career Decision Making Self-Efficacy

The Career Decision Making Self-Efficacy Scale was originally developed by Taylor & Betz (1983), based on the five career choice competencies proposed in Crites' Model of career maturity. Competencies include accurate self-appraisal, gathering occupational information, goal selection, making plans for the future and problem solving (Taylor & Betz, 1983). For each of the five competencies, 10 behavioral items were developed. In order to assess expectations with regard to the career decision making tasks, respondents are asked to indicate their confidence in their ability to complete each task. Answers are obtained on a 10 point scale ranging from complete confidence (9) to no confidence (0). The total score is obtained by adding the confidence ratings for the 50 items, obtaining 450 as a maximum score on the CDMSE-scale. Sample items include "choose a major or career that your parents do not approve of" (goal selection), "accurately assess your abilities" (self-appraisal), "change majors if you did not like your first choice" (problem solving), "describe the job duties of the career / occupation you would like to pursue" (occupational information), "find and use the placement office on campus" (planning) (Taylor & Betz, 1983). Low self-efficacy expectations reflect high levels of perceived task difficulty and vice versa (Taylor & Betz, 1983). Based on the results of their study, Taylor & Betz (1983) concluded that the CDMSE reflected high internal consistency; coefficient alpha of the Five 10- item subscales were 0.88, 0.89, 0.87, 0.89 and 0.86 (for self-appraisal, occupational information, goal selection, planning and problem solving, respectively). However, according to Solberg, Good, Nord, Holm, Hohner, Zima,

Heffernan, & Malen (1994), one major limitation of the CDMSE scale is its assessment of career issues to college level students, like for example selecting a major.

Betz et.al (1996) developed a short form of the Career Decision Making Self-Efficacy Scale. Since the CDMSE scale is longer than desirable for research purposes and for individual assessment and intervention in career counseling (Betz et.al, 1996), it was revised and a shorter form was developed. The Career Decision Making Self Efficacy-short form measures an individual's degree of belief that he can successfully complete career decision related tasks (Betz et.al, 1996). The short form eliminated 5 items from each of the five CDMSE scales. Therefore, the CDMSE- short form scale consists of five 5 scales (a total of 25 items). Responses are rated on a Likert type scale ranging 1 (no confidence at all) to 5 (complete confidence). According to Betz et.al (1996), the CDMSE-short form has yielded coefficient alphas ranging from 0.73 to 0.83 for the subscales, and 0.94 for the total scale. Findings of the study indicated that the short form scale has psychometric characteristics that are comparable to or better than the long form (Betz et.al, 1996).

Attachment Bonds and Career Decision Making Self-Efficacy

Researchers have recently started to investigate the influence of attachment on career related variables (Wright & Perrone, 2008). The most commonly studied career construct with attachment has been the career decision making self-efficacy (Wright & Perrone, 2008). Armsden & Greenberg (1987) define attachment as “an enduring affectional bond of substantial intensity” (p. 33). Most attachment literature describes the

importance of close relationships with caregivers as a way to foster the individuals' movement into different environments, including the career world (Blustein, Prezioso, & Schultheiss, 1995). In the new environment, the "careers world" in this case, students make difficult decisions, take risks and start new relationships; this is why the experience of security might facilitate the exploration of the new environments (Blustein et.al, 1995). Early attachment relationships have a great and continuing impact on the lives of adults (Wright & Perrone, 2008). In contrast, threatened or loss of attachment relationships may result in anxiety, sadness, anger and depression (Armsden & Greenberg, 1987).

The attachment theory highlights the influence of early childhood experiences in personality development and points to the importance of more recent events and relationships (Blustein et.al, 1995). The main assumption of attachment theory is that children develop emotional attachment with their primary caregivers, internalize their experiences with caregivers and use these attachment experiences as reference for their future. Moreover, attachment theory implies that a high secure attachment increases one's ability to explore his environment (Bowlby, 1973; as cited in Wright & Perrone, 2008).

It was proposed that attachment theory and the social cognitive career theory (SCCT) might be used together in an attempt to understand the relationship between attachment and career related variables (Wright & Perrone, 2008). According to SCCT, career learning experiences (including performance accomplishments and vicarious learning) are shaped by personal input variables (gender, predispositions, personality traits and background factors), and have an impact on the career self-efficacy and outcome expectations (Lent et.al, 1994). Background factors include parental behaviors which will

affect learning experiences (secure attachment experiences) by affecting career self-efficacy (Lent et.al, 1994). It was suggested that attachment plays a role in developing personal inputs, which enriches learning experiences (Lent et.al, 1994). Consequently, a deep understanding of individuals' attachment relationships helps in the understanding of their career development (Wright & Perrone, 2008).

Measurement of Attachment Bonds

Attachment bonds are assessed with the Inventory of parents and peer attachment bonds (Armsden & Greenberg, 1987). The objective of the IPPA is to assess adolescents' perceptions of affective and cognitive dimensions of their relationships with parents and close friends (Armsden & Greenberg, 1989). The theoretical framework of the IPPA is attachment theory (Bowlby, 1980); it assesses three dimensions: mutual trust; communication, and alienation. The instrument is a self-report questionnaire with a five point Likert-scale response format. The response options are: almost always or always true, often true, sometimes true, seldom true, or almost never or never true. The original version of the IPPA includes 28 parents' items and 25 peer items; it yields two attachment scores. The revised version (Mother, Father, Peer Version) consists of 25 items in each of the mother, father, and peer sections, yielding three attachment scores (Armsden & Greenberg, 1989). According to Armsden & Greenberg (1989), the IPPA is scored "by reverse-scoring the negatively worded items and then summing the response values in each section" (p.1). Higher scores reflect more secure attachment and lower scores indicate less secure attachment. The subscale of Trust includes 10 items "suggesting themes of parental understanding and respect, and mutual trust" (Armsden & Greenberg, 1987, p. 433). The

Communication subscale, including 10 items, refers to “items related to the extent and quality of verbal communication with parents” (Armsden & Greenberg, 1987, p. 433). The subscale of Alienation includes 8 items, suggesting “feelings of alienation and isolation” (Armsden & Greenberg, 1987, p. 433). The original IPPA’s three-week test-retest reliability coefficients are .93 for parents and .86 for peers (Armsden & Greenberg, 1989). For the revised version, the internal reliabilities (Cronbach’s alpha) are: mother attachment, .87; father attachment, .89; peer attachment, .92 (Armsden & Greenberg, 1989). Sample items include “my parents respect my feelings”, “I get upset easily at home” (Armsden & Greenberg, 1989).

Previous Research on Attachment Bonds and Career Decision Making Self-Efficacy

Cenkseven-Onder et.al (2010) investigated career decision making in a sample of 382 secondary students, in relation to the parenting styles and the parental attachment levels. The Inventory of Parent Attachment was used to assess the parental attachment level of the participants, the CDS was used to measure their career decisions, and the Parenting Style Inventory was adopted to assess parenting styles. The results of one way ANOVA data analysis imply that the children of more authoritative and authoritarian parents were found to be more decisive than the children of neglectful parents. In terms of attachment level, the results demonstrated that students experiencing a medium degree of attachment to their parents were found more decisive than the students having low or high attachment levels (Cenkseven-Onder et.al, 2010).

Ketterson & Blustein (1997) studied the impact of attachment to parents on the career exploration activities in a sample of 137 undergraduate students. Researchers

administered the IPPA to measure parental attachment bonds, and the Environmental Exploration (EE) and Self Exploration (SE) subscales of the CES to measure career exploration activities conducted in the past three months. It was found that the quality of attachment relationship with both mother and father were associated with recent environmental career exploration. Higher levels of parental attachment were associated with higher levels of environmental and self-exploratory activities in the participants. Besides, it was noted that gender did not play a significant role in exploration (Ketterson & Blustein, 1997).

In 2011, Nawaz & Gilani investigated the relationship between career decision making self-efficacy and parental and peer attachment bonds in a sample of adolescents attending different colleges in Pakistan. The Inventory of Parent and Peer Attachment was used to measure the level of parental and peer attachment, and the career decision making self-efficacy was assessed through the career decision making self-efficacy scale- short form. A significant positive relationship was found between the parental as well as peer attachment bonds with career decision making self-efficacy levels of the participants. Nawaz & Gilani (2011) conclude that the findings can be used to improve adolescents' choices of careers and other domains in their lives.

In concordance with Nawaz & Gilani's results, Wolfe & Betz (2004) found a link between attachment bonds and career decision making self-efficacy in a sample of undergraduate students at a large Midwestern university. The study investigated the relationship between attachment bonds and self-rated attachment style to each of fear of commitment and career decision making self-efficacy. Wolfe & Betz's results propose

"evidence linking secure attachment to higher self-efficacy" (p. 367). Additionally, their findings suggest that students with low career decision making self-efficacy may need interventions that focus on building their self-efficacy .Wolfe & Betz suggest that students with insecure attachment may seek counseling interventions focused on these personal issues prior to information focused career counseling.

Germeijs & Verschueren (2009) examined how adolescents' perceptions of attachment security with parents relate to their process of choosing a major in higher education. A sample of 281 grade twelve students participated in the study. They completed the Inventory of Parent and Peer Attachment that measures the degree of perceived security of attachment to both parents, and the Career Decision Making Self-Efficacy scale short form that measures the degree of their confidence in completing career decision making related tasks. In addition, they completed the six subscales of the Study Choice Task Inventory to measure coping behaviors and attitudes that address orientation, self-exploration, environmental exploration, career decidedness and commitment. It was found that the associations between perceived security with mother on the one hand and orientation and the exploration tasks on the other hand were each mediated by adolescents' career decision making self-efficacy beliefs (p.477). Absence of any significant unique effect of father was noticed, while perceived security with mother significantly contributed to students' coping with some decision related tasks. This reflects a stronger reliance on mothers to make career plans (Bryant, Zvonkovic, & Reynolds, 2006; as cited in Germeijs & Verschueren, 2009).

In brief, career decision making self-efficacy is one of the most commonly investigated constructs with attachment (Wright & Perrone, 2008). Previous research found a link between high school students' attachment levels and career decision making self-efficacy (Cenkseven-Onder et.al, 2010; Nawaz & Gilani, 2011; Wolfe & Betz, 2004) reflecting a great dependence on parents in making career plans. Results of these studies can be used to have positive impacts on adolescents' lives (Nawaz & Gilani, 2011), by helping students with insecure attachment through the application of counseling interventions focused on these personal issues prior to the career counseling process (Wolfe & Betz, 2004).

Career Exploration and Career Decision Making Self-Efficacy

Career exploration can be defined as “a purposive behavior and cognitions that afford access to information about occupations, jobs, or organizations that was not previously in the stimulus field” (Stumpf et.al, 1983, p.192). Career exploration is a major construct in the career development theory (Brown et.al, 1999), and it is defined by one's behaviors (Stumpf et.al, 1983). Stumpf et.al (1983) suggest a provisional classification for career related behaviors, proposing that the career exploration process involves four components: where one explores, how one explores, how much one explores and what one explores. The two major sources for career information gathering are the environment and oneself (Stumpf et.al, 1983). Career exploration occurs at all ages and stages of development (Brown et.al, 1999). However, Super (1973) discusses that the age of fourteen to fifteen is the stage where individuals seek to learn in some depth about one or more occupations ,but this stage might continue till early twenties .

Despite their controversy, career exploration programs improve the future prospects of high school students (Visher, Bhandari, & Medrich, 2004). Students who participate in career exploration programs are more likely to take college entrance exams than their counterparts who did not take part in such programs (Visher et.al, 2004). However, critics worry that the incorporation of career exploration activities into the high school curriculum may waste secondary students' time on job shadowing activities instead of focusing on academic skills (Visher et.al, 2004). The following career exploration programs are examples of activities that best suit secondary students: career majors, cooperative education, internships, job shadows and mentoring (Visher et.al, 2004).

Measurement of Career Exploration

Career exploration can be assessed using the Career Exploration Survey (CES; Stumpf, Colarelli, & Hartman, 1983). The CES was designed to “index career search behaviors, reactions to exploration, and beliefs about exploration” (Stumpf et al., 1983, p. 192). The CES allows researchers to evaluate career development programs on several criteria (Stumpf et.al, 1983). It provides measures for examining the effects of personal characteristics on career exploration behaviors and beliefs and it consists of seven measures of the career exploration process, three reactions to exploration, six beliefs about exploration (Stumpf et.al, 1983). It is comprised of 62 items distributed across 16 scales, including environmental exploration, self-exploration, focus, satisfaction with information, employment outlook etc. Answers are based on a 5 point Likert type format. Alpha coefficients ranged from 0.79 to 0.88 for the exploratory process scale (Stumpf et.al, 1983). Sample items include “investigated career possibilities” (environmental exploration),

“obtained information on specific jobs or companies” (environmental exploration), “focused my thoughts on me as a person” (Self exploration), “been retrospective in thinking about my career” (self-exploration) (Stumpf et.al, 1983).

Blustein (1989) has revised the original version of the CES. Precisely, since the CES was developed for students in the final stages of their undergraduate years, Blustein modified the wording of three items from the EE scale, and two items from the SE. For example, in items using “obtained information about specific jobs”, the sentence “in my anticipated area” was added in order to suit the students who may be still exploring career options (Blustein, 1989).

Previous Research on Career Exploration and Career Decision Making Self-Efficacy

Previous research on the career development of secondary level students has linked career exploration to career decision making self-efficacy. Brown et.al (1999) investigated the relation of career decision making self-efficacy to career exploration in two samples of high school students: urban and suburban students. Career exploration was measured with the Career Exploration Survey (CES; Stumpf, Colarelli, & Hartman, 1983). Students’ beliefs about career exploratory behavior significantly predicted their career decision making self-efficacy. In other words, students’ beliefs about successfully planning their job search suggest that they are expressing confidence in their ability to make career decisions (Brown et.al, 1999). Additionally, it was found that urban students reported a higher career exploratory behavior than their suburban counterparts (Brown et.al, 1999).

Likewise, Gushue et.al (2006b) explored the relationship between career decision making self-efficacy and vocational identity and career exploration in a sample of 72 high

school American students. The Career Search Activities Index was used to measure students' career exploration levels, asking them to indicate whether they had participated in each of the activities in the past six months. Items included activities such as "made a list about what you want in a career". Career decision making self-efficacy was measured through the CDMSE Scale Short Form. It was found that higher levels of career decision making self-efficacy were related to greater engagement with career exploration activities and vocational identity. Gushue et.al (2006 b) suggest that " career counselors and educators should explore students' beliefs about their capacity to engage in career exploration tasks an integral part of career counseling" (p. 25). In other words, it was suggested that career education might include strategies enhancing students' sense of self-efficacy about performing career exploration related tasks (Gushue et.al, 2006b).

Similarly, Gushue et.al (2006 a) studied the association between career decision making self-efficacy and perceptions of barriers and the outcome variables of vocational identity and career exploration behaviors in a sample of 128 urban Latino High School students. The study considered the influence of career decision making self-efficacy and perceptions of barriers on vocational identity of the participants, and it examined the impact of career decision making self-efficacy and perceptions of barriers on their career exploratory behavior. Therefore, this study used both psychological (vocational identity) and behavioral (career exploration) outcome measures to assess the impact of career decision making self-efficacy and perception of barriers of the sample. It was found that higher levels of career decision making self-efficacy were related to a greater engagement

in career exploration tasks and more defined vocational identity in participants (Gushue et.al , 2006 a).

Rogers & Creed (2011) investigated predictors of career exploration and career planning in a sample of Australian high school students. Direct relationships between self-efficacy, outcome expectations, choice goals, contextual influences and person inputs and choice actions were assessed. Career exploration was measured with the career exploration subscale of the Career Development Inventory (Lokan, 1984). Results of the hierarchical regression analysis revealed an association between career decision making self-efficacy and each of career exploration and career planning. They found that year 11 students with more confidence in making career decisions are likely to engage in more career exploration ($\beta = .29, p < .01$). They suggest that students “who are confident making career decisions” are more likely to plan and to engage in more career exploration (Rogers & Creed, 2011, p. 169). Therefore, findings of the study suggest that adolescents with high levels of career decision confidence are likely to engage in more exploratory behaviors. Rogers & Creed (2011) indicate that career counselors should design and implement special interventions that focus on the promotion of career decision confidence and the goal setting process.

In brief, career exploration is a significant concept in the career development theory (Brown et.al, 1999). It occurs at all ages (Brown et.al, 1999), and the information gathering is based on the environment and oneself (Stumpf et.al, 1983). Although critics worry that high school students will focus on job shadowing instead of their academics, career exploration programs improve their future prospects (Visher et.al, 2004). Previous research has proved that high levels of career decision making self-efficacy in high school

students are related to greater engagement with career exploration activities (Brown et.al, 1999; Gushue et.al, 2006 a; Gushue et.al, 2006 b; Rogers & Creed, 2011).

Dysfunctional Career Thoughts and Career Decision Making Self-Efficacy

Dysfunctional career thoughts refer to “prejudiced or twisted career beliefs, unreasonable expectations, various career myths, negative estimations regarding the individual’s actions and professions, which influence each one’s ambitions and his actions, leading to self-defeating experiences” (Sidiropoulou-Dimakakou et.al, 2012, p. 118). Some individuals tend to express negative statements regarding the career decision-making process (Hocson, 2012). Such negative career thoughts make the decision making procedure harder and jeopardize one’s overall career development (Sidiropoulou-Dimakakou et.al, 2012). Negative career thoughts are theorized to have implications for all aspects of the career development, including knowledge of values, interests, skills, occupational knowledge and decision making skills (Bullock-Yowell, 2011 b, p. 409).

Research has reflected a relationship between dysfunctional career thoughts and depression symptoms (Walker & Peterson, 2012), indecisiveness (Austin et.al, 2004), and a negative relationship with emotional intelligence (Dahl et.al, 2008). According to Bullock-Yowell et.al (2011 b), “dysfunctional career thoughts that are present during the process of choosing an occupation or major may lead to ineffective decisions and decreased decision making capabilities” (p.401).

Sampson, Peterson, Lenz, Reardon, & Saunders (1998) postulate that those who “verbalize dysfunctional cognitions about career choice can make career problem solving

and decision making more difficult” (p. 116). In addition, dysfunctional career thoughts can influence an individual’s career behavior (Bullock-Yowell et.al, 2011 b). Dysfunctional thinking can lead to decreased self-esteem and perceived self-efficacy when it occurs during the decision making process (Bullock-Yowell et.al, 2011 b, p. 401). Osborn et.al (2007) suggest that dysfunctional career thoughts are equivalent to Ellis’s notion of irrational beliefs, because they are absolute statements including words like “should”, “must” or “ought” , and overarching generalizations like “never” or “always” (p.366). An example of a dysfunctional career thought includes “I am never good at making decisions” (Osborn et.al, 2007, p. 366).

Measurement of Dysfunctional Career Thoughts

The Career Thoughts Inventory (Sampson, Peterson, Lenz, Reardon, & Saunders, 1998), comprised of 48 items, is a self-administered instrument intended to measure dysfunctional thoughts that impede the career decision making process. It yields a total score and three subscale scores: decision making confusion (DMC), commitment anxiety (CA) and external conflict (EC). Respondents are asked to rate on a 4 point Likert type scale the extent to which they agree/disagree with career decision making related thoughts. Answers range from 0 (strongly disagree) to 3 (strongly agree). Sample items include “I’m afraid if I try out my chosen occupation, I won’t be successful”, “I will never understand myself well enough to make a good career choice”. Higher scores on the Career Thoughts Inventory indicate more dysfunctional career thoughts. Sampson et.al (1998) reported internal consistency for the CTI subscales in a sample of college students as follows: 0.82 for decision making confusion (DMC), 0.79 for commitment anxiety (CA) and 0.74 for

external conflict (EC). Test- retest reliability, measured across 4 weeks in high school and college students, ranged from 0.74 to 0.82 (Sampson et.al , 1998).

Previous research on Dysfunctional Career Thoughts and Career Decision Making Self-Efficacy

Career planning courses can reduce the pressures associated with the process of career decision making (Budden et.al, 2006). In their study aiming at measuring the effect of a three credit hour career planning course on the reduction of dysfunctional career thoughts in a sample of 480 university students, Budden et.al (2006) found that dysfunctional career thoughts were significantly reduced after the application of a career planning course. The Career Thoughts Inventory (CTI) was used to measure dysfunctional career thoughts before and after students' participation in the career course.

Osborn et.al (2007) examined the effect of a 6 week career development course on the dysfunctional career thoughts of 158 freshman students, using the Career Thoughts Inventory as pre and posttests. The course was based on lectures, interactive group activities, reflective homework exercises and reading assignments and it was delivered by career specialists. The course was designed to educate students about the world of work, and to teach them how to recognize negative thoughts and reframe them in a positive manner. In addition, the course taught students how to implement decision making skills, identify their personal interests and abilities, relate their personal characteristics to career goals, and finally to create a career action plan. The results of the study show that this course was effective in reducing dysfunctional career thoughts in students. Interestingly, it was noted that students with the highest level of dysfunctional thoughts displayed the most

dramatic reduction of these negative thoughts, as reflected by the posttest (Osborn et.al, 2007).

Bullock-Yowell et.al (2011 a) investigated relationships between emotions, thoughts and career decision state in a sample of college students. It was hypothesized that negative career thoughts would function as a mediator between career and life stress (distressful emotions) and the resulting career decision state (uncertainty and dissatisfaction) when students are making a career decision within a short time (Bullock-Yowell et.al ,2011 a). Participants completed several questionnaires: the Occupational Alternatives Questionnaire, the Decision Making Confusion, Commitment Anxiety (CA), and External Conflict (EC) subscales of the Career Thoughts Inventory, the Career Tension and the Neuroticism scales of the NEO Five-Factor Inventory and the Career Tension Scale. The results of the study showed a non-significant link between career and life stress and the resulting career decision state. However, this association becomes significant when negative career thoughts are considered as a mediating variable. Thus, when making a career choice during stressful circumstances, students think that “when negative thoughts are accounted for, they become more certain and satisfied with career choice” (Bullock-Yowell et.al, 2011 a). Based on their findings, Bullock-Yowell et.al (2011 a) conclude that helping students to modify negative career thoughts is very essential in facilitating positive career decision-making results when they are experiencing career and life stress.

Bullock-Yowell et.al (2011 b) explored the hypothesis that career decision making self-efficacy could be affected by negative career thoughts, Big Five personality Factors (openness, conscientiousness, extraversion, agreeableness and emotional stability) and cultural mistrust in a sample of 322 African American and Caucasian college students. The

big five personality traits were assessed with the International Personality Item Pool (IPIP-NEO; Goldberg et.al, 2006). The Career thoughts Inventory was used to measure the negative thoughts that impede the career decision making self-efficacy. The career decision self-efficacy scale- short form was adopted to measure the career decision making self-efficacy of the participants. Findings of the study reveal that career decision making self-efficacy was negatively correlated with career thoughts. Bullock-Yowell et.al (2011 b) conclude that career counselors can improve the career decision making self-efficacy levels of clients by using “cognitive based counseling skills’.

Hocson (2012) used a correlational research design to describe the career indecision, attachment style, self-efficacy, career thoughts, career decision, vocational identity, need for information and career barriers in 386 undecided freshmen college students, in relation to career indecision. The purpose of the study was to determine the factors that relate to career indecision of freshman students, as basis for the construction of a career counseling program for the psychological well-being in freshman students .The adopted instruments include the Career Decision Scale, Relationship Scales Questionnaire, Career Decision Making Self-Efficacy Scale-Short Form, and Career Thoughts Inventory. The results of the study demonstrated that most career undecided freshman college students have negative career thoughts on their career decisions. Moreover, multiple regression analysis revealed career thoughts, career decisions and vocational identity as factors relating to career indecision. Specifically, all combined factors predicted career indecision (career thoughts on career decisions with t Stat value of 2.901 and P-value of 0.003 and

vocational identity with t Stat value of 3.022 and P-value of 0.002 significant factors relating to career indecision) (Hocson, 2012).

Sidiropoulou-Dimakakou et.al (2012) examined the relationship between career decision making difficulties, dysfunctional career thoughts and generalized self-efficacy, as factors in the decision making process in a sample of 260 university students. Participants were selected through cluster sampling, and the questionnaires were administered in groups. The majority of students reported facing career decision making related difficulties. In addition, it was found that indecisive students reported higher levels of dysfunctional career thoughts than the students who had made a career decision. Significant positive correlations were drawn between career decision difficulties (lack of information, inconsistent information, and lack of readiness) and negative career thoughts (Sidiropoulou-Dimakakou et.al, 2012).

Some research studies investigated the relationship between the social cognitive construct of career decision making self-efficacy and a combination of cognitive, psychological or/or behavioral factors. Gushue et.al (2006b) examined the link between career decision making self-efficacy and two factors: career exploration (behavioral) and vocational identity (psychological), with the latter referring to the conceptualization of one's own vocational interests and goals. They found that greater career decision making self-efficacy was related to more defined vocational identity and greater engagement in career exploration tasks (Gushue et.al, 2006 b). Similarly, Gushue et.al (2006 a) considered in their study the influence of career decision making self-efficacy and perceptions of barriers (predictor variables), on vocational identity and career exploration (criterion

variables). “Perception of barriers” is a cognitive factor intended to measure one’s perceived obstacles to the realization of occupational goals, vocational identity is a psychological factor (previously discussed) and career exploration denotes a behavioral factor. Students who had more confidence in their ability to perform career related decisions were more likely to have a clear vision of their goals and to perform career search activities (Gushue et.al, 2006 a).

Briefly, dysfunctional career thoughts influence people’s ambitions and actions (Sidiropoulou-Dimakakou et.al, 2012) and jeopardize their overall career development (Bullock- Yowell et.al, 2011a). Previous studies found positive effects of career planning courses on the level of dysfunctional career thoughts in high school students (Budden et.al, 2006; Osborn et.al, 2007). Research has also demonstrated a relationship between career decision difficulties and negative career thoughts (Sidiropoulou-Dimakakou et.al, 2012). Hence, based on the recommendation of Bullock-Yowell et.al (2011 b), the application of cognitive based counseling techniques improves career decision making self-efficacy levels in individuals.

At a glance: Career guidance in Lebanon

Despite the fact that the Lebanese Ministry of Education and Higher Education has recently developed a national education strategy that considers career guidance as a priority (Sultana & Watts, 2008), there is no formal careers education program in the Lebanese educational system (Vlaardingerbroek, Taylor, & Haig, 2009). Career guidance has long been neglected in Lebanese schools, and only selected private schools provide some career

guidance for secondary students to monitor their college applications (Oweini & Abdo, 2000). The only regular career publication in Lebanon is the annual universities guide prepared by the Ministry of Education (Sultana & Watts, 2008). The field of career guidance in Lebanon has witnessed advancements, despite the slow development of school counseling facilities (Ayyash Abdo et.al, 2010). The career guidance center at the American University of Beirut was founded in 1985 due to the lack of career guidance services across the schools. In addition, the Hariri Foundation's career guidance center was established "as a means of assisting its funded Lebanese youth in selecting a major to pursue their higher education abroad" (Ayyash Abdo et.al, 2010, p. 14). The Hariri Foundation's Career Guidance department "has been holding a large scale annual career Fair for the past 12 years" (Ayyash Abdo et.al, 2010, p. 14).

In 1982, Theodory investigated the extent to which Lebanese baccalaureate students' perceptions of their academic abilities match their actual achievements in school and government examinations. A large sample of secondary students was recruited for the purpose of the study. Students were found to be uncertain, misguided by idealistic career aspirations that do not match the requirements. In addition, students' personal interest played a major role in their career decisions. Theodory (1982) postulated that due to the absence of professional guidance and counseling programs addressing students, parents and friends seemed to be the major reference for information.

In order to assess whether secondary school students could benefit from prepared career counseling activities, Oweini & Abdo (2000) conducted an experimental workshop at a private school in Beirut. The workshop was attended by a sample of secondary school students, and it included activities on self-exploration. The Holland's Self Directed Search was administered to participants. Analysis of the pre-assessment questionnaire revealed that students' knowledge about majors and colleges was insufficient, and that they expressed a significant need for assistance in this area. The workshop evaluation questionnaire proved that the workshop was effective in providing students with helpful college related information (Oweini & Abdo, 2000). The efficiency of this workshop highlights the importance of exploration workshops and career guidance in enriching secondary students' awareness of available colleges and occupations.

Vlaardingerbroek et.al (2007) organized a tracer study of 90 upper secondary school students. To be eligible for participation, students had to have a younger sibling or close relative in the same school in order to be traced later on. Participants completed a questionnaire asking them for demographic data, their educational and career aspirations, and the factors influencing their aspirations. A follow up questionnaire was given to the sibling in September, after the academic year had ended. It enquired about the status of students regarding to their work or education details. It was concluded from the results of the study that no effects of gender or parental variables (like education or occupational status) on students' choice of the higher education program. Lack of information or guidance about career options was obviously noted in a significant proportion of students.

Moreover, a moderate amount of students' confidence in their personal ability was noted among the participants (Vlaardingerbroek et.al, 2007).

Vlaardingerbroek et.al (2009) conducted an exploratory comparative study of student transition to vocational education from middle secondary school in Australia and Lebanon. According to Vlaardingerbroek et.al (2009), careers education and guidance are emergent aspects in the Australian school system. In Australia, lower secondary students are advised to think about careers and set goals, to understand the connection between subjects and career choices and to attend "career expos" with their parents. On the other hand, the Lebanese school system does not offer career guidance or education. School students seemed to have little awareness of available careers beyond conventional jobs. Therefore, Vlaardingerbroek et.al (2009) suggest the introduction of career counseling services for students and their parents.

Fleihan (2011) investigated career maturity in Lebanese grade 12 students through an exploration of their career goals and their notion of the school education leading to those careers. Career Maturity was assessed with the CDI (an instrument that measures career attitude and career knowledge). Individual interviews were also carried out with the participants, consisting of eleven grade 12 students, aged 17-18 years old. Results showed that only two students among the participants had definite career goals. In line with Theodory's (1982) findings, Fleihan (2011) concluded that there is a lack in secondary students' skills to identify their vocational interests. This lack may be due, according to Fleihan, to the deficiency in the career guidance services offered in Lebanese schools.

In 2012, Abdel Latif reviewed in her study the current practices in the field of career guidance and counseling in Lebanese schools. She examined career guidance services and activities offered in some schools in Beirut. In addition, she assessed and analyzed secondary students' needs for career guidance. Participants were secondary students (in grades 10, 11 and 12) from 10 randomly selected secondary schools in Lebanon. She found that career planning was important for the secondary students who took part in her study. Furthermore, most students reported having decided which university major to pursue. Career aspirations of the participants clustered into a limited number of occupations, reflecting a lack of awareness of the available occupations (Abdel Latif, 2012).

Mugharbil (2012) investigated the relative importance of socio cognitive factors in predicting Lebanese adolescents' career indecision, using multiple regression analysis of the data. Factors included career decision making self-efficacy, gender, SES, parental educational background, educational aspirations, parental career support, perceived career barriers. She applied a mixed methods design where she used questionnaires and semi structured interviews, in a sample of 420 students ranging from grades 8 to 12. Her results show that the most important factors in predicting students' career indecision were students' perceptions of barriers and parental support, while cognitive and individual factors did not have a large impact. With respect to grades 11 and 12, the final regression equation comprised of PEB (Perceptions of Educational Barriers) likelihood, father LOE (father's lack of engagement), mother support, mother's education, COE (career outcome expectation) and career decision making self-efficacy accounted for 38%, $F(6, 135) =$

13.54, $p < .01$, of the variation in career indecision. Based on the results of her study, Mugharbil (2012) recommends the implementation of individual career counseling in schools because it helps students overcome their barriers. In addition, she states that individual career counseling can help promote students' confidence in their ability to make career decisions (Mugharbil, 2012).

In brief, despite the slow expansion of career guidance and counseling services in Lebanese schools (Ayash- Abdo et.al, 2010), there is a shortage in career guidance and counseling services offered to university bound students (Abdel Latif, 2012). Research findings reveal that Lebanese adolescents' career decisions are influenced by family members (Vlaardingerbroek et.al, 2007), and their career indecision is mostly predicted by their perceptions of barriers and parental support (Mugharbil, 2012). Secondary students reported limited career maturity, mainly because of the absence of formal career guidance services in Lebanese schools (Fleihan, 2011; Theodory, 1982). Students also reported limited knowledge of the available career options (Oweini & Abdo, 2000; Vlaardingerbroek et.al, 2007).

Conclusion

This chapter defined the concepts of career, career decision making, self-efficacy, career decision making self-efficacy, dysfunctional career thoughts, career exploration and parent attachment bonds. It explored previous research findings on the relation of each of dysfunctional career thoughts, career exploration and parent attachment bonds, to the main construct of this study (career decision making self-efficacy). Moreover, it provided a brief overview of the state of career guidance in the Lebanese context.

CHAPTER III

METHOD

The objective of the present study is to investigate the relationship between career decision making self-efficacy and each of parental attachment bonds, dysfunctional career thoughts and career exploration, and to determine the relative weights of each of the factors in predicting CDMSE in a sample of Lebanese grade eleven students enrolled at private schools that provide secondary school career guidance. The following instruments are used to assess the constructs: the Career Decision Making Self Efficacy Scale – Short Form (CDMSE-SF), the Career Exploration Survey (CES) (environmental exploration & self-exploration subscales), the Career Thoughts Inventory (CTI) and the Parent and Peer Attachment Bonds (IPPA).

The previous chapter examined the concepts of career, self-efficacy, career decision making, career decision making self-efficacy, dysfunctional career thoughts, career exploration and parent attachment bonds. In addition, it explored previous research findings on the relation between the main construct of this study (career decision making self-efficacy) and each of dysfunctional career thoughts, career exploration and parent attachment bonds. Moreover, it provided a brief overview of the state of career guidance in the Lebanese context. The current chapter will provide a detailed description of the methodology followed in this study. Specifically, it will discuss the research participants and the sampling procedure, the data collection instruments and data analysis procedures, the research ethical standards, the processes of adaptation and administration of the questionnaires.

Research Design

The objective of the present study calls for a quantitative correlational design, since the aim is to investigate the relationship between career decision making self-efficacy and each of parental attachment bonds, dysfunctional career thoughts and career exploratory behavior. Gall, Gall, & Borg (2010) state that correlational research is based on “a particular type of statistical analysis” that yields correlation coefficients (p.265). Correlation Coefficient is defined as “a mathematical expression that provides information about the direction and magnitude of the relationship between a sample’s scores on measures of two or more variables”, and they range in value from -1 to +1 (Gall et.al, 2010, p.265). Moreover, a multiple regression analysis of the data will be performed, in order to determine the relative weights of each of parental attachment bonds, dysfunctional career thoughts and career exploratory behavior, in predicting career decision making self-efficacy in grade 11 students. According to Gall et.al (2010), multiple regression allows researchers to “determine how well the scores for each of a set of measured independent variables predict the scores on the measured dependent variable and how well the combination of scores for all the measured independent variables predict the scores on the measured variables” (p. 275)

Consequently, the following research questions were addressed in the present study:

1. Is there a significant relationship between career decision making self-efficacy and the level of dysfunctional career thoughts, as measured by the Career Thoughts Inventory, in grade 11 students?

2. Is there a significant relationship between career decision making self-efficacy and the level of parental attachment bonds, as measured by the Inventory of Parent and Peer Attachment Bonds (IPPA), in grade 11 students?
3. Is there a significant relationship between career decision making self-efficacy and the level of career exploration, as measured by the Career Exploration Survey (CES), in grade 11 students?
4. How well do parental attachment bonds, dysfunctional career thoughts and career exploration predict career decision making self-efficacy in grade 11 students?
5. What is the relative weight of each of parental attachment bonds, dysfunctional career thoughts and career exploration in predicting grade 11 students' career decision making self-efficacy?

Research Participants

The target population for this study consists of all grade 11 students in Lebanon enrolled at private English speaking schools that offer career guidance services to their secondary students. The sample was drawn from an accessible population of private secondary schools located in Greater Beirut Area. The researcher obtained the list of private English speaking schools from the website of the center for educational research and development (CERD) in Lebanon, and she randomly selected 10 schools among those that offer career guidance services to grade 11. A total of three schools refused to take part in the study so she had to randomly select three others, using the same method. Public schools were not included in the study because counseling services in public schools are restricted

to elementary and middle school levels (Ayyash Abdo et.al, 2010). Likewise, grade 12 students were not included in the present study because during the data collection period, they would be preparing for their official examination, which will probably affect the school's decision to allow them to take part in our study.

“Purposive sampling” was applied during the subsequent part of the sampling procedure, in order to ensure a relative participation of all reported grade 11 sections. The researcher obtained exact numbers of students in each track from each school prior to data collection. Based on these numbers, she made a list and put a preliminary list of sections that were supposed to take part. A total of ten schools in Greater Beirut area participated in the study. Within each school, she selected either the scientific (S) or the economics (E) track from grade 11 (on the basis of the total number of sections across all ten schools, to guarantee a relative representation of participating sections). In the Lebanese system, grade 11 may also include a Literary (L) section, but none of all the ten schools had such a section. She ended up with an equal representation of sections (five “S” sections, and five “E” sections). In cases where a school had two sections of the needed track (S or E), she asked the school administration to randomly select a section to participate in the study. The final sample consisted of 170 students with 50% of them being males and 50% females (Table 1).

Table 1

Profiles of participating schools: number of grade 11 sections, participating section, number of participating students

School	Number of grade 11 sections	Participating section	Number of participating students
1	2 (SC, SE)	SE	21
2	2 (SC, SE)	SC	19
3	1 (SE)	SE	15
4	1 (SC)	SC	14
5	1 (SE)	SE	20
6	1 (SC)	SC	16
7	3 (2 SC, 1 SE)	SC	20
8	3 (2 SC, 1 SE)	SC	17
9	3 (2 SC, 1 SE)	SC	20
10	1 (SE)	SE	8
			N=170

Instruments

The Career Decision Making Self Efficacy Scale – Short Form (CDMSE-SF; Betz, Klein & Taylor, 1996) was used to measure career decision making self-efficacy in students. The Career Decision Making Self Efficacy- short form measures the degree of an individual’s belief that he can successfully complete career decision related tasks. The original basis for scale construction was the five career choice competencies proposed in Crites’ Model of Career Maturity (Taylor & Betz, 1983). Items include behaviors relevant to accurate self-appraisal, gathering occupational information, goal selection, making plans for the future and problem solving. Therefore, the CDMSE- short form scale consists of five scales, each including 5 items (a total of 25 items). Responses are obtained using a 5

level confidence scale ranging from 1 (no confidence at all) to 5 (complete confidence). The total score is obtained by summing up the five scale scores (Betz et.al, 1996). The CDMSE-SF can be completed in 10 minutes. According to Betz et.al (1996), the CDMSE-short form has yielded coefficient alphas ranging from 0.73 to 0.83 for the subscales, and 0.94 for the total scale.

Career Exploration levels were assessed with the Career Exploration Survey (CES; Stumpf, Colarelli, & Hartman, 1983). The CES was designed to “index career search behaviors, reactions to exploration, and beliefs about exploration” (Stumpf et al., 1983, p. 192). The CES allows researchers to evaluate career development programs (Stumpf et.al, 1983). It provides measures for examining the effects of personal characteristics on career exploration behaviors and beliefs, and it consists of seven measures of the career exploration, three reactions to exploration and six beliefs about exploration (Stumpf et.al, 1983). The original instrument is comprised of 62 items distributed across 16 scales. However, in this study, the revised version of CES was used (Blustein, 1989). Since the CES was developed for students in the final stages of their undergraduate years, Blustein modified the wording of three items from the EE scale, and two items from the SE. For example, in items using “obtained information about specific jobs”, the sentence “in my anticipated area” was added in order to suit the students who may be still exploring career options (Blustein, 1989). Answers are based on a 5 point Likert type format. On the environmental exploration (EE) subscale, participants rate the extent of their career exploration regarding occupations, jobs and organizations within the last 3 months. On the Self Exploration (SE) subscale, participants rate the extent of career exploration involving

self-assessment and retrospection within the last 3 months (Stumpf et.al, 1983). Sample items include “investigated career possibilities” (environmental exploration), “obtained information on specific jobs or companies related to my anticipated area” (environmental exploration), “focused my thoughts on me as a person” (Self exploration), “been retrospective in thinking about my educational background and career options” (self-exploration). Alpha coefficients ranged from 0.79 to 0.88 for the exploratory process scale (Stumpf et.al, 1983). In this study, only the Environmental Exploration (EE, 6 items) and the Self-Exploration (SE, 5 items) were used, because according to Stumpf et.al (1983), the two major sources for career information gathering are the environment and oneself. A composite score for career exploration is obtained by combining the scores from the 5 item self-exploration scale, and the 6 items environmental exploration scale. Using a composite score of career exploration scales is consistent with previous studies (Brown et.al, 1999). Students need 5 minutes to complete the eleven items of the career exploration survey (EE and SE subscales).

The dysfunctional career thoughts are assessed with the Career Thoughts Inventory (CTI; Sampson, Peterson, Lenz, Reardon, Saunders, 1998). Comprised of 48 items, the CTI is a self-administered instrument and intended to measure dysfunctional thoughts that impede the career decision making process. It yields a total score and three subscale scores: decision making confusion, commitment anxiety and external conflict. Respondents are asked to rate on a 4 point Likert type scale the extent to which they agree/disagree with career decision making related thoughts. Answers range from 0 (strongly disagree) to 3 (strongly agree). Sample items include “I’m afraid if I try out my chosen occupation, I won’t be successful”, “I will never understand myself well enough to

make a good career choice”. Higher scores of the career thoughts Inventory indicate more dysfunctional career thoughts. The CTI can be completed in 7-15 minutes. Sampson et.al (1998) reported internal consistency for the CTI subscales in a sample of college students as the following: 0.82 for decision making confusion (DMC), 0.79 for commitment anxiety (CA) and 0.74 for external conflict (EC). Test- retest reliability, measured across 4 weeks in high school and college students, ranged from 0.74 to 0.82(Sampson et.al ; 1998).

Parental attachment bonds are assessed with the Inventory of Parent and Peer Attachment Bonds (IPPA; Armsden & Greenberg, 1987). The objective of the IPPA is to assess adolescents’ perceptions of affective and cognitive dimensions of their relationships with parents and close friends (Armsden & Greenberg, 1989). The IPPA assesses three dimensions: mutual trust; communication, and alienation. The instrument is a self-report questionnaire with a five point likert-scale response format. The response options are: almost always or always true, often true, sometimes true, seldom true, or almost never or never true. The original version of the IPPA includes 28 parents items and 25 peer items, yielding two attachment scores. The revised version (Mother, Father, Peer Version) consists of 25 items in each of the mother, father, and peer sections, yielding three attachment scores (Armsden & Greenberg, 1989).According to Armsden & Greenberg (1989), the IPPA is scored “by reverse-scoring the negatively worded items and then summing the response values in each section” (p.1).Higher scores reflect more secure attachment and lower scores indicate less secure attachment. The subscale of Trust includes 10 items “suggesting themes of parental understanding and respect, and mutual trust” (Armsden & Greenberg, 1987, p. 433).The subscale of Communication includes 10 items. Armsden & Greenberg (1987) defined the communication subscale as the “items related to

the extent and quality of verbal communication with parents” (p. 433). The subscale of Alienation includes 8 items, suggesting “feelings of alienation and isolation” (Armsden & Greenberg, 1987, p. 433). The original IPPA’s three-week test-retest reliability coefficients are .93 for parents and .86 for peers (Armsden & Greenberg, 1989). For the purpose of the study, the parents section of the original IPPA version will be adopted. Adolescents enrolled in grade 11 were the respondents to the four previously mentioned instruments.

Adaptation of the questionnaires

The content validity of all the questionnaires was ensured. Three professionals in the field of education reviewed the questionnaires’ items in order to check the suitability of their application in the Lebanese context. Based on their evaluations and feedback, the following modifications and adjustments were applied (Table 2)

Table 2

Adjustments of the questionnaires’ items

Original item	Modified item
Career decision making self-efficacy scale short form	
“Define the type of lifestyle you would like to live”	“Define the type of lifestyle you would like to live” (what kind of life would you like to live?)
Career exploration survey	
“to what extent you have behaved in the following ways over the last three months”	“How often you have done the following things over the last three months”.
“Investigated career possibilities”	“Explored career possibilities”.
“Sought information on specific areas of career interest”	“Looked for information on specific areas of career interest”.

“Reflected on how my past integrates with my future”	“Reflected on how my past relates to my future career”
“Contemplated my past”	“Thought about my past”
“Been retrospective in thinking about my educational background and career options”	“Thought about my educational background and career options”.
“Understood a new relevance of past behavior for my future career plans”	“Understood how my past behavior related to my future career plans”.
Career thoughts inventory	
“My achievements must surpass my mother’s or father’s or my brother’s or sister’s”	“My achievements must be higher than my mother’s or father’s or my brother’s or sister’s”
“Even though there are requirements for the field of study or occupation I’m considering, I don’t believe they apply to my specific situation”	Item disregarded / non relevant to sample
“If I change my field of study or occupation, I will feel like a failure”	Item disregarded / non relevant to sample
“ I’m afraid I’m overlooking an occupation”	Item disregarded / non relevant to sample

Ethical considerations

The researcher started the data collection procedure right after she secured permission to conduct the present research from the Institutional Review Board (IRB) at the American University of Beirut (AUB). The primary mission of the IRB is to protect the rights and privacy of individuals taking part in research activities. She submitted an expedited review application that essentially included full information about the study, the target participants and the measures to protect their privacy, the permission to use copyrighted instruments in addition to the instruments, informed consent documentation

(child assent, parental consent, letter addressed to school principals), the rationale behind the selection of the school and participants, the recruitment procedure and anticipated risk and benefits. The IRB suggested few modifications to be applied to our application and consent documents, and the final approval was granted after she made all needed changes.

She sent formal letters to invite the schools to take part in the study. The letters included brief of the research topic and purpose, information on the principal investigator and researcher, the benefits of the study, the basis on which their school was selected in addition to other related details. After securing the school's consent to participate, parental consent was ensured because most participants were less than 18 years old students thus considered minors. The parental consent form is a letter that includes information on the research topic and purpose, the principal investigator and the researcher, the benefits of the study, the basis on which their children's school was selected in addition to other related details. The most essential part in the parental consent form is the section on "voluntary participation", that gives parents the total freedom of decision without having to face any consequences of any kind in case of their refusal of their child's participation. In addition to seeking permission for participation from the school administrators and the parents, the researcher ensured students' agreement to participate in the study. Grade eleven students read then signed "Assent Forms" before answering the questionnaires, as a proof of their confirmation to voluntarily participate in the study. An assent form is written with a very clear language, and it includes information on the topic of the study, the duration of the questionnaires, confidentiality regarding their names and answers and the possible benefits and risks of participation.

Administration of the Questionnaires

The researcher discussed first the research topic with the school administrators, and she answered all of their questions and showed them the questionnaires that will be administered. After securing the school's confirmation to participate in the study, parental consents were also ensured. School administrators were responsible for sending and collecting back the signed parental consent forms. After collecting the signed parental consent forms, the school administration s contacted the researcher to set a date and time for the administration of the questionnaires, otherwise known as "data collection". The researcher administered the questionnaires in person, in presence of teachers (and supervisors, in some cases). First, the researcher explained the topic to the students, and clarified that their participation is completely voluntary. The students who agreed to participate in the study read and signed the assent forms, right before the administration of the questionnaires. The researcher read the form aloud and made sure students accurately understood it. She explained to the students on what basis they were selected to take part in the study, and she went through the questionnaires to clarify any possible ambiguity. The researcher made sure all students understood the instructions, and no interaction between each other was allowed during administration time. Those who had more questions sought individual help from the researcher only. The four questionnaires required around 40-45 minutes for completion (IPPA requires 10 minutes; CTI requires 10 minutes; CSMSE-SF requires 10 minutes; and CES items require 5 minutes). Administration of the questionnaires was done in regular classroom periods chosen by the school director/ cycle coordinator. While students were filling the questionnaires, the researcher was always

ready to help them in case of questions. After students filled the questionnaires out, she collected the responses. All in all, the researcher spent around 50 minutes in each of the ten visited classrooms (10 minutes for instructions, 35 minutes for the administration of the questionnaires, and 5 minutes for collecting the questionnaires and thanking students for voluntarily participating). All participating students completed the questionnaires, and no single unanswered questionnaire was found. After the data collection session was over, many students asked the researcher further career related questions and inquired about many items answered in the questionnaires, trying to figure ways to relate their career knowledge to making effective career decisions. To ensure students' confidentiality and privacy, each questionnaire had a distinct code, and students' gender was the only element required from them to mention. No names or other identifiers were requested from the students or the school administration. The data collection procedure, including contacting schools, waiting for their final decision then visiting them, took around 2 months (February-March 2014). A total of 3 schools refused to participate in the study because of midterm exams. She had to re-select 3 different schools, using the same selection procedure previously discussed. Some schools requested their results in order to improve their career guidance strategies based on our findings, so the researcher prepared short reports as per their requests and send it to them along with some recommendations.

Data analysis

The researcher performed the coding of the questionnaires and the data entry into SPSS. The data was double checked for errors using spot checking. For each questionnaire, reliability was measured through internal consistency r , using Cronbach alpha. Descriptive

statistics of the data, including means, standard deviations and averages, were reported using SPSS.

Bivariate correlational statistics was performed in order to answer the first three research questions about the correlations between career decision making self-efficacy and each of dysfunctional career thoughts, level of career exploration and level of parental attachment bonds. For this purpose, the Pearson product moment correlation coefficient was used. According to Gall et.al (2010), “bivariate refers to the fact that the statistic indicates the magnitude of the relationship between two, and only two, variables” (p.272).

A standard stepwise multiple regression analysis of the data was performed in order to answer the 4th and 5th research questions. The purpose was to find how well parental attachment bonds, dysfunctional career thoughts and career exploration predict CDMSE, and the weight of each of the factors in the prediction. According to Gall et.al (2010), multiple regression allows researchers to “determine how well the scores for each of a set of measured independent variables predict the scores on the measured dependent variable and how well the combination of scores for all the measured independent variables predict the scores on the measured variables” (p. 275).

CHAPTER IV

RESULTS

This chapter presents the results of the statistical analysis of the data. The results are organized in three sections: descriptive statistics, Pearson correlation and stepwise multiple regression. Pearson correlations were conducted to answer the first three research questions by exploring the possible relationship between career decision-making self-efficacy and each of career exploration, dysfunctional career thoughts and parental attachment. A stepwise multiple regression was done to answer the fourth and fifth research questions regarding the predictive ability of parental attachment, dysfunctional career thoughts and career exploration on career decision-making self-efficacy as well as the relative weight of each of the three factors.

Descriptive Analysis

The sample of students in this study consisted of 170 grade 11 participants with 85 of them males (50%) and 85 of them females (50%) (Table 3).

Table 3

Distribution of Students by Gender

Gender	Frequency	Percent
Male	85	50.0
Female	85	50.0
Total	170	100.0

Table 4 presents the means (*M*), standard deviations (*SD*), and ranges for each of the four variables used in this study (career decision-making self-efficacy, career exploration, dysfunctional career thoughts and parental attachment) along with the

reliabilities of all the scales as measured by Cronbach’s alpha. Measurement of Cronbach’s alpha showed a slightly above average reliability for the Career Exploration Survey (CES; .74) and high reliabilities for each of the Career Decision-Making Self-Efficacy Short Form (CDMSE-SF), the Career Thoughts Inventory (CTI) and the Inventory of Parent and Peer Attachment Bonds (IPPA) with Cronbach’s alpha of .88, .90 and .91 respectively.

In general, the participants reported average levels of confidence in their abilities to make career related decisions ($M = 3.49$; $SD = 0.53$), average levels of parental attachment ($M = 3.56$; $SD = 0.64$) and average levels of career exploration ($M = 3.03$; $SD = 0.63$). Moreover, they reported average levels of dysfunctional career thoughts ($M = 2.26$; $SD = 0.33$). Mean values ranging from “3” to “3.6” were considered as “average” on Likert type scales of 1-5 since SD values ranged from .53 to .64. Similarly, a mean value of 2.26 ($SD = .33$) was considered average on a scale of 1-4.

Table 4

Means, Standard Deviations, Ranges and Reliabilities of the Measured Variables (N = 170)

Scale	<i>M</i>	<i>SD</i>	Range	Cronbach α
Career Decision Making Self-Efficacy Short Form (CDMSE-SF)	3.49	.53	1-5	.88
Career Exploration Survey (CES)	3.03	.63	1-5	.74
Career Thoughts Inventory (CTI)	2.26	.33	1-4	.90
Inventory of Parent and Peer Attachment Bonds (IPPA)	3.56	.64	1-5	.91

Pearson Correlations

Pearson correlations were done to answer research questions 1, 2 and 3 which are as follows: 1) Is there a significant relationship between career decision making self-efficacy and the level of dysfunctional career thoughts, as measured by the Career Thoughts

Inventory, in grade 11 students?; 2) Is there a significant relationship between career decision making self-efficacy and the level of parental attachment bonds, as measured by the Inventory of Parent and Peer Attachment Bonds (IPPA), in grade 11 students? and 3) Is there a significant relationship between career decision making self-efficacy and the level of career exploration, as measured by the Career Exploration Survey (CES), in grade 11 students?

Table 5 presents the correlation matrix that was produced using Pearson's correlation coefficient. Pearson product-moment correlations were computed to assess the relationship between each of career exploration, dysfunctional career thoughts and parental attachment with career decision-making self-efficacy. The results show that career exploration was significantly positively correlated with career decision-making self-efficacy, $r = .48, p \leq .000$. Similarly, parental attachment was found to be significantly positively correlated with career decision-making self-efficacy, $r = .24, p \leq .002$. On the other hand, dysfunctional career thoughts were found to be significantly negatively correlated with career decision-making self-efficacy, $r = -.35, p \leq .000$. This table further reveals a significant negative relationship between dysfunctional career thoughts and parental attachment, $r = -.23, p \leq .003$.

Table 5

Correlation Matrix among Career Exploration, Dysfunctional Career Thoughts, Parental Attachment and Career Decision-Making Self-Efficacy (N = 170)

	Career Exploration	Dysfunctional Career Thoughts	Parental Attachment	Career Decision-Making Self-Efficacy
Career Exploration	-			
Dysfunctional Career Thoughts	-.09	-		
Parental Attachment	.04	-.23**	-	
Career Decision-Making Self-Efficacy	.48**	-.35**	.24**	-

** Correlation is significant at .01 level

In sum, the results of the Pearson correlations indicated that career exploration (behavioral aspect), dysfunctional career thoughts (cognitive aspect) and parental attachment (psychological aspect) were all significantly associated with career decision-making self-efficacy. More specifically, higher levels of career exploration and parental attachment are associated with higher levels of grade 11 students' confidence in their ability to make career-related decisions whereas higher levels of dysfunctional career thoughts are associated with lower levels of grade 11 students' confidence in their ability to make career-related decisions. Furthermore, dysfunctional career thoughts were found to be negatively associated with parental attachment and this relationship was significant. This indicates that higher levels of parental attachment are associated with lower levels of dysfunctional career thoughts and vice versa. Finally, dysfunctional career thoughts and parental attachment were both not significantly correlated with career exploration.

Stepwise Multiple Regression

A stepwise multiple regression was performed in order to answer research questions 4 and 5 which are as follows: 4) How well do parental attachment bonds, dysfunctional career thoughts and career exploration predict career decision making self-efficacy in grade 11 students? and 5) What is the relative weight of each of parental attachment bonds, dysfunctional career thoughts and career exploration in predicting grade 11 students' career decision making self-efficacy?

A standard stepwise multiple regression analysis was conducted to evaluate how well career exploration, dysfunctional career thoughts and parental attachment predicted career decision making self-efficacy levels in grade 11 students. Career exploration, dysfunctional career thoughts and parental attachment were entered as predictor (independent) variables while career decision-making self-efficacy was entered as the predicted (dependent variable). The results of the stepwise multiple regression is shown in Table 6. The linear combination of career exploration, dysfunctional career thoughts and parental attachment, was significantly related to career decision-making self-efficacy, $F(3,166) = 29.62, p = .000$. The multiple correlation coefficient was .35, indicating that approximately 35% of the variance of career decision-making self-efficacy can be accounted for by the linear combination of career exploration, dysfunctional career thoughts and parental attachment.

According to the standardized beta coefficients, all three of the contributing variables (i.e. career exploration, dysfunctional career thoughts and parental attachment) significantly predicted career decision making self-efficacy, with dysfunctional career

thoughts negatively predicting career decision making self-efficacy ($\beta = -.27$), and parental attachment and career exploration positively predicting it ($\beta = .16$ and $\beta = .45$, respectively).

Moreover, the regression equation shows that career exploration (behavioral activity) contributed the most to the variation in career decision making self-efficacy with $\Delta R^2 = .23$ which means that career exploration explains 23% of the variance in career decision making self-efficacy. Dysfunctional career thoughts made the second highest contribution to the variation to career decision-making self-efficacy with $\Delta R^2 = .10$ indicating that 10% of the variation in career decision-making self-efficacy can be explained by dysfunctional career thoughts. Finally, parental attachment explains only 2% of the variation in career decision-making self-efficacy ($\Delta R^2 = .02$).

Table 6

Summary of Stepwise Multiple Regression Analysis for Predicting Career Decision-Making Self-Efficacy (N = 170)

Variable	R	R ²	ΔR^2	β	t	p
Career Exploration	.48	.23	.23	.45	7.11**	.000
Dysfunctional Career Thoughts	.57	.33	.10	-.27	-4.24**	.000
Parental Attachment	.59	.35	.02	.16	2.44*	.016

* t is significant at .05.

** t is significant at .01.

Conclusion

In sum, the results of the stepwise multiple regression indicated that career exploration (behavioral aspect), dysfunctional career thoughts (cognitive aspect) and parental attachment (psychological aspect) all significantly predict career decision-making self-

efficacy. In addition, career exploration explains the largest proportion in the variation in career decision-making self-efficacy followed by dysfunctional career thoughts and parental attachment.

CHAPTER V

DISCUSSION

This chapter summarizes the objectives of the study, and it discusses the findings with reference to previous research studies, theoretical foundations and in relation to the Lebanese context. General recommendations, limitations of the study and research suggestions are subsequently presented.

Summary of the study

The purpose of this study was to investigate the relationship between career decision making self-efficacy (dependent variable) and each of parental attachment bonds, dysfunctional career thoughts and career exploration (independent variables), and to determine the relative weights of each of the factors in predicting career decision making self-efficacy levels, in a sample of 170 Lebanese grade eleven students enrolled at English speaking private schools that provide high school career guidance. The following instruments were used to assess the constructs: Career Decision Making Self Efficacy Scale – Short Form (CDMSE-SF), Career Exploration Survey (CES) (Environmental and self-exploration subscales), Career Thoughts Inventory (CTI) and Parent and Peer Attachment Bonds (IPPA). The study was based on a quantitative correlation design to measure, using Pearson correlations, the relationship between career decision making self-efficacy and each of parental attachment bonds, dysfunctional career thoughts and career exploratory behavior. In addition, a stepwise multiple regression analysis was performed in order to

determine the relative weights of each of the independent variables, in predicting career decision making self-efficacy levels in grade 11 students.

Pearson correlations were used to answer research questions 1, 2 and 3 which are as follows: 1) Is there a significant relationship between career decision making self-efficacy and the level of dysfunctional career thoughts, as measured by the Career Thoughts Inventory, in grade 11 students?; 2) Is there a significant relationship between career decision making self-efficacy and the level of parental attachment bonds, as measured by the Inventory of Parent and Peer Attachment Bonds (IPPA), in grade 11 students? and 3) Is there a significant relationship between career decision making self-efficacy and the level of career exploration, as measured by the Career Exploration Survey (CES), in grade 11 students? Subsequently, a stepwise multiple regression was performed in order to answer research questions 4 and 5 which are as follows: 4) How well do parental attachment bonds, dysfunctional career thoughts and career exploration predict career decision making self-efficacy in grade 11 students? and 5) What is the relative weight of each of parental attachment bonds, dysfunctional career thoughts and career exploration in predicting grade 11 students' career decision making self-efficacy?

Findings and discussion

Independent variables' overall prediction of career decision making self-efficacy

The results of the present research support Bandura's theoretical view regarding the significance of the integration of behavioral, cognitive and psychological aspects during the career decision making process. Our findings, discussed below, show that approximately 35% of the variance of career decision-making self-efficacy can be

accounted for by the linear combination of career exploration, dysfunctional career thoughts and parental attachment. This finding is in line with, yet not exactly like the finding of Bullock-Yowell et.al (2011 b), that that negative career thoughts, openness, conscientiousness and extraversion accounted for 45% variance in career decision making self-efficacy. Specifically, our results show that according to the regression equation, career exploration explains the largest proportion in the variation in career decision-making self-efficacy (23%), followed by dysfunctional career thoughts (10%) and parental attachment (2%). Bandura (1993) explains that thoughts (cognitive aspect) affect behaviors (behavioral aspect) and affections (psychological aspect), linking cognitions, behaviors and psychological factors. According to Bandura (1993) “the stronger people’s belief in their efficacy, the more career options they consider possible, the greater the interest they show in them, the better they prepare themselves educationally for different occupations, and the greater their staying power and success in difficult occupational pursuits” (p. 135). This implies that people’s stronger beliefs in their own efficacy (cognitive aspect) are linked to behavioral activities like more exploration of career choices and greater interest in the career options. Those who believe they can make career decisions usually explore occupations and choices and are able to narrow them down to very few based on their inclinations and interests. Based on their accountancy in the prediction career decision making self-efficacy, our results suggest that behaviors (i.e. career exploration) are the most essential activities that enhances one’s confidence in making career decisions, followed by cognitions (i.e. negative career thoughts), and then affections (i.e. parental attachment).

Career decision making self-efficacy and career exploration

Based on the results of the present study, the regression equation shows that career exploration contributed the most to the variation in career decision making self-efficacy with $\Delta R^2 = .23$ which means that career exploration explains 23% of the variance in career decision making self-efficacy. Moreover, higher levels of career exploration were found to be associated with higher levels of students' career decision making self-efficacy levels (career exploration was significantly positively correlated with career decision-making self-efficacy, $r = .48$, $p = .000$). This finding is in line with previous research (Brown et.al, 1999; Gushue et.al, 2006 a; Gushue et.al, 2006b; Rogers & Creed, 2011). Brown et.al (1999) did a stepwise multiple regression analysis to determine the extent to which career exploration variables predict career decision making self-efficacy. Findings of their analysis reveal that career exploration and beliefs about career exploratory behavior significantly predicted career decision making self-efficacy with a multiple correlation of .40 , which was statistically significant , $F(1.378)=72.43$, $p<.00001$). One possible explanation could be that students' beliefs that they can impact desired outcomes may affect the amount of effort they are willing to exert (i.e. career exploration) , based on the assumption that the beliefs that one can successfully plan his job search suggests more confidence in ability to make career decisions (Brown et.al, 1999).

Examining the direction of the relationship between career exploration and career decision making self-efficacy, our findings (in consistence with the results of Brown et.al , 1999) show that career exploration significantly predicts career decision making self-efficacy levels in students. Conversely, different studies (Gushue et.al, 2006 a; Gushue et.al, 2006 b; Rogers & Creed, 2011) examined career decision making self-efficacy as a

predictor of career exploration, suggesting that higher career decision making self-efficacy levels cause increased career search activities. Gushue et.al (2006 b) found that there is a significant positive relationship of career decision making self-efficacy with career exploration , $r = .31, p \leq .01$. In a different study, Gushue et.al (2006 a) found a significant positive relationship between career decision making self-efficacy and career search activities $r = .43, p \leq .01$. Similarly, Rogers & Creed (2011) found that year 11 students with more confidence in making career decisions are likely to engage in more career exploration ($\beta = .29, p < .01$). Gushue et.al (2006 b) explain that students who have great self confidence in making career decision are also likely to have a better defined sense of their own interests, abilities and objectives, and to get involved in career exploration activities.

Career education includes strategies enhancing students' sense of self-efficacy about performing career exploration related tasks (Gushue et.al, 2006b), in addition to special interventions that focus on the promotion of career decision confidence and the goal setting process (Rogers & Creed, 2011). Career education is expected to increase students' exposure to the world of careers, their career exploration activities and beliefs about their career exploratory behavior (Brown et.al, 1999; Gushue et.al, 2006 a; Gushue et.al, 2006 b; Rogers & Creed, 2011). Career exploration refers to purposive behavior and cognitions that afford access to information about jobs that was not previously in the stimulus field (Stumpf et.al, 1983). More career exploration is expected to be linked to increased confidence in making career decision and less career indecision, based since it answers

students' questions about applying to universities, admission procedures, major choices and general requirements.

Although there is no research question investigating the relationship between the independent variables, an interesting finding was noted. Dysfunctional career thoughts were found to be negatively associated with parental attachment and this relationship was significant, showing that higher levels of parental attachment are associated with lower levels of dysfunctional career thoughts and vice versa. It is perceived that students who have good relationships with their parents are optimistic and they develop positive patterns of thinking, which entails positive outlooks to making career decisions. However, students having troubled relationships with their parents tend to have negative overall thoughts, which in turn negatively affect their confidence in their ability to make career decisions.

Career decision making self-efficacy and dysfunctional career thoughts

The results of the data analysis indicate that higher levels of dysfunctional career thoughts are associated with lower levels of students' career decision making self-efficacy. This finding is consistent with the results of Bullock-Yowell et.al (2011 b), who found a negative correlation between career decision making self-efficacy and negative career thoughts in a sample of college students. They explored the hypothesis that career decision making self-efficacy could be influenced by negative career thoughts, big five personality factors and cultural mistrust. They concluded that negative career thoughts significantly negatively predicted career decision making self-efficacy ($\beta = -.46, p < .05$). Our results also show that dysfunctional career thoughts made the second highest contribution to the variation to career decision-making self-efficacy with $\Delta R^2 = .10$ indicating that 10% of the

variation in career decision-making self-efficacy can be explained by dysfunctional career thoughts.

These results are expected because students who have negative thoughts would possibly have low confidence in their own capability to make career decisions. Negative career thoughts that are present during the career decision making process make the decision making procedure harder and jeopardize one's overall career development (Sidiropoulou-Dimakakou et.al, 2012). Negative thoughts also have implications for all aspects of the career development, including knowledge of values, interests, skills, occupational knowledge and decision making skills, which advocates that counselors should assess students' readiness to get involved in the career development process through formal assessment of negative career thoughts (Bullock-Yowell, 2011 b).

There is an agreement among a number of previous studies regarding the significance of career guidance courses in the reduction of students' negative thoughts (Budden et.al, 2006; Osborn et.al, 2007). Using the Career thoughts Inventory (CTI) to assess students' dysfunctional career thoughts before and after participation in a career planning course, Budden et.al (2006) found significant decreases in negative career thoughts after the completion of the course (CTI pretest mean is 56.1, and CTI posttest mean is 46.8). They attributed the reduction in negative thoughts to the importance of career education in reducing the pressures associated with the career decision making process. Similarly, Osborn et.al (2007) examined the effect of a six weeks undergraduate course on the dysfunctional career thoughts of freshman students, as measured by the Career thoughts inventory (CTI) total score. MANOVA results showed that the course significantly reduced negative thoughts. The comprehensive delivered course was efficient

because it taught students how to recognize negative thoughts then positively reframe them, how to identify their personal interests and abilities and relate them to career goals, how to develop a career action plan, and how to understand and implement career development theories and decision making skills Osborn et.al , 2007). The Career thoughts workbook can be used as a form of career education, enabling students to identify, challenge and alter negative career thoughts (Bullock-Yowell et.al, 2011 a).

Career decision making self-efficacy and parental attachment

Previous research found a link between high school students' attachment levels and career decision making self-efficacy (Cenkseven-Onder et.al, 2010; Nawaz & Gilani, 2011; Wolfe & Betz, 2004) reflecting a great dependence on parents in making career plans. Similarly to the outcome of the studies of Nawaz & Gilani (2011) and Wolfe & Betz (2004), the present study has shown that higher levels of parental attachment were found to be associated with higher levels of career decision making self-efficacy levels in adolescents. According to the present study's regression equation, parental attachment made the least yet statistically significant contribution to the variation in career decision-making self-efficacy (2%).

The results of the study of Nawaz & Gilani (2011) reveal a significant positive correlation between career decision-making self-efficacy and level of parental attachment bonds, $r = .29, p \leq .01$. Moreover, results of their regression analysis show that when parental attachment was taken as a predictor with reference to career decision making self-efficacy, it could account for 9% of career decision making self-efficacy. When both parental and peer attachment bonds were taken as predictors for career decision making

self-efficacy, they explained 11% of the variance of career decision making self-efficacy. In an attempt to explain their results, Nawaz & Gilani (2011) allude to the importance of immediate social networks in the process of career decision making, especially in societies characterized by collectivism. They explain that attachment bonds affect individuals' personalities, choices and most importantly career decision making choices during the development process. Based on their results, they suggest the utilization of parental influence to have a positive impact on adolescents' career choices (Nawaz & Gilani, 2011). Relationships with attachment figures such as primary caregivers who are emotionally available and responsive to individuals' needs provide the person with a sense of security and emotional support (Bowlby, 1988 as cited in Ketterson & Blustein, 1997).

Wolfe & Betz (2004) found that career decision making self-efficacy was positively related to maternal attachment $r = .18, p \leq .01$. When using maternal, paternal, peer attachment, attachment style, as predictors for career decision making self-efficacy and fear of commitment, parental attachment alone was a significant predictor for career decision making self-efficacy ($\Delta R^2 = .03$ which means that parental attachment explains 3% of the variance in career decision making self-efficacy). Wolf & Betz suggest that the discussion of attachment bonds may be a useful part of career counseling, essentially relationships of maternal attachment to career decision making self-efficacy that may be diagnostically useful. Students having insecure attachment may focus in counseling interventions on personal issues prior to the career counseling process, and those having low career decision making self-efficacy or who are struggling to find career choices may need special interventions that focus on building their self-efficacy (Wolf & Betz, 2004).

Attachment relationships are central in facilitating exploratory activities in general (Ketterson & Blustein, 1997), an aspect that could lead to increased confidence in individuals that they can make effective career decisions. A study has found that parent-adolescent relationships that are characterized by support, openness and autonomy predicted exploration among high school students (Ketterson & Blustein, 1997). As Germeijs & Verschueren (2009) explain, students who feel more secure in their relationship with mother are more prone to be aware to be involved in the career decision making process. The connection between career development and attachment variables could be explained by the secure base of comfortable attachment relationships that serve a critical role in students to explore more settings (Ketterson & Blustein, 1997).

In investigating the relative importance of various contextual, individual and cognitive variables associated with the social cognitive career theory in predicting Lebanese adolescents' career indecision using multiple regression analysis, Mugharbil (2012) found that career indecision was significantly negatively correlated with career decision making self-efficacy levels in the participants ($p \leq .01$). The final regression equation (which includes barriers, parental support, person input and cognitive variables) accounted for 29% of the variance associated with career indecision $F(15,351) = 9.41$, $p < .01$. Cognitive variables (career decision making self-efficacy and career outcome expectations) had the least predictive power in accounting for the variation in career indecision with $\Delta R^2 = .03$ for each. Mugharbil's finding regarding parental support as the second most important predictor of career indecision shows that parental support influences self-efficacy in adolescents which in turn affects career indecision. Moreover, the lack of engagement from the father was found to have a stronger impact than support from the

mother, and students' career interests seemed to a large extent influenced by what their parents were doing. Students believe that their parents had much experience that enables them to see things from a global perspective, and this belief is attributed to Bandura's concept of vicarious learning assuming that people are influenced by prominent role models around them (Mugahrbil, 2012). Parental influence is manifested in direct ways (i.e. verbal support, encouragement and giving career advice) or indirect ways (sense of obligation felt by Lebanese adolescents towards parents) (Mugahrbil, 2012).

In brief, our findings reveal that approximately 35% of the variance of career decision-making self-efficacy can be accounted for by the linear combination of career exploration, dysfunctional career thoughts and parental attachment. Career exploration explains the largest proportion in the variation in career decision-making self-efficacy, followed by dysfunctional career thoughts and parental attachment. These results support Bandura's theoretical view regarding the significance of the integration of behavioral, cognitive and psychological aspects during the career decision making process. Students who have great self confidence in making career decision are also likely to have a better defined sense of their own interests, abilities and objectives, and to get involved in career exploration activities (Gushue et.al, 2006 b). Besides, negative career thoughts that are present during the career decision making process make the decision making procedure harder and jeopardize one's overall career development (Sidiropoulou-Dimakakou et.al, 2012). Moreover, attachment bonds affect individuals' personalities and career decision making choices during the development process (Nawaz & Gilani, 2011).

The roles of the school counselors and parents complement each other in increasing adolescents' confidence in their abilities to make balanced career decisions. School counselors can play a critical role in reducing tensions between adolescents and their parents, and in improving relationship bonds in general through the promotion of effective communication strategies. Moreover, school career counselors and guidance officers can play a very essential role in increasing secondary students' exposure to career exploration activities, and in addressing their negative career thoughts then teaching them how to replace them with positive ones.

Recommendations

Based on the foregoing findings of the study, we suggest the following recommendations.

- Career exploration. The best way for secondary students to learn about the world of careers is through career exploration. Students get the chance to surf the web, read relevant books and university brochures, talk to practitioners in their field of interest, fill out specific inventories, visit colleges or even do a short summer internship. Career exploration programs improve the future prospects of high school students (Visher et.al, 2004). When performing career exploration related tasks, students develop strategies that enhance their sense of self-efficacy (Gushue et.al, 2006b). In Lebanon, schools' "career guidance" programs (if existent) are limited in terms of provisions. For instance, very rare are the schools that provide a full career education program that addresses varied aspects related to the person and to the job itself (personal and social competencies, resume building, decision making strategies, individual counseling, job trends, job shadows, mentoring, and internships), beyond the regular activities that include career fairs and university visits. Schools and counselors must treat career

guidance and education as a serious subject and build comprehensive and effective programs to assist students in their career development.

- The reduction of negative career thoughts. Since high levels of negative career thoughts engender low career decision making self-efficacy levels, it is essential for counselors to teach students how to control their negative thoughts and replace them with positive ones. Career planning courses play a great role in educating students about available careers, reducing their uncertainties and worries. Here comes the importance of rich career exploration programs, discussed in the previous recommendation.
- Relationships with parents. Since higher levels of parental attachment are linked to higher levels of career decision making self-efficacy, good relationships between adolescents-parents are encouraged. This suggests that attachment plays a central role in adolescents' confidence in their abilities to make career decisions. School counselors should help students build good relationships with their parents, and vice versa. Counselors can frequently meet with parents to discuss communication strategies with adolescents in order to increase attachment levels in adolescents. Once the students feel attached to their parents, and that they can rely on them and trust them, their confidence in their ability to make career decisions will significantly increase. Moreover, counselors must be in constant touch with students through short individual counseling sessions, so that they assist in solving troubled home relationships, if existent.
- Monitoring and Evaluation. School counselors are encouraged to continuously monitor secondary students' career development through the use of career inventories and other personality scales. Counselors are expected to be aware of students' confidence in their

abilities to make decisions, career exploration, negative career thinking, and insecurity in their parental relationships. These factors can be measured through the administration of personal inventories and scales. Communication between school counselors and parents is important, in order to collaborate on smoothing the school-university transition and addressing conflicts between adolescent-parent, if existent.

Limitations of the study and recommendations for further research

As with any study, there are certain limitations to be noted. The sample does not represent all grade 11 students in Lebanon, since only private schools that provide career guidance services to their secondary students were included. The schools were all selected from Greater Beirut, reducing the representation of schools from other Lebanese regions and impoverished areas. Moreover, the questionnaires are all based on a Likert type format self-report answering, implying the possibility of response bias (Furnham, 1986).

Following are recommendations for future research studies on the career development of secondary students in Lebanon. Further research may build on this study to investigate the relationship between career decision making self-efficacy and attachment to mothers and fathers, separately. It would be relevant to investigate whether the relationship with an adult figure during adolescence is more significant than the other, and whether this relationship is linked to adolescents' gender. Besides, it would be interesting to examine the impact of a comprehensive career course, delivered by career specialists and including various activities like lectures, career exploration activities and decision making strategies, on the reduction of dysfunctional career thoughts in secondary students through pre and posttests. Furthermore, more research is needed on adolescents' career development with emphasis on cognitive aspects underlying the career decision making process.

Conclusion

In conclusion, the findings elucidated that career exploration, dysfunctional career thoughts and parental attachment were all significantly associated with career decision-making self-efficacy. In addition, career exploration, dysfunctional career thoughts and parental attachment all significantly predict career decision-making self-efficacy. Career exploration explains the largest proportion in the variation in career decision-making self-efficacy, followed by dysfunctional career thoughts and parental attachment.

In this research, we examined the significance of the integration of cognitive, psychological and behavioral factors during the career decision making process of Lebanese grade eleven students. It is hoped that this study will add to the pool of existing literature on the career development of Lebanese secondary students.

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APPENDIX A

Sample letter addressed to school principals

Title of study: The Impact of Dysfunctional Career Thoughts, Parental Attachment Bonds and Career Exploration on Grade Eleven Students' Career Decision Making Self-Efficacy

Principal Investigator: Dr. Karma El Hassan

Co- Investigator: Miss Nadine Ghalayini

Dear Principal,

I am a graduate student at the American University of Beirut (AUB), completing my Master's degree in Educational Psychology. I am conducting a study on adolescents' confidence in their ability to make career decisions, under the supervision of Dr. Karma El Hassan. We are requesting your approval to conduct the study in your school.

The purpose of my study is to investigate the impact of negative career thoughts, parental attachment and career exploration, on adolescents' confidence in their ability to make career decisions. In addition, the study will determine the importance of each factor in predicting the confidence levels. Exploring the factors affecting the confidence in one's ability to make career decisions helps counselors gain a better understanding of the career decision making difficulties faced by secondary students and enhance them accordingly. The study will be conducted in 10 private schools in Greater Beirut area that offer Career Guidance to secondary students and adopt English as the main foreign language. Only schools whose principal has signed the consent form will be eligible to participate in the study. A copy of this consent form will be left with you. Only one grade 11 section from each school will be selected for participation, ensuring a relative representation of scientific and non-scientific tracks based on students' total number. We are asking for your permission to let grade 11 ----- (scientific/ nonscientific) track, take part in the study. Since each classroom consists of around 25 students, we expect a sample of approximately 250 students in total. The school administration will be responsible for distributing the parent permission forms for signature, then collecting them back. Only students whose parents have signed the parent consent form will be eligible to participate in the study. Also, only students who have signed the child assent form will be eligible to take part in this research.

Participation in this study requires the participants to respond to 4 questionnaires about different factors that affect students' confidence in their ability to make career decisions. This will take about 45 minutes to complete. The administration of the questionnaires will take place in regular classroom period chosen by the school administration.

Kindly note that the information that will be provided when answering the questionnaires will be used for research purposes only and will be treated in strict confidentiality. The results of this study will not include any names or other identifying information.

Participation in this study is on voluntary basis. The school administration has the right to leave the study and to ask the students to discontinue participation at any time without any penalty or loss of benefits. Your decision about whether or not you choose to participate will not influence your relationship with AUB in any way. Withdrawing from the study will not involve any penalty or loss of benefits to which you are entitled. Discontinuing participation will not affect your relationship with AUB in any way.

Kindly note that there are no risks in participating in this study beyond those experienced in everyday life. The benefits of this study include providing students with an opportunity to explore the different factors that affect their confidence in their ability to make future career decisions.

Your participation in this study will be highly valued. Please feel free to contact me or Dr. Karma El Hassan on the contact details below, should you have any questions or comments related to this study. Independent from the research team, you may also contact the Office of Institutional review Board (IRB) at AUB, for any questions, concerns, complaints related to the research, or for questions about the subjects' rights , or to obtain information or to offer input , at the contact details below.

Thank you for your cooperation,

Nadine Ghalayini

Department of Education- American University of Beirut

Email: nwg04@aub.edu.lb

Phone: 70-841552

Karma El Hassan, Phd
Associate Professor, Director
Office of Institutional Research & Assessment (OIRA)
American University of Beirut
Beirut, Lebanon
Tel: 961 1 350000, ext. 3131
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Institutional Review Board
American University of Beirut
Tel: 961 1 374374, ext.: 5445
Fax: 961 1 374374, ext.: 5444
Direct line: 961 1 738024
Direct Fax: 961 1 738025
Email: irb@aub.edu.lb

I have read and understood the above information. I voluntarily agree for the students of this school to participate in this study

Name of principal

Signature of Principal

Date & Time

APPENDIX B

Sample letter addressed to parents

English version

Dear parent,

I am a graduate student at the American university of Beirut (AUB), completing my Masters in Educational Psychology. I am asking for your help in permitting your son/ daughter to take part in my research study. Your child's participation will help me complete my study, a core requirement for my M.A. degree. Please see below for details.

Title of study: The Impact of Dysfunctional Career Thoughts, Parental Attachment Bonds and Career Exploration on Grade Eleven Students' Career Decision Making Self-Efficacy

Principal Investigator: Dr. Karma El Hassan

Co- Investigator: Miss Nadine Ghalayini

- 1- **Purpose of the study:** The purpose of this research is to investigate the influence of various factors on adolescents' confidence in their ability to make career decisions. In addition, the study will determine the importance of each factor in predicting confidence levels, in grade 11 students.
- 2- **Description of the study:** This study is being conducted in 10 private schools in greater Beirut area that offer career guidance and adopt English as the main foreign language. We contacted the school administration in advance and they have granted us their approval to conduct the study. Only one grade 11 section from each school will be participating, ensuring a relative representation of scientific and non-scientific tracks based on students' total number. Since each classroom consists of around 25 students, we expect a sample of approximately 250 students in total. Exclusion of students will happen only if students refuse to participate. Only students whose parents have signed the "parental consent form" will be eligible to take part in the study. Also, only students who have signed the "child assent form" will participate in the study.
- 3- **Procedures to be followed:** Your child will be asked to fill out 4 questionnaires on factors affecting their confidence in their ability to make career decisions. Students will need around 45 minutes to complete the questionnaires. This will be done during a regular classroom period, chosen by the school administration.
- 4- **Discomforts and risks:** There are no risks in participating in this study beyond those experienced in everyday life. You may refuse to allow your child to participate without penalty or loss of benefits to which you are entitled. If you choose to allow your child to participate, you may discontinue his/her participation at any time without penalty or loss of benefits. If you decide to stop your child's participation in the study, the relationship between you/your child and the school or AUB will not be affected. If you are a student or employee at AUB, your decision

about whether or not to allow your child to participate in the study will not affect your grades or employment status.

- 5- **Benefits:** No payment will be made or your child to participate in the study. This research will provide a better understanding of the factors that affect Lebanese adolescents' confidence in their ability to make career decisions. This information will help school counselors shed light on those factors in students and enhance them accordingly.
- 6- **Confidentiality:** **The information that your son/daughter will provide will be used for research purposes only and will be treated in strict confidentiality. The results of the study will not include any names or other identifying information.**
- 7- **Voluntary participation:** Your child's participation in the study is voluntary. Your son/ daughter can stop participating at any time without penalty or loss of benefits. Your child does not have to answer any question he/she does not want to answer. Refusal to take part in the study or withdrawing from the study will involve no penalty or loss of benefits your child would receive otherwise.

Contacts and Questions:

For any questions or comments related to this study you may contact Dr. Karma El Hassan or Miss Nadine Ghalayini at the contact details below.

Independent from the research team, you may contact the Office of Institutional review Board (IRB) at AUB, for any questions, concerns, complaints related to the research, or for questions about the subjects' rights , or to obtain information or to offer input , at the contact details below.

A copy of this consent form will be left with you. Only children who present this consent form signed by their parents will be included in the study.

Thank you for your cooperation

Nadine Ghalayini

Department of Education- American University of Beirut

Email: nwg04@aub.edu.lb **Phone:** 70-841552

Karma El Hassan, Phd
Associate Professor, Director
Office of Institutional Research & Assessment (OIRA)
American University of Beirut

Institutional Review Board
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Tel: 961 1 374374, ext.: 5445
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Email: kelhasan@aub.edu.lb

Direct line: 961 1 738024
Direct Fax: 961 1 738025
Email: irb@aub.edu.lb

I have read and understood the above information. I voluntarily agree to give permission for my child to participate in this study.

Name of student: ----- Date & Time: -----

Name of Parent: ----- Signature of parent: -----

Arabic version

نموذج موافقة الوالدين

الأباء الأعزاء ،

أنا طالبة دراسات عليا في الجامعة الأمريكية في بيروت، أعمل على إنجاز شهادة الماجستير في علم النفس التربوي .
أطلب مساعدتكم في السماح لابنك / ابنتك بالمشاركة في بحثي. ان مشاركة ولدك سوف تساعدني على إكمال بحثي،
شرط أساسي للحصول على درجة الماجستير. يرجى الاطلاع أدناه لمزيد من التفاصيل.

عنوان الدراسة: تأثير الأفكار المهنية السلبية ، التعلق في الوالدين والاستكشاف المهني على ثقة طلاب السنة الثانوية
الثانية بقدرتهم على اتخاذ قرارات مهنية .

الباحثان: الدكتور ه. كرمة الحسن و الأنسة نادين الغلاييني

- 1. الهدف من الدراسة:** الهدف من هذا البحث هو استكشاف تأثير عوامل مختلفة على ثقة طلاب السنة الثانوية الثانية بقدرتهم على اتخاذ قرارات مهنية . بالإضافة إلى ذلك، الدراسة ستحدد أهمية كل عامل في توقع مستويات الثقة في الطلاب.
- 2. وصف الدراسة:** تجرى هذه الدراسة في 10 مدارس خاصة في بيروت الكبرى ، تقدم التوجيه المهني وتعتمد اللغة الإنجليزية كلغة أجنبية رئيسية. لقد اتصلنا بإدارة المدرسة مسبقا وهي قد منحتنا موافقتها لإجراء الدراسة. شعبة واحدة من صف الثانوية الثانية من كل مدرسة ستشارك في البحث بشكل يضمن تمثيل نسبي للمسارات العلمية وغير العلمية بناء على العدد الإجمالي للطلاب. إذا اعتبرنا أن كل صف يتكون من حوالي 25 طالبا، نتوقع عينة من حوالي 250 طالبا في المجموع. استبعاد الطلاب سوف يحدث فقط في حال رفضهم المشاركة. فقط الطلاب الذين وقع أهلهم على "نموذج موافقة الوالدين" سوف يكونون مؤهلين للمشاركة في الدراسة. أيضا، فقط الطلاب الذين وقعوا على 'نموذج موافقة الطفل' سيشركون في الدراسة
- 3. الإجراءات الواجب اتباعها:** سوف يطلب من ولدكم تعبئة 4 استمارات عن العوامل التي تؤثر على ثقتهم في قدرتهم على اتخاذ القرارات المهنية. سوف يحتاج الطلاب إلى حوالي 45 دقيقة لتعبئة الاستمارات. سوف يتم ذلك خلال أحد الفصول الدراسية العادية، يتم اختياره من قبل إدارة المدرسة.
- 4. ردات الفعل المحتملة:** لا يوجد أي ضرر محتمل في تعبئة الإستمارات. قد ترفض السماح لطفلك في المشاركة دون عقوبة أو فقدان المزايا التي من حقك. إذا اخترت أن تسمح لطفلك في المشاركة، قد توقف له / لها المشاركة في أي وقت دون عقوبة أو خسارة. إذا قررت وقف مشاركة طفلك في الدراسة، لن تتأثر العلاقة بينك / طفلك والمدرسة أو الجامعة الأميركية في بيروت. إذا كنت طالبا أو موظفا في الجامعة الأميركية في بيروت، قرارك حول القبول أو الرفض بمشاركة طفلكم في الدراسة لن يؤثر على علامتك أو الوضع

الوظيفي.

5. الفوائد: لن يتقاضى ولدك المشارك أي أجر مقابل مشاركته في هذا البحث. ستؤدي هذه الدراسة إلى إتاحة فهم أفضل للعوامل التي تؤثر على الثقة في القدرة على اتخاذ القرارات المهنية في أولادكم. هذه المعلومات سوف تساعد مرشدي المدارس في تسليط الضوء على هذه العوامل لدى الطلاب وتعزيزها وفقا لذلك.
6. السرية: المعلومات التي سيعطيها ولدك سوف تستخدم لأغراض البحث فقط وسيتم التعامل معها بسرية تامة. نتائج الدراسة لن تشمل أي أسماء أو غيرها من المعلومات الشخصية.
7. المشاركة الطوعية: إن مشاركة ابنك في الدراسة طوعية. يمكن لابنك التوقف عن المشاركة في أي وقت دون عقوبة أو خسارة من الفوائد. يمكن لابنك تجاوز أي سؤال لا يرغب في الإجابة عليه. رفض المشاركة في الدراسة أو الانسحاب من الدراسة لن ينطوي على أي عقوبة أو خسارة من الفوائد.

الاستفسارات والاستئلة

لأية أسئلة أو تعليقات حول هذه الدراسة يمكنكم الاتصال بالدكتور كرمة الحسن على رقم الهاتف: 350000 (01)- الخط الفرعي 3131 ، أو بواسطة بريدها الإلكتروني kelhasan@aub.edu.lb ؛ أو الإتصال بالأنسة نادين الغلابيني على رقم الهاتف الخليوي 841552-70 أو بواسطة بريدها الإلكتروني nwg04@aub.edu.lb

ان كانت لديك اسئلة عن هذا البحث أو حقوق ولدك في المشاركة في هذا البحث ، أو للملاحظات أو الاقتراحات أو المعلومات المتعلقة بهذا البحث يمكنك الاتصال ب " مجلس مراجعة الأبحاث حول العلوم الاجتماعية و السلوكية " في الجامعة الأميركية في بيروت على رقم الهاتف: 374374 (01) الخط الفرعي 5445 ، أو بواسطة البريد الإلكتروني: irb@aub.edu.lb

إن نسخة من هذه الوثيقة سوف تسلم لك للاحتفاظ بها. فقط التلاميذ الذين يقدمون هذه الوثيقة موقعة من أهلهم سيشاركون في البحث. كما أن نسخة من موافقة التلاميذ لتعبئة الإستمارات سوف تسلم لكل مشارك للاحتفاظ بها.

شكرا لتعاونكم

لقد قرأت وفهمت المعلومات أعلاه وأنا أوافق طوعا لإعطاء الإذن لطفلي للمشاركة في هذه الدراسة

اسم الطالب....._ التاريخ والوقت.....

اسم الوالد....._ توقيع الوالد.....

APPENDIX C

Child assent form

Dear student,

I am doing a research study, as part of my Master's degree requirements. My purpose is to investigate the influence of several factors on your confidence in your ability to make career decisions. In addition, I am interested to know which factors have the greatest influence on your confidence levels.

Please note that the participation in this study is on voluntary basis. Although the school administration and your parents have given their permission for you to participate in this study, it is up to you to decide if you want to be in the study or not. You will be asked to fill out 4 questionnaires on the factors that influence your confidence in your ability to make career decisions. The duration of the questionnaires is about 45 minutes. Your answers will not be graded, and you may skip any question if you do not wish to answer. If you do not want to participate, it is okay and you won't get in trouble. You have the right to withdraw from the study at any time without any penalty or loss of benefits. **The information you will provide will be used for research purpose only and will be treated with strict confidentiality.** The results of this study will not include any names or other identifying information.

There are no risks resulting from the participation in this study. You will not receive any benefits from participating in this study. By answering those questionnaires, you will help us identify the factors that affect your confidence in your ability to make career decisions, which in turn will be of help to school counselors when guiding secondary students to future careers.

If you choose to participate in this study, please sign the letter below. A copy of this form will be given to you. Please note that I am conducting this study under the supervision of Dr. Karma El Hassan. For any comments or questions related to this study, please contact her or Miss Nadine Ghalayini at the contact details below. Also, other than the research team, you may contact the Office of Institutional review Board (IRB) at AUB, for any questions, concerns, complaints related to the research, or for questions about your rights , or to obtain information or to offer suggestions , at the contact details below.

Thank you for your cooperation

Nadine Ghalayini Email: nwg04@aub.edu.lb

Department of Education- American University of Beirut

Karma El Hassan, Phd
Associate Professor, Director
Office of Institutional Research & Assessment (OIRA)
American University of Beirut
Beirut, Lebanon
Tel: 961 1 350000, ext. 3131
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Institutional Review Board
American University of Beirut
Tel: 961 1 374374, ext.: 5445
Fax: 961 1 374374, ext.: 5444
Direct line: 961 1 738024
Direct Fax: 961 1 738025
Email: irb@aub.edu.lb

I have read and understood the above information. I voluntarily agree to participate in this study.

Name of student: ----- Date -----

Signature of student: ----- Time of consent: -----

APPENDIX D

Institutional Review Board Approval of Research



لجنة الأخلاقيات | Institutional Review Board

www.aub.edu.lb

APPROVAL OF RESEARCH

February 4, 2014

Dr. Karma El-Hasan
American University of Beirut
01-350000 Ext. 3131
kelhasan@aub.edu.lb

Dear Dr. El-Hasan,

On February 4, 2014, the IRB reviewed the following protocol:

Type of Review:	Initial, Expedited
Project Title:	The Impact of Dysfunctional Career Thoughts, Parental Attachment Bonds and Career Exploration on Grade Eleven Students' Career decision Making Self-Efficacy
Investigator:	Karma El-Hasan
IRB ID:	FAS.KE.06
Funding Agency:	None
Documents reviewed:	Received December 16, 2013: Proposal, Summary of proposed research procedures, Career Exploration Survey, Career Thoughts Inventory, Inventory of Parent and Peer Attachment, Career Decision-Making Self Efficacy – Short Form. Received January 29, 2014: Letter, Amended IRB Application, Amended Letter addressed to School Principal, Amended Child Assent Form, Amended Parental Consent Form (Arabic and English Version), Phone Script, Email Script.

The IRB approved the protocol from February 4, 2014 to February 3, 2015 inclusive. Before December 3, 2014 or within 30 days of study close, whichever is earlier, you are to submit a completed "FORM: Continuing Review Progress Report" and required attachments to request continuing approval or study closure.

If continuing review approval is not granted before the expiration date of February 3, 2015 approval of this research expires on that date.

Please find attached the stamped approved documents:

- Proposal received December 16, 2013,
- Summary of proposed research procedures received December 16, 2013,
- Career Exploration Survey received December 16, 2013,
- Career Thoughts Inventory received December 16, 2013,
- Inventory of Parent and Peer Attachment received December 16, 2013,
- Career Decision-Making Self Efficacy – Short Form received December 16, 2013
- Letter addressed to School Principal received January 29, 2014,
- Child Assent Form received January 29, 2014,
- Parental Consent Form received January 29, 2014,
- Phone Script received January 29, 2014,
- Email Script received January 29, 2014.

Kindly, use copies of these documents to document consent.

Thank you

The American University of Beirut and its Institutional Review Board, under the Institution's Federal Wide Assurance with OHRP, comply with the Department of Health and Human Services (DHHS) Code of Federal Regulations for the Protection of Human Subjects ("The Common Rule") 45CFR46, subparts A, B, C, and D, with 21CFR56; and operate in a manner consistent with the Belmont report, FDA guidance, Good Clinical Practices under the ICH guidelines, and applicable national/local regulations.

Sincerely,



Michael Clinton, PhD
IRB Vice Chairperson
Social & Behavioral Sciences

Cc: Fuad Ziyadeh, MD, FACP, FASN
Professor of Medicine and Biochemistry
Chairperson of the IRB

Ali K. Abu-Alfa, MD, FASN
Professor of Medicine
Director, Human Research Protection Program

APPENDIX E

Career decision making self-efficacy scale- short form

INSTRUCTIONS: For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks. Circle the response that best represents your opinion.

HOW MUCH CONFIDENCE DO YOU HAVE THAT YOU COULD:	No confidence at all	Very little confidence	Moderate Confidence	Much confidence	Complete confidence
1. Use the internet to find information about careers that interest you.	1	2	3	4	5
2. Select one major from a list of potential majors you are considering.	1	2	3	4	5
3. Make a plan of your goals for the next five years.	1	2	3	4	5
4. Determine the steps to take if you are having academic trouble with an aspect of your chosen major.	1	2	3	4	5
5. Accurately assess your abilities.	1	2	3	4	5
6. Select one career from a list of careers you are considering.	1	2	3	4	5
7. Determine the steps you need to take to successfully complete your chosen major.	1	2	3	4	5
8. Persistently work at your major or career goal even when you get frustrated.	1	2	3	4	5
9. Determine what your ideal career would be.	1	2	3	4	5

10. Find out the employment trends for a career over the next ten years.	1	2	3	4	5
11. Choose a career that will fit your preferred lifestyle.	1	2	3	4	5
12. Prepare a good resume.	1	2	3	4	5
13. Change majors if you did not like your first choice.	1	2	3	4	5
14. Decide what you value most in a career.	1	2	3	4	5
15. Find out about the average yearly earnings of people in a career.	1	2	3	4	5
16. Make a career decision and then not worry whether it was right or wrong.	1	2	3	4	5
17. Change careers if you are not satisfied with the one you enter.	1	2	3	4	5
18. Figure out what you are and are not ready to sacrifice to achieve your career goals.	1	2	3	4	5
19. Talk with a person already employed in a field you are interested in.	1	2	3	4	5
20. Choose a major or career that will fit your interests.	1	2	3	4	5
21. Identify employers, firms, and institutions relevant to your career possibilities.	1	2	3	4	5
22. Define the type of lifestyle you would like to live (what kind of life would you like to live?)	1	2	3	4	5
23. Find information about graduate or professional schools.	1	2	3	4	5
24. Successfully manage the job interview process.	1	2	3	4	5
25. Identify some reasonable major or career alternatives if you are unable to get your first choice.	1	2	3	4	5

APPENDIX F

Career thoughts inventory (CTI)

Read each statement carefully and indicate the degree to which you agree or disagree with each item by circling the answer that best describes you. Do not omit any items

SD= strongly disagree D= disagree A=agree SA=strongly agree

1. No field of study or occupation interests me	SD	D	A	SA
2. Almost all occupational information tends towards making the occupation look good	SD	D	A	SA
3. I get so depressed about choosing a field of study or occupation that I can't get started	SD	D	A	SA
4. I'll never understand myself well enough to make a good career choice	SD	D	A	SA
5. I can't think of any field of study or occupations that would suit me	SD	D	A	SA
6. The views of important people in my life interfere with choosing a field of study or occupation	SD	D	A	SA
7. I know what I want to do, but I can't develop a plan for getting there	SD	D	A	SA
8. I get so anxious when I have to make decisions that I can hardly think	SD	D	A	SA
9. Whenever I've become interested in something, important people in my life disapprove	SD	D	A	SA
10. There are few jobs that have real meaning	SD	D	A	SA
11. I'm so frustrated with the process of choosing a field of study or occupation I just want to forget about it for now	SD	D	A	SA
12. I don't know why I can't find a field of study or occupation that seems interesting	SD	D	A	SA
13. I'll never find a field of study or occupation I really like	SD	D	A	SA
14. I'm always getting mixed messages about my career choice from important people in my life	SD	D	A	SA
15. I've tried to find a good occupation many times before, but I can't ever arrive at good decisions	SD	D	A	SA
16. My interests are always changing	SD	D	A	SA
17. Jobs change so fast it makes little sense to learn much about them	SD	D	A	SA
18. Choosing an occupation is so complicated, I just can't get started	SD	D	A	SA
19. There are several fields of study or occupations that fit me, but I can't decide on the best one	SD	D	A	SA
20. I know what job I want, but someone's always putting obstacles in my way	SD	D	A	SA
21. People like counselors or teachers are better suited to solve my career problems	SD	D	A	SA
22. Even though I've taken career tests, I still don't know what field of study or occupation I like	SD	D	A	SA

23. My opinions about occupations change frequently	SD	D	A	SA
24. I'm so confused, I'll never be able to choose a field of study or occupation	SD	D	A	SA
25. The more I try to understand myself and find out about occupations, the more confused and discouraged I get	SD	D	A	SA
26. There are so many occupations to know about, I will never be able to narrow down the list to only a few	SD	D	A	SA
27. I can narrow down my occupational choices to a few, but I don't seem to be able to pick just one	SD	D	A	SA
28. Deciding on an occupation is hard, but taking action after making a choice will be harder	SD	D	A	SA
29. I can't be satisfied unless I can find the perfect occupation for me	SD	D	A	SA
30. I get upset when people ask me what I want to do with my life	SD	D	A	SA
31. I don't know how to find information about jobs in my field	SD	D	A	SA
32. I worry a great deal about choosing the right field of study or occupation	SD	D	A	SA
33. I'll never understand enough about occupations to make a good choice	SD	D	A	SA
34. My age limits my occupational choice	SD	D	A	SA
35. The hardest thing is settling on just one field of study or occupation	SD	D	A	SA
36. Finding a good job in my field is just a matter of luck	SD	D	A	SA
37. Making career choices is so complicated, I am unable to keep track of where I am in the process	SD	D	A	SA
38. My achievements must be higher than my mother's or father's or my brother's or sister's	SD	D	A	SA
39. I know so little about the world of work	SD	D	A	SA
40. I'm embarrassed to let others know I haven't chosen a field of study or occupation	SD	D	A	SA
41. Choosing an occupation is so complex, I'll never be able to make a good choice	SD	D	A	SA
42. There are so many occupations that I like, I'll never be able to sort through them to find ones I like better than others	SD	D	A	SA
43. I need to choose a field of study or occupation that will please the important people in my life	SD	D	A	SA
44. I'm afraid if I try out my chosen occupation, I won't be successful	SD	D	A	SA
45. I can't trust that my career decisions will turn out well for me	SD	D	A	SA

APPENDIX G

Inventory of Parent and Peer attachment (IPPA)

Indicate whether the following items are:

1= Never true; 2= Seldom true; 3= sometimes true; 4= often true; 5=always true

	1= Never true	2= Seldom true	3= sometimes true	4= often true	5=always true
1. My parents respect my feelings					
2. I feel my parents are successful as parents					
3. I wish I had different parents					
4. My parents accept me as I am					
5. I have to rely on myself when I have a problem to solve					
6. I like to get my parents' point of view on things I'm concerned about					
7. I feel it's no use letting my feelings show					
8. My parents sense when I'm upset about something					
9. Talking over my problems with my parents makes me feel ashamed or foolish					
10. My parents expect too much from me					
11. I get upset easily at home					
12. I get upset a lot more than my parents know about					
13. When we discuss things, my parents consider my					

point of view					
14. My parents trust my judgment					
15. My parents have their own problems, so I don't bother them with mine					
16. My parents help me to understand myself better					
17. I tell my parents about my problems and troubles					
18. I feel angry with my parents					
19. I don't get much attention at home					
20. My parents encourage me to talk about my difficulties					
21. My parents understand me					
22. I don't know whom I can depend on these days					
23. When I am angry about something, my parents try to be understanding					
24. I trust my parents					
25. My parents don't understand what I'm going through these days					
26. I can count on my parents when I need to get something off my chest					
27. I feel that no one understands me					
28. If my parents know something is bothering me , they ask me about it					

APPENDIX H

Career exploration survey (CES)

Using the scale below, indicate how often you have done the following things over the last 3 months. Circle the response that best represents your opinion.

	Little	somewhat	A moderate amount	A substantial amount	A great deal
1. Explored career possibilities	1	2	3	4	5
2. Went to various career orientation programs	1	2	3	4	5
3. Obtained information on specific jobs or companies related to my anticipated career area	1	2	3	4	5
4. Initiated conversations with knowledgeable individuals in my anticipated career area	1	2	3	4	5
5. Obtained information on the labor market and general job opportunities in my anticipated career area	1	2	3	4	5
6. Looked for information on specific areas of career interest	1	2	3	4	5
7. Reflected on how my past relates to my future career	1	2	3	4	5

8. Focused my thoughts on me as a person	1	2	3	4	5
9. Thought about my past	1	2	3	4	5
10. Thought about my educational background and career options	1	2	3	4	5
11. Understood how my past behavior related to my future career plans	1	2	3	4	5