

THE NEXUS AMONG CAREER DECISION SELF-EFFICACY, PARENTAL
RELATIONSHIP FACTORS, AND CAREER INDECISION AMONG
COLLEGE STUDENTS FROM DIFFERENT ETHNIC AND RACIAL GROUPS

by

GALIT FEINSTEIN-MESSINGER

A dissertation submitted to the Graduate Faculty in Psychology in partial
fulfillment of the requirements for the degree of Doctor of Philosophy,
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Abstract

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Adviser: Professor Walter Reichman

A review of the literature on career decision-making suggested the need for a metaperspective to integrate the constructs derived from different theories. Attachment, self-efficacy and ethnic identity theories served as the organizing framework for the investigation of career decision-making difficulties in a sample of 232 college students from different racial and ethnic backgrounds (i.e., African, Asian, Hispanic and White Americans).

In the present study, only 13% of the subjects had not considered what field they would like to major in, or what occupation they would like to choose. In addition, in the total sample, subjects reported moderate degrees of career difficulties. An evaluation of the different racial and ethnic groups reveals that Asian Americans reported significantly higher levels of career difficulties than the other groups.

One of the major goals of this study was to examine the contribution of ethnic identity, parental attachment, and career decision self-efficacy to the career difficulties of

college students. Contrary to the predictions indicated by this study, ethnic identity and parental attachment did not emerge as significant predictors of career difficulties.

However, there was strong support of a relationship between career decision self-efficacy and career difficulties. Furthermore, contrary to the prediction, no significant differences in career self-efficacy among the different racial and ethnic groups were found.

It was predicted that the relationship between parental attachment and career difficulties was curvilinear. However, the analysis failed to support this prediction. Furthermore, there was no evidence that parental attachment and career difficulties are linearly related in the total sample. Nonetheless, there was evidence of a linear relationship only for African Americans.

Consistent with the prediction made in the study, perceptions of discrimination were inversely related to career self-efficacy. In addition, African Americans perceived the highest levels of discrimination compared to other racial and ethnic groups.

In light of the findings in this study, the potential implications for counselors as well as policy makers are discussed. Among the limitations of the present study are the cross sectional nature of the study, and the relatively small sample sizes in some of the groups. Future studies should address these limitations.

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CHAPTER I

CAREER CHOICE

Career indecision has been investigated within different theoretical perspectives. Among these theoretical frameworks are familial-influence theories and self-efficacy theory. Although there is a plethora of research examining the construct of career indecision, a significant limitation underlies this body of research; it mostly fails to consider potential racial and ethnic differences. Furthermore, an investigation of the effects of ethnic identity, an important aspect of the person's self-concept, is absent from this body of research. The aim of this paper is to examine career indecision within the frameworks of attachment theory, family systems theory and self-efficacy theory. In addition, research regarding racial and ethnic background as well as ethnic identity will be reviewed, as this body of research has potentially significant implications for the study of career indecision.

Career Decision-Making Theories

Decision theory offers a systematic approach to describe career decision-making behavior (Jespen & Dilley, 1974). The conceptual framework proposed by decision theory assumes that there is a decision-maker, the expectation that a decision be made, and information relevant to the person's goals. The individual organizes the information according to rules so that a decision can be made.

A number of career development theories focus on career decision-making (CDM). The various theories and models of career decision-making can be classified into two categories: descriptive (behavioral) theories and prescriptive (normative) theories (Pitz & Harren, 1980). While descriptive models purport to embody the ways individuals

generally make career decisions, prescriptive models represent the ideal approach to make a decision (Jespen & Dilley, 1974; Sharf, 2002). In other words, prescriptive models are concerned with the development of procedures for optimal decision-making (Pitz & Harren, 1980). The ideal decision-maker, according to the prescriptive models, is portrayed as a scientist (Phillips & Paziienza, 1988). Accordingly, the ideal decision maker seeks out information and uses it in arriving at the career choice that will maximize the probability of successful implementation.

Prescriptive models

One of the early “prescriptions” for career decision-making was proposed by Parsons (1909), known as the father of career development. Parsons proposed that

In the wise choice of a vocation there are three broad factors: (1) a clear understanding of yourself, your aptitude, abilities, interests, ambitions, resources, limitations, and their causes; (2) a knowledge of the requirements and conditions of success, advantages and disadvantages, compensation, opportunities and prospects in different lines of work; (3) true reasoning of the relations of these two groups of facts (p. 5).

More recently, between the 1960s and 1980s, theorists (e.g., Gati, 1986; Gelatt, 1962; Katz, 1966; Kaldor-Zytowski, 1969) proposed elaborate schemes based on the conception of the ideal decision-maker as a rational individual. The prescriptive/normative models encourage a thorough and impartial process in which alternative choices are weighed, evaluated, and eliminated culminating in the optimal choice (Phillips, 1994). According to Phillips, the different career decision-making models essentially converge on the following recommendations: that the decision process be rational, methodical and

objective, and that decisions be based on a comprehensive consideration of the facts. The normative models are based on the principle of consistency (Pitz & Harren, 1980). Therefore, they ensure that an individual's choice will be consistent with the individual's values and beliefs. However, these models do not address the question of the appropriateness of the values and beliefs themselves. It is still the individual that has to identify, clarify and evaluate personal values and beliefs. It is only once the individual has done so that the models will assist in indicating the implications of the various choices. Therefore, the validity of the normative decision process depends on the accuracy of the individual's description of values and beliefs.

The Expected Utility (EU) model and the Elimination by Aspects (EBA) model are two categories of decision-making models that apply to career decision-making (Lichtenberg, Shaffer & Arachtingi et. al., 1993). The models proposed by Katz (1966), Gelatt (1962) and Kaldor and Zytowski (1969) arise from the EU model, and the model proposed by Gati (1986) arises from the EBA model.

Katz Model

The work of Katz (1966) is possibly the most extensive effort to apply the principles of decision theory to the process of career decision-making (Pitz & Harren, 1980). Katz's (1966) view of the decision-making process rests heavily on the function of values in this process. The value dimensions are the values represented by the "expected" outcomes for the individual. According to Katz, income, power, security, excitement, and independence are some examples of values. Katz focuses on the relevant subjective values in generating the desirability of the alternative decisions. This is a mathematical model in which the best decision is the decision with the highest expected value.

According to Katz (1966), the decision-making process in this model is launched by identifying and defining the decision-maker's values. The decision-maker has to take full cognizance of the values in one's culture and one's personal values. These values are considered satisfying goals rather than motivating drives. Next in the process, the identified values are ranked in terms of the magnitude of the values, and the decision-maker has to identify a personal threshold for each value. The decision maker also establishes the objective probability of achieving the desired threshold that will satisfy the goal. In a mathematical computation, the objective probabilities are multiplied by the magnitude of the values to arrive at an expected value for each decision. The System of Interactive Guidance and Information (SIGI) is an elaborate computer-based system developed by Katz to guide individuals through their decision process (Pitz & Harren, 1980). This system also provides the individual with the likelihood that a decision will lead to a specific outcome.

Gelatt Model

The decision-making method prescribed by Gelatt (1962) is based on the scientific method. More specifically, Gelatt advocates that the decision process should involve the collection and use of pertinent and reliable information. The information that is gathered by the decision-maker initiates a course of action that may lead to a terminal decision or may lead to an investigatory decision -- that is, further investigation by gathering more information. The gathered information is categorized into three different systems: the predictive system, the value system, and the decision criterion. The predictive system includes information about the various alternative actions, the different possible outcomes, and the probabilities that actions will lead to outcomes. The value

system deals with the preferences of the various outcomes. And the decision criterion includes the rules for evaluating the outcome. The decision itself, according to Gelatt, should be evaluated based on the process that was used to arrive at the decision rather than evaluating only the outcome of the decision. Gelatt does not prescribe rules for advancing from information to making a commitment.

Kaldor-Zytowski Model

A prescriptive model that reflects the influence of statistical decision theory as well as the influence of economic decision-making was presented by Kaldor and Zytowski (1969). This model prescribes the processing of information about the self and work in terms of possible gains and costs. The best decision, based on this model, is the decision that offers the highest net value in terms of input costs balanced against outcome gains (Jespen & Dilley, 1974). While the inputs consist of intellectual abilities, physical characteristics, time, and effort, the outputs are consequences that follow from the inputs (i.e., gains) (Jespen & Dilley, 1974; Osipow & Fitzgerald, 1996). This model assumes that the individual has “complete knowledge of occupational possibilities...and the consequences of employing his [or her] resources” (Kaldor & Zytowski, p.787-788).

Gati's Model

Gati proposes the sequential elimination model (SEM) to career decision-making whereby the goal is to eliminate unacceptable alternatives in a step-by-step manner (Gati, 1986). In this model the individual must first define the decision at hand. Each career decision is composed of various quantitative aspects, such as salary, or qualitative aspects, such as interests, abilities, and working conditions that are relevant and have to be identified. Once the aspects are identified, they are ranked according to their

importance. The individual has to identify optimal as well as acceptable standards (i.e., levels) of the ranked aspects. Specific careers are eliminated if they do not meet the acceptable standards. The remaining alternative careers are reexamined in terms of relevant aspects. Once the large number of alternative options has been reduced, additional information is collected about the remaining alternatives to help the individual engage in intense and thorough decision-making so that they will arrive at an informed decision. Following the collection of information the aspects of the alternatives are compared and the alternative decisions are ranked. Finally, the individual outlines the steps necessary to achieve the chosen decision.

The sequential approach, according to Sharf (1997), is a rational, systematic approach that is easy to follow. In addition, unlike the preceding three prescriptive approaches (i.e., Gelatt, 1962; Kaldor & Zytowski, 1969; Katz, 1966) Gati's approach does not require mathematical computations. However, according to Phillips (1994), in Gati's model the decision-maker shortcuts the comprehensive evaluation of all the choices. Instead, the decision-maker sequentially eliminates from further consideration the choices that do not satisfy the successively applied criteria.

Descriptive models

Researchers who attempt to describe the process of decision-making advocate that in reality the rational decision-maker does not exist (Phillips, 1994). Contrary to those who prescribe the decision-making process, those who describe the process contend that in reality the decision-maker's process is not unbiased, thorough, nor systematic. The descriptive models suggest that individuals make a career choice in an attempt to satisfice (Lichtenberg, et al., 1993). In other words, the decision maker is looking for a choice that

is “good enough” rather than the best choice. According to Pitz and Harren (1980), it appears that there is no widely accepted descriptive/behavioral model of decision-making. In fact, the simplest variation of the descriptive models is the “single-rule” approach (Lichtenberg, et al., 1993). For example, one might choose a career that satisfies the wishes of parents because one follows the single-rule of “honoring one’s parents”. Another example is choosing a career that was recommended by most individuals who advised the decision-maker following the single-rule of “choosing by consensus”. Other descriptive models, although not as simple as the “single-rule” approach are presented by Tiedeman and O’Hara (1963) and Hilton (1962).

Tiedeman-O’Hara Model

Tiedeman and O’Hara (1963) divide the decision-making process into the two major stages of Anticipation-Preoccupation and Implementation-Adjustment. These stages correspond to behaviors taking place prior to making a decision followed by instrumental behaviors to carry out the decision. According to Tiedeman and O’Hara these stages are repeated numerous times during the lifespan. Only the stage of Anticipation will be discussed here since the stage of Implementation-Adjustment deals with adjustment to work when an individual has a job, which is beyond the scope of the present paper.

The Anticipation stage is further divided into four stages: exploration, crystallization, choice and clarification (Tiedeman & O’Hara, 1963). During Exploration the individual may consider various alternatives. The individual engages in imaginary activity placing him/herself in various situations. The individual attempts to assess him/herself in relation to the various alternatives. During Crystallization individuals

attempt to clarify their thought and feelings. Thoughts become more orderly, settled and consistent as one organizes the relevant considerations. Choice follows from Crystallization. Choice entails commitment to a single goal. However, the choice may be made with different levels of certainty. In other words, the confidence in the choice is probably affected by antagonism toward the alternative choices. If the individual waits before pursuing the selected choice, doubt is likely to ensue. Doubt is more likely if the individual is exposed to additional information relevant to the decision. The Clarification stage takes place during this in-between time when the individual can reconsider the choice and possibly return to the Exploration stage if the decision is not to continue with the choice. One does not always go through these stages sequentially. Tiedeman and O'Hara (1963) contend that although Crystallization, Choice and Clarification are analytically distinctive, these stages are fairly inseparable.

The Tiedeman and O'Hara model focuses on the internal experience that the decision-maker undergoes as the individual makes a career decision (Sharf, 1997). Phillips and Paziienza (1988) contend that the Tiedeman and O'Hara model is perhaps the most comprehensive descriptive model. However, this model has not stimulated much behavioral research (Sharf, 2002). Sharf points out that the decision process is more complex than Tiedeman and O'Hara specify. Moreover, Miller-Tiedeman and Tiedeman (1990) report that adolescents first made a decision, experienced negative consequences as a result of the decision, and then proceeded to the Crystallization stage.

Hilton's Model

Hilton's model focuses on the preliminary stages of decision-making (Phillips & Paziienza, 1988). Hilton's model is influenced by the theory of cognitive dissonance

(Hilton, 1962). Cognitive dissonance is the discord and imbalance introduced into an individual's perceptions of their environment when events that are observed are at odds with expectations (Osipow & Fitzgerald, 1996).

The fundamental elements in Hilton's model are premises, plans and cognitive dissonance (Hilton, 1962). Premises are individuals' beliefs and expectations about themselves and their environment. Plans represent the images of sequential actions that are related to the entrance of an occupational role. An individual's plans are tested against existing premises. According to this model, the decision-making process begins when input from the environment alters the plans of the decision-maker. The decision-maker evaluates whether a dissonance (i.e., an imbalance) between the plans and the premises has been established. If the dissonance exceeds the threshold, the individual will examine his or her premises. If the individual modifies the premises, the plans and the new premises are reexamined for dissonance. If the premises cannot be modified, the individual will explore his or her stored knowledge or environment for a new behavioral plan. The premises and new behavioral plan are evaluated to check that the dissonance is lower than the threshold level so that the new plans are accepted. Hilton renders decision-makers as "less than comprehensive in their search and deliberation, asserting that their choices reflect the 'good enough', rather than that which is 'optimally good'" (Phillips, 1994, p.157).

Prescriptive vs. Descriptive Models

Phillips (1994) argues that it is worth sustaining a prescriptive ideal. However, Mitchell and Krumboltz (1984) contend that individuals are reluctant to implement the rational prescriptive process since such strategies are difficult to follow. These models

require the decision-maker to thoroughly investigate the complete range of existing alternatives. The Kaldor-Zytowski model assumes that the individual is aware of all occupational possibilities. Such an assumption is not very practical. In addition, following these models requires an overwhelming amount of effort and time. For example, in Katz's model the decision maker has to assign objective probability of achieving the desired threshold that will satisfy the goal, and in Gelatt's model the decision maker has to determine the potential outcomes and the probabilities that actions will lead to desired outcomes. However, a determination of all the possible outcomes is unfeasible (Lichtenberg et al., 1993). Furthermore, even if it was humanly possible to know of all occupational possibilities and possible outcomes, the required process and assigning probabilities to the outcomes would require ample time, effort and money.

Determining if prescriptive models result in improved decision-making requires empirical research to compare the decisions of those who follow the models with those who do not. However, Lichtenberg et al. (1993) note that there is a lack of studies testing the descriptive and prescriptive models. In fact, Mitchell and Krumboltz (1984) contend that choosing criteria for evaluating decisions is difficult. Evaluating the "outcome" of the decision does not take into consideration the factors that may intervene to affect the outcome other than the decision process. On the other hand, evaluating the "decision making-process" without referring to the outcome is also problematic.

The only study located that evaluated the models is a study by Lichtenberg et al. (1993). In this study, subjects made a career choice following an Expected Utility model, a 15-step Sequential Elimination model, and an unspecified model (in which participants were not guided). The EU model resulted in the careers with the highest expected utility,

while the other two models did not differ in term of the EU of the top careers (the ideal choice was defined by the EU model). The same types of careers were chosen using the Sequential Elimination and the unspecified model, and these types of career were different from those chosen using the EU model. There was no difference in post-decisional satisfaction between those using Sequential Elimination and those using the unspecified model (subjects using the EU model were not required to make a career choice).

Moreover, Krumboltz, Rude, Mitchell, Hamel, and Kinnier (1982) suggest that those considered as “good deciders” may not proceed differently from “poor deciders”. Good career decisions were defined as decisions that yield consequences that are consistent with the decider’s work value ratings. Perfect deciders are those who choose an occupation that matches their personal work values perfectly. On the other hand, poor career decisions were defined as decisions that are not consistent with the decider’s work value ratings. Based on a career decision simulation, Krumboltz et al. found that there were no significant differences between good and bad deciders in terms of double checking, number of information sources checked, the volume of information collected, the required decision time, and the proportion of information about high values that was sought after.

Etzioni (1988) asserts that emotions are not fundamentally disruptive, and that emotions should guide the conditions in which logic should be used. In other words, there may be room for and value to the use of intuition in the decision process. Furthermore, Hammond, Hamm, Grassia and Pearson (1987) contend that intuition often outperforms analytical cognitive processes in terms of the pragmatic accuracy of judgments. Although

Phillips (1994) argues for sustaining the rational model, she further asserts that resources such as affect and intuition be treated as “other than rational” as opposed to nontraditional inputs into the decision process. These other-than-rational inputs may act as sources of creativity and imagination that facilitate the decision process.

Applying the Models to Racial and Ethnic Minorities

On the whole, theories of career decision-making do not present different recommendations for diverse populations (Sharf, 1997). In addition, there has not been much emphasis on the potential differential applicability of the theories to diverse groups. The various theories assume an informed decision-maker. However, the applicability of theories that assume an informed decision-maker is complicated by the lack of information among some socioeconomic and/or racial groups. For example, American Indians living on reservations may possess inadequate occupational information (Sharf, 1997). Among other factors, one’s interests should guide one’s career choice (Gati, 1986; Parson, 1909). However, in some groups (e.g., Asian Americans) career choices may not be compatible with one’s interests (Leong & Serafica, 1995), and one’s interests are limited and shaped by one’s life experiences.

The Tiedeman and O’Hara (1963) model does not take diverse populations into account. As a result, this model would not be very applicable in cultures in which career decisions are not made by the individual but rather are made by family members (Sharf, 2002). For example, in American Indian society, the extended family is the normative base and individual decision-making may be perceived as less important than group decision-making (Martin, 1995), and therefore the applicability of theories that assume an individualistic decision would be questionable in such cultures.

Another problem with the career decision-making models is that they fail to account for the effects of discrimination in the determination of key components of the theories. For example, in Gelatt's (1962) predictive system, the perception of discrimination may affect the subjective probabilities that actions will lead to outcomes. Consequently, in reference to diverse groups, whether the career decision-making models are valid or not may be an issue that is deprived of practical significance, since some of the major premises underlying those theories may not be applicable to all groups.

The Family and Career Development

Despite the evident differences among career development theories, most of the key theories recognize the role of the family of origin in the career development process of late adolescence and early adulthood (Blustein, Walbridge, Friedlander & Palladino, 1991). Research has demonstrated that the family of origin exerts considerable influence on the individual's career development, vocational interests, vocational identity and career choice (Lopez, 1989, Luckey, 1974; Steimel & Suziedelis, 1963).

Career Development and Other Related Theories

Early Models of Family Influence

The early psychoanalytically based theories of career development emphasize the crucial effect of childhood experiences and early childhood variables on career development (Bordin, Nachmann and Segal, 1963; Bratcher, 1982; Lopez & Andrews, 1987). Anne Roe was the first to propose that family interaction patterns are related to career development (Ryan, Solberg & Brown, 1996). Bordin et al.'s (1963) framework also applied psychoanalytic notions of parental influences to career development.

Roe's theory. Roe's (1957) theory focuses on the influence of parental interactions with children on children's occupational choice. A major issue in Roe's theory is early experiences in childhood. She emphasizes the importance of parental attitudes (as opposed to specific parental behaviors). According to Roe, the basic attitudes are cold or warm, and these attitudes are further categorized as accepting, rejecting or emotionally concentrating on the child. These attitudes of parents are related to needs of the child, which in turn affect the person's preference toward or away from people. Based on this theory, a person will choose one of eight occupational groups based on the needs established early in childhood. Roe's occupational classification system does not address possible differences amongst racial and ethnic groups. In fact, Roe asserts that she did not try "to consider alterations which might be introduced by [one's] minority" status (Roe, 1957, p. 212).

Brachner (1982) argues that Roe most likely addressed the family's influence on career decision-making better than most vocational psychologists. However, over forty years ago Bordin, Nachmann and Segal (1963) argued that studies failed to verify Roe's theory. Furthermore, Sharf (2002) argued recently that a review of the research leads to the conclusion that Roe's theory is not supported by research. There was no evidence that parental attitudes predict children's occupational choice. Nonetheless, there was evidence that within occupations, individuals select activities that point to orientation toward or away from people.

Bordin, Nachmann and Segal. Bordin et al.'s (1963) framework received its impetus from the studies of Nachmann (1960), Segal (1961) and Galinsky (1962). These studies applied psychoanalytic notions to career development. Nachmann (1960) used

biographical interviews to evaluate the childhood backgrounds and childhood developmental experiences of men in the professions of law, dentistry and social work. She set out to determine whether childhood experiences are related to vocational choice. Nachmann found that there were differences in the experiences of men from these professions. Lawyers and dentists were more likely to perceive their fathers as authority figures than were social workers. Dentists reported closer relationships with their fathers than did lawyers. Social workers' mothers were more likely to be employed during the child's childhood, to make family policy decisions, and to be an active individual than the mothers of dentists and lawyers.

The second study was conducted by Segal (1961) who used projective tests (e.g., the Rorschach) to evaluate differences between accountants and creative writers. Segal reported differences in parental relations between subjects in the two professions. Based on the projective tests, Segal concluded that accountants had been "forced" to conform to social norms in order to achieve parental acceptance, which is achieved by identifying with parents. Through this identification, accountants form ego-ideals that will guide them in the business world. Writers, on the other hand, do not form these ego-ideals and therefore will seek to self-identify through their work.

Galinsky (1962) compared the life histories of male clinical psychology and physics graduate students. Galinsky found that in their life histories, the clinical psychologists reported more opportunities to be curious about interpersonal relationships than physicists. In addition, clinical psychologists reported closer relationships with their mothers than physicists. Clinical psychologists also provided more familial conflictual attachments than physicists. Based on this study, Galinsky concluded that parental

behaviors and attitudes either function as catalysts that build up the child's interest in certain domains, or alternatively inhibit the child's curiosity in specific domains.

Bordin et al. (1963) formulated their psychoanalytic derived framework based on the findings of these studies. These researchers consider the role of early parental influences in the development of career preferences and interests (Blustein, Prezioso, and Schulthesiss, 1995; Tokar et al., 2003). They emphasize the importance of early parental influences in leading to specific modes of achieving the gratification of needs (Bordin et al, 1963). More specifically, Bordin et al. argue that early childhood experiences set-up the needs, motivations and impulses of the individual, and that the pattern of those needs is determined prior to age six. Accordingly, people will seek out occupational outlets where their needs will be met.

Bordin et al. (1963) propose a framework in which there is a collection of dimensions (i.e., traits) of work, with assumptions regarding the underlying parental influences that create these traits. There are ten dimensions in this framework with some of the dimensions being further broken down into subdimensions. For example, the dimension of "Nurturant" is further subdivided into "Fostering" and "Feeding", whereas the dimensions of "Exhibiting" and "Rhythmic Movement" are not subdivided. These researchers illustrate their framework using the occupations of accounting, social work, and plumbing. Using this framework, occupations can be ranked in terms of the degree of involvement of each of the dimensions. Each of the dimensions of work is further defined through the modifying characteristics of "instrumental mode" (i.e., the forms of expression that the dimension may be carried out in adults' work activity), "objects" toward which the activities are directed, "sexual mode" (i.e., masculine or feminine), and

the type of psychoanalytic “affect” that it involves (i.e., affect, reaction formation, or isolation is experienced). For example, the occupations can be rated in terms of the degree of involvement of the dimension of “Fostering” which can be traced back to the childhood experience of warmth of the mother, and tactile sensitivity of the skin.

Plumbing gets a rating of 0 indicating no significant involvement in the dimension of fostering. Accounting gets a rating of 1 indicating peripheral importance, with the instrumental mode being providing financial advice and safeguards, and the client’s financial affairs are the object toward which accountant’s fostering activities are directed. And social work gets a rating of 3 indicating primary importance, with the instrumental mode being to provide encouragement and protection, and the client’s growth and health is the object toward which the social worker’s fostering activities are directed.

Although Bordin et al.’s (1963) framework is creative, since the 1960s, not much psychoanalytically oriented research relating career development to early childhood experiences has been conducted (Sharf, 1997). In addition, this framework is rather subjective. The list of the dimensions described by Bordin et al. is not intended to be final, and the dimensions are theoretically based. In addition, there is no established reliability or validity of the rankings for each of the dimensions. Furthermore, Bordin et al. (1963) make the assumption “that the complex adult activities retain the same instinctual sources of gratification as the simple infantile ones” (p. 110), however, this view appears rather simplistic as adults are driven by their goals more than by their instincts. (For example, I believe that in writing this paper, I am driven among other factors by my interests more than by infantile instincts).

*Attachment Theory*¹

Attachment theory focuses the basic biologically rooted attachment behavioral system (Ainsworth, 1989). According to Ainsworth, it is believed that attachment behavior evolved through the natural selection process since this behavior resulted in a survival advantage by increasing the infant's chances of being protected by those in close proximity. Furthermore, the infant, right from birth, is equipped with species-specific behaviors that promote his or her closeness to a principal caregiver. In other words, the development of early attachments occurs unconsciously as infants and parents are biologically inclined to form attachments thereby ensuring that the infant's physical and psychosocial needs are met (Papalia, Olds and Duskin Feldman, 2003).

Research has devoted considerable attention to the role of attachment relationships throughout the lifespan (Ainsworth, 1989). Bowlby, the most prominent attachment theorist, investigated the significance of attachment figures (i.e., mother and father) and separation from attachment figures in human development. Attachment is "defined as an enduring affectional bond of substantial intensity" (Armsden & Greenberg, 1987, p. 428) that provides the individual the experience of security (Blustein et al., 1995). Although autonomy from parents is normally achieved in early adulthood, "optimum degree of autonomy does not imply cessation of attachments to parent figures" (Ainsworth, 1989, p. 710). The parent-child bond does not terminate during adulthood (Kenny, 1990). In fact, Larson (1995) argues that even for individuals who live far from their family of origin (e.g., college students), their family influences the task of career decision making. In addition, an individual's response to a parent's death demonstrates that the bond of attachment endures through the life span. Furthermore, researchers have

¹ The principal architects of Attachment theory are John Bowlby and Mary Ainsworth (Lopez, 1995).

established that retrospective accounts of early attachments are linked to subsequent attachments in adulthood (Lopez, 1995).

Mary Ainsworth devised the *Strange Situation* to assess patterns of attachment between the infant and the caregiver who is typically the mother (Papalia et al. 2003; Sharf, 1997). The Strange Situation is a laboratory-based procedure consisting of eight episodes taking less than half an hour. During this procedure the mother leaves a 10 to 24 month old child with a stranger in an unfamiliar room. Then the mother returns and leaves the child alone. This time the stranger returns before the mother returns. Next, the mother returns, and comforts the child. The mother leaves again. When the mother returns she encourages the child to explore and play. The mother comforts the child if the child needs to be comforted. Ainsworth categorized children's responses to the *Strange Situation* into secure, avoidant and ambivalent-resistant attachment patterns. The securely attached baby cries when the mother leaves and is happy when she returns. To this baby the mother acts as a secure base, the baby can leave the mother to explore but intermittently returns for reassurance. In avoidant attachments, the baby does not cry when the mother leaves and ignores the mother when she returns. Although such a baby is angry, s/he does not reach out and is unable to trust others. In ambivalent-resistant attachments, the baby is anxious when the mother leaves, and is upset when the mother is absent. However, when the mother returns, the baby is ambivalent, seeking and resisting contact with her. According to Papalia et al. (2003), the *Strange Situation* is a strange laboratory based procedure that is artificial, and its validity has been questioned.

The attachment behavioral system, according to Ainsworth (1989), includes an outward manifestation as well as an inner organization. Similarly, according to

Bartholomew and Thompson (1995), attachment relationships should be distinguished from internal working models of attachment relationships. While attachment relationships are close emotional ties that provide the feeling of security, internal working models of attachment are relational schema (i.e., cognitive structures of relatedness) that provide the feeling of security all through the lifespan (Blustein et al., 1995).

The application of attachment theory to career development, unlike Roe's theory, does not make particular predictions about career choice (Sharf, 2002). However, the nature of the attachment has implications for the career decision-making process (Blustein et al., 1995). Blustein et al. (1991) anticipated that higher levels of attachment to parents would be positively related to greater career commitment. These researchers reported that parental attachment combined with conflictual independence from parents are the family conditions that are supportive of women's commitment to the career decision process. More specifically, they found that women who were moderately attached to both parents and who were conflictually independent from both parents tended to report higher levels of commitment to their career choice and were less likely to prematurely foreclose on their career choice. However, contrary to Blustein et al.'s prediction (although not noted by these authors), it appears that the relationship between attachment and career development may be a curvilinear rather than a linear relationship.

In line with Blustein et al.'s (1991) findings, O'Brien (1996) found that adolescent women who reported moderate, as opposed to high, levels of attachment to and separation from their parents exhibited moderately high degrees of career orientation and realism. Attachment has also been linked to women's higher confidence in career-related tasks, which in turn affects women's career aspirations (O'Brien et al., 2000).

Family Systems Theory

The family, according to Brachner (1982), is the principal and most powerful emotional system that individuals belong to. The underlying proposition in the family systems perspective is that the family is a system in which there are relationship patterns, and that change in any family member will lead to a reaction in another, and the reaction will be followed by another reaction, culminating in a chain-reaction (Bowen, 1978; Penick and Jespen, 1992). This chain reaction leads to change in the family unit. The family systems' perspective of career decision-making underscores the importance of taking into account the interaction patterns and emotional interdependencies amongst family members in comprehending the career decision-making difficulties of young adults (Lopez and Andrews, 1987). Larson (1995) actually contends that the family system is particularly important and one of the most relevant systems that affects career development. Penick and Jespen (1992) found that family functioning is a significant predictor of adolescent career development.

An important family system's perspective is the Bowenian family systems theory (Larson & Wilson, 1998). Bowen's theory emphasizes the importance of emotions in intergenerational transmission. More specifically, anxiety is the principal emotion, and it serves to regulate emotional closeness or distance within the unit of the family. When family members experience intense emotional distance, levels of anxiety increase due to fear of rejection or abandonment. On the other hand, when family members feel intense togetherness, levels of anxiety increase due to fear of losing autonomy or independence. Anxiety is transmitted through the processes of projection and introjection.

The projection-introjection process is heightened through enmeshment (aka fusion), triangulation and intimidation (Larson & Wilson, 1998). In enmeshed families, members are emotionally reactive to one another so that their responses are almost automatic. Enmeshment refers to a family in which family members are not differentiated from or heavily dependent on one another. According to Larson and Wilson, fusion refers to high levels of attachment. However, Kinnier et al. (1990) contend that enmeshment should be differentiated from emotional closeness, since emotional closeness and not enmeshment fosters high self-esteem and assertiveness. When individuals are differentiated, they undergo the process of individuation whereby they free themselves from their parents' control and develop their independent self-identities (Kinner, Brigman & Noble, 1990). Triangulation refers to the degree of triadic fusion in the family. It is the process by which a child becomes the focus of tension in the family (Larson & Wilson, 1998). Triangulation serves to reduce anxiety between the parents, but increases anxiety for the child. Intimidation is the rigid expectation and extreme control over the child's behavior that shifts the anxiety from the parents to the child. Young adults who were raised, as children, in families characterized by enmeshment, triangulation and intimidation experience chronic anxiety, and this anxiety has the role of a mediator between dysfunctional family dynamic and career decision difficulties. In addition, these individuals have a difficult time developing a sense of identity. Their decisions are based on emotions rather than rationality.

Family-Related Variables

Various researchers (Fitzgerald & Harmons, 2001; Schulenberg, Vondracek & Crouter, 1984) contend that the career development process is clearly influenced by the

family of orientation. Brown and Minor (1991) report that when employed adults were asked how they initially got started in their present career, only 12% reported that they were influenced by parents or relatives, while 41% reported following a definite plan, 18% reported that chance circumstances played a role, 11% reported being influenced by friends or associates, 12% reported taking the first job available, and 6% were not sure. However, these findings need to be interpreted with caution since participants had to choose one of the phrases that described how they got started, and it is possible, for example, that some of those who reported that they got started in their present career by following a definite plan may have also been influenced by their parents. It is also possible that although one may not perceive parental influence, that factors related to the family of origin affect how careers get started.

The family of origin's role in career development can be conceptualized from different perspectives (Super, 1957). According to Super, the family can be treated subjectively, in terms of attitudes and relationships, or objectively, in terms of family composition and economic resources. Super also notes that although some experiences cannot be classified neatly into either subjective or objective categories, both categories are important. The following discussion will examine a number of dimensions of the family of orientation that have been reported in the literature as being related to career development.

Family of Origin Racial and Ethnic Background

The family's influence on the individual's career development may be more salient in some ethnic and racial groups than in others. According to Brown (1995), in some circumstances, the parental influence on career development is stronger for African

Americans than for White Americans. Unfortunately, Brown does not indicate what those circumstances might be. Social scientists acknowledge that the family has a more significant role for those identified as Asian American than for those identified as European Americans (Leong & Serafica, 1995). For example, the career choice of Asian Americans is the choice that not only is of interest to them but also the choice that their parents agree with. According to Leong and Serafica, Asian American parents are aware of employment discrimination and therefore may directly influence their children to choose autonomous professions in which Asian Americans have previously succeeded. For American Indians, the family structure varies from nuclear families to extended families (Martin, 1995). In extended families, group decision-making may be more important than individual decision-making, and members of the extended family have influence on the person's life. Therefore, career decision-making in such families may be affected by parents as well as other members of the extended family.

Family of Origin Socioeconomic Background and Other Resources

According to Duncan, Featherman and Duncan's (1972) "very rudimentary model" (p.5) of status attainment, parental social status affects the achieved level of schooling, which in turn has an effect on occupational status. In other words, parental status influences one's occupational status through the mediating variable of education (Hotchkiss & Borow, 1996). This model is somewhat simplistic compared to the process of stratification proposed by Blau and Duncan (1967) in which parental status is assessed via two measures: father's educational attainment and father's occupational status. In Blau and Duncan's model, father's occupational status has an indirect effects on one's occupational status through one's educational attainment and through the status of one's

first job. Father's occupational status also has a direct effect on one's occupational status. The parental status variable of father's education only has an indirect effect on one's occupational status through one's educational attainment.

Studies have demonstrated that parents' SES is associated with career development variables. Schulenberg et al. (1984) contend that the SES of the family of orientation is a crucial factor in the prediction of an individual's vocational status. In addition, Stewart (1952) reported that occupational level was significantly related to mother's SES in a sample in which the subjects were the sons of skilled workmen, and both of the subjects' parents were White and born in the United States. According to Stewart, the mother's interests and values have an important role in establishing the vocational interests level of her son. More specifically, Stewart argues that the mother determines the socioeconomic level of interest while the father may determine the vocational field of interest. Furthermore, according to Schulenberg et al. (1984), parenting values are associated with SES levels. More specifically, research suggests that while low SES parents value conformity in their children, middle SES families promote self-direction in their children.

While socioeconomic status takes into account the financial resources of the family, other familial resources may play a role in the career development of individuals. As part of a study investigating the differences between career indecision and a wide variety of measures, Baird (1969) examined the relationship between intellectual resources in the home and career indecision in a large sample of undergraduate college students ($n= 12,432$). More specifically the relationship between the level of intellectual stimulation in the students' home and indecision was investigated. The relationship was

examined for men and women separately. The findings showed that there were no significant differences in intellectual stimulation at home between decided and undecided students for women or for men.

Career Development of Women

Socioeconomic Background. Astin (1968) reported that female students of high SES family backgrounds tended to plan college careers in science or in teaching while students from lower SES-backgrounds plan to become housewives or to do office work. McLaughlin, Hunt, and Montgomery (1976) argue that SES influences the career and educational aspirations of women. These researchers reported that while women from middle to high SES backgrounds were more likely to enroll in four-year colleges, those from low-SES backgrounds were more likely to enroll in community or technical colleges. If we believe that more prestigious schools indicate better educational opportunities, then middle to high SES also allows for greater career opportunities (Schulenberg et al., 1984). However, Schulenberg et al. (1984) report that the association between SES background and vocational aspiration has significantly less magnitude in females than in males. In fact, Malone and Shope (1978) reported that in their sample whereas males from high SES backgrounds reported higher career expectations than males from low SES backgrounds, SES does not have an impact on the career expectations of females. Since the findings of Malone and Shope are based on a sample of primary school children the generalizability of these findings to adults is not known.

Parental Influence. In their article “Women’s Career Development: A Postmodern Update”, Fitzgerald and Harmon (2001) introduce the topic of parental influences with the old proverb *Like mother, like daughter*. It is therefore not surprising that Etaugh and

Bridges (2001) contend that most of the research regarding the effect of parents' employment on their children has concentrated on maternal employment. However, Fitzgerald and Harmon (2001) argue that nowadays, the majority of women are employed, and therefore "the critical influence of maternal modeling has lost much of its power to explain women's life choices" (p.212). Nonetheless, these writers contend that parental influences are not irrelevant to the career development of women, but rather that we should focus on different types of influences, more specifically the influence of relationship variables rather than variables describing status (e.g., SES). In fact, Schaie and Willis (1996) also contend that the nature of the relationship between fathers and daughters affects young women's career development. In addition, studies confirm that women's perceptions of parental encouragement are important in the career development process (Fassinger, 1985, 1990).

Maternal employment. The influence of mothers' employment status on career outcomes has been investigated in the literature. For example, mother's employment status has been linked with higher career aspirations and expectations of daughters (Etaugh & Bridges, 2001). These findings are consistent with social learning theory that specifies the effects of role models through observation and imitation. Furthermore, the daughter, through the mother's employment status, gains information and attitudes that are "conducive to becoming employed" (Schulenberg et al., 1984, p. 137). However, Fitzgerald and Harmon (2001), argue that a woman's career-related attitudes may have a weaker relationship with mother's employment status (i.e., employed vs. not employed) than the mother's actual attitudes toward her job. Schulenberg et al. explain that the mere presence of a role model is not sufficient. If the mother is content with her role, it is more

likely that the daughter will follow her mother. However, if the mother is dissatisfied with her role, this situation is less likely to result in positive outcomes for her children (Etaugh & Bridges, 2001).

Fathers' attitudes. Fathers' attitude concerning working women is a factor affecting women's career development (Schaie & Willis, 1996). The career orientation of college women was found to depend more on father's attitude toward women's career roles than on mother's attitude toward career roles (Oliver, 1975). In addition, Ridgeway (1978) reported that the perceived importance of traditional sex roles (i.e., women are home oriented, and men are independent) to the father is related to college women's career orientation. Furthermore, studies support the influence of fathers on daughters' nontraditional career choices (Hackett, Esposito and O'Halloran, 1989). Hackett et al. examined the relationship between the perceived influence of role models and career choices. Subjects completed the Role Model Influence Scale that assessed the extent to which they perceive that parents and other role models affected their career choices. Hackett et al. report that father's role model influence was significantly and negatively related to non-traditionality of women's occupational choices ($r = -.20, p < .05$).

Although, nowadays, a large number of women participate in the labor force, their career patterns frequently differ from the career patterns of men (Fassinger, 1990). The career choices of women may be affected by their intentions to work and the significance of career pursuits. Moreover, according to Fassinger, the variables of marital and parental status are the strongest predictors in research on the career development of women. Accordingly, women's career development research uses a larger set of predictor variables than studies of men. In other words, there are variables that relate to women's

career development and not to the career development of men. Similarly, the career development of racial and ethnic minorities may be affected by variables not affecting the career development of non-minority individuals (Osipow & Littlejohn, 1995).

Career Development and Ethnic and Racial Groups

The career development of individuals is influenced by “person factors” as well as “environmental influences” (Lent, Brown & Hackett, 1994). According to Lent et al., the person factors of ethnicity and race have considerable psychological and social consequence for the career development of the individual. These consequences result from dissimilar academic and career opportunities for individual from different ethnic and racial backgrounds. Environmental influences are also significant determinants of academic and career behavior since these influences may present opportunities or barriers in guiding behavior. Environmental influences provide opportunity structures at two different levels. At the more distal level, the individual’s background determines exposure to role models and emotional as well as financial support. At the more proximal level, structural barriers and the presence or lack of career networking contacts play a role. According to Evans and Herr (1994), the career development of minorities may be influenced by their perceptions of discrimination. Moreover, these environmental influences most likely play a role even without the individual’s perceptions of these barriers.

According to Osipow and Littlejohn (1995), the “major” variables of race and ethnicity alone have a minor effect on career development. Therefore, “minor” variables may play a role in the career development of racial and ethnic minorities. This perspective appears to be compatible with Helms and Piper’s (1994) perspective. In

vocational psychology, according to Helms and Piper, to the extent that the effects of race have been examined, race has been defined nominally. In other words, individuals are simply assigned to racial groups. These researchers characterize these nominal definitions of race as “sterile”, and argue in favor of investigating the effects of racial identity (in Osipow & Littlejohn’s terminology, a minor variable) as opposed to the effects of race per se.

Race and Ethnicity

The term “race” is used to specify groups of individuals that are distinguished based on physical characteristics (Kendall, 1999). In the United States the public nowadays believes that the population essentially is comprised of five racial groups: African Americans, Asians, Hispanics, Native Americans, and Whites (Fouad & Brown, 2000). However, in 1930, 10 racial groupings appeared on the U.S. Census form (Berk, 2003). According to Fouad and Brown, there isn’t much consensus as to what “race” is, and racial categories are variably and arbitrarily defined. For example, those born in Central and South America tend to be classified as Hispanics, which denotes a Spanish heritage, however these individuals may have actually descended from indigenous populations, Africa or other European nations. In addition, analyses of DNA indicate that there are extensive genetic differences within races. Therefore, the actual validity of the concept of race has been questioned (Fouad & Brown, 2000). Moreover, according to Kendall (1999), the concept of race is a myth since pure racial categories do not exist. Nonetheless, despite the questionable validity of the concept of race, it is not possible to abandon this concept, as the sociopolitical significance of the term “race” has significant psychological consequences in our society (Fouad & Brown, 2000).

Whereas race tends to be considered a biological concept referring to people's physical characteristics, such as skin pigmentation (Etaugh & Bridges, 2001; Osipow & Fitzgerald, 1996), "ethnicity" refers to a shared identity, shared feelings, attitudes, beliefs, values, and shared behaviors that results from "ethnic group membership" (Fouad & Brown, 2000; Papalia, Wendkos Olds & Duskin Feldman, 2003). An ethnic group refers to people who are united by place of origin, ancestry, and/or language. More specifically, ethnic groups have five principal characteristics in common: (1) distinctive cultural traits including language, clothing, holidays, or religious customs; (2) a sense of unity; (3) a sense of ethnocentrism; (4) membership ascribed from birth; and (5) a persistent attachment to a specific territory (Kendall, 2004). Whereas some individuals identify with a specific ethnic group, others do not identify with a specific ethnic group. According to Etaugh and Bridges, there aren't universally accepted labels that identify an individual's ethnicity. While a person's ethnicity may be based on geographical origin, it may also be based on skin color. For example, whereas the label of "African American" is based on geographic origin, the label "Black" is based on skin pigmentation. Moreover, the various ethnic categories may be comprised of diverse ethnic subgroups. For example, the "Asian American" category encompasses individuals whose ancestry may be from Japan, China, Korea, or Vietnam. And those with "White American" ancestry may find their roots in diverse countries such as Poland, Russia, Scotland, or Germany. According to Kendall, being attracted to the American Dream, various White ethnics ended up in the United States. Irish Americans, Italian Americans, Jewish Americans are all examples of White ethnic groups (Kendall, 2004).

It has also been argued that the concept of “race”, which was historically based on biological categories, is nowadays considered a social category comparable to ethnicity (Papalia, et al., 2003). Consistent with this perspective, Fouad and Brown (2000) operationalize the concept of “race” as a social stratification concept that is based on physical appearance, in addition to historical and political elements that affect behavior.

The terms “majority” and “minority” groups are significant terms in the discussion of racial and ethnic groups. Majority and minority groups are not defined in numerical terms but rather with respect to a pattern of superior resources or restricted opportunities (Kendall, 1999; Osipow & Fitzgerald, 1996). In the United States, Whites are perceived as the majority group.

What is the significance of race and ethnicity in the United States? According to Kendall (1999), race and ethnicity permeate the life of every individual; they are a part of people’s thought processes. In our society, hierarchical ranking is based on race and ethnicity. Groups with undesirable attributes are ascribed less value. While the majority group is the dominant group as it benefits from superior resources in society, the minority group is the subordinate group as it is disadvantaged and subjected to unfair treatment by the majority group. Although individuals from minority groups have been able to move up into upper-middle class by acquiring higher educational levels, racism still depreciates their life chances. In the United States, White Americans have controlled access to work for all other groups (Helms & Piper, 1994), and therefore are considered the majority group. For the purpose of this paper, unless mentioned otherwise, racial and ethnic minorities (R/EMs) will refer to those individuals who belong to all other racial and

ethnic groups other than the numerically dominant majority of White Americans. The following discussion will depict some of the issues faced by R/EMs.

Native Americans. Native Americans have experienced institutional racism and discrimination by the dominant culture that has a long lasting effect on their way of life (Atkinson, 2004). According to Atkinson, oppression continues to affect the life of the Native peoples. In the United States, the Native American ethnic group is the most disadvantaged R/EM in terms of employment, income, nutrition, health and housing (Kendall, 2004). Their lives are characterized by lack of opportunity as well as poverty. The educational opportunities of Native Americans have been extremely limited. Their unemployment rates average 46% (Atkinson, 2004), the highest of all R/EM groups. More recently, tribal colleges have succeeded in providing some Native people with the education needed for skilled working class jobs.

African Americans. The experience of African American is marked by continuous discrimination (Kendall, 2004). In fact, some writers contend that in our society African Americans are taught “to assume the role of a person who is discriminated against” (Evans & Herr, 1994, p.175). Although some African Americans have made significant educational and occupational gains, according to Kendall, most African Americans have not. In fact, in 2000 the unemployment rate of African Americans was more than twice the rate for Whites (9% vs. 4%) and higher than the 7% rate for Hispanics (Atkinson, 2004). According to 2000 census data, whereas 28% of Whites and 42% of Asian Americans graduate college, only 16% of African Americans are college graduates (Atkinson, 2004). And although the income gap between African

and White Americans has been reduced, there are still significant differences in income between Whites and African Americans.

Hispanics. Hispanics are more likely to be employed in service-oriented jobs and twice as likely to work as operators and manual workers than Whites (Atkinson, 2004). In 2000, their unemployment rate was about 7%, lower than the rate for African Americans (9%) and higher than the rate for Whites (4%). Their high school dropout rate is 30%. Their college completion rates range from 5% for Mexicans to a high of 20% for Cubans, with 10% for Puerto Ricans and 16% for Central and South Americans. As a result of their poor educational background Hispanics are isolated from economic opportunities and advancements. The mean per capita income of Hispanics (\$12,306) is lower than the mean per capita income of Whites (\$23,415), African Americans (\$15,197), and Asian Americans (\$22,352). Consequently 25% of Hispanics live in poverty.

Asian Americans. Asian Americans are considered the “model minority” (Atkinson, 2004). According to Kendall (2004), as a group Asian Americans experience significant upward mobility. However, although their college graduation rates are the highest they continue to experience prejudice, racism and discrimination (Atkinson). While in educational settings Asian Americans are lauded for being achievement orientated, in occupational settings they are perceived as passive and unassertive. The discrimination that Asian Americans experience is subtle. It is manifested in a glass ceiling that is a barrier to upper managerial positions. There is also a discrepancy between the salaries of Asian Americans and Whites for comparable positions.

Racial and Ethnic Identity

Researchers have recognized the importance of racial and ethnic identity in the development of persons belonging to R/EMs (Helms & Piper, 1994; Phinney, 1992). According to Arbona (1995), ethnic identity comprises an individual's emotional reaction to and attitudes towards affiliation with the individual's socially attributed ethnic group as opposed to the majority group. And according to Brown (1995), racial identity is based on a person's racial group, a person's attitudes toward her or himself as a member of a racial group, as well as the person's attitude toward the majority racial group. In other words, a person's ethnic identity is a part of the person's social identity (Phinney, 1992). As such, ethnic identity is a part of the person's self-concept that originates from the individual's knowledge of social group membership (i.e., ethnic group) and the emotional significance that the person attaches to ethnic group membership.

Originally, ethnic identity was conceived as a multidimensional construct (Phinney, 1991), however, based on research Phinney (1992) concluded that ethnic identity is a unified construct that consists of interrelated components. Although self-identification as an ethnic group member is a prerequisite for ethnic identity (Phinney, 1992), the construct of ethnic identity includes feelings of belongingness and a sense of commitment toward one's ethnic group, one's evaluation of his/her group, the interest in and knowledge of one's group, and participation in one's group ethnic social activities (Phinney, Cantu & Kurtz, 1997). In other words, an individual who self-identifies as a group member, demonstrates a sense of commitment to his/her group, is comfortable with his/her group membership, has a positive evaluation of his/her group, shows a preference for and is happy with his/her group membership, is interested in and knowledgeable

about the group, and is involved in ethnic behaviors can be described as having a high, strong, secure or achieved ethnic identity (Phinney, 1991). At the other end of the continuum are those individuals who have a low, weak or diffused ethnic identity.

An individual's ethnic identity is not static. Longitudinal research shows that ethnic identity is achieved during late adolescence, that is between age 16 and 19 (Phinney, 1992). In addition, Phinney reported higher reliabilities of the Multigroup Ethnic Identity Measure for her college sample than for the high school sample, suggesting that ethnic identity may become stronger with age.

Researchers have generally studied and/or measured ethnic and racial identity by focusing on specific racial and ethnic groups (Phinney, 1992). For example, Helms and Piper (1994), and Evans and Herr (1994) assess the racial identity in African Americans, Garcia and Lega (1979) assess the ethnic identity of Cubans, Garcia (1982) assesses the ethnic identity of Chicanos, and Helms (1990) assesses the racial identity of Whites. However, according to Phinney, due to ethnic group differences, measures designed for a specific group may not be applicable to other groups. Moreover, the various aspects of ethnic identity in one group may not be valid in other groups. For example, while political attitudes are important in measures of African American identity, language is an important component of Mexican American identity.

The Multigroup Ethnic Identity Measure. In an attempt to overcome the limitation in the study of ethnic identity, Phinney (1992) developed the original Multigroup Ethnic Identity Measure (MEIM). The MEIM examines the general phenomenon of ethnic identity that serves to indicate the level of young individuals' ethnic group identification, regardless of their ethnic group's unique characteristics. In

other words, the MEIM is a measure of ethnic identity based on those components that are common across ethnic groups. The MEIM comprises of two factors (Phinney, 2004). One factor assesses the cognitive and developmental component of ethnic identity search measuring the extent to which one explores their ethnic identity. The other factor assesses the strength of identification with one's ethnic group by measuring the affective component of affirmation (i.e., sense of group membership), belonging (i.e., feelings of belonging and attachment toward one's ethnic group), and commitment (i.e., a clear understanding of one's ethnicity).

The Other-Group Orientation scale was developed with the original MEIM (Phinney, 1992). Other-group orientation assesses attitudes toward other groups, attitudes similar to what Brown (1995) described as minority-group attitudes toward the majority group, except that for majority group members attitudes toward the majority group would constitute attitudes toward their own group. Therefore, since the MEIM is a multigroup measure, it assesses other-group orientation, as opposed to orientation toward the majority group. In the original MEIM, other-group orientation is a factor that is distinct from ethnic identity.

Correlates of Ethnic Identity

Ethnic identity and SES. The relationship between ethnic identity search and commitment and SES was examined by Phinney and Alipura (1990). SES was assessed using fathers' and mothers' occupations. Parental occupations were grouped into the three categories of (1) professionals and administrative, (2) clerical, technical and skilled workers, and (3) unskilled workers. Neither ethnic identity search scores, nor ethnic

identity commitment scores varied significantly as a function of mothers' or fathers' occupation.

Phinney (1992) examined the relationship between ethnic identity and socioeconomic status in two samples of participants. SES background was assessed by subjects' self-report of parental occupation as professional, skilled workers or unskilled workers. In the college sample, ethnic identity did not vary as a function of socioeconomic status assessed by participants' reports of parent's occupation. In the high school sample, the differences in ethnic identity related to socioeconomic status approached significance. Participants whose parents were unskilled workers tended to score low on ethnic identity. In a separate study, Phinney et al. (1997) reported low correlations between ethnic identity and SES for African Americans, Latinos and Whites ($r=.15, p<.05$; $r=.03, n.s.$; $r=-.13, n.s.$; respectively). However, Phinney et. al do not report the variability on SES, and therefore, it is possible that the low and nonsignificant correlations are due to restriction of range in SES.

Ethnic identity and self-esteem. Self-esteem is the self-evaluative component of the self-concept (i.e., descriptive and evaluative mental representation of one's skills and characteristics), it involves one's personal judgment of overall worth (Papalia, Olds & Feldman, 2003). Self-esteem depends on feelings of competence in domains that are important to the individual (Phinney et al., 1997). Therefore, to the extent that group membership is important to the individual, one would expect that a sense of belongingness to one's group would have an effect on self-esteem.

Erikson (1968) argued that "the individual belonging to an oppressed and exploited minority ... is apt to fuse the negative images held up to him by the dominant

majority with the negative identity cultivated in his group“ thereby generating ”inferiority feelings and morbid self-hatred in all minority groups” (p.303). Although early writers assumed that being a member of a disadvantaged group, would lead to lower self-esteem, research has consistently refuted this assumption. DeBord, Griffin and Clark (1977) reported that the career expectations of African Americans are actually comparable to those of Whites. However, these researchers warn that comparable career expectations do not mean that discrimination has vanished. They suggest that the career expectations of African Americans might have been higher had discrimination not played a role. Phinney (1991) contends that there is considerable evidence that groups subjected to discrimination do not suffer from lower self-esteem since members of a group that are subjected to discrimination actually “defend” their self-esteem by ascribing negative outcomes to their minority status rather than to themselves personally. In fact, Phinney et al. (1997) actually reported that African Americans reported significantly higher self-esteem than Whites and Latinos. Phinney (1991) contends that the relationship, if it exists at all, is between ethnic identity and self-esteem. Moreover, the relationship between ethnic identity and self-esteem may only hold for those whose ethnic identity is salient. However, the salience of ethnicity is not necessarily a personal choice. According to Phinney (1989) ethnic salience may be “thrust upon the individual by a society which labels anyone who is different from the norm, whether in appearance, language or customs” (p. 205).

Phinney (1992) investigated the relationship between ethnic identity and self-esteem in two separate ethnically diverse samples (i.e., high school and college students). In the college sample, there was a significant relationship between ethnic identity and

self-esteem only for minority students but not for White students. The correlations for minority high school students and for college students were .31 ($p < .001$) and .25 ($p < .01$), respectively. In the high school sample ($n=417$), there were only 12 White subjects (i.e., these 12 students were the minority in the school as defined by numbers). For these 12 White subjects, Phinney found a significant relationship between ethnic identity and self-esteem ($r = .67$, $p < .05$) possibly because ethnic identity is more salient when one is part of a small numerical minority.

The relationship between ethnic identity search and commitment and self-esteem was assessed by Phinney and Alipuria (1990) in a sample of college students from an ethnically diverse setting. The subjects who participated in this study identified themselves as Asian-American, African-American, Mexican-American or White. Overall, ethnic identity search was significantly related to self-esteem ($r = .16$, $p < .05$). However the relationship was significant only for African Americans ($r = .49$, $p < .01$) and for Mexican Americans ($r = .24$, $p < .05$). The relationship between ethnic identity commitment and self-esteem was significant for all four ethnic groups, although the relationship was stronger for African Americans ($r = .51$, $p < .01$), Mexican Americans ($r = .35$, $p < .01$), and Asian Americans ($r = .31$, $p < .05$) than for Whites ($r = .25$, $p < .05$).

The relationship between ethnic identity and self-concept in adolescents from ethnically diverse high schools was assessed by Phinney (1989). Similar to Phinney's (1992) findings with self esteem in minority subjects, Phinney found that minority adolescents who achieved a sense of ethnic identity showed higher scores on the self-concept scales of self-evaluation, sense of mastery, social and peer interactions, and family relations than minority adolescents who did not achieve ethnic identity.

Phinney et al., (1997) investigated the predictive value of ethnic identity in the self-esteem of African American, Latino and White high school students (mean age=16.1) in predominantly African American and Latino schools. These researchers found a significant relationship between ethnic identity and self-esteem for African American, Latino and Whites ($r=.17, p<.01$; $r=.27, p<.001$; $r=.44, p<.001$), respectively. However, ethnic identity did not account for a large amount of the variance in self-esteem. In addition, the generalizability of these findings is limited since the subjects in this sample came from ethnically diverse settings, and it is possible that the relationship between the variables would not hold in predominantly white settings. Furthermore, the correlations might be inflated by common method variance since all measures were self-reports.

The findings of the various studies indicate that ethnic identity and self-esteem are related. However, it appears that the relationship tends to be stronger in minorities than in the majority groups. The ethnic diversity of the settings also appears to affect the nature of the relationship between ethnic identity and self-esteem.

Ethnic identity and academic achievement. Phinney (1992) analyzed the differences in ethnic identity related to self-reported GPA among subjects from two different samples. She did not find significant differences in ethnic identity based on GPA in the sample of college subjects. However, in the high school sample, Phinney did find that students with self-reported GPAs of A or B scored higher on ethnic identity than students with self-reported GPAs of C or D. Phinney et al. (1997) reported a low significant correlation between ethnic identity and GPA for Latinos ($r=.16, p<.01$), but the relationship was not significant for African Americans or for Whites. However,

Phinney et. al do not report the variability on GPA, and therefore, it is possible that the low and nonsignificant correlations are due to restriction of range in GPA.

The Role of Race and Ethnicity in Career Development

According to Gloria and Hird (1999) race and ethnicity play an important role in career development. Helms and Piper (1994) argue that an individual may perceive race to be a significant factor in one's occupational options. For example, an African American career decision-maker may believe that specific careers are not accessible to individuals who are not White. Therefore, the perceived role of race may affect the individual's vocational behavior. Although this perception might restrict one's perceived options, it is possible for a minority individual to consider race and ethnicity as insignificant factors while at the same time race and ethnicity actually do affect one's career development.

In the United States, Career development theories are mostly derived from research on middle-class White individuals (Fisher & Griggs, 1995). Moreover, the factors that predict career development among White American may not be applicable to R/EMs. More specifically, Fisher and Griggs (1995) argue that while the career development of the dominant culture is influenced by objective measures (i.e., SES, family occupational status), the career development of minority cultures is influenced by subjective factors (i.e., family support and personal efficacy). This argument is partially supported by the findings reported by DeBord, Griffin and Clark (1977) who found that SES background is a weaker determinant of career expectations for African American youth than for White youth from rural and small towns. In addition, in their sample of adolescent boys, Portes and Wilson (1976) found that while the educational attainment of

Whites was more strongly predicted by parental status, mental ability, and school grades, the educational attainment of African Americans was more strongly predicted by self-esteem and educational aspirations.

According to Urie Bronfenbrenner's bioecological approach to development, the macrosystem, that is the overall pattern of values, beliefs, customs, economic, social and political systems filters down in innumerable ways to people's daily lives (Papalia et al., 2003). In our society, according to Helms and Piper (1994), Whites have historically controlled access to employment for all other groups (non-Whites). Therefore, non-Whites were forced to function in an employment environment over which they have had minimal control. It would therefore be expected that such a macrosystem would have an impact on an individual's development in general, and more specifically, career development.

Factors that facilitate career development of R/EMs. Utilizing a qualitative analysis of interview data, Fisher and Griggs (1995) explored the factors that facilitate career development amongst successful African American and Latino students. These researchers found that the minority students perceived that being goal-oriented and having strong self-confidence influenced their career development. Additionally, all students in this small-sample study (n=20) reported that parental support influenced their career development. More specifically, parental support was demonstrated through encouragement, setting high expectations, helpfulness, reinforcement and promoting autonomy. Forty-five percent of the students reported that their parents served as role models influencing their development. Although this study is small scaled, qualitative studies such as this, allow us to form potential hypotheses about influences on career

development. However, being that subjects were minority students this study does not allow us to compare minority to majority group influences. Furthermore, based on this study we cannot conclude that the factors affect the career development of males and females equally.

Barriers to career development. Perceived barriers to career development may affect people's occupational aspirations and the quality of the process of career decision-making (Luzzo, 1993a). Luzzo's study was designed to investigate the barriers to career development perceived by African American, Hispanic, Caucasian American, Filipino, and Asian American college students¹. More specifically, participants had to describe the barriers that they had to overcome in the past, and the barriers that they will face in the future. Ethnic identity barriers had to do with barriers such as employment discrimination on the basis of race, and differential treatment in school based on ethnic background. Results indicated that more African Americans (42%) reported experiencing ethnic identity barriers in the past than Asian Americans (25%), Hispanics (22.4%), Filipinos (13.5%), and Caucasian Americans (5%). African Americans (34.6%) were more likely to report that ethnic identity will be a barrier in the future than Hispanics (20.8%), Asian Americans (9.1%), Filipinos (8.1%), and Caucasians (4.3). Ethnicity was significantly related to past (not future) financial barriers (e.g., lack of economic resources for education), with more Hispanics (28.6%) reporting financial barriers than African Americans (19.2%), Caucasians (19.3%), Filipinos (8.1%), and Asian Americans (5.4%). The groups were also compared on socioeconomic status, with Hispanics' SES being significantly lower than the other groups' SES, which may explain why Hispanics

¹ Although Luzzo (1993a) separates Filipinos from the Asian American group, according to Leong and Serafica (1995), Filipinos are considered to be Asians.

perceived past financial barriers more than other groups, but does not explain the lack of significant differences in future financial barriers.

In the report of the 1989 survey of the perceptions of American minorities commissioned by the National Career Development Association, Brown and Minor (1991) report that significantly more African Americans (15%) and Asian-Pacific Islanders (19%) than Whites (6%) reported that they needed help in selecting, changing, or getting a job in their large sample (n=1,350) of individuals 18 years of age and older. Although more Hispanics (8%) reported needing assistance, their percentage was not significantly different from that of Whites. In addition, more African Americans (44%) reported that they needed assistance in finding information about jobs than Asian-Pacific Islanders (36%), Hispanics (35%), and Whites (25%). Furthermore, significantly more Whites (71%) than African Americans (60%) or Asian-Pacific Islanders (61%) reported that the job-related information they needed was available. Moreover, when asked about the usefulness of the job-related information, African Americans (78%) were significantly more likely than other racial and ethnic subgroups (60-64%) to report that the usefulness of the job-related information needs to improve. An important finding was regarding the item that asked about job discrimination preventing women and minorities from making progress on the job. African Americans (31%) were more likely than Whites (8%), Asian and Pacific Islanders (20%) and Hispanics (9%) to perceive that there was discrimination against women and minorities.

Career Indecision

Deciding upon a career to pursue is considered a principal developmental task of late adolescence and early adulthood (Sharf, 2002). According to Gati (1998), decisions

about one's career are among the most significant decisions an individual has to make. In fact, according to Parsons (1909), "no step in life, unless it may be the choice of a husband or wife, is more important than the choice of a vocation" (p.3).

In an article titled "The wisdom of indecision", Krumboltz (1992) suggests that career indecision is treated by professional counselors as a mental disorder. He further argues that career indecision is to some extent perceived as a problem because of the negative undertone that permeates the word "indecision." Krumboltz goes on to suggest that labeling individuals "undecided" may have a detrimental effect on their mental health and happiness. He thus concludes that being open-minded can be perceived as a virtue that is more important than decidedness. Hall (1992) adopts a comparable view arguing that indecision should be conceptualized as career exploration, which promotes decision making, which in turn lead to a career choice.

A somewhat different perspective of indecision is adopted by other researchers. Tokar, Withrow, Hall, and Moradi (2003) contend that the issue of career indecision is rather serious. Greenhaus and Callanan (1992) further argue that it is wishful thinking to believe that indecision consistently facilitates the decision making process. In fact, they point out that for a very anxious individual, indecision does not firmly promote exploration. In addition, career exploration does not predictably promote career decisions. They also contend that chronic indecision may persist throughout an individual's lifespan. Therefore, Greenhaus and Callanan conclude that there is a negative undertone to being career undecided and a positive undertone to being career decided.

While some studies indicate that as many as 60% of college students experience career indecision (Gaffner & Hazler, 2002), others (Lunneborg, 1975) found that only 24% of the college students they surveyed reported vocational indecision. Sepich (1987) approximates that between 18% and 50% of college students are undecided, while Slaney (1988) estimates that only 20% to 30% of college students are undecided. In fact, 30% of the college students in Williamson's (1937) early study were undecided. Cooper, Fuqua and Hartman (1984) actually reported that 51% of their participants reported experiencing uncertainty regarding their career choice. Based on these findings, it is reasonable to conclude that some individuals need assistance with career decisions. In fact, Hannah and Robinson (1990, as cited in Gianakos, 1999) found that nearly 50% of college freshmen were interested in assistance in making career decisions. Brown and Minor (1991) report that 7% of the large sample (n=1,350) of adults age 18 and older (living in private dwellings) reported that in the past year they needed assistance in selecting, changing or getting a job. Although there appears to be disagreement about the actual percentage of those who are undecided, the estimates do point out that career indecision is an issue. Researchers (Jones & Chenery, 1980; Slaney, 1988) agree that career indecision is a prevalent problem among college students and young adults. Therefore, we first have to properly diagnose the various problems (e.g., inability to select a career goal, uncertainty regarding the goal, lack of knowledge of one's knowledge, skills and abilities) that are associated with career indecision in order to be able to develop appropriate interventions.

As to the career indecision of R/EMs, the empirical literature on this subject is noticeably sparse. Nonetheless, McCowan and Alston (1998) did find that African

American senior female college students in historically Black colleges and universities, as well as in predominantly White colleges and universities reported a lack of career decidedness. These researchers suggest that career indecision, in African American women, may stem from their expectations regarding racism, sexism or both. However, in another study, Slaney and Brown (1983) reported that African American undergraduate male subjects experienced significantly less career indecision than White undergraduate males. Maxell, Maxwell and Krugly-Smolka (1996) examined the link between career indecision and ethnicity (Anglo-Canadians, Euro-Canadians, and Asian-Canadians) among Canadian high school students. These researchers reported that among 12th grade students, 39% of Asian-Canadians were career undecided, compared to 24% of Euro-Canadians and 31% of the Anglo-Canadians. The various studies do not present a coherent picture regarding the nature and extent of indecision among various racial and ethnic groups. Therefore, future research needs to examine the prevalence of career indecision among various R/EM groups.

Defining Career Indecision

Career indecision has to do with uncertainty about a future career (Sepich, 1987). Although a certain level of uncertainty is normal, uncertainty becomes a problem when it interferes with an individual's ability to make sound career decisions (Chartrand & Robbins, 1997). According to Chartrand and Robbins, career indecision is the uncertainty that inhibits individuals from selecting a career or implementing career plans. Greenhaus and Callanan (1992) define career indecision as the inability or the unwillingness to select a career goal, or the uncertainty regarding a selected goal. Tokar et al. (2003), on the other hand, define career indecision as "the inability to select and commit to a career

choice” (p. 3). Career indecision, according to Gati, Krausz and Osipow (1996), refers to individuals who experience problems in making career decisions. More specifically, Gati et al. operationalized career indecision as a group of difficulties that constitute indecision. This is consistent with the explanation offered by Cooper, Fuqua and Hartman (1984) who contend that career indecision involves difficulties in making a career decision, and being career undecided. The various definitions of career indecision illustrate that career indecision deals with various issues (e.g., uncertainty, inability/unwillingness to make a choice, and commitment) and these issues result from various antecedents (e.g., lack of knowledge about occupations, lack of readiness to make a decision).

Eigen, Hartman and Hartman (1987) utilized a typology for career indecision that was based on the number of times that individuals change their career decisions during a five year period. Participants who did not change their career decisions were identified as career decided. Participants who only changed their decisions once or twice were defined as developmentally undecided. And those who changed their career decision three or more times were labeled as chronically undecided. These researchers propose that this typology is to rank indecision based on the apparent difficulty of making a career decision. However, this typology is merely descriptive, as it does not provide the actual reasons for the perceived difficulty in making a career decision.

Research on the Construct of Career Indecision

Although there are numerous theoretical perspectives regarding the career decision-making process, the research about career indecision has been rather atheoretical (Tinsley, 1992). Most of the empirical research on measures of career indecision have been performed independent of theoretical conceptualization, without integrating theories

and empirical research (Gati et al., 1996). On the other hand, the theoretical discussions of career indecision have not involved any empirical tests. For example, the diagnostic taxonomy of career difficulties presented by Campbell and Cellini (1981) is rather comprehensive. The taxonomy encompasses problems in career decision-making, in addition to problems with implementation, problems in organizational performance, and problems in organizational adaptation. However, this taxonomy has not undergone any empirical testing.

The study of career indecision has made significant advances in the past 20 years (Gordon, 1998). Career indecision started as a dichotomous concept (Gordon, 1998; Jones & Chenery, 1980). Initial efforts to study the construct of career indecision utilized the decided- undecided dichotomy (Fuqua, Newmann & Seaworth, 1988). Later on, career indecision has evolved into a unidimensional continuum and more recently into a complex and multidimensional construct (Callanan & Greenhaus, 1992; Gordon, 1998). There is a plethora of research on the construct of career indecision. However, despite the research, Tinsley (1992) contends that career indecision is still an atheoretical construct about which we know relatively little. Furthermore, according to Newman, Fuqua and Minger (1990), the study of career indecision is portrayed as confusing and contradictory.

Career indecision is believed to be a multifaceted problem that consists of multiple dimensions (Chartrand & Robbins, 1990; Cooper, Fuqua & Hartman, 1984; Hartman, Fuqua & Jenkins, 1988). However, according to Gati, Krausz and Osipow (1996), the different theoretical and empirical approaches to career indecision emphasize different aspects of indecision. The Career Decision Scale (CDS) is a widely known instrument assessing career indecision (Betz, Klein & Taylor, 1996). The CDS includes a

Certainty scale, composed of only two items, and a 16-item Indecision scale. Some researchers (Shimizu, Vondracek & Schulenberg, 1994) identified Diffusion (i.e., confusion, discouragement, and lack of information), Support (i.e., need for additional support), Approach-Approach (i.e., attractiveness of several careers), and External Barriers (i.e., external barriers and lack of interest) as the four factors underlying the CDS. The Career Factors Inventory (CFI) is a newer measure of career indecision. Chartrand and Robbins (1990) identified the following four factors: Career Choice Anxiety, Generalized Indecisiveness, Need for Career Information, and Need for Self Knowledge as underlying the CFI. Fitzgerald and Rounds (1989) therefore conclude that although there exists a consensus that career indecision is a multidimensional construct, there is no consensus regarding the nature of the underlying dimensions.

This lack of consistency among various measures of the construct of career indecision is further complicated by the underlying dimensions and number of dimensions identified in specific instruments. While Chartrand and Robbin (1990) identified four dimensions in the CFI, Tokar et al. (2003) modeled only two dimensions in the CFI, one dimension being Need for Information and the other Career Indecisiveness. Similarly, while some researchers contend that the CDS is a multidimensional four-factor scale (Osipow, Carney, & Barak, 1976; Shimizu et al., 1994), Watson, Foxcroft & Stead (1991) argue that it is a two-factor scale. Osipow, Carney and Barak identified the following four factors which accounted for 81.3% of the variance: (1) lack of structure and confidence, (2) external barriers to preferred choice, (3) approach-approach problem, and (4) personal conflict regarding decision making. On the other hand, Watson et al. identified the following two factors: (1) Lack of Experience and

Information, and (2) Lack of Positive Reinforcement and Support, in their sample of white South American adolescents. Yet, Osipow & Fitzgerald (1996) and Tinsley (1992) argue that the CDS, which was designed to identify barriers to career decision-making (Osipow, 1980) is based on the unidimensional approach. Following this unidimensional approach, CDS total scores provide information only about the degree of career indecision, and Vondracek (1991), therefore, argues that this information is rather limited. More specifically, having information regarding the structure of career indecision would be more useful in developing various interventions based on the antecedents of indecision. Accordingly, Hartman et al. (1988) contend that “the most effective approach to measuring career indecision may eventually require comprehensive inventories with multiple subscales designed to assess several different aspects of career indecision” (p. 67). Furthermore, despite the plethora of research on the construct of career indecision, Tinsley (1992) contends that career indecision is still an atheoretical construct about which we know relatively little.

Gati et al. (1996) also argue that it is essential to investigate the components of career indecision. However, these researchers believe that future investigations need to concentrate less on dimensionality and more on a theoretically sound and empirically based taxonomy. In accordance with the criticism provided by Hartman et al. (1987) and Tinsley (1992), Gati et al. (1996) offer a new framework with a theoretical basis pertaining to the construct of career indecision. Rather than discovering the various dimensions of career indecision, these researchers suggest a taxonomy that includes the difficulties that comprise the construct of career indecision. Gati et al. assume that career indecision is a collection of problems that result in the inability to make a decision. There

are different sources of career indecision that result in different problems, and knowing the actual source(s) of indecision can be a valuable input in planning effective interventions to deal with career indecision (Chartrand & Robbins, 1997).

The Taxonomy of Difficulties in Career Decision Making. The taxonomy of difficulties in career decision-making offered by Gati et al. (1996) brings together theoretical and empirical research in an attempt to overcome the limitations in the study of career indecision. This taxonomy is based on decision theory. The fundamental nature of decision theory, as illustrated in the models of Katz (1966), Gelatt (1962), and Gati (1986), is to decompose each career decision problem into its constituent elements, thereby allowing the decision-maker to respond to each of the elements separately (Pitz & Harren, 1980). In Gati et al.'s taxonomy, the difficulties in career decision making are first divided into two major categories, those occurring prior to the beginning of the career decision making process due to lack of readiness (Category 1) and those occurring during the decision making process due to lack of information (Category 2) or inconsistent information (category 3).

The taxonomy is hierarchical in nature. Per the essence of decision theory, Gati et al. (1996) propose 10 categories of specific difficulties (i.e., constituent elements) that are organized into the three categories of difficulties. These difficulties may lead to the inability to foster a career decision. The category of lack of readiness, includes the specific difficulties of (1) lack of motivation, (2) indecisiveness, and (3) dysfunctional myths. The next category includes lack of information regarding (1) the career decision making process, (2) the self, (3) occupations, and (4) ways of obtaining information. The third category is inconsistent information due to (1) unreliable information, (2) internal

conflicts (i.e., conflicts among incompatible desirable aspects, conflicts among incompatible desirable occupations, and conflicts between desirable occupations and an incompatible desirable aspect), and (3) external conflicts.

The difficulties specified by Gati et al. (1996) are also consistent with the body of empirical research on indecision. The category of Lack of Readiness is compatible with the CDS factor of Diffusion (i.e., confusion, discouragement, and lack of information) identified by Shimizu, et al.(1994). The subcategory of internal conflicts is compatible with the CDS factor of Approach-Approach also identified by Shimizu et al. And the subcategories of Lack of Information regarding the self and occupations is compatible with the CFI factors of Need for Career Information, and Need for Self Knowledge identified by Chartrand and Robbins' (1990).

The taxonomy is also consistent with theoretical formulations of career development problems. The category of Lack of Readiness is compatible with Campbell and Cellini's (1981) Getting Started subcategory. The category of Lack of Information is consistent with the Information Gathering subcategory proposed by Campbell and Cellini. The subcategory of Internal Conflict is related to Campbell and Cellini's subcategory of Generating, Evaluating, and Selecting Alternatives.

Correlates of Career Indecision

The relationship between anxiety and career indecision. The anxiety related to career decisions is termed zeteophobia, which means the "fear of searching out" (Krumboltz, 1992, p. 239). Anxiety is an acquired affective reaction to a previously neutral stimulus (Goodstein, 1972). According to Goodstein, making a decision may arouse anxiety when such a decision symbolizes independence from, or the defiance of

parents for the decision-maker. If the decision maker feels inadequate due to lack of readiness for making a career commitment, making a decision may also arouse anxiety. The individual can avoid the anxiety by refraining from making a career decision.

The relationship between anxiety and career indecision can be explained in alternative ways (Fuqua, Newman & Seaworth, 1988). Anxiety may be a consequence of indecision or an antecedent of indecision (Slaney, 1988). Career indecision may lead one to experience anxiety due to society's pressures to make a career choice (Gordon, 1998). Anxiety may also result from an individual's failure to acquire the skills required for making a career decision (Fuqua et al.). Or alternatively, anxiety may prevent an individual from acquiring and using the fundamental information and skills required for making career decisions. Callanan and Greenhaus (1992) found that chronically undecided employed adults experienced more anxiety than developmentally undecided employees. The chronically undecided were also lacking information more than the developmentally undecided. Callanan and Greenhaus suggest that anxiety may prevent individuals from seeking information pertaining to their career or that the information received may be distorted as a result of anxiety and fear. Furthermore, interventions incorporating anxiety management training have been effective in treating career indecision (Fuqua et al.).

Sepich (1987) reviewed various studies investigating the relationship between anxiety and career indecision. Based on the review, Sepich concluded that most of the evidence points toward a relationship between these variables. This conclusion is supported by Fuqua, Seaworth, and Newman's (1987) findings. These researchers investigated the relationship between career indecision and anxiety utilizing multiple

scales for each construct. These researchers report a substantial significant canonical correlation ($r=.66$, $p<.001$) between the set of career indecision scales and the set of anxiety scales in their predominantly White sample (91%) of undergraduate students.

Fuqua, Newman and Seaworth's (1988) study was designed to investigate the relationship between anxiety and career indecision factors. Fuqua et al. factor analyzed the CDS and derived four factors (i.e., Factor 1: lack of information; Factor 2: uncertainty about appropriateness or degree of fit between self and career; Factor 3: multiple interests; Factor 4: specific barriers to a previous choice). In addition, two measures of anxiety were administered. One was a measure of state anxiety and the other a measure of trait anxiety. These researchers found that the two measures of anxiety were significantly related to three of the four career indecision factors. Factor 3 (multiple interests) was the only factor not significantly related to state nor trait anxiety. Fuqua et al. conclude that there is a substantial relationship between anxiety and career indecision. The generalizability of these findings may be limited due to the predominantly White sample that participated in this study. Furthermore, the findings specified above are reported for the complete sample (170 male students, 179 female students). Therefore, we are not capable of determining any differences in the relationships reported between women and men.

Jones and Chenery (1980) attempted to construct a model of career indecision. These researchers also investigated the relation between trait anxiety and career indecision as measured by the Vocational Decision Scale (VDS). They did not find a significant relation between trait anxiety and total VDS scores. However, when the correlations between each of the three VDS factors scores and trait anxiety were

examined individually, it appeared that those who experienced indecision because of low choice/work salience tended not to be anxious while those who experienced indecision due to either self-uncertainty, or lack of education and/or occupational information tended to be anxious.

Lounsbury, Tatum, Chambers and Owens (1999) investigated the relationship between neuroticism and career indecision as measured by the Career-Decidedness Inventory (a 14-item scale developed by Lounsbury et al.). These researchers report a correlation of $-.30$ ($p < .01$) between neuroticism and career decidedness. Since anxiety, worry, distress and tension are inherent in the “Big Five” personality construct of neuroticism, the authors argue that it is not surprising that neuroticism and career decidedness are significantly negatively related. A correlation of similar magnitude ($r = .28$) is reported by Chartrand and Robbins (1997) between the Beck Anxiety Inventory and career indecision (p-value not reported).

Career choice anxiety, a more specific form of anxiety, is defined by Chartrand and Robbins (1997) as the level of uneasiness an individual experiences when faced with the task of making career decisions. In fact, career choice anxiety is one of the four factors underlying the CFI scale. Chartrand and Robbins report intercorrelations of $.27$, $.35$ and $.61$ (p-values not reported) between career choice anxiety and the other three factors, need for career information, need for self knowledge and generalized indecisiveness, respectively. They also cite intercorrelations ranging from $.44$ to $.54$ between career choice anxiety and the other three factors reported in two other studies (Chartrand et al., 1990; Lewis & Savikas, 1995). However, they do not report the level of significance of these correlations. Furthermore, they do not report the correlation between career choice

anxiety and total CFI scores. Choice anxiety was also one of the elements assessed by the Osipow, Carney, and Barak (1976) scale of educational and vocational indecision. In fact, Osipow et al. extracted four factors that accounted for 81.3% of the total variance and choice anxiety is one of the two elements underlying factor 1.

In general, the studies reviewed indicate a relationship between anxiety and career indecision. Higher levels of anxiety tend to be experienced by students and employed adults who experience career indecision. In addition, it appears that some dimensions of career indecision may have a stronger relationship with anxiety than other dimensions. Chartrand and Robbins (1997) reported a stronger correlation between the generalized indecisiveness component of career indecision and anxiety than between the other components of career indecision (i.e., need for career information and need for self knowledge) and anxiety. Furthermore, Callanan and Greenhaus (1992) suggest that when anxiety and fear are associated with indecision, it suggests a more persistent indecisiveness.

Goodstein (1965) hypothesized that career indecision and indecisiveness are differentially related to anxiety. This hypothesis was tested by McGowan (1977) in a sample of senior high school students. However, McGowan found no significant differences in anxiety levels (assessed by the Taylor Manifest Anxiety Scale) between career undecided and indecisive subjects. Moreover, contrary to the studies described above, career decided students did not report significantly higher levels of anxiety than the undecided or indecisive subjects.

The relationship between indecisiveness and career indecision. As human beings, we frequently have to make decisions. Crites (1969) describes indecisive

individuals as having difficulty in making various types of life decisions. The indecisive person, according to Crites, is not capable of making a career decision even under optimal conditions in which there are a supply of choices, incentives for making a decision, and the freedom to make a decision. According to Zingaro (1983), the indecisive individual can be described as undifferentiated using Bowen's terminology. This undifferentiation makes it difficult for the individual to distinguish his or her wishes from the wishes of others. Indecisiveness may have its roots in the ineffective resolution of Erikson's identity-identity confusion "crisis" (Zingaro, 1983). For the indecisive individual, making a decision implies movement away from parents instead of movement toward goals and aspirations. Therefore, the indecisive individual is anxious about making any decision.

There is a considerable history to the distinction between indecisiveness and career indecision (Slaney, 1988). According to Slaney (1988), while Goldstein (1965) is frequently cited for making the distinction between career indecision and general indecisiveness, Tyler (1961) was the first to distinguish between indecision and indecisiveness. The distinction is clarified by Van Matre and Cooper (1984, cited in Slaney, 1988) who contend that indecision is a transitory state while indecisiveness is an enduring trait that affects decision-making tasks. According to Holland and Holland (1977), only a small percentage of students experiencing career indecision have an indecisive predisposition. While the problem of career indecision can be resolved by obtaining career and personal information, indecisiveness which has been linked to personality dimensions such as low self-esteem and uncertain sense of identity (i.e., identity confusion), requires more intensive interventions (Germeijs & De Boeck, 2002).

However, Salmone (1982) contends that it is potentially a severe mistake to label young adults under age 25 as career indecisive. On the other hand, according to Slaney, it is potentially a more severe mistake not to diagnose and treat those who are indecisive.

While indecision is described with regards to a specific domain (e.g., career indecision), indecisiveness generalizes to various domains (Germeijs & De Boeck, 2002). In practice, various career indecision instruments, such as Chartrand's Career Factors Inventory (CFI), Jones' Vocational Decision Scale (VDS), Jones' Career Decision Profile (CDP), and Gati's Career Decision Difficulties Questionnaire, include either an indecisiveness scale or indecisiveness items. For example, one of the factors of the CFI is generalized indecisiveness.

Germeijs and De Boeck's (2002) study was designed to differentiate between indecisiveness and career indecision. A principle component factor analysis of the items of both scales (i.e., indecisiveness and career indecision) was performed. Based on this analysis, it was determined that two factors emerged from the data, and the two factors explained 45.18% of the variance. The items in each of the scales had high loadings only on one of the factors. These findings supported the contention that there is differentiation among the two constructs. In addition, to further support the distinction between the two constructs, these researcher compared the correlation between self-esteem and indecision and self esteem and indecisiveness. They hypothesized that the problem of indecisiveness is more complex than the problem of indecision since indecisiveness is rooted in the individual's personality, and therefore the correlation between indecisiveness and self-esteem will be larger than the correlation between indecision and self-esteem. This hypothesis was confirmed, with the correlation between indecisiveness and self-esteem

being .41 ($p < .01$), and significantly different from the correlation between indecision and self-esteem which was only .18 ($p < .05$). Indecisiveness was not held constant, and the correlation between indecisiveness and indecision is not reported.

The relationship between trait indecisiveness and career uncertainty was also investigated by Cooper et al. (1984). The findings showed that indecisiveness and career uncertainty are positively related. In Jones and Chenery's (1980) study, the relationship between the factor of Self Uncertainty (Factor 1) of the VDS and the total VDS score was studied. Self uncertainty is composed of indecisiveness, lack of career decision-making self-confidence, lack of clarity regarding one's interests, skills and abilities. Jones and Chenery found a correlation of .72 between Self Uncertainty and total indecision scores.

The relationship between self-esteem and career indecision. According to Greenhaus and Callanan (1992), Self-esteem is a valuable variable that should be incorporated in the evaluation of career indecision. Individuals with low self-esteem tend to adopt career decisions that please others rather than making decisions that satisfy their personal needs. In addition, individuals with low self-esteem may engage in limited exploration or distort the data obtained through exploration.

Maier and Herman (1974) investigated the relationship between vocational decidedness and satisfaction with one's vocational decidedness and self-esteem. Undergraduate freshmen at the University of Calgary (in Alberta) were assigned to three different levels of decidedness based on a single item that asked respondents to report whether they are decided, tentatively decided, or undecided. Subjects were also asked to report their level of satisfaction (i.e., concerned, somewhat concerned, not concerned, and not concerned and satisfied). Self-esteem was assessed with the Tennessee Self-Concept

Scale. Findings pointed out to differences in self-esteem among the different groups of vocational decidedness. More specifically, the significant differences in self-esteem were between the decided and undecided groups. The undecided group reported lowest levels of self-esteem, while the decided group reported the highest levels of self-esteem. Although there were differences in self-esteem between the decided and tentatively decided groups, and the tentatively decided and undecided groups, the differences were not significant. There were no significant differences in satisfaction with the decision among the three groups of decidedness. However, only one item was used to assess the construct of indecidedness, and what one person may consider tentatively decided may be considered as decided by another person.

The hypothesis that persons who have made an educational or vocational decision will report high levels of positive self-esteem was tested by Kishor (1981) in a sample of 224 adolescents (mean age=17.6) from middle to upper socioeconomic background in Fiji. Osipow, Carney and Barak's (1976) Scale of Vocational Indecision was used to assign subjects to decided and undecided groups based on the median split procedure. Findings showed that decided students reported significantly higher levels of self-esteem than undecided students. The correlation between self-esteem and decision status was significant ($r=.24$, $p<.001$). There were no significant differences in self-esteem between males and females.

The relationship between self-esteem and career indecision was investigated by Wanberg and Muchinsky (1992) as part of a study investigating the typology of career decision status. The Janis Field feelings of inadequacy scale (JF) was used to assess self-esteem, and both the CDS and the decidedness scale of the Career Decision Profile

(CDP) were used to measure career indecision. The correlations between self-esteem and the two indecision scales were significant. The correlations with the CDS ($r = -.30, p < .01$) was stronger than the correlation with the CDP's decidedness scale ($r = .15, p < .01$). However, these researchers did not test whether there are significant differences between the correlations. Self-esteem is a variable that distinguished the confident decided individuals from the undecided-uncomfortable individuals in Wanberg and Muchinsky's decision status model. Seriously undecided individuals, those who were labeled "undecided-uncomfortable", were characterized by low levels of self-esteem and high levels of anxiety. The racial/ethnic background of the participants in this study is not reported.

The personality types of undecided students were investigated by Lucas and Epperson (1988). In this study, self-esteem was assessed by Rosenberg's self-esteem scale, and indecision was assessed by an instrument designed especially for this study. Those undecided students who were described as "anxious and unclear on goals" were characterized by low self-esteem and high anxiety. These findings are consistent with Wanberg and Muchinsky's (1992) findings. The racial and ethnic makeup of this sample is unknown.

Germeijs and De Boeck (2002) evaluated the relationship between self-esteem and career indecision. Self-esteem was assessed by Merten's (1997) global self-esteem scale and career indecision was assessed by a scale that was constructed specifically for this study. Based on their sample of Dutch high school students, these researchers found a significant though low correlation ($r = .18, p < .01$) between self-esteem and career indecision. However, career indecision in this study was operationalized with respect to

high school students' decisions regarding future studies. Furthermore, the validity of the researcher constructed measure of career indecision is questionable.

Based on the studies reviewed it appears that there is a significant relationship between the constructs of self-esteem and career decidedness. However, the strength of the relationship depends on the instruments used to assess the constructs.

The relationship between ability, academic achievement, aptitude and career indecision. Sepich (1987) provides two reasons for the intuitive relationship between cognitive ability and career indecision. In the first case, intelligent students may perceive numerous career options and therefore may have a difficult time deciding which option to explore. Therefore, their ability will be inversely related to career decidedness. On the other hand, bright students may be perceived as possessing the ability to sophisticatedly match their skills with career interests. Therefore, ability will be positively related to career decidedness. Williamson (1937) also offers an explanation for the relationship. More specifically, Williamson speculated that career decided students may know what they intend to get out of their education and may work harder thereby getting higher grades than undecided students.

Sepich (1987) reviewed various studies examining the relationship between ability and career indecision. Sepich concludes that the evidence does not support a relationship between the variables. Chartrand and Robbins (1997) similarly conclude that career indecision is not confounded with cognitive aptitude. Chartrand and Robbins only found one study that reported a significant correlation between aptitude and career indecision. However, the significant correlation ($r=.24$, p-value not reported) between the need for information factor of the CFI and the analytic reasoning score of the Ball

Aptitude Battery was for a sample of ninth grade students which limits its generalizability to older cohorts.

Williamson (1937) investigated the relationship between career decidedness and academic achievement. Williamson reported that male students with definitive career choices at the beginning of college did not get higher grades than male students who did not make a career choice. On the other hand, female students who made a career choice at the beginning of college tended to get lower grades than female students who were undecided (i.e., a negative relationship is implied although correlation not reported). However, Williamson cautions that we should not jump to the conclusion that indecision guarantees higher grades. These findings are problematic, and the validity of the relationship between women's indecision and grades is questionable since Williamson considered those students who made a choice but were uncertain about the choice as undecided.

Baird (1969) investigated the differences in academic aptitude between decided and undecided students in an extremely large sample of college-bound high school students (59,618). ACT test scores and self-reported high school GPA were used to assess academic aptitude. The mean ACT scores of the undecided and decided students were the same (20.4). There were no significant differences in GPA between the two groups. Therefore, Baird concluded that there are no significant differences in general cognitive ability between those who were decided and those who were undecided. The gender makeup of the sample is not reported, there were no separate analyses reported for males and females. In addition, the ethnic makeup of the sample is not reported.

Osipow and Waddell (1980, cited in Osipow, 1987) investigated the relationship between career indecision and grade point average in college students. They reported a significant relationship between the variables for female students ($r=-.35$, p-value not reported) but not for the male students. Based on regression analyses, Taylor and Betz (1983) found that scores on the verbal section of the SAT were significant predictors of career indecision in group 1 of their study which consisted of 68 male students and 85 female students, but ACT scores were not significant predictors of indecision in group 2 which was made up of 60 male students and 133 female students. In addition, these researchers reported the following correlations between verbal SAT scores and math SAT scores and CDMSE scores $r=.19$ and $.18$, respectively (p-values are not reported).

The various studies present a rather confusing picture regarding the relationship between ability and indecision. The presence of a relationship and the nature of the relationship (i.e., positive or negative), if it exists, are questionable. Moreover, research needs to assess the nature of the relationship in R/EM women.

The Family of Origin and Career Indecision

Although career counselors tend to be tacitly aware that career decision-making of clients is influenced by family interactions (Whiston, 1996), understanding the actual nature of the relationship between career decision-making and family interactions would provide counselors with valuable information.

The role of Parental Relationships and Family Interactions in Career Indecision

Lopez and Andrews (1987) conceptualize career indecision as an outcome of a complex set of interactions between the individual and the family. These writers contend that career indecision might serve a systemic function in the family. It is possible that

career indecision allows the family to postpone the important transformation of separation by actually elevating parental involvement in the child's career decision. It is also possible that career indecision serves the function of covering up conflict between others in the family unit by shifting the emphasis to the family member's career indecision. Alternatively, the young adult may "adopt" indecision due to fear of disappointing the parent(s) with a specific career choice.

A number of researchers have examined the relationship between family relationships and interactions and career indecision. Eigen, et al.'s (1987) study was one of the initial empirical studies of family system dynamics to investigate whether family interactions were related to the task of career decision-making. In this study a predominantly white sample of students (i.e., four of the 205 subjects were non-white) completed the Family Adaptability and Cohesion Scales (FACES II). Family adaptability assesses the ability of the family to change power structures, and roles and rules of the relationships as a reaction to stress. Family cohesion assesses the degree to which an individual is separated or connected to his or her family system. Based on Eigen et al.'s typology of career indecision (described earlier), these researchers did not find a significant relationship between the family interaction patterns of adaptability and cohesion and career indecision in the combined sample of males and females. However, the relationship between the variables was not evaluated for males and females separately. Furthermore, career indecision was assessed based on longitudinal data with the criterion being the number of changes in career decisions over time. In others words, the criterion of career indecision did not assess the actual career decision status of the individual.

The relationship between enmeshment (i.e., family members are not differentiated) and triangulation (i.e., triadic fusion) in the family of origin and career indecision was examined by Kinnier et al. (1990). Kinnier et al. found that individuation accounted for 2.79% of the variance in career indecision (as assessed by the CDS). Triangulation accounted for only .34% of the variance in indecision. Due to the modest amount of variance that is accounted for, we can conclude that there is no support for the relationship between family enmeshment and career indecision. However, career indecision was assessed globally, and therefore it is possible that enmeshment and triangulation would have accounted for more variance in specific aspects of indecision as opposed to global indecision. The findings are reported for the combined sample of men and women students, and 89% percent of the large sample (n=604 students) was White posing a problem with generalizability of the findings to other racial and ethnic groups.

A somewhat similar, although more elaborate, study was undertaken by Larson and Wilson (1998). These researchers, consistent with Bowen's theory, hypothesized that fusion, triangulation and intimidation would be directly related to young adults' anxiety, and that anxiety, in turn, would be directly related to young adults' career decision difficulties (as assessed by Banseberg and Sklare's Career Decision Diagnostic Assessment (CDDA) scale). In their path analytic model, Larson and Wilson found that whereas intimidation and fusion had a direct effect on anxiety, triangulation did not. Although there was no indirect nor direct effect between triangulation and career difficulties, their correlation was significant ($r=.16$, $p<.001$). Intimidation had a direct effect on career decision difficulties, and their reported significant correlation .20 ($p<.001$). Anxiety was also found to have a direct effect on career decision difficulties,

and the correlation between the two variables was .40 ($p < .0001$). These researchers also report that age and family of origin's income were not related to career decision difficulties. However, the effect of race was not evaluated. Moreover, the racial makeup of the sample is not noted by the authors.

The relationship between family interactions and career indecision was assessed by Whiston (1996) in a predominantly White sample (79%) of college students. Whiston examined the relationship between the four CDS career indecision factors of diffusion, support, approach-approach and external barriers, and the Cohesion, Conflict, Open Expression and System Maintenance Dimension of the Family Environment Scale using a canonical correlation analysis. The findings revealed a significant inverse relationship between Systems Maintenance of the family and three career indecision factors only for women. More specifically, women who reported high degrees of control and organization in the family of origin tended to report low degrees of need for support, less approach-approach conflicts, and less diffusion. The respective structure coefficients were -.857, -.493, and -.493. Although the racial and ethnic makeup of the sample is known, these findings were not analyzed for differences between the groups possibly due to small number of minority subjects in the study.

The hypothesis that difficulties in psychological separation are related to career indecision was tested by Blustein et al. (1991) in a sample of undergraduate college students. Four separate dimensions of psychological separation were assessed by the Psychological Separation Inventory (PSI): functional independence, emotional independence, conflictual independence and attitudinal independence. The correlations between each of the four dimensions of psychological separation and career indecision

(assessed by the CDS) were not significant, that is the hypothesis tested was not supported. Since the measure of separation did not consider separation from the mother and father independently, it is possible that separation from one parent and not the other is related to indecision. In addition, Career indecision was assessed globally, and it is possible that specific aspects of indecision are related to specific aspects of psychological separation. Blustein et al. do not report the racial makeup of their sample. Furthermore, only subjects with two living parents participated in this study. Therefore, these findings may not generalize to other types of families (e.g., single-parent households).

Santos and Coimbra (2000) examined the relationship between psychological separation and dimensions of career indecision in a sample ($n=418$) of Portuguese 12th-grade students (mean age 17.4). More specifically these researchers examined the relationship between conflictual and emotional independence from mother and father, and developmental career indecision (as assessed by the CFI subscales of need for self-knowledge and need for career information) and generalized indecision (assessed by Frost & Shows Indecisiveness Scale). Although five of the eight correlations between the variables were significant, the magnitude of the relationships was low. Developmental indecision had a correlation of $r=.17$ ($p<.01$) and $r=.12$ ($p<.05$) with emotional independence from mother and father, respectively. Conflictual independence from parents was not related to developmental indecision. Generalized indecision had correlations of $r=.14$ ($p<.01$), $r=.19$ ($p<.01$), and $r=-.11$ ($p<.05$) with conflictual independence from mother, conflictual independence from father, and emotional independence from mother, respectively. Emotional independence from father was not significantly related to generalized indecision. A canonical correlation analysis between

conflictual and emotional independence from parents and the dimensions of career indecision for males, females and the combined sample of men and women was not significant.

Guerra and Braungart-Rieker (1999) investigated the relationship between career indecision and parental relationship factors. White subjects reported that their mothers encouraged their independence more than African American, Hispanic, and Asian American subjects. In addition, their findings revealed that less career indecision was reported by subjects who reported that their mothers encouraged their independence during childhood as opposed to subjects whose mothers were overprotective. However, career indecision was not related to paternal encouragement of independence although students reported that their fathers encouraged their independence more than their mothers. Furthermore, neither maternal nor paternal acceptance significantly accounted for the variance in career indecision. Guerra and Braungart-Rieker did not find significant racial differences in career indecision scores. Although this study examined racial and ethnic minorities, the subjects in this sample were mostly White (84%).

Very recently, the combined effect of psychological separation and secure attachments on career indecision in a college student population was examined by Tokar et al. (2003). In this comprehensive study, the researchers used three indicators of career indecision and six indicators of attachment and separation anxiety. The CDS was used as a global measure of indecision, and the CFI was used to derive the Need for Information and Career Indecisiveness indicators. The six indicators of attachment and separation anxiety are attachment security, attachment anxiety, maternal separation, paternal separation, maternal conflictual independence, and paternal conflictual independence.

The results indicated that higher levels of separation and experience of attachment security are related to lower levels of career indecision. More specifically, attachment anxiety and maternal separation had significant relationships with the three different indicators of career indecision (correlations ranging from $-.20$ to $.47$, significant at $p < .05$). In addition, maternal conflictual independence was related to career indecisiveness and global career indecision (both include a component of chronic indecision) ($r = -.31$, $p < .05$; $r = -.33$, $p < .05$, respectively). And, paternal conflictual independence was related to career indecisiveness and global career indecision ($r = -.29$, $p < .05$; $r = -.34$, $p < .05$, respectively). Tokar et al. report that the six indicators of separation and attachment accounted for $.09$, $.24$, and $.30$ of the variance in the constructs of Need for Information, Global Indecision, and Career Indecisiveness, respectively. The sample ($n = 350$) in this study was predominantly White (86%), with 200 female and 150 male participants. The findings are reported only for the aggregate sample of females and males.

In 1991, Blustein et al. concluded that “the results from the existing empirical studies do not yield conclusive findings with respect to the nature and magnitude of the relations between family relationship factors and career development” (p.40). The present review of the literature suggests that the findings about the relationship between family relationships and career indecision are still ambiguous. Most of the studies operationalize career indecision as a unidimensional construct without examining the relationship between the various aspects of indecision and family-related factors. In addition, although most studies analyzed the results in combined samples of women and men, research (e.g., Whiston, 1996) indicates that it may be important to examine the

relationship in women separately. Furthermore, most of the studies (with the exception of Guerra and Braugart-Rieker) do not examine the relationships in R/EMs.

Self Efficacy Theory²

A self-efficacy expectation is a belief regarding the performance of a specific behavior (Hackett & Betz, 1981). Self-efficacy expectations are an individual's beliefs regarding the personal ability to successfully carry out a specific task (Betz & Taylor, 2001). Therefore, efficacy expectations are the principal cognitive determinants that will ascertain whether or not a person will undertake a specific behavior (Hackett & Betz). Accordingly, low efficacy expectations may hinder an individual from making an attempt at performing a given task. Self-efficacy expectations are acquired via performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal.

Career-Related Self-Efficacy

During the last 20 years researchers have been utilizing Bandura's theory of self-efficacy to gain a better understanding of career development (Gianakos, 2001). The application of Bandura's self-efficacy theory to career behaviors is referred to as the study of career self-efficacy. The articles by Betz and Hackett (1981) and Hackett and Betz (1981) were the first to apply self-efficacy theory to the study of career psychology and counseling (Betz & Taylor, 2001; Lucas, Wanberg & Zytowski, 1997). Career self-efficacy is defined as the confidence that an individual possesses in pursuing various career-related tasks (O'Brien, Miller Friedman, Tipton and Gerscmay Linn, 2000).

The evaluation of career self-efficacy includes various specific behavioral domains (Betz & Luzzo, 1996), for example, the Kuder task self-efficacy scale (Lucas, Wanberg & Zytowski, 1997), the task-specific occupational self-efficacy scale (Osipow,

² Self-efficacy theory evolved from social learning or social cognitive theory (Osipow & Fitzgerald, 1996).

Temple and Rooney, 1993), Mathematics self-efficacy (Betz & Hackett, 1983), career search self-efficacy (Solberg, Good & Nord, 1993), and career decision-making self-efficacy (Taylor & Betz, 1983). However, according to Betz and Luzzo, the domain of career decision-making self-efficacy has received most of the attention by researchers and practitioners.

Self-efficacy expectations apply directly to the tasks and behaviors involved in career decision making (Luzzo, 1993b). Whiston (1996) defines career decision-making self-efficacy as the level of an individual's confidence regarding the completion of a career decision task. O'Brien et al. (2000) define this construct as the confidence level in pursuing tasks related to a career. And, Betz and Taylor (2001) operationalize career decision-making self-efficacy as the level of an individual's belief that he or she is capable of completing tasks essential for making career-related decisions.

Research on the construct of career decision-making self-efficacy. According to Betz and Taylor (2001), the Career Decision Self-Efficacy Scale and its short form are the chief measures of career decision-making self-efficacy. Nilsson, Schmidt and Meek (2002) contend that the CDMSE scale is a commonly used instrument, and Betz et al. (1996) contend that most of the research on the construct of career decision-making self-efficacy has utilized the CDMSE scale.

While the primary theoretical foundation for the career decision self-efficacy scale³ (CDMSE) is provided by the self-efficacy concept, Crites' career maturity model provided the framework for operationalizing the skills necessary in career decision-

³ The term Career Decision-Making Self-Efficacy Scale was initially used by Betz. However, the term "career decision making" was later trademarked by Thomas Herrington and Arthur O'Shea. Therefore, Betz and Taylor (2001) now refer to their scale as the "Career Decision Self-Efficacy Scale". In this paper the term Career Decision Self-Efficacy Scale will be used.

making (Betz & Taylor, 2001). More specifically, the five career choice competencies proposed by Crites: accurate self-appraisal (SA), gathering occupational information(OI), goal selection(GS), making plan for the future (PL), and problem solving (PS) were used to devise the CDMSE scale. Originally, Betz and Taylor (1983) developed the 50-item CDMSE. Later on, Betz, Klein and Taylor (1996) developed the 25-item scale known as the career decision self-efficacy scale-short form (CDMSE-SF).

The factor structure of the CDMSE scales has been evaluated in various studies. Originally, Taylor and Betz (1983) reported a five-factor solution for the CDMSE scale which accounted for 52% of the total variance in their sample of college students (n=346). However, the researchers noted that the derived factor structure was not clear-cut, since many items with high loadings on factor one, also had relatively high loadings on other factors. Taylor and Popma (1990) reported that the five-factor solution accounted for only 26% of the total variance.

In their sample (n=418) of mostly White (70%) underprepared college students, Peterson and delMas (1998) reported that a two-factor solution of the CDMSE scale accounted for 50% of the total variance in one group and 52% in the other group. The researchers labeled the first component Information Gathering and the second component Decision Making. Several items also loaded uniquely only on one of the factors. In terms of the amount of variance explained, this two-factor solution is comparable to the five-factor solution of Taylor and Betz. Peterson and delMas concluded that the two-factor solution appears robust given that similar factor structures were found in two independent samples. Although Peterson and delMas report the ethnic background of participants in their sample, the data is not analyzed for the ethnic groups separately.

Gati, Osipow and Fassa (1994) evaluated the factor structure underlying a Hebrew version of the CDMSE scale in a sample of Israeli young adults (n=63) using cluster analysis. The initial results of the translated CDMSE revealed that the structure of the 50-item Hebrew version was not consistent with the five-factor structure. The factors of Goal Selection and Problem Solving did not cluster as would be expected in a five-factor solution. Furthermore, the results revealed only small differentiation among the other three factors (i.e., self appraisal, occupational information, and planning). Gati et al. then deleted problematic items from each of the five CDMSE subscales ending up with a short Hebrew version of the scale that included 30 items (6 items per subscale). The short Hebrew version was cluster analyzed, and a new structure emerged. Now, five distinctively different clusters emerged each representing one of Crites' five competencies. However, due to the elimination of items the reliabilities of the subscales, as well as the overall scale were slightly lower than the reliabilities obtained by Betz and Taylor (1983). Gati et al.'s reliabilities were as follows: SA (.79), OI (.76), GS (.83), PI (.83), PS (.65), and total score (.92) while Taylor and Betz's (1983) respective reliabilities were .88, .89, .87, .89, .86, and .97. Problem solving is the only subscale whose reliability decreased substantially from Taylor and Betz's reliability estimate to Gati et al.'s (.86 vs. .65).

Betz, Klein and Taylor (1996) developed a short form of the CDMSE scale that includes 25 items from the original Taylor and Betz (1983) scale, five items in each subscale. Results showed that the reliability coefficients of the subscales and for total scale were similar to Gati et al.'s (1994) short Hebrew version. Reliabilities were as follows: SA (.73), OI (.78), GS (.83), PI (.81), PS (.75), and total score (.94). The

CDMSE-SF was factor analyzed. The eigenvalues for the five factors were greater than 1.0. The five rotated factors accounted for 62% of the variance. However, only two of these factors were clear. Betz et al. also examined a two-factor solution that accounted for 47% of the variance. The two-factor solution was similar to Peterson and delMas' (1998) Decision-Making and Information Gathering factors. Betz et al. did not find gender differences in the five CDMSE-SF scales or in total scores.

As to the question regarding the underlying factor structure of the scale, Taylor and Popma (1990) argue that the CDMSE scale is best described as a generalized measure of career self-efficacy covering multiple aspects of career decision-making. Despite the findings reviewed above, Betz and Taylor (2001) contend that the five-subscale structure should be retained since it is based on Crites' respected career maturity theory.

The Role of Career Decision Self-Efficacy in Career Indecision

Career indecision, according to Betz and Taylor (2001) is conceivably the most consistent and significant correlate of career decision-making self-efficacy. Betz and Taylor contend that studies have demonstrated that higher career decision self-efficacy expectations are associated with less career indecision as assessed by the CDS.

The application of the theory of self-efficacy to career decision-making suggests that career decision-making self-efficacy can be utilized as a valuable predictor of career indecision (Betz & Klein Voyten, 1997). In the first study to use the Career Decision Self-Efficacy Scale (CDMSE), Taylor and Betz (1983) reported that CDMSE scores were negatively related to career indecision scores as measured by the CDS ($r = -.40$, $p < .001$). The CDMSE competency of Goal Selection showed the strongest relationship with the

CDS ($r=-.48$, $p< .001$), followed by the Planning competency ($r=-.42$, $p< .001$). There were no significant differences in self-efficacy between men and women. The racial makeup of the 346-college student sample is not reported.

Taylor and Popma (1990) investigated the relationship between CDMSE, career salience, locus of control, and career indecision in a predominantly White sample (87%) of college students. Consistent with Taylor and Betz (1983), findings showed that CDMSE scores had a moderate negative relationship with career indecision ($r=-.51$, $p< .001$). The Goal Selection subscale showed the highest correlation with indecision ($r=-.59$, $p< .001$), followed by Planning ($r=-.50$, $p< .001$), Self Appraisal ($r=-.43$, $p< .001$), Occupational Information ($r=-.40$, $p< .001$), and Problem Solving ($r=-.38$, $p< .001$). CDMSE, career salience, and locus of control, were entered into a multiple regression analysis using career indecision as the dependent variable. The independent variables accounted for 29% of the variance in career indecision scores. However, career decision self-efficacy was the only significant predictor of career indecision.

Despite the relatively large sample ($n=407$; 203 females and 204 males) in Taylor and Popma's (1990) study, there is no indication in the study that the findings were analyzed for gender differences. And although the racial and ethnic makeup of the sample is reported, the findings do not provide us any information about the relationship of the variables for R/EMs.

The relationship between the short form of the CDMSE and career indecision among undergraduate students ($n=184$) is reported by Betz, Klein and Taylor (1996) as part the evaluation of the CDMSE-SF scale. The correlations are actually reported for the Indecision and the Certainty scales of the CDS separately. A correlation of $-.56$ ($p< .05$)

is reported between CDMSE-SF and both Indecision and Certainty scales for the combined sample of women (n=103) and men (n=81). With the correlations between CDMSE-SF and Certainty being stronger for females ($r=-.68$, $p<.001$) than for males ($r=-.31$, $p<.01$), and between CDMSE-SF and Indecision also being stronger for females ($r=-.63$, $p<.001$) than for males ($r=-.48$, $p<.001$). For females, the correlations between the five CDMSE competencies and CDS Certainty scale range from $-.46$ to $-.76$ (all significant, $p<.001$), and the correlations between the five competencies and Indecision scale range from $-.45$ to $-.66$ (all significant, $p<.001$). These findings suggest that the 25-item CDMSE-SF has a stronger relationship with CDS scores than the 50-item CDMSE scale.

Betz and Voyten (1997), on the other hand, report a stronger correlation between career self-efficacy and career indecision for males ($r=-.53$) than for females ($r=-.42$). However, it is not reported if these correlations are significantly different.

The relationship between career decision-making self-efficacy and career indecision among undergraduate female students (n=101) was investigated by Mathieu, Sowa and Niles (1993). These researchers hypothesized that women who have a preference for a non-traditional, gender-neutral or traditional careers would score higher on CDMSE than women who are career undecided. Participants' career preferences and indecision was determined by self-report responses to a single fill-in the blank item asking for choice of occupation. The item instructed participants that if they are not sure to indicate "undecided". In other words, "indecision" status is based on a single item. The results showed that career undecided women scored significantly lower on total CDMSE scores than either women who have a preference for a non-traditional or a gender-neutral

career. There were no significant differences in CDMSE between women who were undecided and those who expressed a preference for a traditional career. These researchers suggest that the higher level of confidence regarding the ability to make a career decision may enable women to consider a wide range of occupations. Participants' age ranged from 19 to 26, but the average age is not provided. In addition, the racial/ethnic background of participants is not reported.

Kraus and Hughey (1999) investigated the relationship between CDMSE scores and career indecision (assessed by the CDS) following a career intervention for high school students ($n=60$). A posttest-only delayed posttest design was used for the study. At the posttest, the correlation between CDMSE and CDS scores was $-.25$ (nonsignificant, $p < .06$), however, at the delayed posttest the correlation was significant ($r = -.40$, $p < .01$). The sample was 67% White, and average age was 16 years.

In summary, research has demonstrated that CDMSE and career indecision are indeed related to one another. More specifically, there is a negative relationship between the two variables (Betz, Klein & Taylor, 1996; Kraus & Hughey, 1999; Mathieu, Sowa & Niles, 1993; Taylor & Betz, 1983). However, the question still remains as to whether the relationship demonstrated in predominantly White samples holds amongst the various groups of R/EMs.

Career Decision-Making Self-Efficacy and Gender

Self-efficacy expectations result from developmental experiences that lead individuals to deem that their actions determine the resulting outcomes (Gianakos, 2001). As such, self-efficacy expectations are a significant type of cognitive behavior that has explicit relevance to the career development of women (Hackett & Betz, 1981).

Betz and Klein Voyten (1997) did not find significant gender differences in CDMSE-SF between women (96.3) and men (98.3). Luzzo also did not find significant gender differences in CDMSE scores. However, Kraus and Hughey (1999) did find a significant difference in CDMSE scores between males and females but only in their control group (and not in the treatment group). The mean score for males was 178.60 and for females 154.07 ($t(28)=2.39, p=.02$). Giankos (2001) found that women scored higher than men on the Planning and on the Occupation Information subscales of the CDMSE scale. The scores on the Planning and on the Occupation Information subscales were positively related to gender ($p=.008$; $p=.001$, respectively). However, the correlations, the mean CDMSE scores, as well as the significance of the difference between the scores for males and females is not reported.

Career Decision-Making Self-Efficacy and Racial and Ethnic Groups

The concept of career self-efficacy offers significant promise in advancing our understanding of career development of R/EMs (Brown, 1995). Self-efficacy expectations are a significant type of cognitive behavior that has explicit relevance to the career development of R/EMs. Career self-efficacy expectations are presumed to determine one's actions, effort, and level of persistence regarding career behaviors, which in turn affects outcomes. However, for R/EMs, one's outcomes may be determined by perceptions of bias and discrimination, independent of the behavior's adequacy. Therefore, career self-efficacy beliefs may be affected by the presence of discrimination. In addition, according to Arbona (1995), R/EMs may not have the experiences of performance accomplishments and role models that are conducive to the development of career-related self-efficacy. According to Lent et al. (1994), access to education

influences the individual's learning experience and skill development that in turn influences the development of career self-efficacy. For example, Native Americans living on reservations are exposed to limited educational and occupational information that in turn may have a detrimental effect on their ability to develop strong self-efficacy (Sharf, 2002).

Peterson (1993) examined the ethnic variations in CDMSE in a predominantly White sample (70.3%) of underprepared college students. Peterson reported that African Americans scored the highest on CDMSE (6.9), followed by Hispanics (6.6), Whites (6.4), Asians (5.8) and Native Americans (5.3). There were significant differences between some of the groups. More specifically, African Americans reported significantly higher CDMSE than Native American, Asian and White students, and Hispanic and White students reported significantly higher CDMSE than Native American and Asian students.

The relationship between ethnic identity and career self-efficacy is not known well (Gloria & Hird, 1999). The relationship between ethnicity and career decision-making self-efficacy was explored by Gloria and Hird (1999). Ethnic identity was assessed with Phinney's (1992) Multigroup Ethnic Identity Measure (MEIM) and self-efficacy was assessed with the CDMSE-SF. Contrary to Peterson's (1993) findings, Gloria and Hird found that R/EM students reported lower career decision-making self-efficacy (and higher levels of trait anxiety) than White students. Gloria and Hird attribute the differences in career decision-making self-efficacy to the sociopolitical contexts of employment, whereby professional occupations are mostly occupied by Whites. Therefore, R/EM students may perceive that they are not likely to be allowed or accepted

in the work environment. These perceptions may explain R/EMs lower career-related efficacy. Ethnic identity accounted for a larger amount of the variance in CDMSE-SF scores for R/EMs than for White subjects.

Self-Efficacy and the Family

Career decision making self-efficacy beliefs are positively related to exploratory behavior and to successful performance in the past (Blustein et al., 1991). Young adults who experience healthy relationships with their parents are likely to have successful accomplishments during adolescence. Since accomplishments reinforce self-efficacy beliefs (Blustein et al.), the relationship with parents may play an important role in developing the confidence necessary to making a career decision (Gianakos, 2001).

Blustein et al.(1991) tested the hypothesis that higher levels of psychological separation would be positively related to career decision-making self-efficacy. This hypothesis was not supported. These researchers didn't find a significant relationship between the PSI's four psychological separation dimensions and CDMSE scores in their sample of college students (n=101; mean age=21.07).

O'Brien (1996) hypothesized that young women who were moderately attached to, and separated from their parents would experience moderate to high levels of career self-efficacy beliefs. The findings revealed that women (mean age =17.28 years) who experienced moderate attachment to their mothers and psychological separation experienced high levels of efficacy as assessed by the Career Confidence Scale (CCS). However, O'Brien also tried to determine the unique variance that attachment and separation shared with career self-efficacy. This examination revealed that when controlling for attachment, separation accounted for significant variance in career self-

efficacy. On the other hand, when controlling for separation, attachment did not account for significant variance in self-efficacy. However, O'Brien cautions that these findings need to be evaluated in light of the fact that the scores of attachment and separation were significantly correlated. In other words, the instruments that assessed attachment and separation did not assess two distinct constructs. The review of measures of attachment and separation by Lopez and Gover (1993) supports the contention that measures of attachment and separation each integrate some aspect of the other construct. The generalizability of these findings to R/EMs is also questionable since the sample in this study was predominantly White (81%), and the relationships amongst the variables were only assessed for the complete sample.

O'Brien et al. (2000) conducted a longitudinal study in which they investigated the relationship among women's (mean age=22years) attachment to and separation from parents and career self-efficacy. Results of the path analysis model revealed that at time 1, attachment to mother had a significant direct effect on career self-efficacy (i.e., Career Confidence Scale scores), while at time 2 (i.e. five years later), attachment to father had a significant direct effect on career self-efficacy. However, separation from parents was not found to have a significant direct effect on career self-efficacy. Due to the sample being predominantly White (88%), the generalizability of these findings to various racial and ethnic groups is limited. Most of the women in this study (62%) completed college.

The relationship among family interactions as assessed by the family environment scale (FES) and career decision-making self-efficacy was investigated by Whiston (1996) from the perspective of family systems theory. The results indicate that the level of organization and control in the family of female college students was not related to levels

of career decision-making self-efficacy. On the other hand, the relationship between intellectual and cultural family orientation (a subscale of Personal Growth Dimension of the FES) and the CDMSE factor of occupational information was positive and significant for the combined sample of predominantly White (79%) men (50%) and women (42.5%) (7.5% of the subjects did not identify their gender). In addition, scores on the Independence and Achievement Orientation subscales (subscales of the Personal Growth Dimension of the FES) and scores on the Occupational Information subscale of the CDMSE were inversely related.

The relationship between career-search self-efficacy (CSES) and family relationships was investigated by Ryan, Solberg and Brown (1996). More specifically, these researchers investigated the association between career search self-efficacy and family dysfunction and parental attachment (assessed for mothers and fathers separately) among community college students. Their findings showed that 17% of the variance in career search self-efficacy for women (mean age =22.98years) was accounted for by attachment to mother and dysfunction. Attachment to father did not emerge as a significant predictor of CSES scores. The generalizability of these findings to various racial and ethnic and SES groups is questionable due to the predominantly affluent White community college students who participated in this study (n=220).

Peterson (1993) categorized mother's and father's education into ordinal categories; parents who did not graduate high school, graduated high school, had less than 2 years of vocational training, had 2 or more years of vocational training, had less than 2 years of college, had 2 or more years of college, completed college, had a master's degree, and those who had an advanced degree. Peterson found significant differences in

CDMSE based on parental education between some of the groups (i.e., both maternal and paternal education). However, the differences were difficult to interpret. The following are some examples: students whose mothers had two or more years of vocational training reported the highest CDMSE (7.3). Students whose father had two or more years of vocational training or had advanced degrees reported the highest CDMSE (6.9 in both groups). Students whose mothers had two or more years in college, for example, scored lower than students whose mothers completed college, completed less than two years of vocational training, or whose mothers completed high school.

Peterson (1993) also examined differences in CDMSE based on parental occupation. As with parental education, Peterson had various categories for parental occupation; some of the categories are homemaker (for mothers), laborers, managers, operatives, sales, teachers, service, retired, unemployed, two different professional categories, and those whose parents' occupation was not known. Peterson found some difference in CDMSE based on parental occupation between some of the groups, however, some of the differences are difficult to interpret. The following are some examples of differences: students whose mothers were professional reported higher CDMSE than those whose mothers were homemakers. Students whose fathers were unemployed or whose mothers were deceased reported the highest CDMSE. Students whose mothers were homemakers reported higher CDMSE than those whose mothers were in sales. Students whose fathers were laborers reported higher CDMSE than students whose fathers were managers, professional, or in sales.

Whiston (1996) concluded that studies need to further examine the relationship between family dynamics and career self-efficacy. Furthermore, based on Peterson's

(1993) findings, it is difficult to draw concrete conclusion regarding the relationship between parental education and occupation and career self-efficacy.

Correlates of Career Decision Self-Efficacy

The relationship between career decision-making attitudes and skills and career decision-making self-efficacy. Self-efficacy expectations are defined as an estimation of confidence in the ability to complete a task successfully, and as such they are expected to affect performance (Luzzo,1993b). Therefore, it is expected that confidence in the ability to engage in the process of career decision-making would be related to both attitudes toward career decision-making as well as actual performance.

Luzzo (1993b) investigated the usefulness of career decision-making self-efficacy in predicting career decision-making attitudes and skills. Undergraduate college students (n=233) completed the Crites' Career Maturity Inventory (CMI) attitude scale, Super's Career Development Inventory (CDI) assessing skills, and the CDMSE scale. The findings revealed a significant relationship between CDMSE and career decision-making attitudes ($r=.405$). However, the relationship between CDMSE and career decision-making skills was not significant. Luzzo ran a multiple regression analysis with attitudes as the dependent variable. Career decision making skills and self-efficacy were the strongest predictors of CDMSE. When CDM skills was used as a dependent variable, CDM attitudes, but not CDMSE emerged as a significant predictor. Since the CDMSE scale is based on Crites five factors, it is not surprising that the CMI attitude scale scores were predicted by and correlated to CDMSE. Approximately 80% of the participants in this study were White, and Luzzo does not report any analysis based on ethnicity.

The relationship between anxiety and career decision-making self efficacy.

Anxiety and self-efficacy are presumed to be inversely related (Taylor & Betz, 1983). As self-efficacy expectations increase, anxiety levels should decrease. Anxiety is perceived as a co-effect of low self-efficacy beliefs (Hackett & Betz, 1981). In other words, anxiety may be induced when the person doesn't have efficacy expectations regarding specific tasks. Furthermore, once anxiety is induced, it further serves to decrease efficacy expectations as well as the likelihood that the behaviors will be undertaken. However, no studies investigating the relationship between anxiety and CDMSE were found.

The relationship of career decision-making self-efficacy to self-esteem and generalized self-efficacy. Betz & Klein (1996) examined the relationships of career self-efficacy to the more general measures of self-efficacy and self-esteem. The correlations between CDMSE scores and Generalized Self-Efficacy Scale (GSES) scores were significant ($r=.59$, $p<.001$ and $r=.50$, $p<.001$, for males and females respectively), and so were the correlations between CDMSE scores and Unconditional Self-Regard Scale (a measure of global self-esteem) which was also significant ($r=.43$, $p<.001$ and $.39$, $p<.001$, for males and females respectively). However, as the correlations indicate, there is a gender difference in the relationships as the correlations are higher for males than for females. The ethnic and racial makeup of the sample is not provided in this study.

The relationship between ability, academic achievement and aptitude and career decision-making self-efficacy. The relationship between CDMSE scores and ability was assessed by Taylor and Betz (1983). Taylor and Betz report that for the most part, the correlations between CDMSE scores and ACT or SAT scores were low and in general nonsignificant (p-values are not reported). More specifically, for SAT scores, the

correlations between SAT-m and SAT-v and total CDMSE scores were .18 and .19, respectively. The correlations ranged from $r=.07$ for SAT-Math and the CDMSE problem-solving subscale to $r=.25$ for SAT-Verbal and CDMSE occupational information subscale. As for ACT scores, the correlation between ACT-English and CDMSE scores was .15 and between ACT –Math and CDMSE $r=-.02$.

Luzzo (1993b) assessed the relationship between CDMSE and grade point average in undergraduate students. Luzzo found a low correlation ($r=.151$, n.s.). On the other hand, Peterson (1993) reported that underprepared college students with the highest college GPA had the highest CDMSE scores. More specifically, students whose GPAs ranged from 3.50 to 4.00 reported significantly higher CDMSE than students whose GPAs ranged from 1.50 to 2.49.

CHAPTER II

The Present Study

Problem

In 1952, Stewart investigated the relationship between social factors and occupational level, “interestingly” Stewart wrote that “colored students and sons of foreigner-born parents were excluded from the sample, because it was not known what effect race or foreign culture would have on the variables investigated” (p. 18-19). In another article Stewart (1959) wrote that “Caucasian subjects were chosen exclusively in order to avoid racial variations - most theory from which the hypothesis derives seems implicitly to refer to dominant white culture” (p.37). Despite the changes in the racial and ethnic demographics of the United States, about forty years after Stewart’s articles were published, Fitzgerald and Betz (1994) claimed that career development theories have the most to say about middle class white Americans, and they concluded that theories and research in career development fail to take cultural factors into account.

Nowadays, the United States population is remarkably diverse. According to the most recent census (U.S. Census Bureau, 2000), 25% of the U.S. population is non-White. However, a review of the literature, almost a decade after Fitzgerald and Betz’s (1994) article was published, clearly suggests that there is a paucity of research on racial/ethnic differences despite the changing demographics, the culturally and ethnically plural nature of this country’s population, and the presence of a zeitgeist highlighting diversity. Some studies do not report the ethnic background of the sample. Other studies report the racial and ethnic background of subjects but do not analyze the data for differences amongst the groups. And when race and ethnicity have been examined, only

simple nominal differences have been investigated. Consequently, our knowledge of the effect of ethnic identity on individual's career development is limited. Moreover, there is even less attention dedicated to the career development of R/EM women. Furthermore, although studies (Maxell, Maxwell & Krugly-Smolka, 1996; McCowan & Alston, 1998) lead us to speculate that R/EMs may experience significant levels of career indecision. Others (Slaney & Brown, 1983) found that R/EMs do not experience more indecision. It is, therefore, fair to say that our knowledge of the career indecision, as well as career-decision making self-efficacy and parental influence in R/EMs is rather limited. This study will examine the prevalence of career indecision among the various groups.

In 1995, Lopez concluded that there is a need for a metaperspective that will integrate important individual differences and developmental constructs from different theories and models. Most studies to date have used either self-efficacy theory, or familial influence theories as the organizing frameworks for investigating career decision-making difficulties. Therefore, the need for such a metaperspective involving relevant concepts and constructs still exists. The present study will investigate career indecision amongst R/EMs while integrating self-efficacy theory and attachment theory as the organizing framework. Since the proposed study deals with R/EMs, the potential employment barriers that are perceived by R/EMs will also be examined. The perception of barriers may relate to other variables investigated in the study (e.g., career decision difficulties, career self-efficacy).

Hypotheses

Various studies (Larson & Wilson, 1998; Santos & Coimbra, 2000; Tokar et al., 2003; Whiston, 1996) concluded that there is a significant relationship between family

relationships and career difficulties. Although not specified in the literature, the nature of this relationship is likely to be nonlinear since moderate attachment is related to positive career outcomes such as higher career commitment and higher career orientation (Blustein, 1991; O'Brien, 1996). Furthermore, various studies (Betz, Klein & Taylor, 1996; Mathieu, Sowa & Niles, 1999; Taylor & Betz, 1983, Taylor & Pompa, 1990,) concluded that there is a significant relationship between career self-efficacy and career indecision. This study will further explore the relationships in the separate racial and ethnic groups.

H1A: Career self-efficacy is inversely related to career decision-making difficulties in the total sample, as well as in the racial and ethnic groups, and gender subgroups.

H1B: There is a curvilinear U-shaped relationship between parental attachment and career difficulties such that moderate levels of attachment are related to fewer career difficulties, and low and high levels of attachment are related to high levels of career difficulties.

H1C: Maternal and paternal attachment and career self-efficacy are jointly related to career decision-making difficulties.

Although researchers (e.g., Taylor & Betz, 1983) presume that anxiety and self-efficacy are inversely related, no studies investigating this relationship were found. However, studies do support a relationship between anxiety and career indecision (Fuqua, Newman & Seaworth, 1988; Fuqua, Seaworth & Newman, 1987; Jones & Chenery, 1980. And since career indecision is conceivably the most consistent and significant correlate of career self-efficacy (Betz & Taylor, 2001), it is logical to hypothesize that anxiety and career self-efficacy will also be related.

H2: Anxiety is inversely related to career decision-making self-efficacy in the total sample and in the racial and ethnic subgroups.

The empirical literature on the career indecision of R/EMs is scanty. In addition, the few studies that did evaluate ethnicity have defined it nominally. In other words, individuals were simply assigned to ethnic groups. As suggested by Helms and Piper (1994), these nominal definitions are “sterile”. Therefore, this study will examine the relationship between ethnic identity and career indecision.

Fisher and Griggs (1995) contend that the career development of minorities is influenced by subjective attributes while the career development of the dominant culture is influenced by objective attributes. This is a causal influence that is not justified by analyses. Nonetheless, Portes and Wilson (1976) report that the educational attainment of African Americans is more strongly predicted by subjective attributes (i.e., self-esteem and educational aspirations) while the educational attainment of Whites is more strongly predicted by more objective attributes (i.e., parental status, mental ability and school grades). In addition, Gloria and Hird (1999) found that ethnic identity accounted for a larger amount of variance in the career self-efficacy of R/EMs than for Whites. However, since ethnic identity (as measured by the MEIM) is a subjective attribute, it is expected that career difficulties of R/EMs will be strongly predicted by ethnic identity.

H3A: The simultaneous consideration of ethnic identity in addition to parental attachment and career self-efficacy will account for significant incremental variance in the career decision-making difficulties of college students.

H3B: Ethnic identity will account for more unique variance in the career difficulties of each of the racial and ethnic minority groups than in the career difficulties of the White American group.

Self-efficacy expectations are the product of developmental experiences that lead individuals to believe that their outcomes are determined by their actions. However, the R/EM groups lack the experiences that are conducive to the development of self-efficacy. Many Native Americans, African Americans, and Hispanics experience discrimination and lack the experience of educational opportunities. Asian Americans possess some of the developmental experiences deemed beneficial for the development of self-efficacy (e.g., education) nonetheless they experience prejudice and discrimination which can be detrimental to the perception of efficacy. Occupationally, Native Americans are the most disadvantaged group, most likely followed by Hispanics (e.g., lower income than African Americans), African Americans, and Asian Americans being the least disadvantaged ethnic minority.

H4A: There are significant differences in career decision self-efficacy among the different R/EM groups. Career decision self-efficacy will be highest in Whites, followed by Asian Americans, African Americans, Hispanics, with Native Americans (if any participate in the study) scoring the lowest.

H4B: There is an inverse relationship between the perception of discrimination and career decision self-efficacy. That is the more the perceptions of discrimination the lower career decision self-efficacy is expected to be.

While some studies do not report significant gender differences in CDMSE (Betz & Klein Vuyten, 1997; Luzzo, 1993), others do report gender differences with males

scoring higher than females. Kraus and Hughey (1999) reported that males scored higher in one of their groups, whereas, Giankos (2001) found that women scored higher than men.

Research Question 1: Is there a significant difference in CDMSE between females and males?

Intuitively, there are reasons for the relationship between cognitive ability and career difficulties. One possibility is that an intelligent individual may explore numerous career options and it may be difficult for the individual to make a career decision (i.e., there will be a positive relationship between the cognitive ability and career difficulties). Another possibility is that high-ability individuals possess the cognitive ability to match their skills with their career interests (i.e., there will be an inverse relationship between the variables). Investigations of this relationship present a rather confusing picture. Some concluded that there is no relationship between ability and indecision (Baird, 1969; Sepich, 1987). Others report an inverse relationship between ability and indecision but only for female students (Osipow & Waddel, 1980, cited in Osipow, 1987; Williamson, 1937). Yet others report a positive relationship between the variables in one of their groups (Taylor & Betz, 1983).

Furthermore, Fisher and Griggs (1995) contend that the career development of the dominant culture is influenced by objective attributes, while the career development of R/EMs is influenced by subjective attributes. This causal influence is not justified. Nonetheless, consistent with Fisher and Griggs's (1995) contention, since ability is an objective measure, it is expected that ability will be more strongly related to career difficulties of Whites than of R/EMs.

Research Question 2A: What is the direction and strength of the relationship between career difficulties and cognitive ability as measured by GPA?

Research Question 2B: To what extent is the relationship between career difficulties and cognitive ability different for R/EMs and Whites?

Research Question 2C: To what extent is the relationship between career difficulties and cognitive ability different for females and males?

McCowan and Alston (1998) reported a lack of career decidedness in African Americans. Maxell, Maxwell and Krugly-Smolka (1996) reported that more Asian-Canadians were career undecided, than Euro-Canadians and Anglo-Canadians. On the other hand, Slaney and Brown (1983) reported that African American experienced significantly less career indecision than Whites. And Guerra and Braugart-Rieker did not find significant racial differences in career indecision scores. The various studies do not present a coherent picture regarding the nature and extent of indecision among various racial and ethnic groups.

Research Question 3: Are there differences in the levels of career difficulties among the different ethnic groups?

Present Study

The present study is divided into two stages. In stage 1, a short form of the mother and father scales of the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1986) was developed. In stage 2, the short form of the IPPA developed in stage 1 was used along with the other scales. Stage 2 was designed to test the hypotheses.

Stage 1

Purpose

The purpose of stage 1 was to develop a short form of the mother and father scales of the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1986). To accomplish the development of the short form, the 25-item scales were administered to a pilot sample. Responses were analyzed using the reliability analysis of SPSS. Based on the analyses, 12 items were selected for each of the scales (i.e., mother and father scales).

Method

Participant

Two hundred and two students participated in the study. Participants enrolled in an Introductory Psychology course in an ethnically diverse Northeastern public college that has one of the largest and most prestigious business schools in the US. Students participated in the study as part of a research requirement, and they received credit for research participation. Alternative ways of earning the credit for research participation were available to students. Sixty-seven percent ($n=67$) of the participants were female, and 33% ($n=35$) were male. The age range was 16-46 years, with a mean of 23 years. Thirty-three percent of the participants were White, 31% Asian Americans or Asians, 15% African Americans or Black, 13% Latino or Hispanic and 8% reported some other background. Two questionnaires were discarded because they were erratically completed.

Procedure

Students were asked to participate in a study that deals with attachment to parents. The participants completed a questionnaire. A copy of the questionnaire appears in Appendix A.

Survey Instrument

Parental attachment. The Mother and father scales of the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1986) was utilized to assess attachment to parents. In developing the short form of the mother and father scales of the Inventory of Parent and Peer Attachment (IPPA), it was decided to retain the conceptual structure on which the IPPA was based. The mother and father scales of the IPPA are each composed of three subscales assessing the dimensions of Parent Trust (10 items), Parent Communication (9 items), and Parent Alienation (6 items). Accordingly, 12-item short forms of the mother and father scales were developed by eliminating items from each of the three subscales. For the mother and the father, the Trust subscales were reduced from 10 to 5 items, the Communication subscales from 9 to 4 items, and the Alienation subscales from 6 to 3 items. In developing the 12-item short forms of the mother and father scales the criterion utilized was the corrected item-total correlations.

Results

The purpose of the study was to reduce the length of the mother and father scales of the IPPA. In order to develop the short forms of the Mother and Father Attachment scales, responses to each of the 25-item scales were analyzed. Tables 1 and 2 provide the item means, standard deviations and variances for the mother and father scales respectively. The mean score for the 25-item mother scale was 3.67, with item means

ranging from 2.94 to 4.46, and item variances ranging from .86 to 1.69. The mean score for the 25-item father scale was 3.29, with item means ranging from 2.42 to 4.15, and item variances ranging from 1.20 to 1.81.

Table 1

Means, Standard Deviations and Variances for Items in the Mother Scale of the Inventory of Parent and Peer Attachment

	N	Mean	Std. Deviation	Variance
Item 1	101	3.99	.93	.87
Item 2	101	4.28	.95	.90
Item 3	99	4.46	.93	.86
Item 4	99	4.01	1.16	1.34
Item 5	100	3.47	1.14	1.30
Item 6	101	3.42	1.21	1.47
Item 7	100	3.95	.98	.96
Item 8	100	3.66	1.17	1.36
Item 9	101	3.29	1.17	1.37
Item 10	101	3.45	1.30	1.69
Item 11	101	2.99	1.22	1.49
Item 12	100	3.65	1.09	1.18
Item 13	101	3.86	1.11	1.24
Item 14	101	3.33	1.18	1.40
Item 15	100	3.15	1.17	1.36
Item 16	100	2.94	1.14	1.29
Item 17	101	3.91	1.09	1.18
Item 18	101	4.07	1.13	1.29
Item 19	101	3.15	1.11	1.23
Item 20	101	3.52	1.17	1.37
Item 21	101	3.58	1.01	1.21
Item 22	101	4.35	.98	.97
Item 23	101	3.17	1.23	1.52
Item 24	101	3.26	1.24	1.53
Item 25	101	3.83	1.02	1.04

Tables 3 and 4 show the corrected item-total correlations for the Mother and Father scale, respectively. The items with the highest corrected item-total correlations within each of the three subscales were selected. Table 3 shows that in the Mother scale, the corrected item-total correlations for the selected items ranged from .65 to .74 for the Trust subscale, from .67 to .76 for the Communication subscale, and from .54 to .61 for

the Alienation subscale. Table 4 shows that in the Father scale, the corrected item-total correlations for the selected items ranged from .75 to .81 for the Trust subscale, from .64 to .75 for the Communication subscale, and from .63 to .71 for the Alienation subscale.

Table 2

Means, Standard Deviations and Variances for Items in the Father Scale of the Inventory of Parent and Peer Attachment

	N	Mean	Std. Deviation	Variance
Item 26	102	3.58	1.09	1.20
Item 27	102	3.83	1.26	1.59
Item 28	102	4.15	1.23	1.51
Item 29	102	3.80	1.18	1.39
Item 30	101	3.17	1.26	1.58
Item 31	101	3.07	1.19	1.43
Item 32	101	2.69	1.10	1.22
Item 33	102	3.41	1.25	1.57
Item 34	102	3.16	1.32	1.74
Item 35	101	3.53	1.35	1.81
Item 36	101	2.74	1.23	1.51
Item 37	102	3.39	1.26	1.59
Item 38	102	3.76	1.07	1.15
Item 39	102	3.08	1.30	1.68
Item 40	102	2.76	1.18	1.39
Item 41	102	2.42	1.11	1.24
Item 42	102	3.75	1.20	1.43
Item 43	102	3.75	1.32	1.74
Item 44	100	2.55	1.19	1.42
Item 45	102	3.06	1.23	1.52
Item 46	102	3.11	1.14	1.31
Item 47	102	4.04	1.13	1.29
Item 48	102	2.78	1.26	1.58
Item 49	101	3.02	1.28	1.64
Item 50	102	3.02	1.31	1.72

The Alpha if Item Deleted listed in Table 3 and Table 4 were rounded to the second decimal place and have the same value for items within each of the scales. As a result they do not provide additional information that could be utilized as criteria for item selection. When left not rounded, the values were different from one another by the

thousandth. For example, the Alpha if item deleted for items 1 and 2 .9269 and .9272, respectively.

Table 3

Corrected Item-Total Correlations and Alpha if Item Deleted from the Mother Scale of the IPPA⁴

Subscale	Corrected Item-Total Correlations	Alpha if Item Deleted
<i>Trust</i>		
Item 1	.73	.93
Item 2	.70	.93
Item 3	.57	.93
Item 4	.65	.93
Item 9	.43	.93
Item 12	.74	.93
Item 13	.57	.93
Item 20	.67	.93
Item 21	.63	.93
Item 22	.60	.93
<i>Communication</i>		
Item 5	.68	.93
Item 6	.54	.93
Item 7	.34	.93
Item 14	.40	.93
Item 15	.76	.93
Item 16	.67	.93
Item 19	.71	.93
Item 24	.62	.93
Item 25	.44	.93
<i>Alienation</i>		
Item 8	.42	.93
Item 10	.57	.93
Item 11	.35	.93
Item 17	.61	.93
Item 18	.46	.93
Item 23	.54	.93

⁴ Note. The items in bold were selected for the short scale due to higher corrected item-total correlations within their respective subscale.

Table 4

Corrected Item-Total Correlations and Alpha if Item Deleted from the Father Scale of the IPPA⁵

Subscale	Corrected Item-Total Correlations	Alpha if Item Deleted
<i>Trust</i>		
Item 26	.80	.95
Item 27	.77	.95
Item 28	.67	.95
Item 29	.66	.95
Item 34	.20	.95
Item 37	.74	.95
Item 38	.71	.95
Item 45	.82	.95
Item 46	.80	.95
Item 47	.72	.95
<i>Communication</i>		
Item 30	.62	.95
Item 31	.52	.95
Item 32	.58	.95
Item 39	.52	.95
Item 40	.69	.95
Item 41	.77	.95
Item 44	.67	.95
Item 49	.65	.95
Item 50	.73	.95
<i>Alienation</i>		
Item 33	.53	.95
Item 35	.60	.95
Item 36	.47	.95
Item 42	.70	.95
Item 43	.62	.95
Item 48	.65	.95

Table 5 lists the items that were selected for the Mother and Fathers scales. The two scales have 9 of the 12 selected items in common, while the 3 remaining items in

⁵ Note. The items in bold were selected for the short scale due to higher corrected item-total correlations within their respective subscale.

each of the scales differ. The Alpha coefficients for the mother and father 12-item scales are .91, and .94 respectively. These coefficients compare favorably with the coefficients reported in the literature. Armsden and Greenberg (2003) reported Alpha's of .87 and

Table 5

Items in the Mother and Father Scales Selected for Inclusion in the 12-item Scales⁶

Mother Scale

1. My mother respects my feelings.
2. I feel my mother does a good job as my mother.
3. <i>My mother accepts me as I am.</i>
4. <i>I like to get my mother's point of view on things I'm concerned about.</i>
5. <i>I get upset easily around my mother.</i>
6. When I discuss things, my mother cares about my point of view.
7. My mother helps me to understand myself better.
8. I tell my mother about my problems and troubles.
9. I feel angry with my mother.
10. My mother helps me to talk about my difficulties.
11. My mother understands me.
12. My mother doesn't understand what I'm going through these days.

Father Scale

1. My father respects my feelings.
2. I feel my father does a good job as my father.
3. When I discuss things, my father cares about my point of view.
4. My father helps me to understand myself better.
5. I tell my father about my problems and troubles.
6. I feel angry with my father.
7. <i>I don't get much attention from my father.</i>
8. My father helps me to talk about my difficulties.
9. My father understands me.
10. <i>When I am angry about something, my father tries to be understanding.</i>
11. My father doesn't understand what I'm going through these days.
12. <i>If my father knows something is bothering me, he asks me about it</i>

.89 for the 25-item Mother and Father scales, respectively. O'Brien (1996) reported

Alpha coefficients of .96 and .95 for the 25-item mother and father scales, and Ryan,

⁶ The items in italics are the items that are not included in both scales. The other items were selected in both the mother and father scales.

Solberg and Brown (1996) reported corresponding Alphas of .96 and .96 for the 25-item scales.

Table 6 summarizes the mean mother and father scores for males and females for the 25-item and the revised 12-item scales. On the revised 12-item scales, the mean mother attachment score for females was 3.51 and for males 3.64. The mean father attachment score for females was 3.19 and for males 3.14. There were no significant gender differences on the mother and father attachment scales. These findings were comparable to the findings based on the 25-item scales. More specifically, on the 25-item scales, the mean mother attachment score for females was 3.48 and for males 3.57. The mean father attachment score for females was 3.29 and for males 3.21. There were no significant gender differences on the 25-item mother and father attachment scales.

Table 6

Mean Mother and Father Scores for Females and Males for the 25-item and 12-item Revised Scales⁷

		25- item Scale	12- item Scale	Correlation between scales	Mean difference between mean scores	Significance of difference
Mother Scale	Females	3.48	3.51	.998	-.03	t(67)=-4.71, p=.000
	Males	3.57	3.64	.995	-.07	t(32)=-5.95, p=.000
Father Scale	Females	3.29	3.19	.976	.10	t(67)=4.12, p=.000
	Males	3.21	3.14	.974	-.07	t(33)=1.84, p=.075

Table 6 also includes the correlations between the 25-item and 12-item scales for each comparison. These correlations are high, ranging from .974 to .998. However, based

⁷ Possible mean scores range from 1 to 5.

on the paired samples t-tests, with the exception of the fourth comparison between the 25-item and the 12-item scales (i.e., father scale for males), the other three comparisons show statistically significant differences between the mean scores. However, due to the small differences between the mean scores, the differences are not believed to be of practical significance.

Stage 2

Method

Participant

Two hundred and thirty three students participated in stage 2 of the study during the Fall 2004 semester. The participants in stage 2 did not include participants from stage 1. One questionnaire was discarded because it was erratically completed, resulting in 232 questionnaires.

Participants enrolled in an Introductory Psychology course in an ethnically diverse Northeastern public college that has one of the largest and most prestigious business schools in the US⁸. Students participated in the study as part of a research requirement, and they received credit for research participation. Alternative ways of earning the credit for research participation were available to students. Fifty five percent (n=128) of the participants were female, and 45% (n=104) were male. The age range was 18-33 years, with a mean of 20 years. Twenty nine percent of the participants were White, 33% Asian Americans or Asians, 13% African Americans or Black, 21% Latino or Hispanic, 3% mixed race and .4% reported some other background.

⁸ Students attending the college most likely made an informed decision to attend a business-oriented school.

Procedure

Students were asked to participate in a study that deals with the career development of college students. Students were provided with a written informed consent form. After reading the form, the participants completed a questionnaire. A copy of the questionnaire appears in Appendix B.

Survey Instrument

The variables were presented in the order described below.

Parental attachment. The Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1986) is a widely used instrument of parental attachment. Whereas some other measures (e.g., Parental Attachment Questionnaire; Kenny, 1987) assess attachment to both parents together, the IPPA assesses attachments to mother and father separately. Lopez and Gover (1993) contend that the IPPA demonstrates acceptable psychometric properties. Armsden and Greenberg (2003) report internal consistencies of .87 and .88 for the mother and father scales, respectively. O'Brien (1996) reported internal consistency coefficients of .96 and .95 for the mother and father scales. Evidence of construct validity is demonstrated by the negative relationship with instruments assessing psychological separation from parents (O'Brien, 1996).

The short-form of the mother and father attachment subscales of the revised Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1986) were administered to assess the level of attachment to parents. Each scale is comprised of 12 items that assess three dimensions of attachment. The three dimensions are degree of mutual trust, quality of communication, and extent of anger and alienation. Participants rated their agreement with the statements on a 5-point Likert scale ranging from (1)

almost never or never true to (5) almost always or always true. Examples of items include: “My mother respects my feelings” and “My father helps me to talk about my difficulties.” Students who have more than one person acting as a mother or father (i.e., natural parent and step-mother/father) are instructed to respond to the items about the individual that has influenced them the most. Students who have had no person occupying the role of a mother and/or father at any point are instructed to leave the questions blank.

Anxiety. The Taylor Manifest Anxiety Scale (TMAS; Taylor, 1953) is an accepted and well-researched measure of anxiety. The TMAS contains 50 true/false items assessing anxiety. Items from the unidimensional short form of the TMAS (Hicks, Ostle & Pellegrini, 1980) will be utilized in this study. This short form of the TMAS was constructed based on a sample of college students, whereas some other scales are intended for use in psychiatric populations. The short form of the TMAS includes 20 items. Hicks et al. reported an internal consistency reliability of .92, and the discrimination indexes for the 20 items. According to Crocker and Algina (1986), items with a discrimination index that is .40 or higher function quite satisfactorily. For the present study, only the 13 items with a discrimination index of .40 or higher are used. Examples of items include “I often find myself worrying about something,” “At times I feel that I am going to crack up,” and “I worry quite a bit over possible troubles.”

Career Decision Self-Efficacy Questionnaire. The Career Decision Self-Efficacy Scale (CDMSE) and short form of the Career Decision Self-Efficacy Scale (CDMSE-short form) are well-researched instruments of career decision-making self-efficacy. Most of the research on this construct utilized these scales. These instruments

are based on Bandura's theory of self-efficacy and Crites' career maturity model. The CDMSE-short form is a 25-item instrument assessing self-efficacy regarding career-decision making (Betz & Taylor, 2001). Betz et al. (1996) report a coefficient alpha of .94 for the 25-item scale. A five factor solution emerged that accounted for 62% of the variance. These authors also report significant correlations ($r = -.56$) with both Indecision and Certainty scales of the CDS.

Peterson and delMas (1998) reduced the length of the CDMSE to 16-items. A two-factor solution emerged that accounted for 60% and 63% of the variance in two separate samples. These researchers report a coefficient alpha of .93. Peterson and DelMas' 16-item solution included 12 of the items in the CDMSE-SF. The 12 items that were included in both will be retained for the present study. Participants rated their perceived confidence in completing various tasks on a 5-point Likert scale ranging from (1) *no confidence at all* to (5) *complete confidence*. Examples of items include "How much confidence do you have that you could find information in the library about occupations you are interested in," "How much confidence do you have that you could determine what your ideal job would be," and "How much confidence do you have that you could make a career decision and then not worry whether it was right or wrong."

Decision status and confidence in choice. Two introductory items from the CDDQ (Gati & Osipow, 2002) will be used. Participants responded to the Yes/No item "Have you considered what field you would like to major in or what occupation you would like to choose?" and to the item "If so, to what extent are you confident of your choice? On a 9-point scale ranging from "Not confident at all" to "Very confident."

Career Decision Difficulties Questionnaire. The Career Decision-Making Difficulties Questionnaire (CDDQ, Gati et al., 1996) is a theoretically based instrument. The instrument is based on well-founded decision theory, and decomposes each career decision into its constituent elements. The specific difficulties are consistent with the empirical research on career indecision.

The CDDQ (Gati & Osipow, 2002) is a 34-item scale assessing difficulties during the career decision-making process. This is an abridged version of Gati et al.'s (1996) original 44-item CDDQ. Participants will rate the items on a 9-point Likert scale ranging from (1) *does not describe me* to (9) *describes me well*. Examples of items include "I find it difficult to make a career decision because I'm equally attracted by a number of careers and it is difficult for me to choose among them," and "I find it difficult to make a career decision because my skills and abilities do not match those required by the occupation I am interested in." Gati and Saka (2001) report a Cronbach's alpha reliability of .92 for the 34-item scale in an American sample who completed the CDDQ over the internet and an alpha of .87 for a Hebrew version administered to an Israeli sample over the internet. Gati, Saka and Krasz (2001) reported a Cronbach's alpha of .89 and a test-retest reliability of .79 for an abridged, 30-item Hebrew version of the CDDQ. Osipow & Gati (1998) found that the original version of the CDDQ was correlated with the CDS (.77) and with the CDMSE (-.50). Osipow and Gati also provide evidence of concurrent validity for the CDDQ (original version). "Undecided" American students scored significantly higher on the CDDQ than "Decided" students.

Multigroup Ethnic Identity measure. The Multigroup Measure of Ethnic Identity (MEIM, Phinney, 1992) is based on aspects of ethnic identity that are common

across groups. Whereas measures of ethnic identity focus on the uniqueness of the different ethnic groups, such measures do not allow comparisons across groups. The MEIM will be utilized in this study since it can be used with all ethnic and racial groups.

The MEIM has been used with diverse ethnic groups, including African Americans, Asian Americans, Latinos, Mexican Americans, and Whites (Phinney et al., 1997; Phinney & Alipura, 1990; Roberts, Phinney, Masse, Chen, Roberts & Romero, 1999). Studies show similar correlates (e.g., self-esteem, coping, mastery, optimism) of ethnic identity in the various racial and ethnic groups including Whites.

The revised MEIM (Phinney, 2004) is a 12-item instrument that assesses ethnic identity search and affirmation, belonging and commitment. Participants rated items on a 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*. Examples of items include “I have a clear sense of ethnic background and what it means for me,” and “I have a lot of pride in my ethnic group.” Phinney (1992) reports a Cronbach’s alpha of .90 in a college sample. Phinney, Cantu and Kurtz (1997) report an alpha of .83. Phinney (1992) reports a significant correlation between MEIM scores and self esteem. Phinney et al. (1997) report that ethnic identity is a significant predictor of self-esteem.

Perceptions regarding employment discrimination. The following items assess perceptions regarding discrimination in employment: (1) “I believe that people of my ethnicity are not well represented in the professions,” (2) “I believe that career barriers limit the employment prospect of my ethnic group,” (3) “I believe that hiring practices don’t discriminate against people of my ethnic group,” and (4) “I believe that there are ample networking contacts available to people of my ethnic group that will help.” The items are scored on a 5-point Likert scale ranging from *strongly disagree* (1) to *strongly*

agree (5). Item 3 is reverse scored. Higher scores indicate higher levels of perceived discrimination.

Demographic information sheet. Students will complete a demographic sheet that will assess their age, gender, employment status (currently employed/ currently not employed), ability (self-reported GPA), participants' race/ethnicity (African American or Black, Asian American, Latino or Hispanic, Native American, White or Caucasian, or Other), parents' (mother's and father's) race and ethnicity, where born (United States or elsewhere), and employment status.

The socioeconomic status (SES) of the family of origin will be assessed using home ownership (whether parents own their home), parental income, parental education, and the total yearly income before taxes of the parents. Parental income includes money received by parents from all sources such as work, rent, social security payments, interest and any other sources of income. The following income categories will be used: \$9,999 or less, \$10,000 - \$19,999, \$20,000 - \$29,999, \$30,000 - \$39,999, \$40,000 - \$49,999, \$50,000 - \$59,999, \$60,000 - \$69,999, \$70,000 or more. Parental education will be assessed using the educational factor of Hollingshead's (1975) Index of Social Status. Participants will be asked to report the educational level of their parents (parents with whom participants are currently living or were last living: biological parents or stepparents). Father's and mother's level of education completed will be scored on a seven-point scale (less than seventh grade = 1, junior high school (9th grade) = 2, junior high (10th or 11th grade) = 3, high school graduate = 4, partial college or specialized training = 5, standard college or university = 6, graduate professional training (graduate degree) = 7).

Data Analysis

Coefficients α values were calculated to evaluate the internal consistency of the scales. The factorial structure of the measures was assessed via structural equation modeling using the maximum likelihood (ML) method of estimation. Overall model fit was assessed using the following model fit measures: the Chi-square (χ^2) and the associated *df*; comparative fit index, CFI; and root mean square error of approximation, RMSEA. The χ^2 is a test statistic indicating the goodness of fit of a model. When the *p* value associated with the χ^2 is lower than the preset significance level, one may consider rejecting the model (Raykov & Marcoulides, 2000). However, according to Raykov & Marcoulides the chi-square and its associated *p* value should not be trusted alone in model evaluation. Therefore, additional fit indices should be evaluated. The recommended values for the CFI are above .95 (Byrne, 2001; Hu & Bentler, 1999). The recommended cutoff value for the RMSEA is close to .06 (Hu & Bentler, 1999). While Loelin (1998) considers RMSEA values of .10 to indicate good fit and values below .05 to indicate “very good” fit, MacCallum, Browne and Sugawara (1996) deem RMSEA values ranging from .08 to .10 to indicate mediocre fit, and values above .10 to indicate poor fit. The precision of the RMSEA will be assessed by the confidence interval for the RMSEA.

Possible areas of misfit in the models were assessed using the standardized residuals, and the modification indexes (MIs) with their respective expected parameter change values (EPC). Standardized residuals exceeding the threshold value of ± 2.58 are considered to be large (Byrne, 2001). The accepted guideline is to have less than 5% of the residuals exceed the threshold of ± 2.58 (Hair et al., 1995). A fixed parameter with an

MI larger than 5 warrants a closer examination (Raykov & Marcoulides, 2000). A fixed parameter with a large MI and a sizable EPC may be freed to improve data-model fit (Mueller, 1996). However, such modifications must be consistent with research findings in the domain in question (Raykov & Marcoulides, 2000).

Hypothesis 1A, 2, 4B and research questions 2A were tested by means of Pearson product moment correlations. In Hypothesis 1A the variables were career self-efficacy and career difficulties. In Hypothesis 2, anxiety and career self-efficacy. In hypothesis 4B, perceptions of discrimination and career self-efficacy. In research question 2A, career difficulties and cognitive ability.

Hypothesis 1B was tested using a two-step hierarchical multiple regression. The dependent variable was career difficulties and the independent variables were parental attachment.

Hypothesis 1C was tested using a multiple regression analysis. Career difficulties served as the dependent variable and parental attachment and career self-efficacy as the predictors.

Hypothesis 3A and 3B were tested using a hierarchical multiple regression analysis. In Hypothesis 3A, career difficulties was the dependent variable, parental attachment, career self-efficacy were entered as independent variables in the first block and ethnic identity was entered as an independent variable in the second block. In Hypothesis 3B, career difficulties was the dependent variable, parental attachment and career self-efficacy were entered as independent variables in the first block and ethnic identity was entered as an independent variable in the second block.

Hypothesis 4A and research questions 1 and 3 were tested using a one-way ANOVA. Where the ANOVA was significant, the Tukey post-hoc method was conducted to determine where the differences between the groups existed. This method was used since it is a powerful pairwise test and it controls for familywise error rates. Hypothesis 4A examined differences in career self-efficacy among the R/EM groups. Research question 1 examined differences in career self-efficacy by gender. Research question 3 examined differences in career difficulties among R/EM groups.

Research question 2B and 2C were tested using *z*-scores, and their respective *p*-values of the correlations between career difficulties and cognitive ability. Research question 2B tested for significant differences among the correlations in the R/EM groups. Research question 2C tested for significant differences among the correlations between males and females.

Results

Coefficient α values were calculated to evaluate the internal consistency of the scales. Coefficient α values for career difficulties, mother attachment, father attachment, career self-efficacy, ethnic identity, anxiety, perceptions of discrimination scales were, respectively, .92, .90, .92, .87, .88, .73, .66⁹. For the most part, these estimates indicate that the scales possess adequate reliability. The reliability of the mother and father attachment subscales and the career difficulties subscales were also computed as these subscales were utilized in the analyses. The reliability of the mother trust, communication and alienation scales were .87, .87, and .63, respectively. The reliability of the father trust, communication and alienation scales were .90, .88, and .62 respectively. The

⁹ The perceptions of discrimination scale is based on only 4 items. This α is therefore affected by the length of the scale.

reliability for the career difficulties subscales of lack of information, inconsistent information, and readiness were .94, .84, and .64, respectively.

Factorial Structure of Measures

The purpose of the preliminary analyses was to determine the factorial structure of the following measures: Inventory of Parent and Peer Attachment-Revised mother and father scales (Mother IPPA-R; Father IPPA-R), Career Decision Self-Efficacy Scale-Revised (CDMSE-R), Career Decision-Making Difficulties Questionnaire (CDDQ), and Multigroup Measure of Ethnic Identity (MEIM). The scales were examined using a confirmatory factor analysis via structural equation modeling using Amos 5.0. The maximum likelihood (ML) method of estimation was employed in all the analyses. Research has demonstrated that the ML method does not appear to be biased by mildly nonnormal variables (Bollen, 1989; Raykov & Marcoulides, 2000).

Mother Attachment Scale. Of the 232 questionnaires completed, 224 had complete data for all 12 items. Eight questionnaires were excluded from the analysis; 1 questionnaire had missing data for all 12 items, and 7 had missing data for at least one item.

The Mother IPPA-R scale was examined using a confirmatory factor analysis. The short 12-item Mother IPPA was first hypothesized to represent a single factor. The hypothesized model is presented in Figure 1. Results of the analysis are presented in Table 7. The χ^2 value is 226.60 with 54 degrees of freedom and a probability of less than .001. In addition the CFI is .87. The RMSEA of the hypothesized model is .12, with the 90% confidence interval ranging from .10 to .14 and the *p* value for the test of closeness of fit equal to .0001. These fit indexes indicate a poor fit of the model, and the single factor model was rejected. The three-factor model representing Trust, Communication

and Alienation was tested. The revised model is presented in figure 2. Results of the analysis for the three-factor model showed that the χ^2 value decreased to 106.44 with 51 degrees of freedom, however, the probability was still less than .001. On the other, the CFI (.96) of the revised model exceed the recommended level of .95. The RMSEA is .07, with the confidence interval ranging from .05 to .09 and the p value for the test of closeness of fit equal to .04. These indices indicate an acceptable fit between the three-factor model and the observed data. An examination of the residuals showed that all the standardized residuals were below the cutoff of 2.58, indicating that the model explained the observed variance adequately. A review of the MIs reveals that there is no need to free paths between any of the 12 items and any of the factors. In reviewing the estimates for the factor loadings and covariances among factors, all are statistically significant (i.e., the critical ratio is $> \pm 1.96$). On the basis of these findings, the three-factor model is determined to have good fit. To conclude, on the basis of these findings, the fit indexes for the three-factor improved substantially over the indexes for the one factor model. , and the three-factor model is determined to have good fit. In addition, there is theoretical rationale to support the three-factor model. Therefore, the findings justify the utilization of the three subscale scores in future analyses.

Table 7

Summary of the Analysis of the Mother IPPA (N = 224)

<u>Model</u>	χ^2	<i>df</i>	CFI	RMSEA
One-factor null model	226.60***	54	.87	.12
Three-factor model	106.44***	51	.96	.07

Note. CFI = comparative fit index; RMSEA = root mean square error of approximation.

*** $p < .001$.

Father Attachment Scale. Of the 232 questionnaires completed, 213 had complete data for all 12 items. Nineteen questionnaires were excluded from the analysis; 13 questionnaires had missing data for all 12 items, and 6 had missing data for at least one item.

The Father IPPA-R scale was also examined using a confirmatory factor analysis. The short 12-item Father IPPA was hypothesized to represent a single factor. The hypothesized model is presented in Figure 3. Results of the analysis are presented in Table 8. The model yields a χ^2 value of 170.47 with 54 degrees of freedom and a probability of less than .001. In addition, the CFI is .92. The RMSEA is .10 with the confidence interval ranging from .08 to .12 and the p value for the test of closeness of fit equal to .04. These indexes indicate that the fit of the model can be improved. As a result, the model was respecified and a three-factor model (Trust, Communication and Alienation) was tested. The revised model is presented in Figure 4. Results of the analysis for the three-factor model showed that the χ^2 dropped to 112.20 with 51 degree of freedom and a probability of less than .001. Although the reduced χ^2 is statistically significant, the CFI (.96) is indicative of an adequate fit. The RMSEA is .08 with the confidence interval ranging from .06 to .09 and the p value for the test of closeness of fit equal to .02. These indexes indicate an acceptable fit between the hypothesized three-factor model and the observed data. An examination of the standardized residuals showed that all the residuals were below the cutoff of 2.58, indicating that the model explained the observed variance adequately. A review of the MIs reveals that there is no need to free paths between any of the 12 items and any of the factors. In reviewing the estimates for the factor loadings and covariances among factors, all are statistically significant (i.e.,

the critical ratio is $>\pm 1.96$). To conclude, on the basis of these findings, the fit indexes of the three-factor solution are improved substantially over the indexes for the one factor model, and the three-factor model is determined to have good fit. In addition, there is theoretical rationale to support the three-factor model. Therefore, the findings justify the utilization of the three subscale scores in future analyses.

Table 8

Summary of the Analysis of the Father IPPA (N = 213)

<u>Model</u>	χ^2	<i>df</i>	CFI	RMSEA
One-factor model	170.47***	54	.92	.10
Three-factor model	112.20***	51	.96	.08

Note. CFI = comparative fit index; RMSEA = root mean square error of approximation.

*** $p < .001$.

Career Decision Self-Efficacy Scale. Of the 232 questionnaires completed, 229 had complete data for all 12 items. One questionnaire had missing data for all 12 items, and 2 questionnaires had missing data for at least one item.

The Career Decision Self-Efficacy Scale-R (CDMSE-R) was examined using a confirmatory factor analysis. The 12-item CDMSE-R scale was hypothesized to represent two factors; Decision Making and Information Gathering. The hypothesized model is presented in Figure 5. Results of the analysis are presented in Table 9. The χ^2 value is 118.57 with 53 degrees of freedom and a probability of less than .001. Although the significant χ^2 indicates that the fit of the data to the hypothesized model is not adequate, the CFI (.93) suggests an adequate data-model fit. The RMSEA is .07 with the confidence interval ranging from .06 to .09 and the p value for the test of closeness of fit equal to .02.

Table 9**Summary of the Analysis of the Career Decision Self-Efficacy Scale-R (N = 229)**

<u>Model</u>	χ^2	<i>df</i>	CFI	RMSEA
Hypothesized model	118.57***	53	.93	.07
Revised model	103.16***	52	.95	.07

Note. CFI = comparative fit index; RMSEA = root mean square error of approximation.

*** $p < .001$.

An examination of the residuals revealed only two of the standardized residuals exceed the cutoff of 2.58 (SE3 and SE6; SE8 and SE12). This is within the guideline of having less than 5% of the residuals exceed the threshold. A review of the MIs for error covariances revealed a large MI for the covariance between error terms e8 and e12. Examining the EPC for the MI suggests that the EPC is relatively large in relation to the covariance between the variables. The addition of error covariance e8/e12 could improve the fit of the model. An examination of the items reveals that the items may elicit responses that are reflective of similar mental sets.

The baseline model was respecified, and the error covariance between the items SE 8 and SE12 was added to the model. The revised model is presented in Figure 6. Results of the analysis for the revised model showed that the χ^2 dropped to 103.16 with 52 degree of freedom and a probability of less than .001. The CFI increased to .95. The RMSEA (.07) remained the same. However, its confidence interval ranged from .05 to .08 with the p value for the test of closeness of fit equal to .08. In reviewing the estimates for the factor loadings and error covariances, all are statistically significant.

To conclude, the revised model is a better fitting model. In addition the fit indexes suggest that the revised model represents a good fit to the data. Therefore, the findings justify the utilization of the two subscale scores in future analyses.

Career Decision Difficulties Questionnaire. Of the 232 questionnaires completed, 222 had complete data for all 34 items. Ten questionnaires had missing data for at least one item, and were excluded from the analysis.

The Career Decision Difficulties Questionnaire (CDDQ) was examined using a confirmatory factor analysis. The CDDQ was hypothesized to represent a hierarchic structure in which there are 10 categories of difficulties that are divided into three broad difficulty categories (i.e., Lack of readiness, Lack of information, and Inconsistent information). The second-order CFA model tested is presented in Figure 7. Results of the analysis for the baseline model are presented in Table 10. The model yields a χ^2 value of 953.87 with 451 degrees of freedom and a probability of less than .001. The CFI (.86) falls outside the acceptable range. Although the RMSEA is .07 with the confidence

Table 10

**Summary of the Analysis of the Career Decision-Making Difficulties Questionnaire
N = 222)**

<u>Model</u>	χ^2	<i>df</i>	CFI	RMSEA
Hypothesized model	953.87***	451	.86	.07
First revised model	784.65***	443	.90	.06
Second revised model	780.78***	442	.90	.06

Note. CFI = comparative fit index; RMSEA = root mean square error of approximation.

*** $p < .001$.

interval ranging from .06 to .08 and the p value for the test of closeness of fit equal to .0001, the various indexes taken together are indicative of a very poor data-model fit.

An examination of the residuals revealed that less than 1% (10/1024) of the standardized residuals exceeds the cutoff of 2.58. This is within the guideline of having less than 5% of the residuals exceed the threshold. A review of the MIs for error covariances revealed several large MIs. Examining the EPCs for the respective MIs

suggests that the EPCs are relatively large in relation to the covariance between the variables. The addition of eight error covariances (e15/31; e16/17; e16/19; e18/19; e19/23; e25/28; e27/29; e30/31) could improve the fit of the model. In addition, there is a substantive reason for allowing these error covariances. These items have the same item stem. The item stem reads “I find it difficult to make a career decision because...” Common item stems are a typical justification for allowing error covariances (R. E. Millsap, Personal Communication, January 26, 2005). In other words, there are correlated factors that contributed to the observed scores on the variables.

The baseline model was respecified, and the eight error covariances were added to the model. The first revised model is presented in Figure 8. The χ^2 of the revised model decreased to 784.65 with 443 degrees of freedom and a probability of less than .001. The CFI increased to .90. The RMSEA dropped to .06 with the confidence interval ranging from .05 to .07 and the *p* value for the test of closeness of fit equal to .02. Although the indexes suggest that the revised model is better fitting than the hypothesized model, there is some degree of misfit in the revised model.

Maximum Likelihood estimation has been demonstrated to be robust to mild deviation from multivariate normality (Byrne, Personal Communication, January 30, 2005). However, when there is a higher degrees of nonnormality, the χ^2 becomes exceedingly large, CFI is underestimated, and the RMSEA will be inflated. Values of Mardia's coefficient greater than 10 represent considerable multivariate kurtosis (Byrne, Personal Communication, February 2, 2005). Since the variables in the model violate the assumption of normality substantially (Mardia's coefficient = 192.20), and since the revised model does not present a good data-model fit, bootstrapping was used.

Bootstrapping is an estimation procedure that is based on empirical resampling with replacement of the data and it does not assume normality of the variables (Byrne, 2001). The Bollen-Stine bootstrap was utilized to test model fit. When the Bollen-Stine bootstrap has a p value below .05, the model is rejected. The Bollen-Stine bootstrap was applied to the revised model using the ML estimator on 200 samples. According to this test the revised model was rejected ($p = .02$).

In reviewing the estimates for the factor loadings and error covariances, all are statistically significant (i.e., the critical ratio is $> \pm 1.96$) with the exception of a nonsignificant path between Dysfunctional Beliefs and the Readiness factor ($p = .44$). These findings are consistent with previous research (Mau, 2001).

Research (Mau, 2001; Osipow & Gati, 1998) utilizing the original 44-item CDDQ (not the revised 34-item CDDQ used in this study) demonstrated that in American samples, the External Conflict scale should be included under the Readiness factor. Therefore, a second revised model was tested in which the External Conflict scale was included in both the Readiness and the Inconsistent Information factors. However, the addition of a path between External Conflict and the Readiness factor did not improve the fit of the model. The fit indexes for the second revised model are presented in Table 11. In fact, the χ^2 did not change notably, and the CFI and RMSEA did not change at all. Therefore, in the interest of parsimony, this path should not be retained in the model.

To conclude, based on the analyses presented above, although the revised model is better fitting than the hypothesized model, there is still some degree of misfit in the revised model structure. Consequently, the revised model is rejected. Although the statistical findings do not justify the utilization of the subscale scores, one of the

objectives of the present study was to overcome the limitations of previous studies that only evaluated global career difficulties. Because the career difficulties scale and its subscales are theoretically based, subscales scores will nevertheless be utilized in addition to total scores.

Multigroup Ethnic Identity Measure. Of the 232 questionnaires completed, 228 had complete data for all 12 items. Four questionnaires had missing data for at least one item, and were excluded from the analysis.

The Multigroup Ethnic Identity Measure (MEIM) was examined using a confirmatory factor analysis. The short 12-item MEIM was hypothesized to represent the two factors (Factor 1 was labeled ethnic identity search; Factor 2 was labeled affirmation, belongingness, and commitment). The hypothesized model is presented in Figure 9.

Results of the analysis for the baseline model are presented in Table 11. The model yields

Table 11

Summary of the Analysis of the Multigroup Ethnic Identity Measure (N = 228)

<u>Model</u>	χ^2	<i>df</i>	CFI	RMSEA
Hypothesized model	189.29 ^{***}	53	.90	.11
Revised model	131.50 ^{***}	49	.94	.09

Note. CFI = comparative fit index; RMSEA = root mean square error of approximation.

^{***} $p < .001$.

a χ^2 value of 189.29 with 53 degrees of freedom and a probability of less than .001. The CFI is .90. The RMSEA is .11 with the confidence interval ranging from .09 to .12 and the p value for the test of closeness of fit equal to .0005. These indexes suggest that the data-model fit could be improved.

An examination of the residuals revealed that one of the standardized residuals exceeds the cutoff of 2.58. The residual between the MEIM10 and MEIM 11 is 3.27. This

is within the guideline of having less than 5% of the residuals exceed the threshold. A review of the MIs with their EPC values revealed that the item measuring a clear sense of ethnic identity (MEIM3) cross loads on factors 1 and factor 2. Therefore, freeing the path between this item and factor 1 would improve the fit of the model. In addition, the MIs and expected change statistics related to the covariances also revealed that allowing some of the error terms to covary would improve the fit of the model. It appears that the correlated errors were triggered by similarity in item content. Therefore, one can substantiate freeing the error covariances of these items on the grounds that the items appear to elicit responses that are reflective of similar mental sets. These findings are also consistent with previous research. More specifically, Roberts et al. (1999) improved the fit of the model by allowing item MEIM3 to cross load on the two factors and by adding five error covariances to the baseline model.

The baseline model was revised, and the revised model is presented in Figure 10. The path between item MEIM3 and factor 1 was freed. In addition, three error covariances were added to the model. The χ^2 for the revised model decreased to 131.29 with 49 degrees of freedom and a probability of less than .001. The CFI increased to .93. The RMSEA dropped to .09 with the confidence interval ranging from .07 to .10 and the p value for the test of closeness of fit equal to .001. These indexes suggest that the data-model improved by freeing the paths. In reviewing the estimates for the factor loadings and covariances, all are statistically significant (i.e., the critical ratio is $>\pm 1.96$). To conclude, although these findings are indicative of an improved data-model fit, there is still some degree of misfit in the revised two-factor structure. Furthermore, should subscale scores be utilized, item MEIM3 would have to be included in both subscales.

Therefore, the findings do not justify the utilization of subscale scores, and total scale scores will be used in future analyses.

Tests of Hypotheses

The zero order correlations among the variables for the total sample as well as for each of the separate R/EM groups are presented in Appendix C. An evaluation of the zero order correlations in the total group reveals that with the exception of the relationship between the parental attachment scales and their corresponding subscales, the strongest relationship is between career difficulties and career self-efficacy ($r = -.66, p < .01$). In addition, this statistically significant relationship is also found for the African American, Asian American, Hispanic and White subgroups. A preliminary evaluation further reveals that in the total sample there is a lack of a significant relationship between career difficulties and various other variables (e.g., mother attachment, father attachment, ethnic identity, perceptions of discrimination). For the most part, there is also a lack of relationships between career difficulties and various other variables in the R/EM groups. A more comprehensive understanding of the relationships among the variables investigated in this study will emerge from the hypotheses tested.

Hypothesis 1A predicted that career self-efficacy is inversely related to career difficulties in the total sample, as well as in the separate R/EM groups, and in the gender groups. The relationship of career self-efficacy to career difficulties was assessed by means of Pearson product moment correlations, overall, for each ethnic group, and for each gender group. The correlations are presented in Table 12. Career self-efficacy was inversely related to career difficulties in the total sample ($r = -.60, p < .01$), for all R/EM groups (Asian Americans, $r = -.72, p < .01$; African Americans, $r = -.66, p < .01$; Whites,

$r = -.54, p < .01$; Hispanic, $r = -.39, p = .01$) and for the two gender groups (Females, $r = .63, p < .01$; Males, $r = -.56, p < .01$). The moderate to strong negative relationships indicate that the higher the students' career self-efficacy the less career difficulties the students tend to experience. These relationships support the hypothesis being tested.

Among the R/EM groups, there were some significant differences between the correlation coefficients. The relationship was significantly stronger for Asian Americans than for Whites ($z = -1.78, p < .05$), and for Asian Americans than for Hispanics ($z = -2.63, p < .01$). There were no significant differences between males and females.

Hypothesis 1B predicted that there is a curvilinear relationship between parental attachment and career indecision. A two-step hierarchical multiple regression was

Table 12

Correlations between Career Self-Efficacy and Career Difficulties

	Correlation	<i>p</i>
Total group (N = 231)	-.60	<.01
African Americans (N = 29)	-.66	<.01
Asian Americans (N = 76)	-.72 _{ab}	<.01
Hispanics (N = 49)	-.39 _a	<.01
Whites (N= 68)	-.54 _b	<.01
Females (N = 127)	-.63	<.01
Males (N = 104)	-.56	<.01

Note. Correlations with same subscript letters differ significantly at $p < .05$. ns = nonsignificant.

performed to determine the overall shape of the regression function between career decision difficulties as the dependent variable and parental attachment as the independent variables in the total sample. A centered version of mother attachment and father attachment were computed. In step 1, the centered mother and father attachment scores were entered as linear predictors. In step 2, quadratic mother and father attachment terms

were entered as curvilinear predictors, X^2 . The R^2 change and the associated F test determine whether a curvilinear relationship between parental attachments accounts for more variance in career difficulties than a linear relationship. Table 13 displays the results of the hierarchical multiple regression analysis. The linear effect of parental attachments did not account for a significant amount of the variance in career difficulties (R^2 change = .02, F change = 2.69, $p = .07$). In addition, the quadratic mother attachment

Table 13

Summary of Hierarchical Regression Analysis with Mother and Father Attachment Predicting Career Difficulties

Step	Variable Entered	β	R^2	R^2 Change	F Change	<i>df</i>	<i>p</i>
Total Sample: Utilizing Total Attachment Scores							
1 ^a	MA _c	-.09	.02	.02	2.68	2, 215	.07
	FA _c	-.10					
2 ^a	MA _c ²	.05	.04	.02	1.68	2, 213	<i>ns</i>
	FA _c ²	-.13					
Total Sample: Utilizing Subscale Attachment Scores							
1 ^a	MT _c	-.04	.06	.06	2.08	6, 211	.06
	MC _c	.09					
	MAI _c	-.16					
	FT _c	-.40*					
	FC _c	.14					
	FAI _c	.11					
2 ^a	MT _c ²	.14	.09	.04	1.43	6, 205	<i>ns</i>
	MC _c ²	-.02					
	MAI _c ²	-.09					
	FT _c ²	-.21*					
	FC _c ²	.03					
	FAI _c ²	.04					

Note. MA_c and FA_c, centered linear predictor of mother and father attachment, respectively; MA_c² and FA_c², centered quadratic predictor of mother and father attachment, respectively.

MT_c, MC_c, MAI_c, centered linear predictor of mother trust, communication and alienation, respectively; FT_c, FC_c, FAI_c, centered linear predictor of father trust, communication and alienation, respectively. MT_c², MC_c², MAI_c², FT_c², FC_c², FAI_c², centered quadratic predictors of mother trust, communication, alienation and father trust, communication, alienation, respectively. β is derived from final regression equation.

^a All variables in this step entered as a block.

* $p < .05$.

term (MA_c^2) and father attachment terms (FA_c^2) did not account for additional significant variability in career difficulties (R^2 change = .02, F change = 1.68, *ns*). The findings did not reveal a curvilinear relationship between parental attachment and career difficulties.

The findings of previous analyses justify the utilization of the three attachment subscale scores. Therefore, the relationship was further explored by examining the relationship between the three attachment subscale scores and career difficulties in the total sample. A two-step hierarchical multiple regressions was performed utilizing the three attachment subscale scores (trust, communication and alienation) to determine the overall shape of the regression function between career decision difficulties as the dependent variable and parental attachment subscale scores as the independent variables. Centered versions of mother trust, communication, and alienation and father trust, communication, and alienation were computed. In step 1, the centered mother and father trust, communication, and alienation scores were entered as linear predictors. In step 2, the quadratic mother and father trust, communication, and alienation terms were entered as curvilinear predictors. The R^2 change and the associated F test determine whether a curvilinear relationship between parental trust, communication, and alienation accounts for more variance in career difficulties than a linear relationship.

Table 13 displays the results of the hierarchical multiple regression analysis using the attachment subscale scores in the total sample. In the total sample, the linear effect of mother and father trust, communication and alienation was close to significantly accounting for the variance in career difficulties (R^2 change = .06, F change = 2.08, $p = .06$). However, the quadratic centered mother trust, communication, and alienation terms (MT_c^2 , MC_c^2 , MAI_c^2) and father trust, communication, and alienation terms (FT_c^2 , FC_c^2 , FAI_c^2)

did not account for additional significant variability in career difficulties (R^2 change = .04, F change = 1.43, *ns*). The analyses including the subscale attachment scores did not reveal a curvilinear relationship between parental trust, communication, and alienation and career difficulties in the total sample. Based on the multiple regression using the total attachment scores as well as the subscale attachment scores in the total sample, the hypothesis is rejected.

The analyses were also performed in each of the R/EM groups separately. Two-step hierarchical multiple regressions were performed to determine the overall shape of the regression function between career decision difficulties as the dependent variable and parental attachment as the independent variables in each of the groups. A centered version of mother attachment and father attachment were computed. In step 1, the centered mother and father attachment scores were entered as linear predictors. In step 2, quadratic mother and father attachment terms were entered as curvilinear predictors, X^2 . With the exception of the analyses for African American, the analyses for Asians, Hispanics and Whites showed that the linear effect of parental attachments did not account for a significant amount of the variance in career difficulties, and the quadratic mother attachment term (MA_c^2) and father attachment terms (FA_c^2) did not account for additional significant variability in career difficulties. Table 14 displays the results of the hierarchical multiple regression analysis for African Americans. The linear effect of parental attachments accounted for a significant amount of the variance in the career difficulties of African Americans (R^2 change = .23, F change = 3.50, $p = .05$). However, the quadratic mother attachment term (MA_c^2) and father attachment terms (FA_c^2) did not account for additional significant variability in career difficulties of African Americans

(R^2 change = .00, F change = .05, *ns*). Therefore, the findings did not reveal a curvilinear relationship between parental attachment and career difficulties for any of the R/EM groups.

The relationships were further explored by examining the relationship between the three attachment subscale scores and career difficulties in the various R/EM groups. A two-step hierarchical multiple regression was performed utilizing the three attachment subscale scores (trust, communication and alienation) to determine the overall shape of the regression function between career decision difficulties as the dependent variable and parental attachment subscale scores as the independent variables. Centered versions of mother trust, communication, and alienation and father trust, communication, and alienation were computed. In step 1, the centered mother and father trust, communication, and alienation scores were entered as linear predictors. In step 2, the quadratic mother and father trust, communication, and alienation terms were entered as curvilinear predictors. Once again, with the exception of the analyses for African Americans, the analyses for Asians, Hispanics and Whites showed that the linear effect of parental attachments subscale scores did not account for a significant amount of the variance in career difficulties, and the quadratic mother attachment term subscale scores and father attachment subscale scores did not account for additional significant variability in career difficulties. Table 14 also displays the results of the hierarchical multiple regression analysis using the attachment subscale scores for African Americans. The linear effect of mother and father trust, communication and alienation significantly accounted for the variance in career difficulties of African Americans (R^2 change = .52, F change = 3.62, p = .01). However, the quadratic centered mother trust, communication, and alienation

terms (MT_c^2 , MC_c^2 , MAI_c^2) and father trust, communication, and alienation terms (FT_c^2 , FC_c^2 , FAI_c^2) did not account for additional significant variability in career difficulties of African Americans (R^2 change = .14, F change = .94, *ns*). The analyses including the subscale attachment scores did not reveal a curvilinear relationship between parental trust, communication, and alienation and career difficulties for the R/EM groups. Therefore,

Table 14

Summary of Hierarchical Regression Analysis with Mother and Father Attachment Predicting Career Difficulties

Step	Variable Entered	B	R ²	R ² Change	F Change	df	p
African Americans: Utilizing Total Attachment Scores							
1 ^a	MA _c	.39	.23	.23	3.50	2, 24	.05
	FA _c	-.63*					
2 ^a	MA _c ²	-.00	.23	.00	.05	2, 22	<i>ns</i>
	FA _c ²	-.07					
African Americans: Utilizing Subscale Attachment Scores							
1 ^a	MT _c	.34	.52	.52	3.62	6, 20	.01
	MC _c	.53					
	MAI _c	-.16					
	FT _c	-1.14*					
	FC _c	.30					
	FAI _c	.06					
2 ^a	MT _c ²	.36	.66	.14	.94	6, 14	<i>ns</i>
	MC _c ²	-.05					
	MAI _c ²	-.22					
	FT _c ²	-.19					
	FC _c ²	-.27					
	FAI _c ²	.36					

Note. MA_c and FA_c centered linear predictor of mother and father attachment, respectively; MA_c² and FA_c², centered quadratic predictor of mother and father attachment, respectively.

MT_c, MC_c, MAI_c centered linear predictor of mother trust, communication and alienation, respectively; FT_c, FC_c, FAI_c centered linear predictor of father trust, communication and alienation, respectively. MT_c², MC_c², MAI_c², FT_c², FC_c², FAI_c², centered quadratic predictors of mother trust, communication, alienation and father trust, communication, alienation, respectively. β is derived from final regression equation.

^a All variables in this step entered as a block.

* $p < .05$.

the hypothesis is also rejected based on the multiple regressions using the subscale attachment scores in the R/EM groups.

Since the linear effect of parental attachments only accounted for a significant amount of the variance in the career difficulties of African Americans, and since the linear effect of mother and father trust, communication and alienation significantly accounted for the variance in career difficulties only of African Americans, the parental attachment scores for different groups were compared. Table 15 displays the means and standard deviations of maternal and paternal attachment for the R/EM groups. African

Table 15

Means and Standard Deviations of Mother and Father Attachment by R/EM Group

	Ethnic Group	<i>M</i>	<i>SD</i>
Mother Attachment	Total group (N = 211)	3.64	.69
	African Americans (N = 27)	3.81 _a	.77
	Asian Americans (N = 74)	3.40 _{ab}	.67
	Hispanics (N = 44)	3.71	.72
	Whites (N = 66)	3.80 _b	.60
Father Attachment	Total group (N = 211)	3.19	.87
	African Americans (N = 27)	2.88	1.03
	Asian Americans (N = 74)	3.10	.75
	Hispanics (N = 44)	3.25	.97
	Whites (N = 66)	2.37	.84

Note. Means with the same subscript letters differ significantly at $p < .05$.

Americans reported the highest level of maternal attachment ($M = 3.81$, $SD = .77$) followed by Whites ($M = 3.80$, $SD = .60$), Hispanics ($M = 3.71$, $SD = .72$) with Asians scoring the lowest ($M = 3.40$, $SD = .67$). A one-way ANOVA was used to examine whether the differences in maternal attachment among the R/EM groups were significant differences. Table 16 reveals the results of the one-way ANOVA. There were significant differences among some of the groups [$F(3, 207) = 5.04$, $p < .01$]. Therefore, a Tukey post-hoc test was conducted to determine where the differences existed among the four

groups. The pairwise comparisons indicated that Asian Americans scored significantly lower than African Americans, and Whites. Whites reported the highest level of father attachment ($M = 3.37, SD = .84$) followed by Hispanics ($M = 3.25, SD = .97$, Asian Americans ($M = 3.10, SD = .74$) with African Americans scoring the lowest ($M = 2.88, SD = 1.03$). A one-way ANOVA was used to examine whether the differences in father attachment among the R/EM groups were statistically significant. Table 16 reveals the results of the one-way ANOVA. There were no significant differences in father attachment among the R/EM groups.

Table 16

One Way Anova of Mother and Father Attachment by R/EM Group

Mother Attachment					
Source	SS	df	MS	F	<i>P</i>
R/EM groups	6.80	3	2.27	5.04	.00
Error	93.11	207	.45		
Total	99.91	210			

Father Attachment					
Source	SS	df	MS	F	<i>p</i>
R/EM groups	5.38	3	1.79	2.40	.07
Error	154.58	207	.75		
Total	159.96	210			

In the total sample, although the correlation coefficients between career difficulties and mother ($r = -.12, ns$) and father attachment ($r = -.08, ns$) were not statistically significant, there were significant relationships between career difficulties and some of the attachment subscale scores. More specifically, the correlation coefficients between career difficulties and mother trust ($r = -.14, p = .04$), mother alienation ($r = -.16, p = .02$), and father trust ($r = -.15, p = .03$) were significant.

However, when the relationships were examined in each of the R/EM groups, the only significant correlation was between career difficulties and father alienation ($r = -.44, p = .02$) for African Americans. Nonetheless, with the exception of the correlation for African Americans, even the significant correlations indicate only weak relationships, that account for a negligible amount of variance.

The analyses were also performed for males and females separately. Two-step hierarchical multiple regressions were performed to determine the overall shape of the regression function between career decision difficulties as the dependent variable and parental attachment as the independent variables for males and females. Centered versions of mother attachment and father attachment were computed. In step 1, the centered mother and father attachment scores were entered as linear predictors. In step 2, quadratic mother and father attachment terms were entered as curvilinear predictors, X^2 . Table 17 displays the results of the hierarchical multiple regression analysis for females. Only for females, the linear effect of parental attachments was close to significantly accounting for the variance in career difficulties (R^2 change = .05, F change = 2.92, $p = .06$), however the quadratic mother attachment term (MA_c^2) and father attachment terms (FA_c^2) did not account for additional significant variability in career difficulties. Therefore, the findings did not reveal a curvilinear relationship between parental attachment and career difficulties for males or females.

The relationships were further explored by examining the relationship between the three attachment subscale scores and career difficulties for males and females. A two-step hierarchical multiple regressions was performed utilizing the three attachment subscale scores (trust, communication and alienation) to determine the overall shape of

the regression function between career decision difficulties as the dependent variable and parental attachment subscale scores as the independent variables. Centered versions of mother trust, communication, and alienation and father trust, communication, and

Table 17

Summary of Hierarchical Regression Analysis with Mother and Father Attachment Predicting Career Difficulties

Step	Variable Entered	B	R ²	R ² Change	F Change	df	p
Females: Utilizing Total Attachment Scores							
1 ^a	MA _c	-.09	.05	.05	2.92	2, 118	.06
	FA _c	-.17					
2 ^a	MA _c ²	.08	.07	.02	1.43	2, 116	<i>ns</i>
	FA _c ²	-.15					
Females: Utilizing Subscale Attachment Scores							
1 ^a	MT _c	.18	.07	.07	1.36	6, 114	<i>ns</i>
	MC _c	.02					
	MAI _c	-.26*					
	FT _c	-.49*					
	FC _c	.03					
	FAl _c	.21					
2 ^a	MT _c ²	.30*	.16	.09	2.00	6, 108	<i>ns</i>
	MC _c ²	-.05					
	MAI _c ²	-.20					
	FT _c ²	-.31*					
	FC _c ²	.08					
	FAl _c ²	.10					

Note. MA_c and FA_c, centered linear predictor of mother and father attachment, respectively; MA_c² and FA_c², centered quadratic predictor of mother and father attachment, respectively. MT_c, MC_c, MAI_c, centered linear predictor of mother trust, communication and alienation, respectively; FT_c, FC_c, FAl_c, centered linear predictor of father trust, communication and alienation, respectively. MT_c², MC_c², MAI_c², FT_c², FC_c², FAl_c², centered quadratic predictors of mother trust, communication, alienation and father trust, communication, alienation, respectively. β is derived from final regression equation.

^a All variables in this step entered as a block.

* $p < .05$.

alienation were computed. In step 1, the centered mother and father trust, communication, and alienation scores were entered as linear predictors. In step 2, the quadratic mother and father trust, communication, and alienation terms were entered as curvilinear predictors. However, the linear effect of parental attachments subscale scores did not

account for a significant amount of the variance in career difficulties, and the quadratic mother attachment term subscale scores and father attachment subscale scores did not account for additional significant variability in career difficulties for males nor for females.

Hypothesis 1C predicted that maternal and paternal attachment and career self-efficacy are jointly related to career decision-making difficulties. A multiple regression analysis was carried out, utilizing career difficulties as the dependent variable and parental attachment and career self-efficacy as the predictors. The quadratic parental attachment terms were excluded from the analyses since in previous analyses they did not account for variability in career difficulties. The results of this analysis are shown in Table 18. The obtained multiple correlation (R) was .60 accounting for 36% of the variance in career difficulties. However, career self-efficacy was the only significant predictor of career difficulties. Subjects reporting higher levels of career self-efficacy

Table 18

Summary of Simultaneous Regression Analysis with Parental Attachment and Career Self-Efficacy Predicting Career Difficulties

Predictor variables	B	SE B	β	t	R^2
Self-efficacy	-1.26	.12	-.60***	-10.63	.36
Mother attachment	-.08	.11	-.04	-.69	
Father attachment	.05	.09	.03	.54	

*** $p < .001$

experienced less career difficulties. Mother and father attachments were not significant predictors of career difficulties.

Hypothesis 2 predicted that anxiety is inversely related to career self-efficacy in the total sample and in the separate R/EM groups. The relationship between anxiety and

career self-efficacy was assessed by means of Pearson product moment correlations, overall, for each ethnic group, and for the pooled R/EM groups (excluding the Whites). The correlations are presented in Table 19. Anxiety was inversely related to career self-efficacy in the total sample ($r = -.25, p < .0001$), and for Asian Americans ($r = -.36, p = .002$). The relationship was close to significant for African Americans ($r = -.36, p = .06$). However, the relationship was not significant for Hispanic ($r = -.18, p = .21$), or Whites ($r = -.11, p = .38$). The relationship was significant for the pooled R/EM groups ($r = -.32, p < .0001$). The weak to moderate negative relationships indicate that the higher the students' anxiety the less career self-efficacy students tend to experience. Although the

Table 19

Correlations between Anxiety and Career Decision Self-Efficacy

	Correlation	<i>P</i>
Total group (N = 217)	-.25	<.01
African Americans (N = 26)	-.36	<i>ns</i>
Asian Americans (N = 74)	-.36	<.01
Hispanics (N = 44)	-.18	<i>ns</i>
Pooled R/EM groups (N=154)	-.32	<.01
Whites (N = 66)	-.11	<i>ns</i>

magnitude of the correlation coefficient for African Americans and Asian Americans was twice as much as the magnitude for Hispanics, and more than twice as large as the magnitude for Whites, there were no significant differences among the correlation coefficients of the R/EM groups. Since the relationship between anxiety and career self-efficacy was not significant for all R/EM groups, the hypothesis was only partially supported.

Due to the small sample size of some of the R/EM groups, further analysis was undertaken by pooling the R/EM groups into one group. As indicated in table 19, the

correlation for the pooled sample of African Americans, Asian Americans and Hispanics (N=154) was significant ($r = -.32, p < .001$).

No significant differences among the correlations between anxiety and career decision self-efficacy in the various R/EM groups were found. Due to the possible lack of power to detect differences in correlation coefficients, an additional analysis comparing the correlations for whites with the correlation for the combined group of African Americans, Hispanics and Asians was undertaken. However, according to this analysis as well there are no statistically significant differences between the correlations of White American and the correlation for the other R/EM groups.

Hypothesis 3A predicted that the simultaneous consideration of ethnic identity in addition to parental attachment and career self-efficacy will account for significant variance in career difficulties. Hierarchical multiple regression analysis was employed to determine if ethnic identity improved prediction of career difficulties beyond parental attachment and career self-efficacy. Career difficulties was the dependent variable and parental attachment and career self-efficacy were entered as independent variables in the first block. Ethnic identity was entered in the second block. Table 20 displays the results of the hierarchical regression. The model accounted for 36% of the variance in career difficulties. However, an examination of the R^2 change for the addition of the ethnic identity block reveals no increment change ($R^2 = .00$). In other words, the addition of ethnic identity did not make a significant contribution to the prediction of career difficulties. Furthermore, there were no significant differences in ethnic identity among the different groups. Career self-efficacy emerged as the most powerful predictor of career difficulties ($\beta = -.60$). On the other hand, attachment to mother and father, and

ethnic identity did not contribute meaningful variance in the sample ($\beta = -.04, .03, .01$, respectively).

Hypothesis 3B predicted that ethnic identity will account for more unique

Table 20

Summary of Hierarchical Regression Analysis for Variables Predicting Career Difficulties

Step	Variable Entered	β	R	R^2 Change	F change
1 ^a	MA	-.04	.60	.36	40.25***
	FA	.03			
	CSE	-.60***			
2	EI	.01	.60	.00	.01

Note. MA, mother attachment; FA, father attachment; CSE, career self-efficacy; EI, ethnic identity. B is derived from final regression equation.

^a All variables in this step entered as a block.

* $p < .05$. ** $p < .01$. *** $p < .001$.

variance in the career difficulties of R/EM groups than in the career difficulties of Whites. To determine the relative importance of ethnic identity, hierarchical multiple regression analyses were performed in the separate R/EM groups. In each of the analyses career difficulties was the dependent variable and parental attachment and career self-efficacy were entered as independent variables in the first block. Ethnic identity was entered in the second block. Table 21 displays the results of the separate hierarchical regressions. The model accounted for significant variance in career difficulties of African Americans, Asian Americans and Whites ($R^2 = .58, R^2 = .52, R^2 = .32$, respectively) but not for Hispanics. An examination of the R^2 change for the addition of the ethnic identity block reveals no change for Asian Americans and Whites (R^2 change = .00 for both groups). Although ethnic identity accounted for 50% more variance in African Americans than in Hispanics, the change for African Americans and Hispanics (R^2 change = .06, R^2 change = .04, respectively) is not statistically significant. In other words, ethnic identity

did not make a statistically significant contribution to the prediction of career difficulties in any of the four R/EM groups in this sample.

Career self-efficacy emerged as the most powerful predictor of career difficulties in the four R/EM groups. In fact, it is the only predictor to reach significance. Among African Americans, ethnic identity received the second largest standardized estimate ($\beta =$

Table 21

Summary of Hierarchical Regression Analysis for Variables Predicting Career Difficulties among African American, Asian American, Hispanic and White Groups

Step	Variable Entered	β	R	R^2 Change	F change
African Americans ($N = 26$)					
1 ^a	MA	.13	.72	.52	7.89***
	FA	-.07			
	CSE	-.64***			
2	EI	-.30	.76	.06	3.07
Asian Americans ($N = 74$)					
1 ^a	MA	-.05	.72	.52	25.74***
	FA	.02			
	CSE	.72***			
2	EI	.01	.72	.00	.00
Hispanics ($N = 44$)					
1 ^a	MA	.02	.36	.13	2.01
	FA	-.17			
	CSE	-.30			
2	EI	.21	.41	.04	1.90
Whites ($N = 66$)					
1 ^a	MA	.01	.57	.32	9.92***
	FA	.16			
	CSE	-.58***			
2	EI	-.07	.57	.00	.02

Note. MA, mother attachment; FA, father attachment; CSE, career self-efficacy; EI, ethnic identity. β is derived from final regression equation.

^a All variables in this step entered as a block.

* $p < .05$. ** $p < .01$. *** $p < .001$.

-.30), followed by the standardized estimates for mother ($\beta = -.13$) and father attachment ($\beta = -.07$). Among Hispanics, ethnic identity also received the second largest standardized estimate ($\beta = .21$) followed by the standardized estimates for father ($\beta = -.17$) and mother ($\beta = .02$) attachment. Among Whites, on the other hand, father attachment received the second largest standardized estimate ($\beta = .16$) followed by the standardized estimates for ethnic identity ($\beta = -.07$) and mother attachment ($\beta = .01$). To conclude, although ethnic identity did not make a statistically significant contribution to the prediction of career difficulties in any of the groups, it did receive the second largest standardized estimate following the standardized estimate for career self-efficacy, among African Americans and Hispanics in the sample.

Hypothesis 4A predicted that there are significant differences in career decision self-efficacy among the different R/EM groups. Table 22 shows the means and standard deviation of the career decision self-efficacy scores. There were only small mean differences between the career self-efficacy scores of the different R/EM groups. African Americans scored the highest ($M = 3.71$, $SD = .66$) followed by Whites ($M = 3.69$, $SD = .73$), Hispanics ($M = 3.57$, $SD = .54$) with Asians scoring the lowest ($M = 3.48$, $SD = .60$). A one-way ANOVA was used to examine whether the differences in career self-efficacy among the R/EM groups were significant differences. Table 23 reveals the results of the one-way ANOVA. These differences are not statistically significant [$F(3, 218) = 1.61$, n.s]. While there were no significant differences in mean career self-efficacy scores among the R/EM groups, there were significant differences in career self-efficacy scores between subjects that are employed and subjects not employed. Subjects

who were employed scored significantly higher ($M = 3.73$, $SD = .63$) than subjects not employed ($M = 3.40$, $SD = .61$), $t(228) = 3.94$, $p < .01$. There was a significant

Table 22

Means and Standard Deviations of Career Self-Efficacy by R/EM Group

	<i>M</i>	<i>SD</i>
African Americans (N = 29)	3.71	.66
Asian Americans (N = 76)	3.48	.60
Hispanics (N = 49)	3.57	.54
Whites (N = 68)	3.69	.73

Table 23

One Way Anova of Career Self-Efficacy by R/EM Group

Source	SS	df	MS	F	<i>p</i>
R/EM groups	1.95	3	.65	1.61	.19
Error	90.07	218	.40		
Total		221			

difference in career self-efficacy between subjects whose fathers completed post-graduate education ($M = 3.92$, $SD = .49$) and those whose fathers only completed junior high school ($M = 3.28$, $SD = .13$), $t(44) = 3.98$, $p < .01$. No other differences based on fathers' education were found. In addition, there were no significant differences in career self-efficacy among the different income groups, and among the different levels of mother's education groups.

Hypothesis 4B predicted that perceptions of discrimination are inversely related to career self-efficacy in the total sample, as well as in the separate R/EM groups. The relationship between perception of discrimination and career self-efficacy was assessed by means of Pearson product moment correlations overall, and for each ethnic group. The correlations are presented in Table 24. Perceptions of discrimination are inversely related

to career self-efficacy for the total sample ($r = -.16, p = .01$) and for Asian Americans ($r = -.29, p = .01$). The weak to moderate significant relationships indicate that the higher the students' perceptions of discrimination the less career self-efficacy students tend to experience. However, the relationship was not significant for African Americans, $r = -.01, p = .98$, Whites ($r = -.11, p = .38$) or Hispanics ($r = -.19, p = .20$). Since these relationships were not significant in all groups, the hypothesis being tested was only partially supported. In addition, there were no significant differences between the correlation coefficients of the different R/EM groups.

Table 24

Correlations between Perceptions of Discrimination and Career Self-Efficacy

	Correlation	<i>P</i>
Total group (N = 231)	-.16	.01
African Americans (N = 29)	-.01	<i>ns</i>
Asian Americans (N = 76)	-.29	.01
Hispanics (N = 49)	-.18	<i>ns</i>
Pooled R/EM groups (N=154)	-.13	<i>ns</i>
Whites (N = 68)	-.11	<i>ns</i>

Since the correlations for Hispanics, Whites and particularly for African Americans were lower than for Asians, the shapes of the distributions of the variables (i.e., perception of discrimination and career self-efficacy) were examined. Histograms of the distributions are presented in Figures 11, 12 and 13 for African Americans, Hispanics and Whites, respectively. The histograms indicate that the shapes of the distributions differ the most for African Americans and for Whites.

Due to the small sample size of some of the R/EM groups, further analysis was undertaken by pooling the R/EM groups into one group. However, the correlation for the

pooled sample of African Americans, Asian Americans and Hispanics (N=154) was not significant ($r = -.13$).

Because there was some evidence that perceptions of discrimination are related to career self-efficacy, and since the findings confirmed that career self-efficacy and career difficulties are related, the relationship between perceptions of discrimination and career difficulties was explored. Perceptions of discrimination were significantly related to career difficulties only for Asian Americans ($r = .39, p < .01$).

The perceptions regarding discrimination were evaluated in the R/EM groups. Table 25 shows the means and standard deviations for perceptions regarding discrimination by R/EM groups. African Americans ($M = 3.68, SD = .70$) perceived the highest level of discrimination against their group followed by Hispanics ($M = 3.28, SD = .53$). Asians ($M = 3.10, SD = .61$) were almost neutral regarding the presence of discrimination against their group, and Whites ($M = 2.27, SD = .63$) perceived that there was no discrimination against their group. A one-way ANOVA was used to examine

Table 25

Means and Standard Deviations of Perceptions Regarding Discrimination by Race and Ethnicity

Ethnic Group	<i>M</i>	<i>SD</i>
African Americans (N = 30)	3.68 _{abc}	.70
Asian Americans (N = 76)	3.10 _{ad}	.61
Hispanics (N = 49)	3.28 _{bc}	.53
White (N = 68)	2.27 _{cde}	.63

Note. Means with the same subscript letters differ significantly at $p < .05$.

whether there were significant differences in mean perceptions of discrimination scores among the R/EM groups. Table 26 reveals the results of the one-way ANOVA. There were significant differences among some of the groups [$F(3, 219) = 47.12, p < .01$].

Therefore, a Tukey post-hoc test was conducted to determine where the differences existed among the four groups. The pairwise comparisons indicated that African Americans scored significantly higher than Hispanics, Asians, and Whites. Whites scores significantly lower than the other three groups.

Table 26

One Way Anova of Perceptions of Discrimination by R/EM Group

Source	SS	df	MS	F	<i>p</i>
R/EM groups	53.28	3	17.76	47.12	.00
Error	82.55	219	.38		
Total	135.83	222			

Research question 1 investigated whether there was a difference in the mean career self-efficacy scores between females and males. The means and standard deviations for career self-efficacy by gender are presented in Table 27. Males ($M = 3.64$, $SD = .64$) scored slightly higher than females ($M = 3.56$, $SD = .66$). A one-way ANOVA

Table 27

Means and Standard Deviations of Career Self-Efficacy by Gender

Gender Group	<i>M</i>	<i>SD</i>
Females (N = 127)	3.56	.66
Males (N = 104)	3.64	.62

Table 28

One Way Anova of Career Self-Efficacy by Gender

Source	SS	df	MS	F	<i>p</i>
Gender groups	.37	1	.37	.90	.35
Error	94.00	229	.41		
Total	94.37	230			

was used to examine whether there was a significant difference in career self-efficacy between males and females. Table 28 reveals the results of the one-way ANOVA. There was no significant difference in career self-efficacy between males and females.

Research questions 2A, 2B and 2C investigated the direction and strength of the relationship between career difficulties and cognitive ability in the total sample as well as in the separate R/EM groups, and in the two gender groups, respectively. The relationship between career difficulties and cognitive ability was assessed by means of Pearson product moment correlations overall, for each R/EM group, and for each gender group. The correlations are presented in table 29. In the total sample, although career difficulties scores are inversely related to cognitive ability, the relationship is not significant ($r = -.13, ns$). Career difficulties scores are inversely significantly related to cognitive ability for Whites ($r = -.43, p = .02$) and for males ($r = -.32, p = .01$). The moderate negative relationships indicate that the higher the students' cognitive ability the less career difficulties students tend to experience. However, the relationship was not significant for African Americans ($r = -.04, ns$), Asian Americans ($r = -.22, ns$), Hispanics ($r = .16, ns$) or females ($r = -.04, ns$).

Further analyses investigated whether there were significant differences among the correlation coefficients between career difficulties and cognitive ability among the R/EM groups, as well as between females and males. The only significant racial difference was between the correlation coefficients of Hispanics and Whites ($z = 2.25, p = .02$). The correlation between career difficulties and cognitive ability was significantly stronger for Whites ($r = -.43, p = .02$) than for Hispanics ($r = .16, ns$). No other

significant R/EM differences were found. In addition, there was a significant difference between the correlations of females and males ($z = 2.12, p = .03$). The correlation

Table 29

Correlations Between Career Difficulties and Cognitive Ability

	Correlation	<i>p</i>
Total group (N = 134)	-.13	<i>ns</i>
African Americans (N = 24)	.04	<i>Ns</i>
Asian Americans (N = 47)	-.22	<i>Ns</i>
Hispanics (N = 28)	.16 _a	<i>Ns</i>
Whites (N = 30)	-.43 _a	.02
Females (N = 72)	.04 _b	<i>Ns</i>
Males (N = 62)	-.32 _b	.01

Note. Correlations with same subscript letters differ significantly at $p < .05$. *ns* = nonsignificant.

between career difficulties and cognitive ability was significantly stronger for males ($r = -.32, p = .01$) than for females ($r = .04, ns$).

Research question 3 investigated whether there were differences in levels of career difficulties among the R/EM groups. In the total sample, the mean for career difficulties was 4.00 ($SD = 1.32$). The means and standard deviations for career difficulties by race and ethnicity are presented in Table 30. African Americans scored the lowest ($M = 3.52, SD = 1.26$), followed by Hispanics ($M = 3.69, SD = 1.15$), Whites ($M = 3.87, SD = 1.35$), with Asian American scoring the highest ($M = 4.51, SD = 1.33$). Itamar Gati suggests that CDDQ scores in the range of 1 to 3.33 are indicate of a negligible level of career difficulties, scores in the range of 3.34 to 6.66 are indicate of moderate levels of difficulties, and scores in the range of 6.67 to 9.00 are indicative of severe difficulties (personal communication). Accordingly, the CDDQ scores for the

various groups as well as for the total sample are indicative of moderate degrees of career difficulties.

Table 30

Means and Standard Deviations of Career Difficulties by Race and Ethnicity

Ethnic Group	<i>M</i>	<i>SD</i>
African Americans (N = 30)	3.52 _a	1.26
Asian Americans (N = 76)	4.51 _{abc}	1.33
Hispanics (N = 49)	3.69 _b	1.15
White (N = 68)	3.87 _c	1.35

Note. Means with the same subscript letters differ significantly at $p < .05$.

A one-way ANOVA was used to examine whether there were significant differences in career difficulties between R/EM groups. Table 31 reveals the results of the one-way ANOVA. Significant R/EM differences were discovered among the four groups, $F(3, 219) = 6.45$, $p < .01$. Therefore, a Tukey post-hoc test was conducted to determine where the differences existed between the four groups. The pairwise comparisons indicated that the mean career difficulties score for Asian Americans was significantly higher than for the other three groups (African Americans, $p < .01$; Hispanics, $p < .01$, and Whites, $p < .05$). No other significant R/EM group differences in career difficulties were found at the .05 level.

Table 31

One Way Anova of Career Difficulties by Race and Ethnicity

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Race/Ethnic groups	32.17	3	10.72	6.45	<.01
Error	364.14	219	1.66		
Total	396.31	222			

Next, the prevalence of career difficulties was examined. The percentage of participants reporting indecision in each R/EM group is presented in Table 32. In the total sample, 13.4% of the subjects reported that they have not consider what field they would like to major in or what occupation they would like to choose. The rates of indecision were not the same in the various groups. While 20.0% of African Americans have not considered a major or occupation, 14.7% of Whites, 14.3% of Hispanics, and only 10.5% of Asian Americans have not considered what field they would like to major in or what occupation they would like to choose.

Table 32

Percentages of Members From Each R/EM Group Reporting Career Indecision

	Percentage Indicating Indecision
Total group (N = 232)	13.4
African Americans (N = 30)	20.0
Asian Americans (N = 76)	10.5
Hispanics (N = 49)	14.3
Whites (N = 68)	14.7

Table 33 reveals the means and standard deviations of confidence in career decision and difficulty in making a career choice. Those students who have considered a major or occupation also rated the degree of confidence in their choice on a nine-point scale ranging from Not Confident at all (1) to Very Confident (9). In the total sample, the mean confidence score was 6.94 (SD = 1.48). African Americans reported the highest confidence in their decision (M = 7.17, SD = 1.40), followed by Hispanics (M = 7.10, SD = 1.32), Whites (M = 6.88, SD = 1.73), and Asians (M = 6.82, SD = 1.40). However, a one-way ANOVA revealed no significant difference in confidence among the groups. All subjects also rated their degree of difficulty in making a career decision on a nine-point

scale ranging from Low (1) to High (9). In the total sample, the mean difficulty score was 5.25 (SD = 2.45). Hispanics reported the highest difficulty in making a career decision (M = 5.84, SD = 2.14), followed by Asian Americans (M = 5.26, SD = 2.35), Whites (M = 5.21, SD = 2.64), with African Americans reporting the lowest degree of difficulty (M = 4.53, SD = 2.68). However, a one-way ANOVA revealed no significant difference in difficulty scores among the groups.

Table 33

Means and Standard Deviations of Confidence in Career Decision and Difficulty in Making a Career Choice by R/EM Group

	Ethnic Group	<i>M</i>	<i>SD</i>
Confidence in Career Decision	Total group (N = 201)	6.94	1.48
	African Americans (N = 24)	7.17	1.40
	Asian Americans (N = 68)	6.82	1.40
	Hispanics (N = 42)	7.10	1.32
	Whites (N = 58)	6.88	1.73
Difficulty in Making Career Decision	Total group (N = 232)	5.25	2.45
	African Americans (N = 30)	4.53	2.68
	Asian Americans (N = 76)	5.26	2.35
	Hispanics (N = 49)	5.84	2.14
	Whites (N = 68)	5.21	2.64

CHAPTER III

DISCUSSION

A review of the literature indicated the need for a metaperspective integrating important theories and constructs. The metaperspective utilized in this study integrated individual differences as well as developmental constructs from different theories. More specifically, attachment, self-efficacy and ethnic identity theories served as the organizing framework for the investigation of career decision-making difficulties. One of the main objectives of this study was to investigate the relationship between ethnic identity and career development. This study further examined the levels of career difficulties experienced by the different R/EM groups.

The results of the present study indicate that only 13% of the participants had not considered what field they would like to major in or what occupation they would like to choose. This result contrasts favorably with previous studies. Recently, Gaffner and Hazler (2002) and Cooper, Fuqua and Hartman (1984) reported that over 50% of the subjects in their respective samples were undecided. Although only 13% of the subjects in the present study were undecided, the CDDQ scores for the total sample are indicative of moderate degrees of career difficulties. This suggests that even those students who have considered a major or an occupation were not highly confident in their decision.

(H1A) The results of the present study provide strong support for the relationship between career self-efficacy and career decision-making difficulties. This finding supports previous research (Betz, Klein & Taylor, 1996) demonstrating a significant inverse relationship between self-efficacy and career difficulties. Students experiencing

lower levels of confidence regarding their ability to complete the career decision task tend to experience more career decision-making difficulties.

This study, sought to determine whether the relationship between career self-efficacy and career decision-making difficulties that was demonstrated in predominantly White samples would hold amongst the various R/EM groups. Indeed, this study added to previous findings by confirming the relationship in the separate R/EM groups. With the exception of a moderate effect size for Hispanics ($r = .39$), the correlations for African Americans, Asian Americans, and Whites all indicate a large effect size. Career self-efficacy is a stronger predictor of career decision-making difficulties among Asian Americans than among Whites and Hispanics. The correlations for females and males also indicate a large effect size. In this study although the correlation was stronger for females ($r = .63$) than for males ($r = .56$), the difference was not statistically significant.

Due to the correlational nature of this study, causal inferences are not warranted. Nonetheless, these findings suggest that interventions designed to improve career self-efficacy may prove valuable in decreasing students' career difficulties in the long run. On the other hand, interventions designed to eliminate career difficulties may have a beneficial effect on students' career self-efficacy.

(H1B) The relationship between parental attachment and career difficulties was hypothesized to be a curvilinear relationship since previous research (Blustein, 1991; O'Brien, 1996) has shown that moderate levels of attachment were related to positive career outcomes. However, the analysis did not provide support for the general hypothesis that there is a curvilinear relationship between relationships with parents and career difficulties. Moreover, there was no evidence that parental attachment and career

difficulties are linearly related in the total sample. Although these findings are consistent with previous studies that have found either weak or no support for the relationship between parental relationships and career difficulties (Eigen et al., 1987, Kinnier et al., 1990, Blustein et al., 1991, Guerra & Braungart-Rieker, 1999), the finding of a lack of a relationship contradicts the findings of other studies (Santos & Coimbra, 2000, Tokar et al., 2003) that have found a linear relationship between parental relationships and career difficulties.

A closer evaluation of the R/EM groups revealed that there was evidence of a significant linear relationship between parental attachment and career difficulties for African Americans only. Thus it appears that attachment to parents is an important predictor of career difficulties for African Americans but not for Asian Americans, Hispanics or Whites. This finding is consistent with Brown's (1995) assertion that parental influence on career development is stronger for African Americans than for Whites. On the other hand, these findings contradict Leong and Serafina's (1995) claim that the family plays a more significant role for Asian Americans than for European Americans. In fact, in this study African Americans reported significantly higher levels of maternal attachment than Asian Americans, and Asian Americans reported significantly lower levels of mother attachment than Whites. Additionally, the relationship between parental attachment and career difficulties approached significance only for females and not for males. These findings are consistent with Whiston (1996) who found that the relationship between family interactions and career indecision was only significant for women.

Deciding upon a career to pursue is a principal developmental task of late adolescence and young adulthood. Similarly, a principal developmental task during these years is the task of adjustment to college. A study by Mattanah, Brand and Hancock (2004) was the first to demonstrate that separation-individuation actually mediates the effect of parental attachment on college students' adjustment. Mattanah et al. assessed feelings concerning separation and individuation using the Separation-Individuation Test of Adolescence (SITA). The three SITA subscales used focus on separation anxiety, engulfment anxiety, and rejection expectancy. Utilizing SEM these researchers conclude that separation-individuation mediated the relationship between parental attachment and adjustment to college. Therefore, future research should examine the possibility that the link between parental attachment and career difficulties is actually mediated by separation-individuation. Such an investigation is especially warranted since Gnaulati and Heine (2001) reported ethnic differences in separation-individuation.

(H1C) Although the findings of the present study provide support for the hypothesis that maternal and paternal attachment and career self-efficacy are jointly related to career decision-making difficulties, while career self-efficacy emerged as a significant predictor of students' career difficulties, maternal and paternal attachment did not emerge as significant predictors of career difficulties. Thus it appears that attachment to parents is not an important predictor of career difficulties in the total sample.

(H2) The findings of the study provide support for the relationship between anxiety and career decision self-efficacy in the total sample. The results show that the higher the students' career self-efficacy, that is the higher the level of the students' belief that they are capable of completing tasks essential for making career decisions, the lower

their anxiety. Due to the correlational nature of this study, causal inferences are not warranted. Anxiety may be a consequence of low career self-efficacy, or alternatively, anxiety may lower one's career self-efficacy. These findings suggest that interventions designed to improve career self-efficacy may prove valuable in decreasing students' anxiety. On the other hand, interventions designed to eliminate anxiety could have a beneficial effect on students' career self-efficacy.

Interestingly, when evaluating the correlations in the various ethnic groups, this relationship was only significant for Asian Americans. One problem in the present study is that the sample size in most of the R/EM groups is relatively small, lowering the power to detect significant relationships. Although the correlation for African Americans was of the same magnitude as for Asian Americans, it was not significant for African Americans. However, the lack of significance for African Americans may be due to the small sample size of this group. Nonetheless, the significance of the correlation in the total group may be due to the influence of the significant correlation among Asian Americans. Asian Americans made up a relatively large portion of the total sample. They accounted for about a third of the sample, increasing the chances of finding a significant correlation in that group. In fact, further analysis of the correlation coefficient in the combined sample of African Americans, Asian Americans and Hispanics (N=154) shows that by pooling the R/EM groups together, the relationship was significant due to the increase in power.

No significant differences among the correlations between anxiety and career decision self-efficacy in the various R/EM groups were found. For example, although the magnitude of the correlation coefficient for African Americans was more than twice as

large as the magnitude for Whites, there were no significant differences between the two correlations. However, utilizing Cohen's (1988) power analysis it was determined that the power to detect a significant difference was lower than .24.¹⁰ Due to the possible lack of power to detect differences in correlation coefficients, an additional analysis comparing the correlations for whites with the correlation for the combined group of African Americans, Hispanics and Asians was undertaken. However, according to this analysis as well there are no statistically significant differences between the correlations of White Americans and the correlation for the other R/EM groups. Future studies should utilize larger samples of R/EMs in order to increase the power of the analyses in each of the R/EM groups.

(H3A) One of the main goals of the present study was to examine the contribution of ethnic identity, parental attachment, and career self-efficacy to the career difficulties of college students. Although the findings provide support for the hypothesis that the simultaneous consideration of ethnic identity in addition to maternal and paternal attachment and career self-efficacy accounts for significant variance in students' career decision-making difficulties, career self-efficacy emerged as the only significant predictor of students' career difficulties. In other words, contrary to the predictions suggested by this study, ethnic identity and maternal and paternal attachment did not emerge as significant predictors of career difficulties. These findings suggest that ethnic identity may not be particularly salient in students' career decision-making difficulties.

(H3B) Contrary to the prediction that ethnic identity will account for more unique variance in the career decision-making difficulties of R/EM groups than in the career

¹⁰ Using the following formulas, $q = z_1 - z_2 = .27$; $n' = [2(n_1 - 3)(n_1 - 3) / (n_1 + n_2 - 6)] + 3 = 37$, and the power tables (Cohen, 1988, p. 125), the power is lower than .24.

difficulties of Whites, ethnic identity did not make a significant contribution to the prediction of career difficulties in any of the four R/EM groups in this study.

Furthermore, there were no significant differences in ethnic identity scores among the different R/EM groups.

(H4A) Contrary to the prediction that there are significant differences in career decision self-efficacy among the different R/EM groups, the analysis failed to detect significant differences in career decision self-efficacy among the various groups. The lack of statistically significant differences among the groups can be interpreted in several ways. Self-efficacy expectations are the products of experiences that one's outcomes are determined by one's actions. As such, according to this study, R/EMs may have the same or similar developmental experiences that are conducive to the development of self-efficacy that Whites have.

(H4B) Researchers (Brown, 1995; Gloria & Hird, 1999) agree that perception of discrimination may affect career self-efficacy. Consistent with the prediction made in this study, perceptions of discrimination were inversely related to career self-efficacy in the total sample. The results show that the higher the students' perception of discrimination the lower the career decision self-efficacy students reported. However, due to the correlational nature of this study, causal inferences are not warranted. These findings suggest that interventions designed to reduce perceptions of discrimination may prove valuable in increasing students' career decision self-efficacy.

A closer examination of the correlations between perceptions of discrimination and career self-efficacy revealed that the relationship was only significant for Asians Americans, while insignificant for African Americans, Hispanic Americans and Whites.

An additional important finding was the presence of a significant relationship between perceptions of discrimination and career difficulties. However, this relationship was only significant for Asian Americans.

In this study while Asian Americans perceived the lowest levels of discrimination, they had the lowest career decision self-efficacy scores. On the other hand while African Americans perceived that their R/EM group was subjected to the highest levels of discrimination compared to the other groups, they nonetheless reported the highest levels of career decision self-efficacy, the highest confidence in their career choice and the lowest levels of career difficulties.

One problem in the present study is that the sample size in some of the R/EM groups is relatively small, lowering the power to detect significant relationships. In addition, the significance of the correlation in the total group may be due to the influence of the significant correlation among Asian Americans. Asian Americans made up a relatively large portion of the total sample. They accounted for about a third of the sample, increasing the chances of finding a significant correlation in that group. However, further analysis of the correlation coefficient in the combined sample of African Americans, Asian Americans and Hispanics (N=154) shows that even by pooling the R/EM groups together, the relationship was not significant.

One question that can be asked is why are the correlations for Hispanics, Whites and especially for African Americans lower than the correlation for Asians. According to Nunnally and Bernstein (1994), dissimilarity in the shapes of the distributions of the two variables restrict the magnitude of the correlation. The extent of the restriction on the correlation depends on how dissimilar the shapes of the distributions of the two variables

are. In this study, the shapes of the distributions of the variables differ the most for the African Americans and for Whites. Nunnally and Bernstein further argue that when the shape of the two distributions is different and the correlation is based on a small number of subjects (i.e., 30 or less) the correlations are affected significantly. In this study, the size of the correlation especially for African Americans might be affected by the differences in the distribution shapes of the variables, especially since the sample size is low ($n=29$).

Research Question 1 investigated whether there were significant differences in career decision self-efficacy between males and females. No differences were revealed in this study. Although this finding contradicts the findings of Kraus and Hughey (1999) and Giankos (2001), the lack of gender differences in career decision self-efficacy is consistent with previous research by Betz and Klein Voyten (1997), Betz, Klein and Taylor (1996), Luzzo (1993), and Taylor and Betz (1983).

Twenty-five years ago, in their theoretical paper, Hackett and Betz (1981) postulated that career self-efficacy is lower in women than in men. They argued that since women's socialization experiences are different than men's socialization experiences, women lack strong career-related efficacy. However, the lack of significant differences in career decision self-efficacy implies that women may have the same or similar developmental experiences that are conducive to the development of self-efficacy that men have. On the other hand if women have different developmental experiences than men, those experiences are uniformly beneficial to the development of the belief that one is capable of completing the career decision task.

Research Question 2A, 2B and 2C investigated the strength and the direction of the relationship between career difficulties and cognitive ability. The relationship was not significant in the total sample. In addition, while the relationship was not significant for African Americans, Asians or Hispanics, the relationship was significant for Whites. In fact, there was a moderate inverse relationship between career difficulties and cognitive ability indicating that the higher White students' cognitive ability, the less career difficulties they reported.

The finding of a significant relationship for whites and not for the other R/EM groups is consistent with Fisher and Griggs's assertion that the career development of white Americans is influenced by objective attributes, while the career development of R/EMs is influenced by subjective attributes. Although in this study, causal inferences are not permitted due to the correlational design, in fact an objective measure such as GPA was a better predictor for Whites than for non-Whites.

While the relationship was not significant for females, the relationship was significant for males. The moderate inverse relationship between career difficulties and cognitive ability for males indicates that the higher male students' cognitive ability, the less career difficulties they experienced. This finding is inconsistent with Osipow and Waddel (1980, cited in Osipow 1987) and Williamson (1937) who reported an inverse relationship between career indecision and ability for females but not for males. Nonetheless, the presence of a moderate inverse relationship between career difficulties and cognitive ability for males may indicate that high-ability male students possess the cognitive ability necessary to match their skills with their career interests. Therefore, low

ability students may benefit from interventions designed to assist students in matching their skills with their career interests thereby reducing their career difficulties.

The lack of a relationship between career difficulties and cognitive ability for females may be consistent with the literature on the career development of women. According to Fassinger (1990), the career development of women is influenced by variables that are not related to the career development of men. For example, discrimination, sexual harassment, the anticipation of familial responsibilities and lack of child-care resources may pose as barriers to the career development of women (Osipow & Fitzgerald, 1996). Therefore, the career difficulties of women may be related to the perceived barriers more than to objective measures such as cognitive abilities. Accordingly, future research should explore the relationship between barriers to women's career development and the career difficulties experiences by women.

Moreover, cognitive ability was measured by using students' self-reports of their GPA. Therefore, it is possible that students' self-reported GPA was not accurate due to students' attempt to represent themselves in a more positive fashion. Future research should utilize a more objective measure of cognitive ability such as students' college records of GPA by obtaining students' permission to access their GPA.

The present study sought to present a coherent picture regarding the extent of career indecision and difficulties among various R/EM groups. **Research Question 3** investigated whether there were differences in the levels of career difficulties among the different ethnic groups. At a first glance, it appears that all groups experience moderate degrees of career difficulties. A more thorough evaluation reveals that Asian Americans reported significantly higher levels of career difficulties than African Americans,

Hispanics and Whites. This finding is interesting given that more Asian Americans have considered a major or occupation than African Americans, Hispanics, and Whites. This suggests that the mere consideration of a major or occupation does not preclude the presence of difficulties in making a career decision. Therefore, it appears that all the R/EM groups could benefit from interventions designed to reduce the extent of career difficulties experienced by students.

Although a higher percentage of African Americans have not considered a major or occupation than the other three groups, nonetheless, consistent with Slaney and Brown (1983), African Americans did experience the lowest levels of difficulties. In addition, although African Americans reported the highest level of confidence, there were no significant differences in confidence in decision regarding major or occupation among the various groups.

For the most part, the value of this study lies in the findings for the total group, as the sample size in the racial and ethnic groups was limited. Future investigations should design research to test whether the subgroup differences found in this study can be reproduced with larger samples in each subgroup.

Implications of the Present Study

The findings of the present study have potential implications for counselors. Given the moderate to strong relationship between career self-efficacy and career difficulties, interventions designed to increase career self-efficacy may assist in decreasing the extent to which students experience career decision difficulties. Since self-efficacy expectations are acquired via performance accomplishments, vicarious experiences, verbal persuasion, and emotional arousal, interventions focusing on these

factors may prove beneficial. For those students experiencing career decision difficulties, counselors can assist these students in formulating realistic career goals thereby bolstering students' career self-efficacy, as well as their confidence in their career decision.

Given the significant relationship between attachment to parents and career difficulties for African American students, and the nearly significant relationship for female students, it is important for counselors, especially those working with African Americans and female students with career difficulties, to assess the individuals' attachment to parents. Improving parental attachment relationships may reduce the career difficulties that individuals encounter. Alternatively, counselors may work with parents of students experiencing career difficulties so that parents become cognizant that their children's career difficulties may affect the nature of their attachment to their parents.

The significant relationship between anxiety and career decision self-efficacy has two practical implications. For individuals with low career self-efficacy, interventions aimed at increasing career self-efficacy may in turn reduce individuals' anxiety. Alternatively, for individuals with high levels of anxiety, counseling attempting to reduce individuals' anxiety may in turn improve career self-efficacy.

Regarding the perceptions of discrimination there are several practical implications for policy makers as well as for counselors. Policy makers need to be aware that African Americans and Hispanics still perceive that they are discriminated against. The health gap between African Americans and Whites has been attributed to the stress and frustration that are caused by discrimination (Papalia, Olds & Feldman, 2004). Furthermore, given the significant relationship between perceptions of discrimination and

career self-efficacy, all parties are to gain from workplace policies and practices that eliminate perceptions of discrimination. Employees stand to gain since the lowered perceptions of discrimination are likely to be related to increases in their career self-efficacy. Consequently, employers stand to gain since employees with higher career self-efficacy are likely to be more productive in the workplace.

The finding of a significant relationship between career difficulties and cognitive ability for whites and for males also bears a practical implication for counselors. Low ability students may be in a position to benefit from interventions designed to assist students in matching their skills and abilities with their career interests. Such interventions may prove beneficial by reducing the career decision-making difficulties that students encounter.

Although all the groups in this study reported moderate levels of career difficulties, the present study found that Asian Americans experience higher levels of career difficulties than the other R/EM groups. In coining effective interventions that cater to the needs of specific groups, career counselors should be aware that Asian Americans experience higher levels of career difficulties than other groups. Furthermore, future studies should investigate the reasons that Asian Americans experience higher levels of career difficulties.

Limitations of the Study and Future Directions

Although the study did find significant relationships among some of the variables a number of limitations be should be acknowledged. The sample in this study consisted of young college students in an ethnically diverse college with a prestigious business schools. Future studies should utilize young as well as older samples in order to improve

the generalizability of the findings. In addition, the data were collected at one regional college; the findings may not generalize to other less ethnically heterogeneous university settings. Furthermore, due to the reputation of the college as a business-oriented college, the findings may not generalize to colleges specializing in /non-business fields

In the present study, as mentioned earlier, the analyses utilized global career difficulties scores and global ethnic identity scores since the statistical findings based on the SEM models did not justify the utilization of the career difficulties and the ethnic identity subscale scores. Therefore, it is possible that specific components of career difficulties might have been related to attachment scores and/or the subscale attachment scores.

One limitation previously acknowledged is that cognitive ability was assessed by students' self report of their GPA. Students' self-report of their GPA may not be accurate. Some may not remember their GPA and others may distort their GPA by reporting a higher GPA. Therefore, future studies should measure cognitive ability more objectively. One way to do so would be to actually measure cognitive ability using available tests. An alternative would be to gain students' authorization to obtain their GPA through their college records.

As mentioned earlier, due to the correlational nature of the study, causal inferences regarding the relationships among the variables are not warranted. In addition, the present study was a cross sectional study. Future studies using adult samples could present further insight into the long-term influence of parental attachment. Furthermore, longitudinal studies can analyze the influence of parental attachments throughout the lifespan including childhood, adolescence and adulthood.

The exclusive use of self-report pencil and paper scales to assess the variables in question is another limitation. Self-reports are subjective measures. As such individuals' responses may be influenced by unconscious distortions or poor recollections of experiences. In addition, Individuals willing to fill out questionnaires are not representative of the population thereby affecting the generalizability of the findings.

Another problem, previously mentioned, is that the sample size in most of the R/EM groups was relatively small, lowering the power to detect significant relationships. In addition, due to the relatively small sample sizes, the power to detect differences in correlation coefficients may be less than optimal. Therefore, future studies should utilize larger samples of R/EMs in order to increase the power of the various analyses.

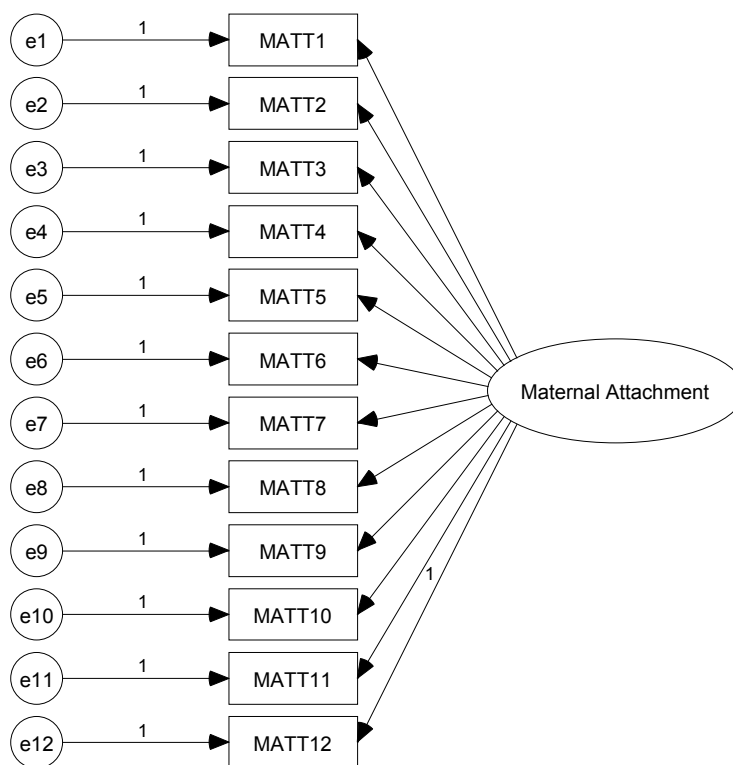


Figure 1. Hypothesized model of factorial structure for the IPPA mother scale.

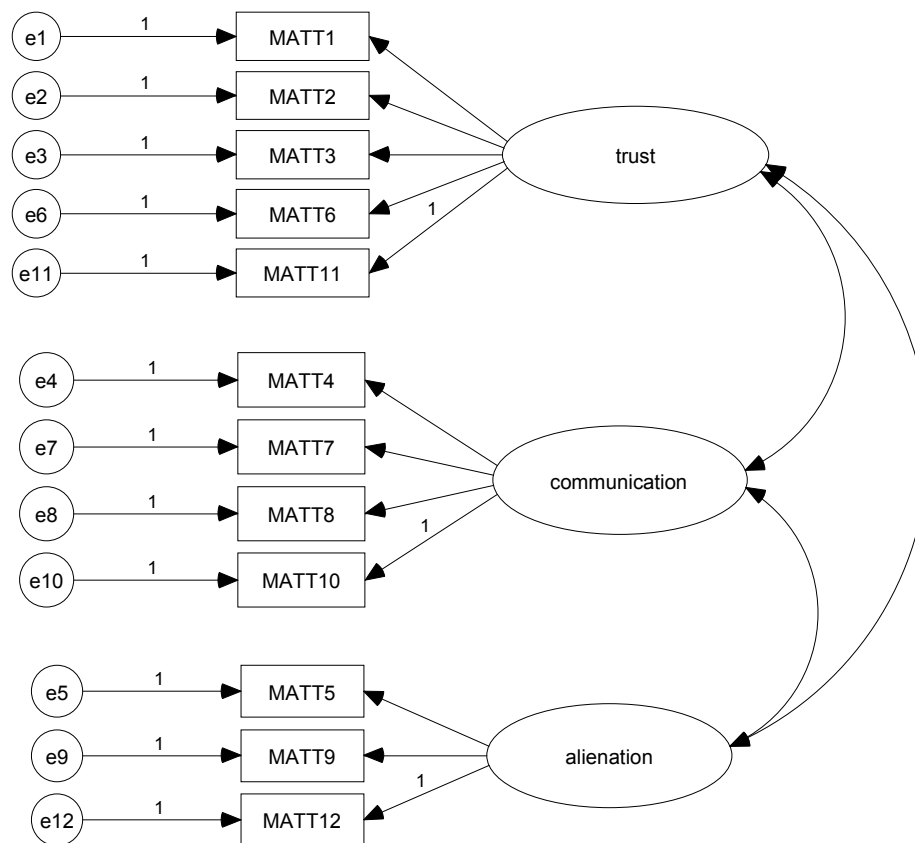


Figure 2. Revised model of factorial structure for the IPPA mother scale.

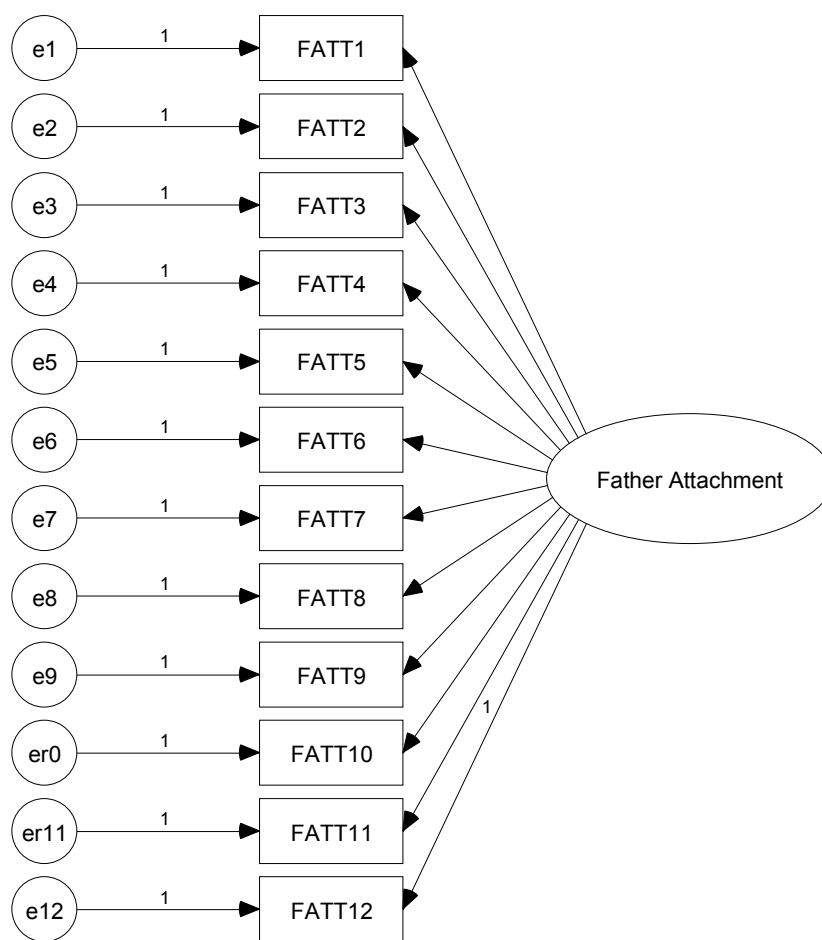


Figure 3 . Hypothesized model of factorial structure for the IPPA father scale.

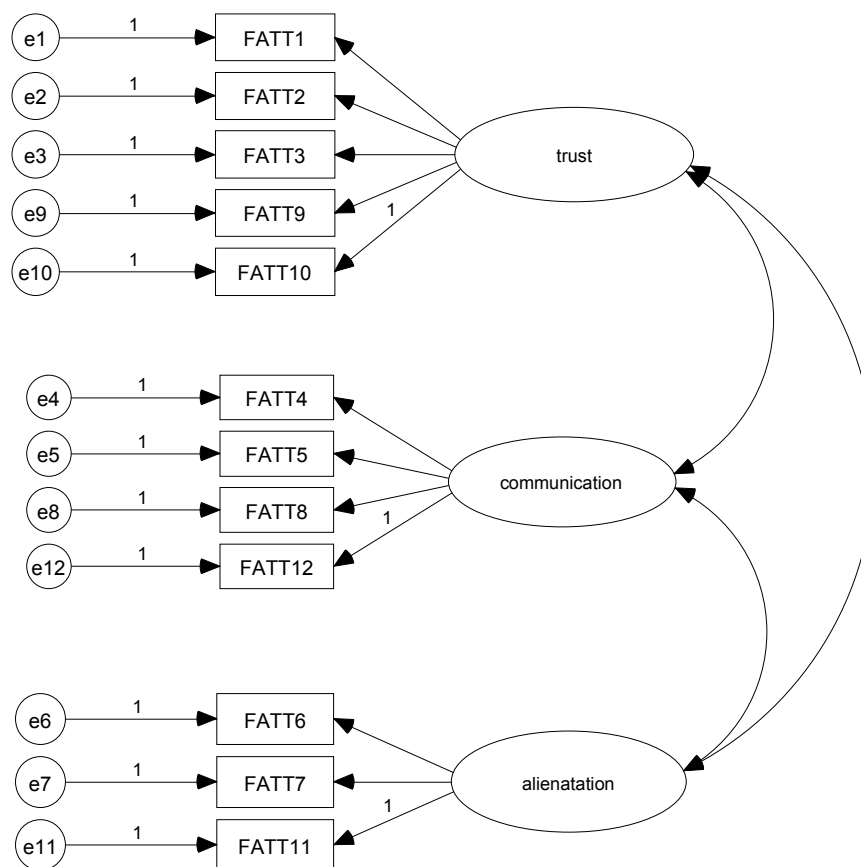


Figure 4. Revised model of factorial structure for the IPPA father scale.

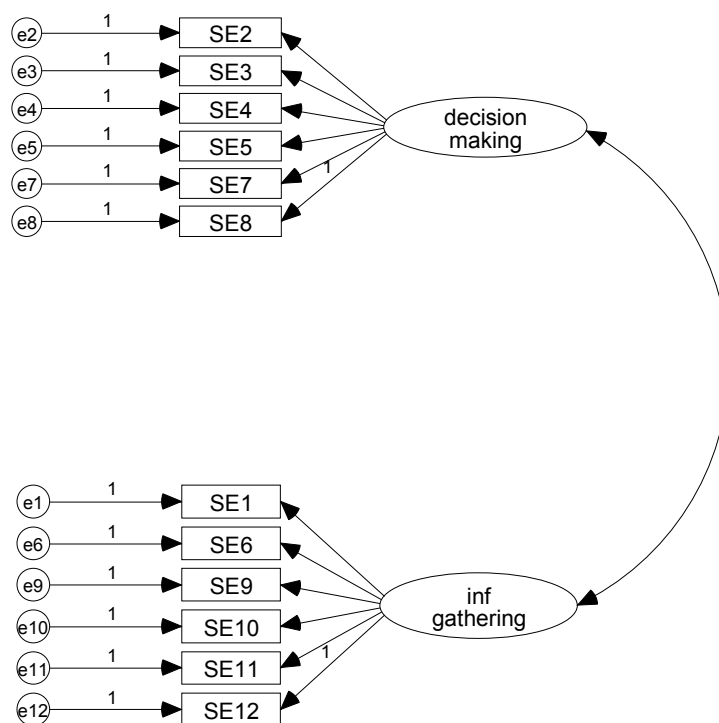


Figure 5. Hypothesized model of factorial structure for the Career Decision Self-Efficacy Scale.-R

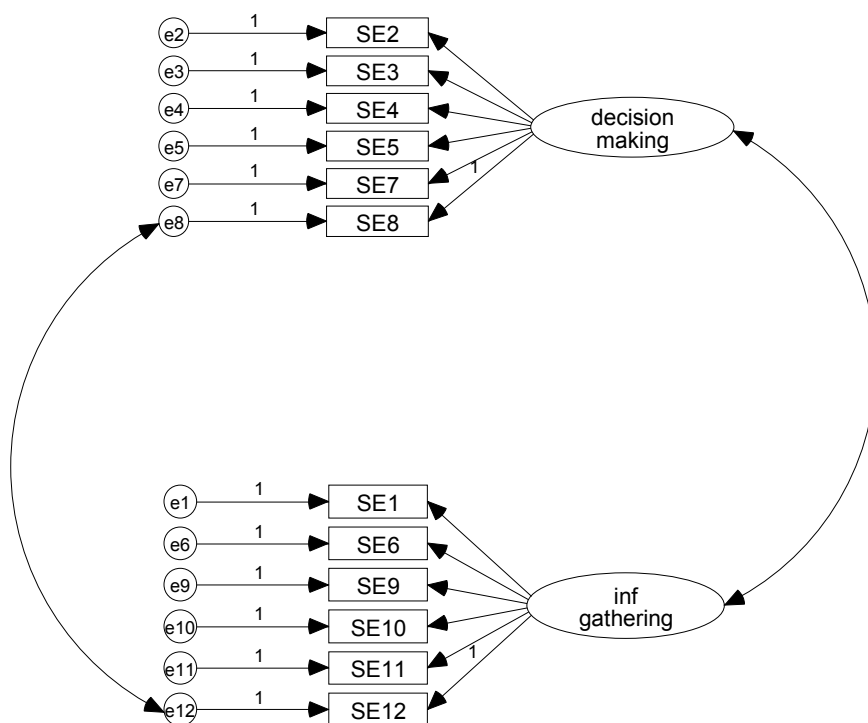


Figure 6. Revised model of factorial structure for the Career Decision Self-Efficacy Scale-R.

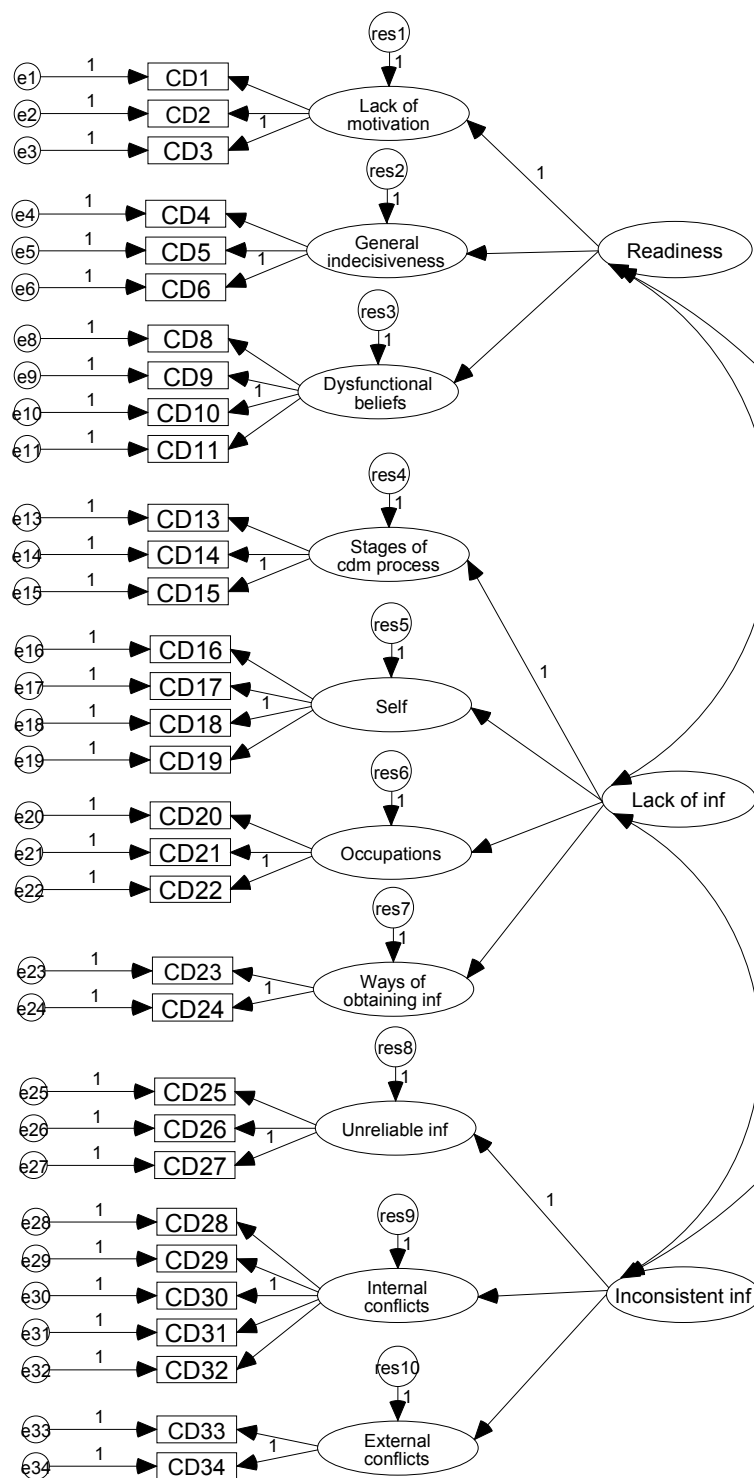


Figure 7. Hypothesized model of factorial structure for the Career Decision Difficulties Questionnaire.

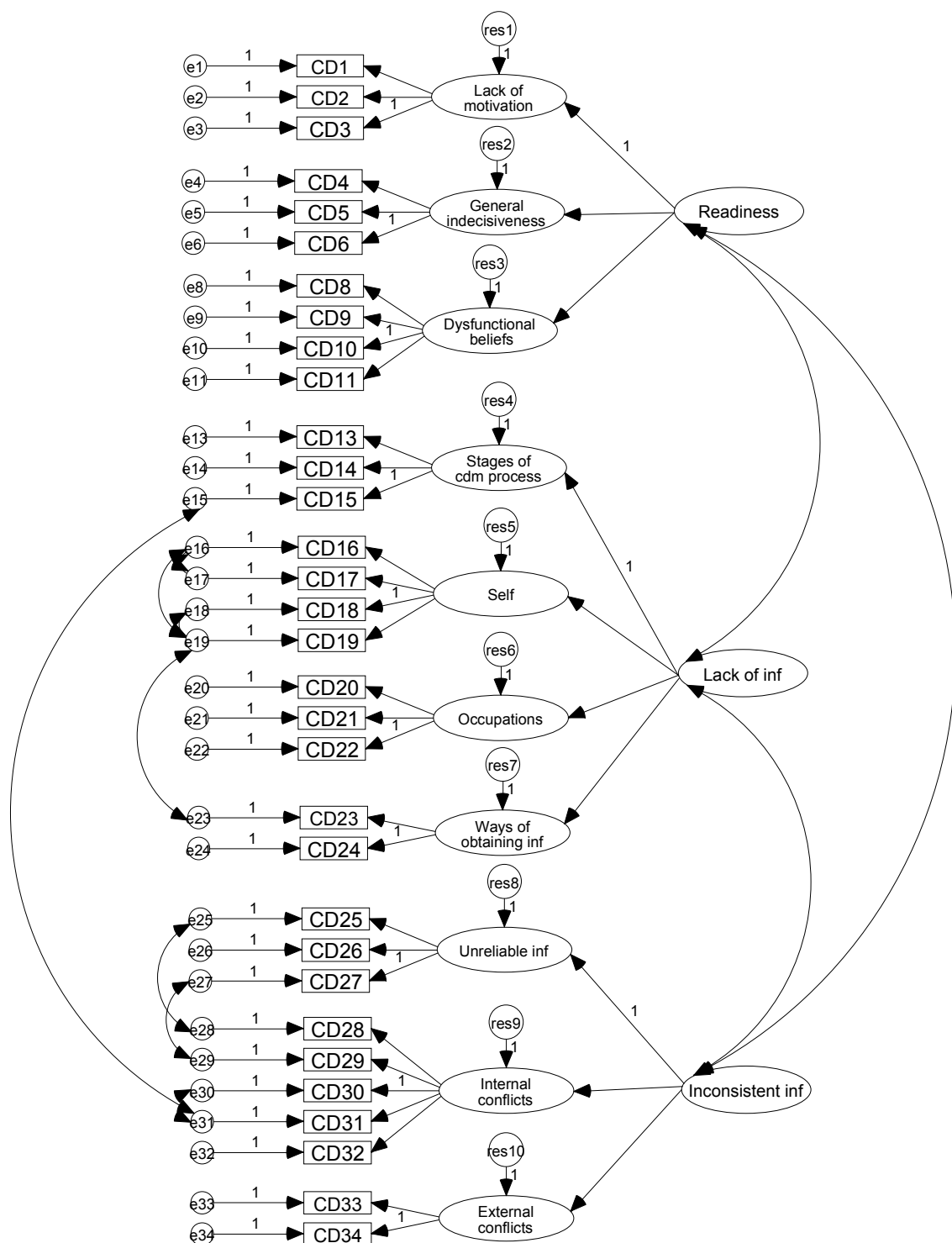


Figure 8. Revised model of factorial structure for the Career Decision Difficulties Questionnaire.

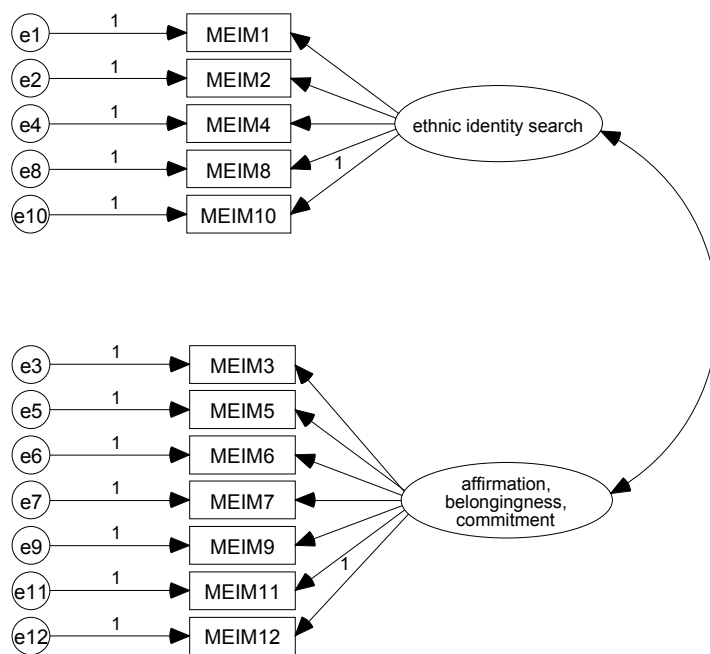


Figure 9. Hypothesized model of factorial structure for the Multigroup Ethnic Identity Measure.

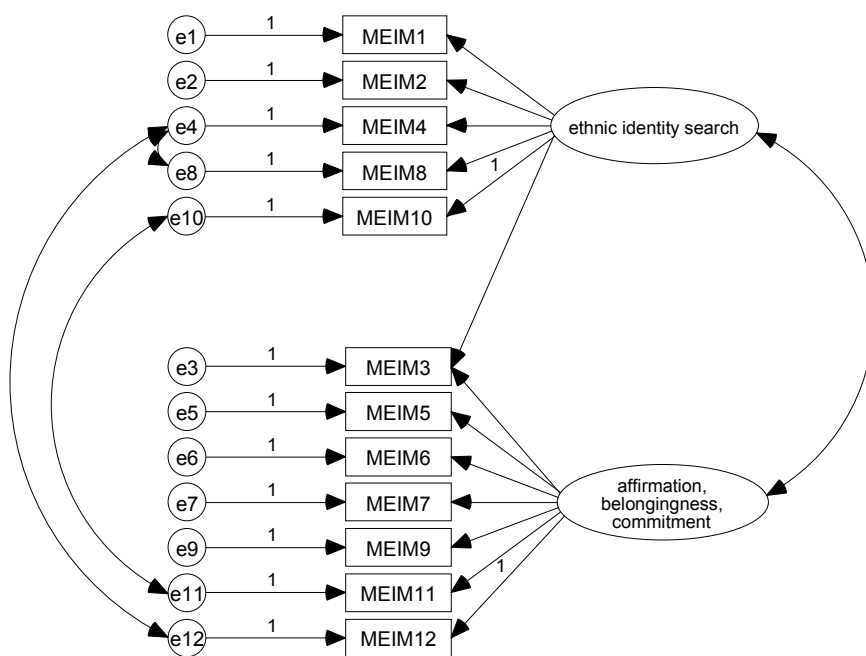


Figure 10 . Revised model of factorial structure for the Multigroup Ethnic Identity Measure.

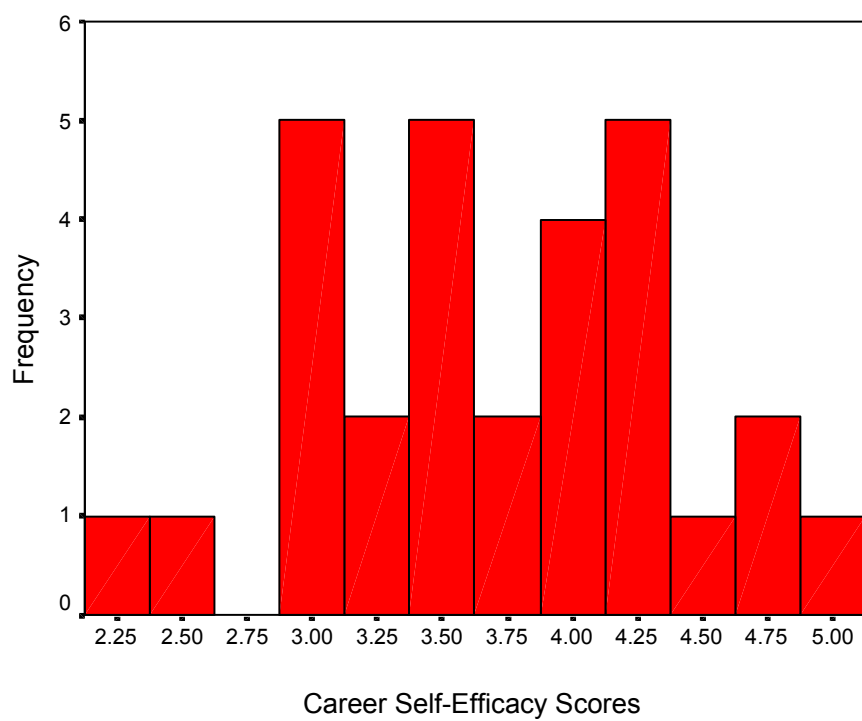
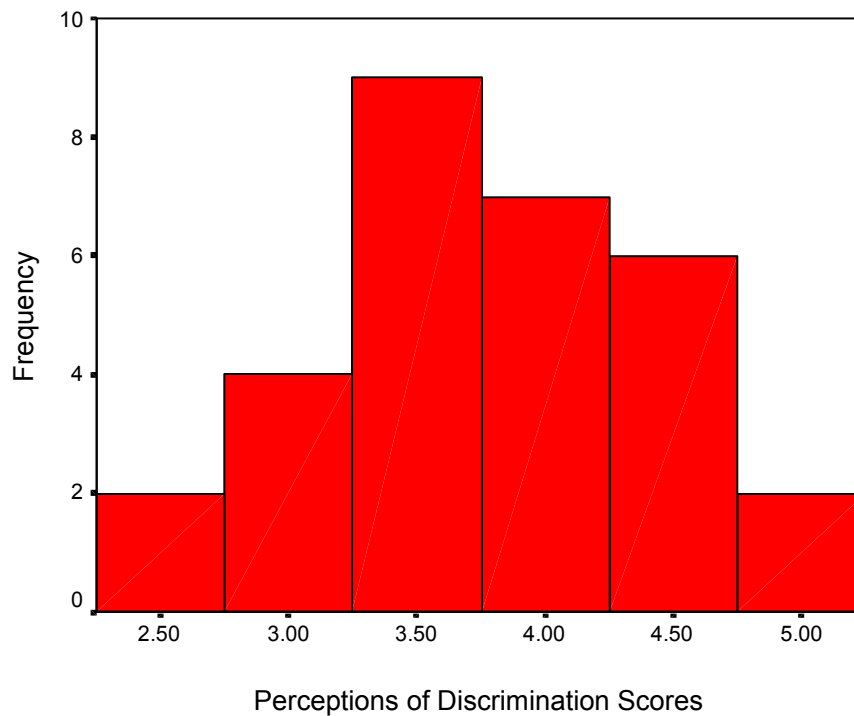


Figure 11. Distributions of Career Self-Efficacy Scores and Perceptions of Discrimination Scores for African Americans.

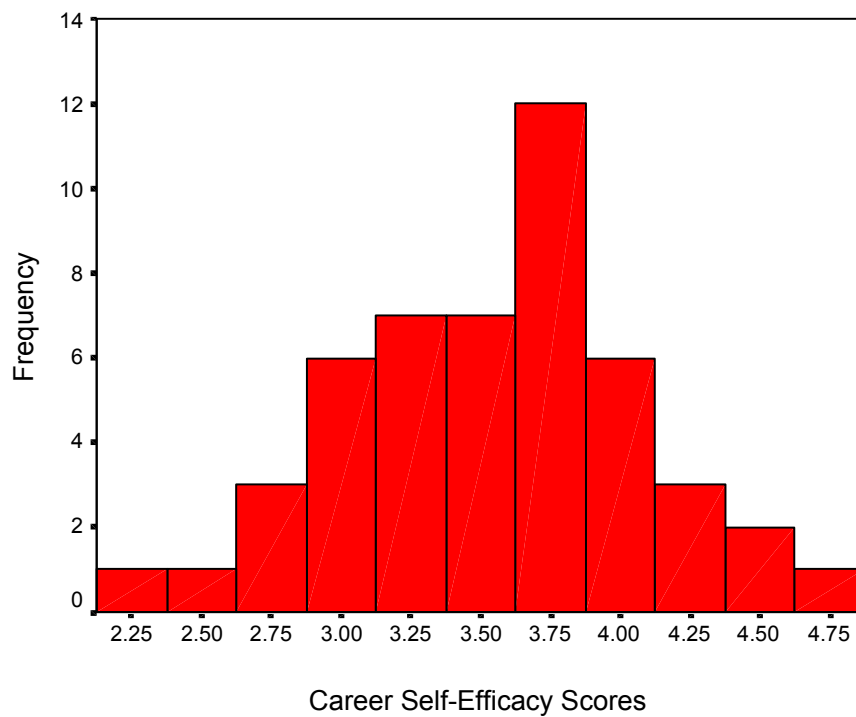
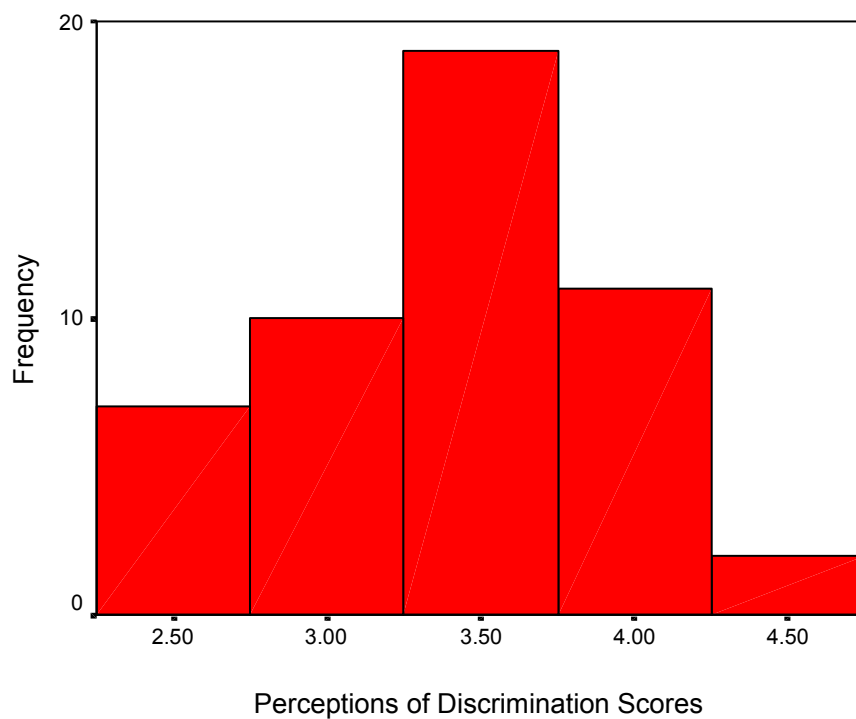


Figure 12. Distributions of Career Self-Efficacy Scores and Perceptions of Discrimination Scores for Hispanics.

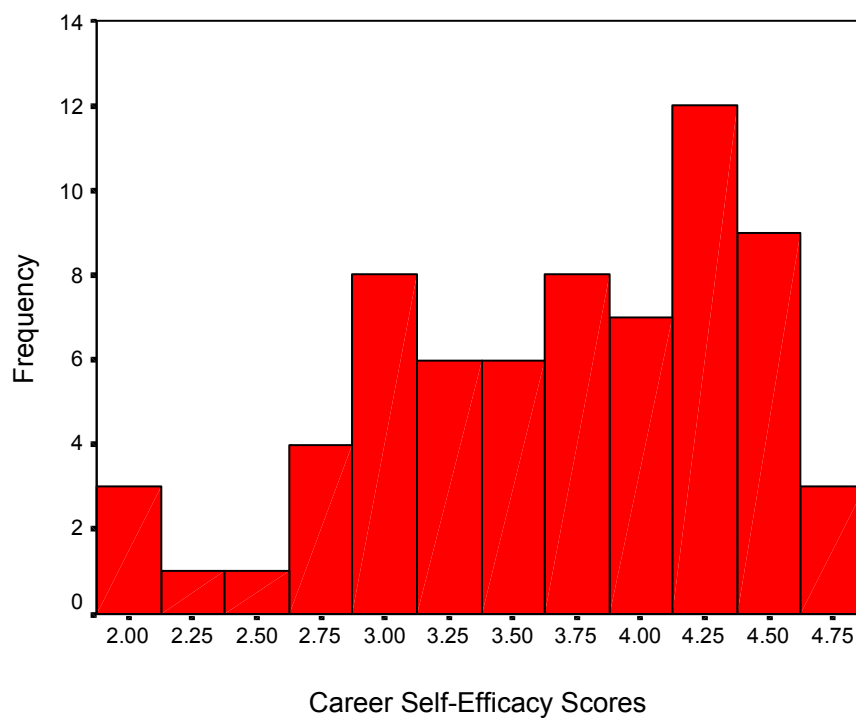
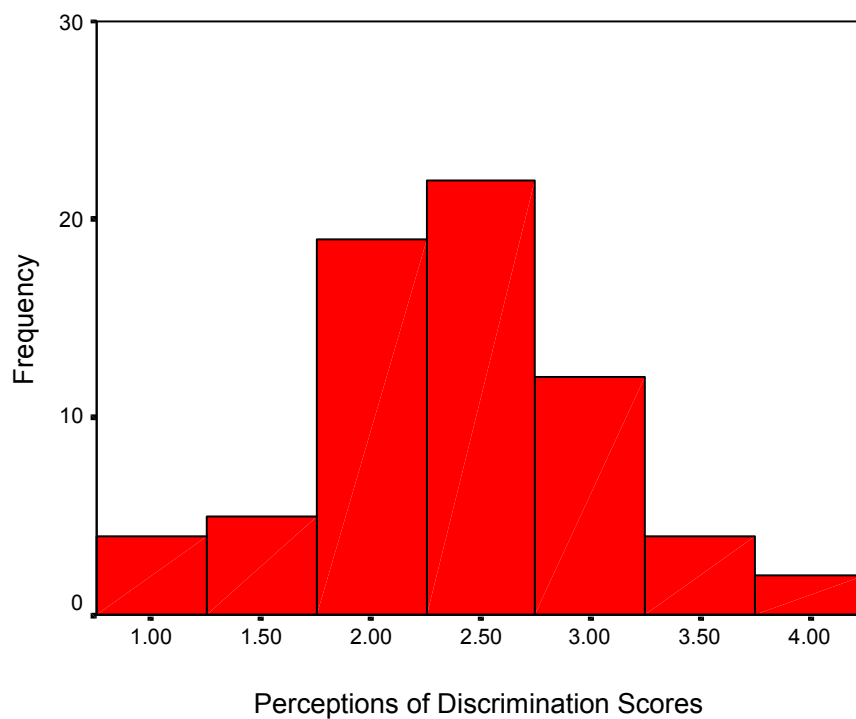


Figure 13. Distributions of Career Self-Efficacy Scores and Perceptions of Discrimination Scores for Whites.

Appendix A

Questionnaire Administered in Stage I

The following questions ask about your mother. If you have more than one person acting as your mother (e.g. a natural mother and a step-mother) answer the questions for the one you feel has most influenced you. If there has been no one occupying the role of a mother at any point, please leave questions blank.

Please read each statement and circle the one number that tells how true the statement is for you now on your answer sheet.

	Almost Never or Never True	Not Very Often True	Sometimes True	Often True	Almost Always or Always True
1. My mother respects my feelings.	1	2	3	4	5
2. I feel my mother does a good job as my mother.	1	2	3	4	5
3. I wish I had a different mother.	1	2	3	4	5
4. My mother accepts me as I am.	1	2	3	4	5
5. I like to get my mother's point of view on things I'm concerned about.	1	2	3	4	5
6. I feel it's no use letting my feelings show around my mother.	1	2	3	4	5
7. My mother can tell when I'm upset about something.	1	2	3	4	5
8. Talking over my problems with my mother makes me feel ashamed or foolish.	1	2	3	4	5
9. My mother expects too much from me.	1	2	3	4	5
10. I get upset easily around my mother.	1	2	3	4	5
11. I get upset a lot more than my mother knows about.	1	2	3	4	5
12. When I discuss things, my mother cares about my point of view.	1	2	3	4	5
13. My mother trusts my judgment.	1	2	3	4	5
14. My mother has her own problems, so I don't bother her with mine.	1	2	3	4	5
15. My mother helps me to understand myself better.	1	2	3	4	5
16. I tell my mother about my problems and troubles.	1	2	3	4	5
17. I feel angry with my mother.	1	2	3	4	5
18. I don't get much attention from my mother.	1	2	3	4	5
19. My mother helps me to talk about my difficulties.	1	2	3	4	5
20. My mother understands me.	1	2	3	4	5
21. When I am angry about something, my mother tries to be understanding.	1	2	3	4	5
22. I trust my mother.	1	2	3	4	5
23. My mother doesn't understand what I'm going through these days.	1	2	3	4	5
24. I can count on my mother when I need to get something off my chest.	1	2	3	4	5
25. If my mother knows something is bothering me, she asks me about it	1	2	3	4	5

The following questions ask about your father. If you have more than one person acting as your father (e.g. a natural father and a step-father) answer the questions for the one you feel has most influenced you. If there has been no one occupying the role of a father at any point, please leave questions blank.

Please read each statement and circle the one number that tells how true the statement is for you now on your answer sheet.

	Almost Never Or Never True	Not Very Often True	Sometimes True	Often True	Almost Always Or Always True
26. My father respects my feelings.	1	2	3	4	5
27. I feel my father does a good job as my father.	1	2	3	4	5
28. I wish I had a different father.	1	2	3	4	5
29. My father accepts me as I am.	1	2	3	4	5
30. I like to get my father's point of view on things I'm concerned about.	1	2	3	4	5
31. I feel it's no use letting my feelings show around my father.	1	2	3	4	5
32. My father can tell when I'm upset about something.	1	2	3	4	5
33. Talking over my problems with my father makes me feel ashamed or foolish.	1	2	3	4	5
34. My father expects too much from me.	1	2	3	4	5
35. I get upset easily around my father.	1	2	3	4	5
36. I get upset a lot more than my father knows about.	1	2	3	4	5
37. When I discuss things, my father cares about my point of view.	1	2	3	4	5
38. My father trusts my judgment.	1	2	3	4	5
39. My father has his own problems, so I don't bother him with mine.	1	2	3	4	5
40. My father helps me to understand myself better.	1	2	3	4	5
41. I tell my father about my problems and troubles.	1	2	3	4	5
42. I feel angry with my father.	1	2	3	4	5
43. I don't get much attention from my father.	1	2	3	4	5
44. My father helps me to talk about my difficulties.	1	2	3	4	5
45. My father understands me.	1	2	3	4	5
46. When I am angry about something, my father tries to be understanding.	1	2	3	4	5
47. I trust my father.	1	2	3	4	5
48. My father doesn't understand what I'm going through these days.	1	2	3	4	5
49. I can count on my father when I need to get something off my chest.	1	2	3	4	5
50. If my father knows something is bothering me, he asks me about it	1	2	3	4	5

Please answer the following questions about yourself. This information will be helpful in analyzing the questionnaire data.

What is your age? _____

What is your gender?

1. female
2. male

What is your employment status?

1. currently employed
2. currently not employed

What is your GPA?

1. 3.7-4.0
2. 3.0-3.6
3. 2.0-2.9
4. under 2.0

What is your race/ethnicity?

1. African American or Black
2. Asian American or Asian
3. Latino or Hispanic
4. Native American
5. White or Caucasian
6. Other, please specify _____

The following questions ask about your parents. Parents refer to the parents with whom you are currently living or were last living, biological parents or stepparents.

Do your parents own their home?

1. yes
2. no

What is the total yearly income before taxes of your parents? Parental income includes money received by parents from all sources such as work, rent, social security payments, interest and any other sources of income.

1. \$9,999 or less
2. \$10,000 - \$19,999
3. \$20,000 - \$29,999
4. \$30,000 - \$39,999
5. \$40,000 - \$49,999
6. \$50,000 - \$59,999
7. \$60,000 - \$69,999
8. \$70,000 or more

What is the level of education completed by your father?

1. less than seventh grade
2. junior high school (9th grade)
3. high school (10th or 11th grade)
4. high school graduate
5. partial college or specialized training
6. graduate of standard college or university
7. post-graduate professional training

What is the level of education completed by your mother?

1. less than seventh grade
2. junior high school (9th grade)
3. high school (10th or 11th grade)
4. high school graduate
5. partial college or specialized training
6. graduate of standard college or university
7. post-graduate professional training

What is the race/ethnicity of your mother?

1. African American or Black
2. Asian American or Asian
3. Latino or Hispanic
4. Native American
5. White or Caucasian
6. Other, please specify _____

What is the race/ethnicity of your father?

1. African American or Black
2. Asian American or Asian
3. Latino or Hispanic
4. Native American
5. White or Caucasian
6. Other, please specify _____

Appendix B

Questionnaire Administered to Students in Stage II

The following questions ask about your mother¹¹. If you have more than one person acting as your mother (e.g. a natural mother and a step-mother), please answer the questions for the one you feel has most influenced you. If there has been no one occupying the role of a mother at any point, please leave questions blank. Please read each statement and circle the one number that tells how true the statement is for you now.

	Almost Never or Never True	Not Very Often True	Sometimes True	Often True	Almost Always or Always True
1. My mother respects my feelings.	1	2	3	4	5
2. I feel my mother does a good job as my mother.	1	2	3	4	5
3. My mother accepts me as I am.	1	2	3	4	5
4. I like to get my mother's point of view on things I'm concerned about.	1	2	3	4	5
5. I get upset easily around my mother.	1	2	3	4	5
6. When I discuss things, my mother cares about my point of view.	1	2	3	4	5
7. My mother helps me to understand myself better.	1	2	3	4	5
8. I tell my mother about my problems and troubles.	1	2	3	4	5
9. I feel angry with my mother.	1	2	3	4	5
10. My mother helps me to talk about my difficulties.	1	2	3	4	5
11. My mother understands me.	1	2	3	4	5
12. My mother doesn't understand what I'm going through these days.	1	2	3	4	5

¹¹ Short form of the mother Inventory of Parent and Peer Attachment.

The following questions ask about your father¹². If you have more than one person acting as your father (e.g. a natural father and a step-father), please answer the questions for the one you feel has most influenced you. If there has been no one occupying the role of a father at any point, please leave questions blank.

Please read each statement and circle the one number that tells how true the statement is for you now.

	Almost Never or Never True	Not Very Often True	Sometimes True	Often True	Almost Always or Always True
1. My father respects my feelings.	1	2	3	4	5
2. I feel my father does a good job as my father.	1	2	3	4	5
3. When I discuss things, my father cares about my point of view.	1	2	3	4	5
4. My father helps me to understand myself better.	1	2	3	4	5
5. I tell my father about my problems and troubles.	1	2	3	4	5
6. I feel angry with my father.	1	2	3	4	5
7. I don't get much attention from my father.	1	2	3	4	5
8. My father helps me to talk about my difficulties.	1	2	3	4	5
9. My father understands me.	1	2	3	4	5
10. When I am angry about something, my father tries to be understanding.	1	2	3	4	5
11. My father doesn't understand what I'm going through these days.	1	2	3	4	5
12. If my father knows something is bothering me, he asks me about it	1	2	3	4	5

¹² Sort form of the father Inventory of Parent and Peer Attachment.

Please read each statement below and indicate whether it is True or False for you¹³. If you are uncertain, decide which is more applicable to how you feel at the moment.

1. I often find myself worrying about something.	True	False
2. At times I lose sleep over worry.	True	False
3. At times I feel that I am going to crack up.	True	False
4. I feel anxious about something or someone almost all the time.	True	False
5. I work under a great deal of strain.	True	False
6. I worry quite a bit over possible troubles.	True	False
7. At times I have been worried beyond reason about something that really did not matter.	True	False
8. I am the kind of person who takes things hard.	True	False
9. My feelings are hurt easier than most people.	True	False
10. I find it hard to keep my mind on a task or job.	True	False
11. Life is often a strain to me.	True	False
12. I am more self-conscious than most people.	True	False
13. I have often felt that I faced so many difficulties that I could not overcome them.	True	False

¹³ Items 1-13 form the unidimensional short form of the Taylor Manifest Anxiety Scale.

For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks¹⁴.

	No Confidence at all	Very Little Confidence	Moderate Confidence	Much Confidence	Complete Confidence
1. Find information in the library about occupations you are interested in.	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. Select one occupation from a list of potential occupations you are considering.	1	2	3	4	5
5. Determine what your ideal job would be.	1	2	3	4	5
6. Find out the employment trends for an occupation over the next ten years.	1	2	3	4	5
7. Choose a career that will fit your preferred lifestyle.	1	2	3	4	5
8. Make a career decision and then not worry whether it was right or wrong.	1	2	3	4	5
9. Talk with a person already employed in a field you are interested in.	1	2	3	4	5
10. Identify employers, firms, and institutions relevant to your career possibilities.	1	2	3	4	5
11. Find information about graduate or professional schools.	1	2	3	4	5
12. Successfully manage the job interview process.	1	2	3	4	5

¹⁴ Items 1-12 are part of the short form of the Career Decision Self-Efficacy Scale.

The following questions ask about your career decision-making process¹⁵.

1. Have you considered what field you would like to major in or what occupation you would like to choose? *Yes / No*

2. If so, please rate to what extent are you confident of your choice?

Not confident at all 1 2 3 4 5 6 7 8 9 *Very confident*

Next, you will be presented with a list of statements concerning the career decision-making process. Please rate the degree to which each statement applies to you on the following scale:

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

Circle 1 if the statement does not describe you and 9 if it describes you well. Of course, you may also circle any of the intermediate levels.

3. I know that I have to choose a career, but I don't have the motivation to make the decision now ("I don't feel like it").

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

4. Work is not the most important thing in one's life and therefore the issue of choosing a career doesn't worry me much.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

5. I believe that I do not have to choose a career now because time will lead me to the "right" career choice.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

6. It is usually difficult for me to make decisions.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

7. I usually feel that I need confirmation and support for my decisions from a professional person or somebody else I trust.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

8. I am usually afraid of failure.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

9. I like to do things my own way.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

¹⁵ Items 1 – 37 form the Career Decision Difficulties Questionnaire.

10. I expect that entering the career I choose will also solve my personal problems.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

11. I believe there is only one career that suits me.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

12. I expect that through the career I choose I will fulfill all my aspirations.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

13. I believe that a career choice is a one-time choice and a life-long commitment.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

14. I always do what I am told to do, even if it goes against my own will.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

15. I find it difficult to make a career decision because I do not know what steps I have to take.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

16. I find it difficult to make a career decision because I do not know what factors to take into consideration.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

17. I find it difficult to make a career decision because I don't know how to combine the information I have about myself with the information I have about the different careers.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

18. I find it difficult to make a career decision because I still do not know which occupations interest me.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

19. I find it difficult to make a career decision because I am not sure about my career preferences yet (for example, what kind of a relationship I want with people, which working environment I prefer).

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

20. I find it difficult to make a career decision because I do not have enough information about my competencies (for example, numerical ability, verbal skills) and/or about my personality traits (for example, persistence, initiative, patience).

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

21. I find it difficult to make a career decision because I do not know what my abilities and/or personality traits will be like in the future.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

22. I find it difficult to make a career decision because I do not have enough information about the variety of occupations or training programs that exist.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

23. I find it difficult to make a career decision because I do not have enough information about the characteristics of the occupations and/or training programs that interest me (for example, the market demand, typical income, possibilities of advancement, or a training program's prerequisites).

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

24. I find it difficult to make a career decision because I don't know what careers will look like in the future.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

25. I find it difficult to make a career decision because I do not know how to obtain additional information about myself (for example, about my abilities or my personality traits).

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

26. I find it difficult to make a career decision because I do not know how to obtain accurate and updated information about the existing occupations and training programs, or about their characteristics.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

27. I find it difficult to make a career decision because I constantly change my career preferences (for example, sometimes I want to be self-employed and sometimes I want to be an employee).

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

28. I find it difficult to make a career decision because I have contradictory data about my abilities and/or personality traits (for example, I believe I am patient with other people but others say I am impatient).

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

29. I find it difficult to make a career decision because I have contradictory data about the existence or the characteristics of a particular occupation or training program.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

30. I find it difficult to make a career decision because I'm equally attracted by a number of careers and it is difficult for me to choose among them.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

31. I find it difficult to make a career decision because I do not like any of the occupation or training programs to which I can be admitted.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

32. I find it difficult to make a career decision because the occupation I am interested in involves a certain characteristic that bothers me (for example, I am interested in medicine, but I do not want to study for so many years).

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

33. I find it difficult to make a career decision because my preferences cannot be combined in one career, and I do not want to give any of them up (e.g., I'd like to work as a free-lancer, but I also wish to have a steady income).

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

34. I find it difficult to make a career decision because my skills and abilities do not match those required by the occupation I am interested in.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

35. I find it difficult to make a career decision because people who are important to me (such as parents or friends) do not agree with the career options I am considering and/or the career characteristics I desire.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

36. I find it difficult to make a career decision because there are contradictions between the recommendations made by different people who are important to me about the career that suits me or about what career characteristics should guide my decisions.

Does not describe me 1 2 3 4 5 6 7 8 9 *Describes me well*

37. Finally, how would you rate the degree of your difficulty in making a career decision?

Low 1 2 3 4 5 6 7 8 9 *High*

For each statement below, please indicate how much you agree or disagree with each statement¹⁶.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.	1	2	3	4	5
2. I am active in organizations or social groups that include mostly members of my own ethnic group.	1	2	3	4	5
3. I have a clear sense of my ethnic background and what it means for me.	1	2	3	4	5
4. I think a lot about how my life will be affected by my ethnic group membership.	1	2	3	4	5
5. I am happy that I am a member of the group I belong to.	1	2	3	4	5
6. I have a strong sense of belonging to my own ethnic group.	1	2	3	4	5
7. I understand pretty well what my ethnic group membership means to me.	1	2	3	4	5
8. In order to learn more about my ethnic background, have often talked to other people about my ethnic group.	1	2	3	4	5
9. I have a lot of pride in my ethnic group.	1	2	3	4	5
10. I participate in cultural practices of my own group, such as special food, music, or customs.	1	2	3	4	5
11. I feel a strong attachment towards my own ethnic group.	1	2	3	4	5
12. I feel good about my cultural or ethnic background.	1	2	3	4	5

¹⁶ Items 1-12 form the Multigroup Ethnic Identity Measure.

The following items will be used to assess perceptions regarding the context of employment¹⁷. For each statement below, please indicate how much you agree or disagree with each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I believe that people of my ethnicity are not well represented in the professions.	1	2	3	4	5
2. I believe that career barriers limit the employment prospect of my ethnic group.	1	2	3	4	5
3. I believe that hiring practices don't discriminate against people of my ethnic group.	1	2	3	4	5
4. I believe that there are ample networking contacts available to people of my ethnic group that will help me in the context of employment.	1	2	3	4	5

¹⁷ Items 1-4 assess perceptions regarding employment discrimination.

Please answer the following questions about yourself. This information will be helpful in analyzing the questionnaire data.

What is your age? _____

What is your gender?

1. female
2. male

What is your employment status?

1. currently employed
2. currently not employed

What is your GPA?

1. 3.7-4.0
2. 3.0-3.6
3. 2.0-2.9
4. under 2.0
5. this is my first semester in college – I don't have a GPA

What is your race/ethnicity?

1. African American or Black
2. Asian American or Asian, including Chinese, Japanese, and others
3. Latino or Hispanic, including Mexican American, Central American, and others
4. Native American
5. White, Caucasian, Anglo, European American
6. Other, please specify _____

The following questions ask about your parents. Parents refer to the parents with whom you are currently living or were last living, biological parents or stepparents.

Do your parents own their home?

1. yes
2. no

What is the total yearly income before taxes of your parents? Parental income includes money received by parents from all sources such as work, rent, social security payments, interest and any other sources of income.

1. \$9,999 or less
2. \$10,000 - \$19,999
3. \$20,000 - \$29,999
4. \$30,000 - \$39,999
5. \$40,000 - \$49,999
6. \$50,000 - \$59,999
7. \$60,000 - \$69,999
8. \$70,000 or more

What is the level of education completed by your father?

1. less than seventh grade
2. junior high school (9th grade)
3. high school (10th or 11th grade)
4. high school graduate
5. partial college or specialized training
6. graduate of standard college or university
7. post-graduate professional training

What is the level of education completed by your mother?

1. less than seventh grade
2. junior high school (9th grade)
3. high school (10th or 11th grade)
4. high school graduate
5. partial college or specialized training
6. graduate of standard college or university
7. post-graduate professional training

What is the race/ethnicity of your mother?

1. African American or Black
2. Asian American or Asian, including Chinese, Japanese, and others
3. Latino or Hispanic, including Mexican American, Central American, and others
4. Native American
5. White, Caucasian, Anglo, European American
6. Other, please specify _____

What is the race/ethnicity of your father?

1. African American or Black
2. Asian American or Asian, including Chinese, Japanese, and others
3. Latino or Hispanic, including Mexican American, Central American, and others
4. Native American
5. White, Caucasian, Anglo, European American
6. Other, please specify _____

Appendix C

Descriptive Statistics and Zero-Order Correlations

Descriptive Statistics for Total Sample

Variable	<i>M</i>	<i>SD</i>
Mother. Attachment	3.63	.70
Mother Trust	3.99	.75
Mother Communication	3.18	.96
Mother Alienation	3.63	.81
Father Attachment	3.19	.87
Father Trust	3.39	1.00
Father Communication	2.66	1.04
Father Alienation	3.55	.89
Anxiety	.50	.23
Career Self-Efficacy	3.59	.64
Career. Difficulties	3.99	1.32
Ethnic Identity	3.69	.70
Perceived Discrimination	2.96	.77
Age	20.07	2.95
Gender	.55	.50
Employment Status	.59	.49
GPA	3.79	1.17
Home Ownership	.55	.50
Income	4.64	2.36
Mother Education	4.38	1.57
Father Education	4.42	1.74

Note. Gender was dummy-coded: 1, female; 0 male. Employment Status was dummy coded: 1, currently employed; 0, currently not employed. GPA was dummy coded: 1, 3.7-4.0; 2, 3.0-3.6; 3, 2.0-2.9; 4, under 2.0; 5, don't have GPA (first semester). Home own. was dummy coded: 1, yes; 0, no. Income was dummy coded: 1, \$9,999 or less; 2, \$10,000 - \$19,999; 3, \$20,000 - \$29,999; 4, \$30,000 - \$39,999; 5, \$40,000 - \$49,999; 6, \$50,000 - \$59,999; 7, \$60,000 - \$69,999; 8, \$70,000 or more. Mother Education and Father Education were dummy coded: 1, less than seventh grade; 2, junior high school (9th grade); 3, high school (10th or 11th grade); 4, high school graduate; 5, partial college or specialized training; 6, graduate of standard college or university; 7, post-graduate professional training.

Descriptive Statistics for African Americans

Variable	<i>M</i>	<i>SD</i>
Mother. Attachment	3.82	.74
Mother Trust	4.15	.78
Mother Communication	3.34	1.05
Mother Alienation	3.92	.71
Father Attachment	2.88	1.03
Father Trust	3.16	1.11
Father Communication	2.33	1.13
Father Alienation	3.15	1.14
Anxiety	.45	.25
Career Self-Efficacy	3.71	.66
Career Difficulties	3.52	1.26
Ethnic Identity	3.81	.55
Perceived Discrimination	3.67	.70
Age	21.07	4.56
Gender	.77	.43
Employment Status	.60	.50
GPA	3.33	1.03
Home Ownership	.50	.51
Income	5.07	2.25
Mother Education	4.60	1.63
Father Education	4.28	1.65

Note. Gender was dummy-coded: 1, female; 0, male. Employment Status was dummy coded: 1, currently employed; 0, currently not employed. GPA was dummy coded: 1, 3.7-4.0; 2, 3.0-3.6; 3, 2.0-2.9; 4, under 2.0; 5, don't have GPA (first semester). Home ownership was dummy coded: 1, yes; 0, no. Income was dummy coded: 1, \$9,999 or less; 2, \$10,000 - \$19,999; 3, \$20,000 - \$29,999; 4, \$30,000 - \$39,999; 5, \$40,000 - \$49,999; 6, \$50,000 - \$59,999; 7, \$60,000 - \$69,999; 8, \$70,000 or more. Mother Education and Father Education were dummy coded: 1, less than seventh grade; 2, junior high school (9th grade); 3, high school (10th or 11th grade); 4, high school graduate; 5, partial college or specialized training; 6, graduate of standard college or university; 7, post-graduate professional training.

Descriptive Statistics for Asian Americans

Variable	<i>M</i>	<i>SD</i>
Mother. Attachment	3.39	.67
Mother Trust	3.67	.75
Mother Communication	2.95	.86
Mother Alienation	3.51	.73
Father Attachment	3.10	.74
Father Trust	3.29	.90
Father Communication	2.56	.89
Father Alienation	3.52	.75
Anxiety	.51	.23
Career Self-Efficacy	3.48	.60
Career Difficulties	4.51	1.33
Ethnic Identity	3.65	.66
Perceived Discrimination	3.06	.61
Age	20.07	2.61
Gender	.43	.50
Employment Status	.53	.50
GPA	3.76	1.14
Home Ownership	.49	.50
Income	3.87	2.14
Mother Education	4.03	1.59
Father Education	4.15	1.78

Note. Gender was dummy-coded: 0, female; 1 male. Employment Status was dummy coded: 1, currently employed; 0, currently not employed. GPA was dummy coded: 1, 3.7-4.0; 2, 3.0-3.6; 3, 2.0-2.9; 4, under 2.0; 5, don't have GPA (first semester). Home ownership was dummy coded: 1, yes; 0, no. Income was dummy coded: 1, \$9,999 or less; 2, \$10,000 - \$19,999; 3, \$20,000 - \$29,999; 4, \$30,000 - \$39,999; 5, \$40,000 - \$49,999; 6, \$50,000 - \$59,999; 7, \$60,000 - \$69,999; 8, \$70,000 or more. Mother Education and Father Education were dummy coded: 1, less than seventh grade; 2, junior high school (9th grade); 3, high school (10th or 11th grade); 4, high school graduate; 5, partial college or specialized training; 6, graduate of standard college or university; 7, post-graduate professional training.

Descriptive Statistics for Hispanics

Variable	<i>M</i>	<i>SD</i>
Mother. Attachment	3.70	.72
Mother Trust	4.17	.63
Mother Communication	3.15	1.05
Mother Alienation	3.66	.90
Father Attachment	3.25	.97
Father Trust	3.47	1.02
Father Communication	2.68	1.20
Father Alienation	3.66	.94
Anxiety	.51	.21
Career Self-Efficacy	3.57	.54
Career Difficulties	3.69	1.15
Ethnic Identity	3.75	.73
Perceived Discrimination	3.28	.53
Age	20.04	2.82
Gender	.53	.50
Employment Status	.59	.50
GPA	3.76	1.22
Home Ownership	.47	.50
Income	4.09	2.30
Mother Education	3.76	1.60
Father Education	3.98	1.77

Note. Gender was dummy-coded: 1, female; 0 male. Employment Status was dummy coded: 1, currently employed; 0, currently not employed. GPA was dummy coded: 1, 3.7-4.0; 2, 3.0-3.6; 3, 2.0-2.9; 4, under 2.0; 5, don't have GPA (first semester). Home ownership was dummy coded: 1, yes; 0, no. Income was dummy coded: 1, \$9,999 or less; 2, \$10,000 - \$19,999; 3, \$20,000 - \$29,999; 4, \$30,000 - \$39,999; 5, \$40,000 - \$49,999; 6, \$50,000 - \$59,999; 7, \$60,000 - \$69,999; 8, \$70,000 or more. Mother Education. and Father Education were dummy coded: 1, less than seventh grade; 2, junior high school (9th grade); 3, high school (10th or 11th grade); 4, high school graduate; 5, partial college or specialized training; 6, graduate of standard college or university; 7, post-graduate professional training.

Descriptive Statistics for White Americans

Variable	<i>M</i>	<i>SD</i>
Mother. Attachment	3.80	.59
Mother Trust	4.19	.63
Mother Communication	3.39	.89
Mother Alienation	3.65	.82
Father Attachment	3.37	.84
Father Trust	3.54	1.00
Father Communication	2.92	.97
Father Alienation	3.78	.87
Anxiety	.51	.23
Career Self-Efficacy	3.69	.73
Career Difficulties	3.87	1.35
Ethnic Identity	3.74	.75
Perceived Discrimination	2.27	.63
Age	19.57	2.27
Gender	.56	.50
Employment Status	.65	.48
GPA	4.09	1.16
Home Ownership	.69	.47
Income	5.73	2.16
Mother Education	5.12	1.24
Father Education	5.08	1.53

Note. Gender was dummy-coded: 1, female; 0 male. Employment Status was dummy coded: 1, currently employed; 0, currently not employed. GPA was dummy coded: 1, 3.7-4.0; 2, 3.0-3.6; 3, 2.0-2.9; 4, under 2.0; 5, don't have GPA (first semester). Home ownership was dummy coded: 1, yes; 0, no. Income was dummy coded: 1, \$9,999 or less; 2, \$10,000 - \$19,999; 3, \$20,000 - \$29,999; 4, \$30,000 - \$39,999; 5, \$40,000 - \$49,999; 6, \$50,000 - \$59,999; 7, \$60,000 - \$69,999; 8, \$70,000 or more. Mother Education. and Father Education were dummy coded: 1, less than seventh grade; 2, junior high school (9th grade); 3, high school (10th or 11th grade); 4, high school graduate; 5, partial college or specialized training; 6, graduate of standard college or university; 7, post-graduate professional training.

Zero-Order Correlations for Total Sample (N = 199)

Variable	1	2	3	4	5	6	7	8	9	10
1. Mo. Attach.	1.00									
2. Mo. Trust	.92***	1.00								
3. Mo. Comm.	.88***	.73**	1.00							
4. Mo. Alien.	.67**	.52**	.34**	1.00						
5. Fa. Attach.	.24**	.24**	.23**	.11	1.00					
6. Fa. Trust	.23**	.26**	.23**	.07	.94**	1.00				
7. Fa. Comm.	.23**	.21**	.26**	.06	.92**	.81**	1.00			
8. Fa. Alien.	.16*	.14	.08	.22**	.74**	.58**	.53**	1.00		
9. Anxiety	-.17*	-.13	-.06	-.31**	-.21**	-.20**	-.15*	-.21**	1.00	
10. Ca. Self-Eff.	.19**	.17*	.17*	.12	.25**	.25**	.24**	.13	-.17**	1.00
11. Ca. Difficul.	-.12	-.14	-.05	-.15*	-.09	-.12	-.04	-.06	.33**	-.66**
12. Ethnic Iden.	.19**	.18*	.17*	.11	.14*	.13	.16*	.07	-.15*	.08
13. Per. Discr.	-.02	-.03	-.05	.05	-.22	-.21**	-.18*	-.19**	.13	-.15*
14. Age	-.03	-.06	-.01	-.01	.04	.05	.09	-.08	-.01	.15*
15. Gender	-.03	-.09	.06	-.09	-.11	-.01	-.11	-.10	.15*	-.08
16. Emp. Status	-.07	-.01	-.07	-.10	.01	.00	.02	-.01	.07	.24**
17. Home Own.	-.04	-.01	.03	-.16*	-.00	.01	.00	-.02	.04	.02
18. Income	.09	.13	.13	.03	.17*	.19**	.15*	.06	-.16*	.10
19. Mo. Edu.	.10	.08	.08	.02	.11	.09	.18*	-.02	-.09	.20**
20. Fa. Edu.	.11	.13	.13	-.03	.22**	.20**	.25**	.11	-.04	.21**

Note. Mo. = Mother; Attach. = Attachment; Fa. = Father; Comm. = Communication; Alien. = Alienation; Ca. Self-Eff. = Career Self-Efficacy; Ca. Difficul. = Career Difficulties; Ethnic Iden. = Ethnic Identity; . Per. Discr. = Perceptions of Discrimination; Emp. Status = Employment Status; Home Own. = Home Ownership; . Edu. = Education.

* $p < .05$. ** $p < .01$.

Zero-Order Correlations for Total Sample (Cont.)

Variable	11	12	13	14	15	16	17	18	19	20
1. Mo. Attach.										
2. Mo. Trust										
3. Mo. Comm.										
4. Mo. Alien.										
5. Fa. Attach.										
6. Fa. Trust										
7. Fa. Comm.										
8. Fa. Alien.										
9. Anxiety										
10. Ca. Self-Eff.										
11. Ca. Difficul.	1.00									
12. Ethnic Iden.	-.07	1.00								
13. Per. Discr.	.12	-.05	1.00							
14. Age	-.08	-.05	.21**	1.00						
15. Gender	-.03	.03	.07	.07	1.00					
16. Emp. Status	-.08	-.03	-.04	.11	-.03	1.00				
17. Home Own.	-.03	-.05	-.22**	-.01	-.02	.08	1.00			
18. Income	-.15*	.01	-.29**	-.06	-.11	.01	.45**	1.00		
19. Mo. Edu.	-.11	.01	-.23	-.09	-.07	.10	.20**	.42**	1.00	
20. Fa. Edu.	-.13	-.10	-.18	-.02	-.13	.04	.24**	.40**	.64**	1.00

Note. Mo. = Mother; Attach. = Attachment; Fa. = Father; Comm. = Communication; Alien. = Alienation; Ca. Self-Eff. = Career Self-Efficacy; Ca. Difficul. = Career Difficulties; Ethnic Iden. = Ethnic Identity; . Per. Discr. = Perceptions of Discrimination; Emp. Status = Employment Status; Home Own. = Home Ownership; . Edu. = Education.

* $p < .05$. ** $p < .01$.

Zero-Order Correlations for African Americans (N = 23)

Variable	1	2	3	4	5	6	7	8	9	10
1. Mo. Attach.	1.00									
2. Mo. Trust	.92**	1.00								
3. Mo. Comm.	.91**	.77**	1.00							
4. Mo. Alien.	.64**	.45*	.39	1.00						
5. Fa. Attach.	.53**	.51*	.44*	.39	1.00					
6. Fa. Trust	.62**	.61**	.53**	.41	.95**	1.00				
7. Fa. Comm.	.50*	.50*	.45*	.26	.93**	.83**	1.00			
8. Fa. Alien.	.28	.23	.16	.41	.86**	.74**	.70**	1.00		
9. Anxiety	.29	.31	.43*	-.18	-.19	-.17	-.05	-.36	1.00	
10. Ca. Self-Eff.	.10	.02	.01	.33	.39	.34	.34	.42*	-.40	1.00
11. Ca. Difficul.	.10	.21	.23	-.36	-.33	-.30	-.17	-.50*	.64**	-.67**
12. Ethnic Iden.	-.13	.04	-.18	-.21	.39	.36	.34	.39	-.16	.10
13. Per. Discr.	.02	.07	.02	-.07	-.12	-.08	-.02	-.29	.33	-.08
14. Age	-.16	-.26	.00	-.21	-.10	-.07	-.05	-.18	.14	-.10
15. Gender	-.12	-.19	-.04	-.07	-.22	-.13	-.36	-.11	-.03	.14
16. Emp. Status	-.11	-.12	-.06	-.11	-.01	-.18	.05	.15	.13	.31
17. Home Own.	-.20	-.21	-.18	-.10	-.16	-.19	-.28	.09	.03	-.09
18. Income	-.17	-.19	-.22	.05	.03	.02	-.08	.17	-.30	.16
19. Mo. Edu.	.12	.10	.09	.15	-.02	-.06	.02	.02	-.10	.25
20. Fa. Edu.	.30	.47*	.20	.03	.22	.21	.31	.07	.04	-.01

Note. Mo. = Mother; Attach. = Attachment; Fa. = Father; Comm. = Communication; Alien. = Alienation; Ca. Self-Eff. = Career Self-Efficacy; Ca. Difficul. = Career Difficulties; Ethnic Iden. = Ethnic Identity; . Per. Discr. = Perceptions of Discrimination; Emp. Status = Employment Status; Home Own. = Home Ownership; . Edu. = Education.

* $p < .05$. ** $p < .01$.

Zero-Order Correlations for African Americans (Cont.)

Variable	11	12	13	14	15	16	17	18	19	20
1. Mo. Attach.										
2. Mo. Trust										
3. Mo. Comm.										
4. Mo. Alien.										
5. Fa. Attach.										
6. Fa. Trust										
7. Fa. Comm.										
8. Fa. Alien.										
9. Anxiety										
10. Ca. Self-Eff.										
11. Ca. Difficul.	1.00									
12. Ethnic Iden.	-.34	1.00								
13. Per. Discr.	-.07	.15	1.00							
14. Age	-.08	.07	.41	1.00						
15. Gender	-.34	-.05	.37	.25	1.00					
16. Emp. Status	-.01	-.11	-.06	.02	.02	1.00				
17. Home Own.	-.13	.31	-.28	-.01	.17	.14	1.00			
18. Income	-.33	.39	-.32	-.06	-.12	-.02	.62**	1.00		
19. Mo. Edu.	-.12	-.00	-.37	-.45*	-.27	.04	.36	.49*	1.00	
20. Fa. Edu.	.08	.32	-.15	-.38	-.38	-.16	.18	.42*	.64**	1.00

Note. Mo. = Mother; Attach. = Attachment; Fa. = Father; Comm. = Communication; Alien. = Alienation; Ca. Self-Eff. = Career Self-Efficacy; Ca. Difficul. = Career Difficulties; Ethnic Iden. = Ethnic Identity; Per. Discr. = Perceptions of Discrimination; Emp. Status = Employment Status; Home Own. = Home Ownership; Edu. = Education.

* $p < .05$. ** $p < .01$.

Zero-Order Correlations for Asian Americans (N = 70)

Variable	1	2	3	4	5	6	7	8	9	10
1. Mo. Attach.	1.00									
2. Mo. Trust	.95**	1.00								
3. Mo. Comm.	.88**	.78**	1.00							
4. Mo. Alien.	.68**	.56**	.34**	1.00						
5. Fa. Attach.	.14	.18	.18	-.05	1.00					
6. Fa. Trust	.13	.17	.15	-.05	.95**	1.00				
7. Fa. Comm.	.10	.13	.17	-.13	.89**	.78**	1.00			
8. Fa. Alien.	.15	.14	.13	.10	.64**	.49**	.35**	1.00		
9. Anxiety	-.32**	-.28*	-.22	-.33**	-.30*	-.32**	-.19	-.24*	1.00	
10. Ca. Self-Eff.	.20	.20	.17	.12	.23	.26*	.20	.05	-.34**	1.00
11. Ca. Difficul.	-.17	-.21	-.08	-.12	-.13	-.21	-.12	.07	.36**	-.76**
12. Ethnic Iden.	.02	-.02	.10	-.07	.25*	.23	.31*	.06	-.18	.21
13. Per. Discr.	.01	-.05	-.06	.19	-.28*	-.33**	-.22	-.11	.29*	-.27*
14. Age	-.04	-.020	-.03	-.08	.15	.15	.18	-.00	-.10	.19
15. Gender	-.06	-.09	.06	-.15	-.03	-.04	-.04	.05	.14	-.22
16. Emp. Status	-.11	-.02	-.17	-.11	.04	.10	.02	-.05	.01	.25*
17. Home Own.	.09	.08	.15	-.06	.04	-.01	.06	.07	.08	-.04
18. Income	.20	.26*	.08	.15	.18	.19	.13	.13	-.15	.06
19. Mo. Edu.	.02	.06	.02	-.08	.21	.18	.25*	.05	-.07	.17
20. Fa. Edu.	.09	.11	.12	-.04	.26*	.20	.26*	.19	.01	.19

Note. Mo. = Mother; Attach. = Attachment; Fa. = Father; Comm. = Communication; Alien. = Alienation; Ca. Self-Eff. = Career Self-Efficacy; Ca. Difficul. = Career Difficulties; Ethnic Iden. = Ethnic Identity; . Per. Discr. = Perceptions of Discrimination; Emp. Status = Employment Status; Home Own. = Home Ownership; . Edu. = Education.

* $p < .05$. ** $p < .01$.

Zero-Order Correlations for Asian Americans (cont.)

Variable	11	12	13	14	15	16	17	18	19	20
1. Mo. Attach.										
2. Mo. Trust										
3. Mo. Comm.										
4. Mo. Alien.										
5. Fa. Attach.										
6. Fa. Trust										
7. Fa. Comm.										
8. Fa. Alien.										
9. Anxiety										
10. Ca. Self-Eff.										
11. Ca. Difficul.	1.00									
12. Ethnic Iden.	-.16	1.00								
13. Per. Discr.	.39**	-.01	1.00							
14. Age	-.07	.16	.03	1.00						
15. Gender	.19	-.02	.00	-.03	1.00					
16. Emp. Status	-.16	.06	.18	.23	-.08	1.00				
17. Home Own.	.00	-.16	-.04	-.04	.03	-.03	1.00			
18. Income	-.17	-.17	-.27*	-.22	.04	-.17	.48**	1.00		
19. Mo. Edu.	-.22	.02	-.30*	-.14	.10	.04	.27*	.46**	1.00	
20. Fa. Edu.	-.14	-.14	-.18	.05	.21	-.02	.32**	.44**	.69**	1.00

Note. Mo. = Mother; Attach. = Attachment; Fa. = Father; Comm. = Communication; Alien. = Alienation; Ca. Self-Eff. = Career Self-Efficacy; Ca. Difficul. = Career Difficulties; Ethnic Iden. = Ethnic Identity; Per. Discr. = Perceptions of Discrimination; Emp. Status = Employment Status; Home Own. = Home Ownership; Edu. = Education.

* $p < .05$. ** $p < .01$.

Zero-Order Correlations for Hispanics (N = 40)

Variable	1	2	3	4	5	6	7	8	9	10
1. Mo. Attach.	1.00									
2. Mo. Trust	.93**	1.00								
3. Mo. Comm.	.89**	.77**	1.00							
4. Mo. Alien.	.68**	.56**	.32*	1.00						
5. Fa. Attach.	.20	.19	.09	.27	1.00					
6. Fa. Trust	.19	.21	.12	.17	.95**	1.00				
7. Fa. Comm.	.20	.18	.13	.25	.96**	.86**	1.00			
8. Fa. Alien.	.16	.13	-.02	.43**	.80**	.64**	.697**	1.00		
9. Anxiety	-.22	-.25	-.08	-.30	-.07	-.07	-.04	-.09	1.00	
10. Ca. Self-Eff.	.02	.06	-.01	.01	.31	.34*	.29	.18	-.21	1.00
11. Ca. Difficul.	.04	.01	.09	-.03	-.23	-.21	-.18	-.29	.08	-.32*
12. Ethnic Iden.	.36*	.31	.22	.46**	.03	.05	-.05	.16	-.16	.06
13. Per. Discr.	-.13	-.07	.06	-.46**	-.35*	-.31*	-.30	-.40*	.31	-.24
14. Age	.10	.12	.02	.14	.20	.16	.25	.11	.13	.36*
15. Gender	-.11	-.18	-.02	-.12	-.06	.02	-.11	-.09	.33*	-.20
16. Emp. Status	-.0	.05	.03	-.18	.06	.07	.10	-.07	-.09	.00
17. Home Own.	.00	-.03	.13	-.18	-.18	-.18	-.14	-.18	.01	-.16
18. Income	.12	.18	.10	.01	.30	.33*	.27	.19	-.36*	.34*
19. Mo. Edu.	.00	-.01	.09	-.13	.12	.14	.16	-.07	-.12	.41**
20. Fa. Edu.	.09	.15	.05	.03	.20	.27	.15	.06	-.13	.26

Note. Mo. = Mother; Attach. = Attachment; Fa. = Father; Comm. = Communication; Alien. = Alienation; Ca. Self-Eff. = Career Self-Efficacy; Ca. Difficul. = Career Difficulties; Ethnic Iden. = Ethnic Identity; . Per. Discr. = Perceptions of Discrimination; Emp. Status = Employment Status; Home Own. = Home Ownership; . Edu. = Education.

* $p < .05$. ** $p < .01$.

Zero-Order Correlations for Hispanics (cont.)

Variable	11	12	13	14	15	16	17	18	19	20
1. Mo. Attach.										
2. Mo. Trust										
3. Mo. Comm.										
4. Mo. Alien.										
5. Fa. Attach.										
6. Fa. Trust										
7. Fa. Comm.										
8. Fa. Alien.										
9. Anxiety										
10. Ca. Self-Eff.										
11. Ca. Difficul.	1.00									
12. Ethnic Iden.	.20	1.00								
13. Per. Discr.	.08	-.33*	1.00							
14. Age	-.29	-.11	-.04	1.00						
15. Gender	-.19	.18	-.04	-.04	1.00					
16. Emp. Status	.14	-.05	.15	.06	-.27	1.00				
17. Home Own.	.07	-.24	.12	.08	-.14	.02	1.00			
18. Income	-.11	.06	-.23	.24	-.44**	.27	.17	1.00		
19. Mo. Edu.	.06	.03	.12	.17	-.36*	.20	.03	.33*	1.00	
20. Fa. Edu.	-.06	-.29	.05	.09	-.43**	.25	.23	.33*	.54**	1.00

Note. Mo. = Mother; Attach. = Attachment; Fa. = Father; Comm. = Communication; Alien. = Alienation; Ca. Self-Eff. = Career Self-Efficacy; Ca. Difficul. = Career Difficulties; Ethnic Iden. = Ethnic Identity; Per. Discr. = Perceptions of Discrimination; Emp. Status = Employment Status; Home Own. = Home Ownership; Edu. = Education.

* $p < .05$. ** $p < .01$.

Zero-Order Correlations for White Americans (N = 59)

Variable	1	2	3	4	5	6	7	8	9	10
1. Mo. Attach.	1.00									
2. Mo. Trust	.85**	1.00								
3. Mo. Comm.	.85**	.59**	1.00							
4. Mo. Alien.	.58**	.34**	.22	1.00						
5. Fa. Attach.	.19	.14	.29*	-.04	1.00					
6. Fa. Trust	.19	.20	.27*	-.08	.94**	1.00				
7. Fa. Comm.	.21	.08	.37**	-.07	.88**	.76**	1.00			
8. Fa. Alien.	.07	.01	.05	.13	.70**	.54**	.42**	1.00		
9. Anxiety	-.11	.01	-.02	-.33*	-.18	-.10	-.19	-.20	1.00	
10. Ca. Self-Eff.	.18	.12	.22	.05	.19	.18	.23	.05	-.18	1.00
11. Ca. Difficul.	-.05	-.02	-.03	-.09	.12	.06	.17	.10	.34**	-.55**
12. Ethnic Iden.	.28*	.24	.32*	.04	-.06	-.06	.02	-.12	-.00	-.00
13. Per. Discr.	.04	.08	-.09	.14	-.01	-.05	.05	-.03	-.02	-.06
14. Age	-.12	-.07	-.11	-.12	.05	.04	.12	-.05	.00	.25
15. Gender	.04	-.11	.19	-.05	-.10	-.14	.02	-.14	.17	-.05
16. Emp. Status	-.12	-.08	-.17	.01	-.05	-.06	-.03	-.02	.14	.27*
17. Home Own.	-.15	-.03	-.09	-.26*	.06	.12	.08	-.11	.06	.16
18. Income	-.05	.01	-.04	-.09	.02	.04	.09	-.12	.14	-.13
19. Mo. Edu.	.15	.06	.12	.18	.02	-.02	.14	-.08	-.09	.03
20. Fa. Edu.	.08	.04	.15	-.05	.16	.10	.22	.10	-.01	.26*

Note. Mo. = Mother; Attach. = Attachment; Fa. = Father; Comm. = Communication; Alien. = Alienation; Ca. Self-Eff. = Career Self-Efficacy; Ca. Difficul. = Career Difficulties; Ethnic Iden. = Ethnic Identity; . Per. Discr. = Perceptions of Discrimination; Emp. Status = Employment Status; Home Own. = Home Ownership; . Edu. = Education.

* $p < .05$. ** $p < .01$.

Zero-Order Correlations for White Americans (cont.)

Variable	11	12	13	14	15	16	17	18	19	20
1. Mo. Attach.										
2. Mo. Trust										
3. Mo. Comm.										
4. Mo. Alien.										
5. Fa. Attach.										
6. Fa. Trust										
7. Fa. Comm.										
8. Fa. Alien.										
9. Anxiety										
10. Ca. Self-Eff.										
11. Ca. Difficul.	1.00									
12. Ethnic Iden.	-.03	1.00								
13. Per. Discr.	.13	-.09	1.00							
14. Age	.08	-.33*	.12	1.00						
15. Gender	.09	.07	-.02	.07	1.00					
16. Emp. Status	-.07	.03	-.03	.24	.11	1.00				
17. Home Own.	-.09	.08	-.16	.09	-.08	.15	1.00			
18. Income	.05	-.03	-.01	-.18	-.24	-.13	.36**	1.00		
19. Mo. Edu.	-.07	.01	.20	.02	-.08	.01	-.09	.19	1.00	
20. Fa. Edu.	-.23	-.10	.01	.09	-.30*	-.04	-.07	.19	.56**	1.00

Note. Mo. = Mother; Attach. = Attachment; Fa. = Father; Comm. = Communication; Alien. = Alienation; Ca. Self-Eff. = Career Self-Efficacy; Ca. Difficul. = Career Difficulties; Ethnic Iden. = Ethnic Identity; Per. Discr. = Perceptions of Discrimination; Emp. Status = Employment Status; Home Own. = Home Ownership; Edu. = Education.

* $p < .05$. ** $p < .01$.

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