CHAPTER TWO: LITERATURE REVIEW

The main constructs of the present study were career certainty, career indecision and career decision making difficulties that included difficulties in constructs like career beliefs and thoughts, personality, perceived barriers, interpersonal supports and occupational information. The researcher conducted a review of literature on the exploration, understanding and evaluation of the effect of interventions on these above mentioned constructs.

2.1 Career certainty / career indecision

Numerous research studies have shown that academic-vocational indecision can significantly affect choice processes and can actually hinder adaptation processes (Jones, 1989; Lucas, 1993; Lucas & Epperson, 1990; Nota, 1999; Savickas & Jarjoura, 1991). Gordon (1995) and Hayes (1997) found that as little as 20% and as many as 60% of students entering college are undecided about an academic major or career choice. Gaffner and Hazler (2002) reported that career indecision has been a major concern of practitioners, researchers and educators for many years and may now be even of greater concern because current societal trends push people to revise their career decisions over their life spans.

Wanberg and Muchinsky (1992), who have studied the relationship between decisional status and psychological variables in depth, have
considered aspects such as anxiety, locus of control, self-esteem, and self-awareness level. Their analyses have shown that indecision is associated with poor self-awareness, low knowledge of academic-vocational reality, high levels of anxiety, low self-esteem, and external locus of control. Patton, Creed and Watson (2003) reported that greater is the perception of barriers among clients higher is their indecision and they have generally less career maturity. They also found perceived work barriers were related to less career certainty and more career indecision in their sample of Australian and South African adolescents.

Barak, A. and Friedkes, R. (1981) tested the hypothesis that career indecision subtypes serve as a mediating variable in regard to career counseling effectiveness. They found that different subtypes gained differentially in their career decidedness; clients who “lack structure” gained the most from the treatment (a standard counseling process), while clients who “perceive external barriers” and who experienced “personal conflicts” gained the least. Guay et al (2006) validated this typology through a three-year longitudinal study with college students (N = 325). Their study revealed the presence of two indecision groups (chronically undecided and developmentally undecided) and a group of students who are decided.

Constantine, Wallace and Kindaichi (2005) examined the extent to which perceived occupational barriers and perceived parental support predicted career certainty and career indecision in a sample of African
American adolescents. Perceived occupational barriers were positively predictive of career indecision, and perceived parental support was positively associated with career certainty.

Germeijs and Boeck (2003) conducted a study that showed that when students have to make a career decision concerning further studies, three elements can be differentiated as possible sources of indecision. These three factors are: an information factor, a valuation factor, and an outcomes uncertainty factor. The information factor refers to how well students feel informed about the alternatives, the valuation factor refers to valuation problems related to the objectives and the value of the outcomes, and the outcomes factor refers to uncertainty about the outcomes.

Leong and Chervinko (1996) examined the construct validity of career indecision. Negative personality traits such as perfectionism and fear of commitment were found to account for up to 20% of the variance when career indecision was measured by the Career Decision Scale. These authors also highlighted two aspects of career indecision as “a trait-based vocational problem” and as a part of “a normative developmental process” (p. 327).

Taylor and Popma (1990) found a moderate negative relationship between career decision making self-efficacy and career indecision and identified career decision making self-efficacy as the only variable to make a significant contribution to the prediction of career indecision.
Researchers have identified associations between career indecision and task-specific self-efficacy (Temple and Osipow, 1994); family interaction patterns (Whiston, 1996); and students’ perceptions of the parental relationship and career decision making (Guerra and Braungart-Rieker, 1999). Betz and Voyten (1997) established self-efficacy beliefs as the best predictor of career indecision. Osipow and Gati (1998) also found a moderate correlation between career decision making self-efficacy and career indecision. They recommended the Career Decision making Difficulties Questionnaire as a suitable adjunct to the Career Decision Scale as it “enables assessment of systematic categories of difficulties……some of which are represented in the CDS.....only indirectly” (p.361).

**Effect of intervention on career certainty and career indecision**

Mann (1972) found that students who were exposed to a “balance-sheet” or tallying procedure three months before their choice of college tended to 1) select a wider array of alternatives in formulating their career decision, 2) to take into account more self-related and fewer social considerations, 3) to express less regret and report less concern about their choice following the decision, and 4) were less interested in receiving supportive, dissonance reducing information, as compared with a control group when tested six weeks after making their decision.

Osipow, Carney and Barak (1976) examined the Career Decision Scale’s responsiveness to various career counseling interventions. A number of comparisons were made with groups for which there were
pre—and post-test scores with varying intervening activities. The results provided support to the hypothesis that groups exposed to treatment for vocational indecision would be less undecided than before treatment. Lower post-test scores were found for treated groups than for groups not treated.

Carney (1977a) used both the Career Decision Scale and the Assessment of Career Decision Making (ACDM) as outcome measures to assess changes in vocational concerns for students participating in a class on career exploration. The students met two and half hours weekly for eleven weeks. Pre- and post-comparisons yielded results indicating that the group’s Indecision Scale score was significantly reduced, while the students’ commitments, to a major and an occupation, as reflected on the ACDM, increased significantly.

Carney (1977b) used the Career Decision Scale to monitor the pre-and post-changes during a career development workshop conducted with college students. Students who participated in these nine hour workshops were exposed to activities designed to help them exploit chance factors operating in their lives, life experiences, life style preferences, their personal values, aptitudes and abilities, interests and information about the world of work. Tests of pre-to post-changes on the CDS revealed significant gain on the Certainty Scale and a significant reduction on the Indecision Scale.
Sutera (1977) used the Career Decision Scale in conjunction with other measures to gauge the impact of a residential career planning program. Topics covered over the sixteen week period included the history and personal meaning of work, work values and personal lifestyles, concepts of effective decision-making, career development as a life-long process, the structure of the world of work, assessment of personal characteristics, gathering occupational information, and job search strategies. Comparisons of pre- and post-test scores revealed significant changes in Indecision scores.

Taylor (1979) examined the effects of a career exploration program on the level of college students’ career decidedness, employing the Career Decision Scale as a treatment measure. Pre- and post-test measures over a period of eight months revealed a significant decrease in Indecision scores for the treatment group following treatment.

Ware (1980) examined the combined influence of career related preferences and career decision making skills on certainty about career choices among college students. The results indicated that career decision making skills mediate the influence of models and direct reinforcement on career preference. Career related preference was a better predictor of career certainty among low than high maturity students.

Barak and Friedkes (1981) tested the hypothesis that career indecision subtypes serve as a mediating variable in regard to career counseling
effectiveness. In a pre-post design conducted on 149 undergraduate clients who went through a standard counseling process they found that different subtype groups gained differentially in their career decidedness; clients who “lack structure” gained the most from the treatment while clients who “perceive external barrier” and who experienced “personal conflict” gained the least.

Glaize and Myrick (1984) compared the effectiveness of a computer assisted guidance program (DISCOVER), a small group guidance intervention (Vocational Exploration Group), and a combined approach on career maturity and decidedness in 120 high school students. All three interventions were significantly helpful to students.

Cooper (1986) examined the effects of individual and group vocational counseling on personal indecisiveness and career indecision. The results showed decreases in career indecision and personal indecision in both group and individual counseling participants.

Quinn and Lewis (1989) and Johnson and Smouse (1993) found significant relationships between a career course and reduced career indecision.

Brusoski, Golin, Gallagher, and Moore (1993) found that a three-session workshop increased students’ career decidedness.
Niles (1993) studied treatment outcome differences based on the timing of counselor contact in the use of a computer delivery system. Study participants who were exposed to the post-intervention counseling strategy (i.e. use of computer system followed by a meeting with a counselor) experienced less career indecision at the conclusion of the study than did participants in the control group.

Gaffney (1995) investigated the impact of a psycho-educational intervention on high school students’ career decidedness. The findings of the study suggested that the psycho-educational intervention did have an effect on the career decidedness of high school students.

Peng and Herr’s (1999) study indicated that career education courses demonstrated statistically significant changes in career certainty and career indecision components of career decision making among junior college students in Taiwan.

Jurgens (2000) investigated the impact of a four-phase intervention on outcomes of career certainty, career indecision and career satisfaction in undecided college students and compared it to a two-phase intervention. Both interventions were effective in increasing career certainty in the sample population; however, the four-phase treatment was significantly more effective in career certainty. Both treatments were effective in decreasing career indecision, although no significant difference was found between the two treatment groups. These findings echoed previous studies that confirmed that comprehensive programs and short
term interventions can be effective in reducing career indecision and increasing career certainty (Rayman et al, 1983; Cairo, 1983; Harris et al. 1985; Cooper, 1986; Fukuyama et al. 1988; Niles, 1993; Mawson and Kahn, 1993; Oliver and Spokane, 1998; McAuliffe and Fredrickson, 1990; Savickas, 1990; and Peterson et al. 1991).

Huiling Peng (2001) conducted an exploratory study to compare the effectiveness of two different career education courses on career decision making for college freshman in Taiwan. The career education courses consisted of a cognitive restructuring intervention and a career decision skills training intervention. The cognitive restructuring intervention focused on strengthening rational attitudes related to career decision making while the career decision skills training intervention focused on teaching the factors of students’ career decision making including personality, interest, aptitude and values. Students in a third condition, a no-treatment control group, were administered the Career Decision Scale two times, but received no career education. Results showed that there was no significant treatment group difference between the experimental groups. However, there was a significant effect of treatment on the Indecision scale scores of the Career Decision Scale of the students who had received the two career education courses as compared to those who did not.

Prideaux (2003) evaluated the efficacy of a theoretically derived career education intervention on the career indecision of high school students. Results indicated that post intervention the students had significantly
reduced career indecision as compared to the control group. A longitudinal evaluation of the intervention after eight and twelve weeks revealed that the drop in indecision levels was maintained, thus attesting the long term value of the intervention in helping students resolve their indecision regarding career matters.

Hung (2003) analyzed an undergraduate career development course titled Introduction to Career Portfolios on measures of career certainty and career indecision. The course content included principles, theories and practices relating to the meaning and nature of work, leisure, self and identity; career choice and career decision making; issues and strategies in self-assessment; occupational research; and the future of work. The students were encouraged to tailor the research assignments to meet their personal areas of interest. Pre and post results indicated significant increases on measures of career certainty and significant decreases on measures of career indecision.

Leong, Hardin and Gaylor (2005) evaluated a workshop aimed at promoting career specialty choice for second year medical students. All participants reported their level of choice certainty and satisfaction. Results indicated two distinct student subgroups, of career specialty decided and undecided students. The former subgroup showed more stability and certainty of specialty choice as well as satisfaction with their choice. Both groups reported having benefited from the workshop.
2.2. Career decision-making difficulties

Dungy (1984) found that students with limited self knowledge, occupational knowledge, confidence, willingness to assume responsibility and willingness to use resources, were correspondingly less successful and more uncertain in making career decisions. Greene-Black (1988) stated that perceived barriers are almost uniformly considered instrumental in eroding students’ self-confidence and complicating the career planning process. According to Gati, Krauz and Osipow (1996) “…. identifying the unique difficulties that prevent individuals from reaching a (career) decision is an essential step in providing them the help they need (p. 510). Gati et al’s (1996) taxonomy of career decision making difficulties included three major categories viz. Lack of Readiness, Lack of Information and Inconsistent Information, which were further divided into ten difficulty sub-categories. Brown and Brooks (1996) noted that a variety of individual characteristics can hinder the career decision making process and that some students may have too few interests, have unrealistic or self-limiting aspirations, or are resistant to career counseling. Other barriers, such as pressure to make a prestigious decision, conflict with parents, a lack of financial resources, prejudice and stereotyping make career decision making more difficult.

Most early discussions of barriers have distinguished between two types: internal and external (Crites, 1969; Farmer, 1976; O’Leary, 1974). Swanson and Tokar (1991) argued for three categories:
social/interpersonal, attitudinal and interactional. Luzzo and McWhirter (2001) conceptualized barriers as being career-related or education-related.

Given below is a review of research on Gati et al’s (1996) difficulty categories along with other barriers that prevent individuals from making effective career choices.

2.2.1. Lack of career motivation

Chartrand et al., (1994) and Larson et al., (1988) suggested that students could be termed vocationally immature and not ready to begin the career planning process which may be due to lack of motivation. Gati, Krauz et al’s (1996) research also indicated a moderately high correlation between lack of motivation and lack of readiness. Adams (1997) defined career readiness as a level of maturity to acquire specific information on career options; to identify interests, values, and aptitudes; to use this information in career planning and course selection; and to change plans when pertinent information is presented. Grotevant, (1987, cited in Kracke 1997) reported that lack of readiness to engage in career exploration is a barrier that appears to vary from student to student. According to Blustein (1989) some factors that account for this variability include self-esteem, ego-strength, openness and decision-making style. Gaffner and Richard (2002) stated three major factors that were, according to them, important in preventing students from being ready to make a career decision. These three factors are 1) lack of motivation, 2) dysfunctional myths and 3) lack of
knowledge about the process of decision-making. They posit that lack of motivation may indicate an attitude problem.

**Lucas and Epperson (1988)** suggested that a cluster in their research labeled “undecided and limited interests” lacked a sense of competency and were unwilling to tackle a “difficult” task.

**Blustein (1989)** reported that individuals who are more cognitively oriented and systematic in making decisions may be more likely to engage in career exploration.

**Sampson, Peterson, Reardon and Lenz (2000)** suggested that adolescents should be assessed for their career decision making readiness before career counseling to improve the value of the service delivery to them.

**Larson and Majors (1998)** suggested that affective distress associated with career decision making among adolescents may be adaptive because it increases the motivation to seek help, thus decreasing the chances of uninformed decisions. **Luzzo, 1995, 1996; Swanson and Tokar, 1991; Creed, Patton, and Bartrum, 2004** have suggested that perceptions of barriers might motivate increased career-related activity.

**Savickas’s (1990)** designed a career decision making course which adhered to **Crites’s (1976)** model for comprehensive career counseling. The course addressed the career choice process by developing the
decisional attitudes and competencies known to increase the readiness to make a career choice. The attitudes towards career decisions included involvement, orientation, independence, compromise and decisiveness.

**Interventions to increase career motivation**

**Schmeiding and Jenson (1968)** in an attempt to change attitude and impressions regarding work, of eleventh and twelfth graders, observed a trend in the positive direction due to an occupational unit course of 22 sessions.

**Gold, Lois M (1981)** investigated the extent to which a career education module improves ninth grade adolescents’ vocational behavior. Significant gains to the p< .05 level were achieved by the treatment group in the following – students’ knowledge and willingness to use a variety of resources for career exploration, their knowledge of career decision-making principles and knowledge of preferred occupation i.e. regarding a specific career field.

**Savickas (1990)** designed a course that adhered to the Crites Career Decision Making Course model to help tenth graders develop the decisional attitudes and competencies that increase readiness to deal with career choice tasks and facilitate behavioral responses that meet these tasks. He found that the course reduced the participants’ career decision making difficulties and increased their foresight in terms of personal direction.
Hardesty (1991) reported a meta-analysis regarding the beneficial effects of career courses on career maturity and career decidedness.

2.2.2. Career choice and Indecisiveness

Herr, et al., (1993) pointed out that career indecisive students exist in significant numbers and experience different problems, requiring different interventions.

Larson, Heppner, Ham and Dugan (1988) found a more negative pattern of career planning deficits and more deleterious problem solving attitudes and behaviors amongst the indecisive group they labeled as “plan less avoiders” as compared to the other three cluster identified in their study. Gordon (1998), in a review of all studies of career decided-undecided types extracted from the literature between 1977 and 1996, identified three types of decided students and four types of undecided students. The “chronically indecisive” type that was identified across all 15 studies reviewed was described as excessively anxious, distressed and pervasively aimless (Gordon). Kelly and Pulver (2003) identified a career indecision type labeled “neurotic indecisive information seekers” who were characterized by significantly more anxiety and general negative affect than the other three types generated. Schmidt (2001) defined career indecisiveness as a personality attribute that would exist in spite of exposure to career resources or opportunity to choose. Creed, Prideaux and Patton (2005) remarked that there are different types of career indecision and those who suffer from chronic indecision may be worse off than others who are developmentally indecisive.

Gaffner and Hazier (2002) investigated the relationships between career indecisiveness and personality types and difficulties in making career decisions. Their results identified lack of career readiness on the CDDQ to be a better single predictor of indecisiveness than any other combination of variables.

Kinnier, Brigman, and Noble (1990) observed that individuals who were more easily influenced by family pressures and who were not able to cope effectively with the interference of significant others were more indecisive when facing problems concerning career decision making.

Lucas (1993, p.444) found their most indecisive group to be “more nervous, less self-confident and more depressed than the other three groups identified. Leong and Chervinko, (1996) reported that the indecisive type of individual has a fear of commitment which is associated with high levels of career indecision. Nota and Soresi (1998) highlighted how, in a group of 319 students about to choose a university course of study, those who were very indecisive also felt greater levels of discomfort in situations in which assertive behaviors might be required. According to Gaffner and Hazler (2002), inadequate knowledge about the career development process inhibits students from making decisions,
and hence, may impact indecisiveness. According to Sampson, Reardon, Peterson and Lenz (2004), the indecisive career decision maker faces a host of challenges like gaps in self and occupational knowledge combined with decision making deficits which limit the effectiveness of career choice. They suggested that the difference that distinguishes indecisiveness from indecision pertains to executive processing. Indecisive individuals may demonstrate excessive negative self-talk, attention deficits, or confused thought processes. These cognitive information processing difficulties significantly impair the career choice process.

**Career interventions to reduce indecisiveness**

Nota and Soresi (2003) evaluated the effectiveness of an assertiveness training program for indecisive university students. Their analysis showed that the training they had devised to improve the assertive abilities of the group of indecisive students was effective. The assertiveness training intervention actually decreased the level of social discomfort experienced by the participants when they had to resort to assertive behaviors in critical situations. Through training, these indecisive students learned to analyze difficult situations, to gather information, to examine their own wishes and objectives, and to effectively communicate all of this to significant others. Furthermore, the assertiveness training intervention seemed to improve the students' ability to gather information useful to making a choice and to strengthen these students' tendency to attribute to their own selves an essential role.
in achieving their professional objectives. All of these factors were associated with increased levels of decision-making skills.

**Austin, Wagner and Dahl (2004),** showed that a career decision making intervention could reduce career indecisiveness in adults. The study had participants engage in a four-week career decision making program based upon the Cognitive Information Processing (CIP) model of career decision making. The intervention comprised of integrated modular instruction, comprehensive lifework assessment, opportunity for career research, and individual vocational counseling. Modular instruction included discussing personal assessment results, vocational family mapping, vision casting, career research methods, labor market information, decision making and barriers analysis. The comprehensive lifework assessment included problem solving, emotional intelligence, aptitude, skills and personality tests. Tests of work values and interest inventories were also completed by the participants. Each test was followed by a psycho-educational component and personal application exercise. The results indicated that 1) the more dysfunctional an individual's career thoughts are, the more indecisive the individual is, 2) individuals in the high negative career thoughts group demonstrated significantly lower indecisiveness following the career decision making intervention and 3) individuals with greater levels of indecisiveness may reduce their indecisiveness following a career decision making intervention more effectively than individuals with low indecisiveness.

### 2.2.3. Career decision making and Dysfunctional beliefs

According to **Lewis and Gilhousen (1981)** raising awareness of beliefs
is as important as knowing one’s interests, aptitudes, and values since this information is of little value if a client cannot put them into realistic perspective. Zunker (2002) presented “unearthing career beliefs” as one of the eight goals of assessment in career counseling.

Mitchell and Krumboltz, (1996) suggested that career beliefs are, in essence, faulty assumptions or ideas that interfere with career decision making and later career progress. Peterson, Sampson, Reardon, and Lenz (1996) defined career beliefs as positive and negative thoughts or assumptions people hold about themselves, occupations, and the career development process. Zunker (2002) defined them as “clients’ beliefs about careers, career decision making styles, identity issues, maladaptive behaviors, degrees of anxiety, fear of failure, and reasons why people are undecided” (p.212). According to Amundson, (1997) career myths are incorrect assumptions and generalizations about the career counseling and decision-making process. These myths are common beliefs internalized from family or societal messages.

According to Amundson (1997) and Mitchell and Krumboltz (1996) people’s beliefs about themselves and the world of work influence their approach to learning new skills, developing new interests, setting goals, making career decisions, and taking actions toward career goals.

According to Sampson et al (1996) career beliefs can influence clients’ career related aspirations and action in both positive and negative ways. Negative beliefs affect clients’ perceptions of themselves and the world
of work, increase clients’ level of negative emotions associated with making a career decision and immobilize clients’ toward their career goals.

**Stead, Watson and Foxcroft (1993)** reported a relation between career indecision and irrational career beliefs. **Saunders, Peterson, Sampson and Reardon (2000)** investigated the relationships between depression, dysfunctional career thinking and career indecision in undergraduate university students and suggested that dysfunctional career thinking was a significant predictor of career indecision.

**Interventions to dispel dysfunctional beliefs**

**Reed, Reardon, Lenz and Leierer (2001)** assessed a university career development course based on cognitive information-processing theory. Students who took the course showed a significant decrease in their negative career thoughts when the Career Thoughts Inventory was used as a pretest and posttest measure. The greatest decrease in negative thinking was found in students with the highest level of negative thinking at the beginning of the course. The specific components of negative career thinking—decision-making confusion and commitment anxiety—contributed significantly to the main effect.

**Roll and Arthur (2002)** suggested that career counseling interventions targeted at career beliefs should include exploring beliefs expressed in families and performance contexts. Clients should be supported to examine which beliefs support their current career goals, beliefs that
have a negative impact and beliefs that offer new possibilities and career options.

Austin, Dahl and Wagner (2003) evaluated the efficacy of a community centered career decision making program based on cognitive information processing's career decision making model. Results showed that the career decision-making intervention greatly reduced negative career thoughts which are strongly associated with career indecision.

Research has shown that there are common patterns among those who are unsure of which careers to pursue. These themes can be grouped into three categories: issues dealing with self, decision making, and need for occupational information. For instance, one individual may have personal concerns that are affecting his or her decision, while another may simply need information about particular careers. According to the Handbook of Career Counseling (Post, Borgen, Amundson, & Washburn, UNESCO, 2002), the reasons why individuals enter particular occupations vary according to the amount of importance placed on personal preferences, such as interests, or external influences, such as labor market trends or parental expectations.

Fretz (1981) stated that one of the parameters of career interventions is their content domain and this content domain includes occupational information, self-knowledge and decision making skills. According to Austin, Wagner and Dahl (2004) gaps in self and occupational knowledge combined with decision making difficulties limit the effectiveness of career choice.
2.2.4. Knowledge of Self

According to Gaffner and Hazler (2002) progress in career development becomes blocked when there is a lack of information about self.

Holland (1997) stated that an adolescent’s vocational identity gives clarity and stability to his or her current and future goals and sets forth to the career direction he or she will pursue. According to Symes (1998), “vocationally undecided individuals have been characterized as experiencing both state and trait anxiety, lacking vocational identity and as holding various maladaptive beliefs and faulty generalizations”. According to Turner and Lapan (2005) vocational identity refers to the integration and crystallization of an individual’s energy, aptitudes and opportunities into a consistent sense of the uniqueness of himself or herself and fit into the vocational world.

Sampson et al (1996) reported that clients’ who experience negative emotions associated with the career decision making process may perceive themselves as less able to cope with stress. According to O’Hare (1989) and Sampson et al (1996) anxiety or overwhelming feelings about career decision making can impede action toward career goals. Lent, Brown and Hackett (1996) found that if clients do not have realistic perspective on their abilities, skills, interests, and values they may strive to reach unattainable goals but experience failure and discouragement.
Gaffner, and Hazier (2002) reported self-efficacy, locus of control, and anxiety as factors that are personality components of decision-making. According to Betz and Voyten (1997) and Taylor and Betz (1983), students with low self-efficacy will be delayed in their decision-making.

Waas (1984) observed that providing occupational information alone was insufficient to increase the cognitive differentiation among careers and suggested that personality information should be also be provided in addition to occupational information. Costa et al (1995) suggested that personality information can help in understanding the clients’ strengths and weaknesses and result in more appropriate and realistic choices. According to Julien (1999) information used by adolescents in making decisions about their future career includes attitudes and beliefs acquired during childhood, including specific information provided by a number of sources, including parents, siblings, other family members, family friends, peers, guidance counselors, teachers, school and public library resources, the mass media and government career centers.

Jurgens (2000) stated that self-knowledge can be developed through assessment results. According to Zunker and Norris (1998) assessment results can identify individual characteristics and generate further career development activities. Ryan Krane and Tirre (2005) reported that ability assessments are used to help individuals identify job possibilities in which success is increased. This is done by assessing abilities that can be immediately transferred into job-related skills and by testing aptitudes.
to predict areas of potential that could be tapped in the future to maximize occupational success.

Wei-Cheng J. Mau (2004) showed that Asian American students reported more difficulties than White and Hispanic American students before the process and more difficulties than White and African American students during the process of career decision-making.

Interventions to boost career self-knowledge

Curran (1977) investigated the effectiveness of a self-developed career guidance mini-course. The post-tests results showed that the treatment group, which was provided with information about self through a booklet (on self, society and changing world), significantly differed from the control group and another treatment group which was provided with a letter to the students.

Hadsal (1978) developed and tested a thirteen-week career development program, which included areas concerning assessment of the self, career options and training in job search skills. The program was useful in assisting students to clarify career objectives and in developing an effective search strategy.

Dean (1982) in a study of eighth grade students found that the treatment group, exposed to a career education program scored higher on career attitude maturity, goal selection and problem solving.

Kerr and Erb, (1991) conducted two studies to assess the impact of a persuasive value-based career counseling intervention on the development of purpose and identity in multi-potential college students. In the first study, a simple pretest-posttest evaluation, 41 students who received the intervention showed significant gains in the development of purpose and identity. Students who experienced the intervention in the second study, a quasi-experimental design, gained significantly more than a control group in the development of identity but were similar to controls in their development of purpose.

Schmidt and Callan, (1992) conducted a study where students were assigned to receive individual career counseling, personal counseling, or career counseling combined with career information. Compared with controls, students in all three treatment conditions demonstrated a significant increase in their level of vocational identity from pretest to posttest, suggesting that personal counseling, career counseling and career information can each be useful ways to assist adolescents in the successful achievement of their vocational identity.

Powell and Luzzo (1998) examined the career maturity of 253 high school students in relation to their career decision making attribution style. They found that those who had more personal control over their career decisions had more positive attitudes towards career decision making and were more career aware.
Marko and Savickas, (1998) tested the effect of a time perspective intervention designed to increase an individual’s orientation to the future. They postulated that the intervention should, in addition to increasing future orientation, foster career development because a future orientation constitutes a fundamental dimension in career choice attitudes and competencies. The experimental groups, when compared with control groups, exhibited statistically significant increases in future orientation as they improved their sense of continuity between the past, present and future and enhanced their optimism for the future. The intervention produced its largest effect size (.77) for more highly developed attitudes toward career planning among the experimental group. The intervention, however, did not immediately affect the quality of the students’ planning outcomes.

O’Brien, Dukstein, Jackson, Tomlinson and Kamatuka, (1999) evaluated the effect of Career Horizons, a one week six hour a day intervention with students and reported that the intervention demonstrated increases in career planning and exploration efficacy, educational and vocational development efficacy, number of careers considered and congruence between interests and career choice.

O’Hara (2000) studied the effects of a two semester career exploration intervention called Senior Bridge, on the Career Development Inventory scores of high school students. The results showed that the intervention significantly improved the students’ awareness, concern, and career
exploration behaviors. There was significant improvement on the Attitudinal measures of the Career Development Inventory.

McWhirter, Crothers and Rasheed, (2000) investigated the influence of a 9-week career education class on career decision-making self-efficacy, vocational skills self-efficacy, perceived educational barriers, outcome expectations, educational plans, and career expectations among a sample of 166 high school students. Their results showed that the career education class resulted in increased career-decision making self-efficacy, vocational skills self-efficacy, and short-term gains in outcome expectations but did not influence perceived educational barriers.

2.2.5. Occupational information

According to Holland (1985) those who have an adequate amount of self-information and occupational knowledge will make better decisions whereas those without this information will make poor decisions. Larson et al. (1988) suggest that some students are not ready to make decisions due to a lack of information about the career planning process. Chartrand et al. (1994) found a similar need for information about the process in their “developmentally undecided” cluster.

Gaffner and Hazler, (2002) stated that progress in career development may become blocked when there is a lack of information about the world of work (occupational information) and ways of obtaining information. According to Larson et al. (1988) students who lack career information may enter college and quickly find that their career
goals are unobtainable or unsuitable. Julien (1999) surveyed nearly 400 Canadian adolescents about their information seeking for career decision-making. A written questionnaire was used to gather data on the degree of helpfulness of various information sources and the ways in which these sources had helped. It also asked about some of the barriers to the adolescents’ information seeking. Further, thirty semi-structured interviews were conducted with the participants to know about their decision-making and information-search processes, their concerns about these processes, and the barriers they faced in accessing helpful information for career decision-making. The results revealed that 40% of the adolescents of the study did not know where to go for help in their decision-making and 38% felt that they needed to go to too many different places for the information they required. The respondents also shared that the trustworthiness of the information sources was critical to the ultimate usefulness of the help that they received.

Westbrook (1972) found that career counseling groups incorporating explicit presentations of occupational information led to greater and longer retention of such information. Several researchers have studied the impact of the method of presenting occupational information on the amount and accuracy of information obtained. Pilato and Myers (1975) found that giving students' accuracy of self-knowledge feedback as well as training in an occupational classification scheme was superior to either one separately for improving the appropriateness of occupational preference level. Osipow (1997) suggested that all students, regardless of social background, personality and past experiences, would improve
their future career decision making process by having a solid high school educational program and knowledge in how to access career information.

Of those studies comparing methodologies for presenting occupational information five (Sellman, 1970; Yungman, 1971; Jepsen, 1972; Laramore, 1972; and Johnson, Korn and Dunn, 1975) compared media (e.g., computer, video- or audio presented materials) with written materials. All of these studies found that the media-presented format or media plus written format resulted in greater effect than the written presentation alone in terms of the accuracy and amount of information students obtained from them. Computer programs and programmed material have been found to assist with the acquisition of basic occupational information (Maola and Kane, 1976; Cairo, 1983; Fukuyama, Probert, Neimeyer, Nevill and Metzler, 1988; and Peterson et al. 1991).

Interventions that add to knowledge of occupational information

Lincoln (1934), in his study found that ninth grade students who had both individual counseling and an occupational course had the best occupational plans and appropriate choice as compared to those who were not provided any counseling treatment.

Nick (1942) found that information about local employment opportunities given through school assemblies, group, and individual
conferences brought the occupational plans of eleventh and twelfth graders to closer harmony.

Speer and Jacker (1949) reported that direct experience with job possibilities, such as part-time and summer employment, gives the adult students a more realistic understanding of jobs and of themselves than does published information alone. When work experience combines with occupational information, guided and directed by a competent counselor, the best vocational choices emerge.

Aiken and Johnston (1973) studied the effect of group reinforcement counseling on the frequency of career information seeking behavior of college freshmen and sophomores. There were three counseling sessions, one and half hour duration each. Using Holland’s Vocational Preference Inventory (VPI) to identify consistent-inconsistent vocational patterns and Crites’ Vocational Inventory (VDI) to identify vocational maturity-immaturity, they found that group reinforcement counseling and vocational consistency were significantly related to behavioral change (i.e. active and cognitive information seeking behavior by students) after six weeks.

Barnes (1974) reported that an occupational investigation course increased the vocational maturity of ninth graders.

Wiggins and Moody (1981) tested the effectiveness of a program which involved using the Career Survey (CS) in combination with the
Vocational Preference Inventory (VPI). In this program, students completed a career survey focused on occupational dream choices, tentative realistic choices, listing information currently known about the occupations listed, comparing perceived interests and strengths with the occupations listed and then deciding if their choices seemed appropriate and consistent. The VPI was used to help students organize occupations according to tested typologies. Students were then allowed free access to occupational briefs and similar material and they could meet with a counselor as desired. The intervention program was evaluated using the My Vocational Situation and was found to be effective in reducing the occupational information concerns of the students.

Rayman, Bernard, Holland and Barnett (1983) evaluated the effects of a career course taught by 11 instructors (two sections each) for college students, who were undecided about a major field or career, in a pre-post design using the Vocational Identity, Occupational Information, and Barrier scales of the My Vocational Situation scale. Large main effects were observed for the Identity and Occupational Information scales, but not for the Barriers scale.

Research by Oliver and Spokane, (1988); McAuliffe and Fredrickson, (1990); Savickas, (1990) and McAuliffe, (1991); showed that career courses increased occupational information seeking.

Sirois-LeBlanc and Landine (2006) evaluated the effect of a series of workshops aimed at alleviating the second broad category of career
decision making difficulties i.e., lack of information, outlined in Gati et al., (1996) taxonomy. Their results indicated that the workshops significantly reduced the difficulty of students in the sub-categories, lack of information about occupations and lack of information about additional sources of information.

2.2.6. Internal barriers

Fuqua, Blum and Hartman (1988); Lucas and Epperson (1988), (1990); Newman, Fuqua and Minger (1990) reported that high anxiety is closely tied to a students’ inability to decide. This internal factor may delay a student from making a decision.

Scheier and Carver (1993) reported that one internal person-related variable that is likely to influence whether the individual perceives a barrier as being challenging or defeating is their cognitive style. A useful cognitive style to examine in this context is optimism/pessimism, which is a generalized tendency to expect positive outcomes. Powell and Luzzo, (1998); Petrone, (2000); and Creed, Patton, and Bartrum, (2002) found that students who endorsed higher levels of optimism showed greater career planning and exploration, were more decided about their careers and had more career goals, while those high in pessimism reported less career knowledge, were more indecisive and achieved more poorly academically. Creed, Patton and Bartrum (2004) conducted a study which predicted that optimism/pessimism will influence the perception of internal and external barriers, and that internal and external barriers will interact and impact on career-related
confidence and subsequently affect career focus and career indecision. Their results demonstrated that 1) cognitive style was influential in determining the perception of internal barriers (for males and females) and external barriers and 2) career decision-making self efficacy, internal and external barriers and optimistic/pessimistic cognitive style were able to predict career focus and career indecision.

Tinsley (1992) suggested that internal factors such as personal identity, self-esteem and decision making style were influential in students’ career decision making. Negative cognitions have been linked to indecisiveness. The more dysfunctional an individual’s career thoughts are, the more indecisive the individual is (Austin, Wagner and Dahl, 2004).

According to Swanson and Achiardi (2005) career decision making skills is an important variable to assess in the career counseling process because not all clients are similarly skilled at, or confident about, making a career choice even after exploring their interests, skills/abilities, and values.

Jurgens, (2000) reported that designs of many interventions recommend ways to enhance decision making skills, and workshops and books have attempted to alleviate the difficulty of the process.

Research supports the notion that most participants benefit from career interventions aimed at enhancing decision making skills (Holland, Magoon and Spokane, 1981; Oliver and Spokane, 1988; Zagora and
Cramer, 1994). Herr and Cramer (cited in Kraus and Hughey, 1999), concluded that the major objective of high schools’ career guidance programs should be in assisting students by the use of research and technology in developing effective career decision making skills. Isaacson et al. (2000) identified skills for locating, evaluating and interpreting information about career opportunities as a competency that is necessary for high school students to move through the decision making process.

**Effect of interventions on internal barriers**

Mitchell and Krumboltz (1987) found that a cognitive restructuring intervention was more effective than both decision making training and control condition in reducing anxiety about career decision making and in encouraging vocational exploratory behavior.

Sirois-LeBlanc and Landine (2006) found a significant reduction in the unreliable information and internal conflicts subcategories of career decision making difficulties of the CDDQ following a series of workshops titled “taking the fear out of career choice”.

2.2.7. External barriers

i. Family

Super (1957) postulated that the family was an important factor in influencing the career development process.

According to Splete and Freeman-George (1985) the major family determinants of children’s career development can be categorized as
follows: geographic location, genetic inheritance, family background, socio-economic status, family composition, parenting style and parental attitudes towards work. Hargrove, Inman and Crane, (2005) examined how perceptions of family interaction patterns as defined along three dimensions of family environment (quality of family relationships, family goal orientations, and degree of organization and control within the family system) might predict vocational identity and career planning attitudes among adolescents. Their analyses revealed that the quality of family relationships (i.e., degree to which family members are encouraged to express feelings and problems) played a small, yet significant role in predicting career planning attitudes of adolescents.

In examining research since 1980 on the relationship between family of origin and career development Whiston and Keller (2004) found that very few family structure factors like for example, race or ethnicity, socio-economic status, parents’ occupational or educational background and family size, directly influenced career outcomes; however, they found several studies that indicated that career variables were influenced by an interaction among family structure variables and family process variables like family interactions, relational factors and parental expectations.

Roe (1956) described family interaction patterns as the primary determinants of occupational behaviors. O’Neil et al. (1980) linked career decision-making skills to early childhood experiences, family attitudes and practices regarding careers, and role modeling by mothers.
and fathers. According to Schulenberg et al (1984) the family also exercises significant power through educational opportunities, knowledge base, and resources it provides. According to O’Neil et al. (1980); Grotevant and Cooper (1988); DeRidder (1990); and Penick and Jepsen (1992) children are influenced by their family’s work values, attitudes, and behaviors. The family is often the primary source of values, beliefs and stereotypes (Richmond-Abbott, 1984; Levkovich and Kuzmitskaite, 1993; Witt, 1997), all of which influence the perception of the value of any activity, interest or career (Levin and Gordon, 1989; Colley, Eglinton and Elliot, 1992).

Bratcher (1982) found that family behavior patterns that become dysfunctional can deter career development. Zingaro (1983) stated that the failure of adolescents to engage in meaningful career exploration can be symptomatic of dysfunction within the family behavior dimensions of cohesion and adaptability. For example, over-identification (undifferentiation) with the family because of extreme family loyalty (extreme cohesion) can negatively affect the development of autonomy. Seligman, Weinstock, and Owings (p.229, 1988) suggested that counselors should look closely at the family environment of children who are not able to articulate career and family goals. An undifferentiated individual has difficulty in distinguishing his or her own wishes, thoughts, and goals from those of other family members. Kinnier, Brigman, and Noble (1990) reported that individuals who were more easily influenced by family pressures and who were not able to cope effectively with the interference of significant others were more
indecisive when facing problems concerning career decision making. Penick and Jepsen (1992) found that if the family is rigidly organized and does not change to satisfy needs for increased autonomy, difficulties in adolescent career development may result.

In a study of high school students Hesser (1984) found a significant linear relationship between career variables such as decision making information, career planning and world-of-work knowledge and family adaptability and cohesion. Tang, Fouad, and Smith (1999) found that family involvement and feedback in career planning have a strong impact on Asian American college students' career choice.

ii. Parents
There is a general consensus that parents are the single most influential factor in the career development and choice of their children (O'Neil et al, 1980; McNair and Brown, 1983; Kotrlik and Harrison, 1989; Orfield and Paul, 1994; Trusty, 1996). Parents have been cited as a strong influential factor acting as either a facilitator or a barrier in their children’s career decision-making (Sebald, 1989; and Middleton and Loughead, 1993).

Auyeung and Sands (1997) studied the relative influence of career-choice factors on students from different cultural backgrounds. They reported that the factors: parental influence, peer influence, teacher influence and association with others in the field, have greater impact on career choices for Hong Kong and Taiwanese students, whereas
Australian students tended to be more influenced by aptitude for subject matter. Patton and McMahon (1999) stated that careers are influenced by parents, social and environmental context and economic climate, interests, ability, geography, and many other events. According to Lent, Brown, & Hackett (2000) a career decision-making task requires the person who is making the decision to interact with many individuals who might hinder or support his or her choices. Such individuals include parents, teachers, peers, and friends, all of whom may either create barriers to or facilitate the formulation and achievement of the person's objectives.

In early work, Roe (1957) sought to establish a link between parental attitudes and the child’s eventual occupational choice. O’Neil, Ohlde, Tollefson, Barke, Piggott and Watts, (1980) stated that parents influence adolescents’ occupational aspirations and attainment, and the range of choices considered. According to Birk and Blimline (1984) and Schulenberg et al (1984) parents have the greatest influence on their children’s self concept, cultural norms, beliefs and goals; all of which affect their career development and decisions. According to Santrock (1993) parents are among the most important socio-cultural factors influencing career development, especially in areas such as expectations for achievement and teaching about the world of work through their own occupations. Wall, Covell & MacIntyre, (1999) suggested that parental support often interacts with other variables. They tested a model linking perceived social supports, perceived opportunities, educational aspirations and expectations, and career
aspirations and expectations of Canadian adolescents. They found that the path from family factors to career plans, for both males and females, was from family support to perception of opportunities to educational expectations and finally, to occupational expectations. Parent expectations and support are important factors in influencing career decidedness and maturity (Guerra and Braungart-Reiker, 1999; Kenny, 1990) and future educational and occupational attainment (Poole, Langan-Fox, Ciavarella and Omodei, 1991).

Blustein et al (1991); and Ketterson and Blustein, (1997) reported parent-adolescent factors, such as feeling a sense of connectedness and attachment to parents, to be beneficial for adolescent career exploration. In addition, parents who enjoy their work and share this enjoyment with their children help them to learn positive work values (Morrow, 1995). Trusty (1996) found that high parental involvement, including an active interest in children’s school subjects, homework, grades, activities, emotional well being, and future aspirations, predicted positive attitudes toward school and the future, better grades, and better career decision making skills. Kracke (1997) found that parents who encouraged their children to think independently and encouraged career exploration tended to have children who participated in much more career exploration than parents who did not implement these strategies. Marjoribanks (2002) demonstrated that parents’ perceived aspirations for their adolescent children have medium to large associations with the adolescents’ educational aspirations and small but significant associations with the adolescents’ occupational aspirations.
Mau et al (1998) showed that adolescents’ perceptions of parental expectations have an influence on educational aspirations. In a study measuring the intensity of information seeking undertaken by 236 adolescent students in German schools, Kracke (2001, p. 20) found that parental involvement in career related issues is one of a series of factors that leads to young people engaging in more intense and effective information seeking activities.

Leong & Serafica (1995) reported that Asian Americans, compared with European Americans, are more likely to follow their parents’ advice on career choice. The reason is likely due to Asian cultural values that emphasize respect and obedience toward authority and older individuals. Tang, Fouad, and Smith (1999) suggested that the strong parental influence is associated with more traditionally acceptable career choices, such as engineering, medicine, and computer science, for Asians.

Contrary to the positive influences, parental influence may have a less beneficial impact on adolescent’s career exploration and decision making when it is characterized by non-involvement, indifference or negative involvement. This creates barriers for adolescents who are attempting to achieve their own career goals (Middleton and Loughead, 1993). Blustein, Walbridge, Friedlander and Palladino (cited in Super et al. 1996, p.129) stated that “some students’ indecision problems are wrapped in their role as children because they cannot make a choice for fear of disappointing a parent”. According to Rainey and Borders (1997) adolescents who are overly dependent on their parents may
eliminate potential career paths. Often times, children feel that their parent’s expectations are unattainable, which then places too much pressure on the children to succeed. Other parental factors such as educational and occupational status, attitudes and personal biases towards their own and others’ occupations(s), financial concerns, rules and expectations may affect the career information passed on to their adolescents (Rainey and Borders, 1997; Young et al, 1997). Taylor, Harris and Taylor (2004) found that without parental approval or support, adolescents are often reluctant to pursue – or even explore – diverse career possibilities.

Herbert (1986) noted that in Gallup polls of American families, parents reported helping their children choose a career as their second most pressing concern. She further stated that career guidance had a top priority with parents and high school students.

Parents are often not adequately informed about how to help their adolescent children in their career decision making (Jeffrey, Lehr, Hache, and Campbell, 1992; Young, 1994). Parents often do not have the tools or information they need to use their power most effectively (Orfield and Paul, 1994). Downing and D’Andrea (1994) reported that although parents feel they are actively involved in their children’s career decision making, they also feel that they are uninformed about the process and unable to provide competent help.
Paa and McWhirter (2000) advocated programs that seek to “help parents become informed educators and sources of guidance for their children’s career development” (p.41) and suggest that it would be beneficial if the process of career development were explained to parents and if parents were made familiar with the career resources available to their children. Trusty, (1998); Kracke, (2001); Way and Rossmann, (1996); Otto, (2000) concurred with Paa and McWhirter (2000) about providing parents with access to career resources so that they can provide informed and accurate advice and support to their children. Taylor, Harris, and Taylor (2004) emphasized the need to prioritize the provision of career information to parents and suggest that this should include information on various careers, how to use career resources, and helping parents understand the influence they have on their children’s career decision making.

Barak and Friedkes (1981) reported that clients who perceive “external barrier” and who experienced “personal conflict” gained the least from a standard counseling process.

Parents need to be encouraged to understand the conversations they have with their children about careers as one of the most important and formative places for self-investigation, value-forming, career exploration and decision making (Way and Rossmann, 1996; Paa and McWhirter 2000; Kracke, 1997, 2001). Parents’ active involvement in school based career counseling programs is useful to students (Amumdson and Penner, cited in Young and Chen, 1999). Castricone, Finan and
Gumble, (1982); Daniels, et al. (1983) suggested parent / student workshops to facilitate career discussions, self-directed career centers for use by both parents and students, and student / parent handbooks for personal, educational and vocational planning.

Interventions to increase and facilitate parent involvement in career decision making

Many studies have been conducted where parents were trained to deal with the occupational needs of their teenage children who are about to embark on their post-secondary experience. These programs are often an abbreviated form of traditional career counseling facilitated by parents, including: assessment, job search, occupational and educational planning, and implementation (Castricone, Wright Finan, and Gumble, 1982; Jeffrey et al., 1992; Kush and Cochran, 1993; Otto and Call, 1985). These programs do report positive results, however, only a few of them have been rigorously evaluated (Kush and Cochran, 1993; Palmer and Cochran, 1998). None the less, children whose parents did participate in the few evaluation studies showed clearer assessment of themselves and an enhanced sense of agency in career decision making.

Palmer and Cochran (1988) examined the effectiveness of the Partners Program with high school students. They found that adolescents reported increased career orientation, and a strengthening of parental bonding. They concluded that parents can function effectively in
fostering the career development of their children, when provided with a structured program that they can follow.

**Young and Friesen (1992)** explored the intentions of parents in influencing the career development of their children. They categorized 1772 critical incidents into ten categories which represented the intentions of parents. These categories included skill acquisition, acquisition of specific values or beliefs, protection from unwanted experiences, increase independent thinking or action, decrease sex role stereotyping, moderation of parent-child relationships, facilitation of human relationships, enhancement of character development, development of personal responsibility and achievement of parents’ personal goals. Their study revealed that parents, although not necessarily attempting to influence particular occupational choice, are active agents in influencing their children in a broad range of areas in career development.

**Kush and Cochran (1993)** tested the effectiveness of a program for parents to help their adolescent sons and daughters develop a greater sense of agency regarding a career. Through career planning with a parent, adolescents in Grade 12 showed a greater career certainty, less indecision, greater confidence, and more career motivation.

**Amundson and Penner (1998)** reported positive effects of a Parent Involved Career Exploration (PICE) program where the parents assumed an observational role while their children completed some
basic career exploration activities. There were both short-term and long-term positive results in the area of family interaction. The adolescents felt more understood by their parents due to increased and improved communication with them. This led to better career decision-making on the part of the children.

Clark and Horan (2000) evaluated the effectiveness of an interactive internet program that taught parents to facilitate their children’s career development. Their results showed that parents in the experimental group outperformed control group parents in their demonstration of career development knowledge. They were able to understand and tackle career myths better than the control group parents. Also, the program was effective in increasing the career guidance behaviors of parents with their children.

Young et al (2001) studied the career development in adolescence as a family project. This study conceptualized and investigated career-relevant parent-child conversations and other actions over time. A systematic qualitative analysis revealed several dimensions facilitating the family career-development project, including joint goals, communication, goals-steps congruence, and individuation.

2.4. Review of other outcome constructs

Other outcome constructs like career maturity, career salience, and career self-efficacy were not an integral part of the present study; however, since they are closely related to the construct of career
indecision, a brief review on the effect of interventions on them is presented below.

Magill (1980) found significantly higher scores on the attitude scale, self appraisal and goal selection sub-tests of the Career Maturity Inventory in favor of the experimental groups of seventh and eighth graders which were provided two years and one year occupational investigation course.

Barr (1983) reported a significant difference between the pre-test and post-test scores on the career Maturity Inventory after a career decision-making course.

Tulsi Paramjit Kaur (1983) investigated and showed that career guidance strategies had a significant effect on the vocational maturity of ninth graders.

Fukuyama et al., (1988) used a pretest-posttest design to assess the value of DISCOVER and found significant increases in the career decision making self-efficacy of students.

Luzzo and Taylor (1994) evaluated the effects of verbal persuasion on career decision making activities and found that verbal persuasion significantly increased career decision making self-efficacy.

Luzzo et al., (1999) evaluated the effects of both, performance accomplishment and vicarious learning experiences on the math/science
self-efficacy and career interests, goals and career choice actions of career undecided college students. Pre- and post treatment assessments revealed significant effects of the performance accomplishment and vicarious learning experiences.

**Luzzo and Day’s (1999)** evaluation of college students’ career decision making self-efficacy before and after a self-efficacy enhancing feedback session showed significant increases in their career decision making self-efficacy.

**Reese and Miller (2006)** investigated the effects of a career development course on career decision-making self-efficacy. The course was primarily designed to help undecided students with career decision making. The results indicated that students who completed the career course showed increased career decision-making self-efficacy overall, specifically in the areas of obtaining occupational information, setting career goals, and career planning. The career course also appeared to lower perceived career decision difficulties.