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The Relational Career Values of Post-Secondary Women Students

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One of the most salient criticisms of the state of career development theory today is that it is ill-equipped to explain the vocational behavior of women (Brooks, 1990). Career theory has traditionally been a domain entrenched with male ways of being (Marshall, 1989). Although some theories have been revised and expanded to more adequately capture women's career development, many of the major career theories were originally formulated based on the career experiences of men (Gallos, 1989; Patton & McMahon, 1999). Due to this male bias in career theory, many of the variables and dimensions unique to women's career development have not been explored (Betz & Fitzgerald, 1987). The investigation of such things as the meaning and expectation for fulfillment of women's career values has not been a focus of social science research.

Relational aspects of women's identities have been noted and examined by several feminist researchers who suggest that this factor has been neglected in the traditional theories of human development. Gilligan (1982) found that women tend to define themselves in the context of intimate relationships whereas men define themselves in terms of non-relationships, which focus on separation and autonomy. Women in her studies used words such as "caring," "giving," "being kind," and "not hurting others" to describe themselves, suggesting a value system deeply influenced by a genuine concern for others. Belenky, Clinchy, Goldberger, and Tarule (1986) researching women's cognitive development found that women develop a "connected" way of knowing which can be described as contextual, values experience, and connects concepts to personal knowledge and events. The "self-in-relation" model (Jordan, Kaplan, Miller, Stiver, & Surrey, 1991) posits that for women particularly, connections and relationships with others enhance psychological well being. It is recognized that relational ways of being are not gender-specific, but gender-related whereby women are more likely than men to endorse them (Gilligan & Attanucci, 1988).

The new ways of understanding women's psychological, cognitive, and moral development within a relational context have implications for explaining women's career experience (Crozier, 1999; Forrest & Mikolaitis, 1986; Stonewater, 1988). Forrest and Mikolaitis (1986) reasoned that individuals with a relational identity would prefer environments such as the helping professions, where this orientation could be expressed. They suggested that work environments should be assessed for the "skills, values and preferred problem-solving styles" to see if they are "more associated with helping, not hurting, and maintaining the interconnectedness between people" (p. 83). Stonewater (1988) hypothesized that women would approach the career decision-making process differently than males seeking careers where they could be connected to others in a helping role. Crozier (1999) identifies a number of ways in which a relational identity would influence women's careers such as in career choice, stages of

career development, multiple life roles, career decision-making process, and definitions of career success. The connection between relational identity and traditional careers is self-evident. However, women need to be encouraged to consider nontraditional careers, and increase their awareness of the ways they can “offer relationships, be helpful to people, and make a meaningful contribution” (Crozier, 1999, p. 237). Despite the fact that overall research on the career development of girls and women has grown exponentially in the last decade (Phillips & Imhoff, 1997), there has been little attention paid to these relational constructs or underlying relational meanings in women’s careers.

Values are a critical component of one’s sense of identity (Josselson, 1987). Values are expressed in a variety of life roles, such as the work role (Brown, 1996). Values can be conceptualized as “the degree of importance personally given to modalities of being and behaving that are relevant to the work context and activities” (Perron & St. Onge, 1991, p. 80). Work values have been incorporated in varying degrees and permutations into various theories of career development.

Donald Super introduced the concept of work values to the field of career theory over 40 years ago advocating for their inclusion in vocational appraisal which had for so long been limited to measures of abilities and interests (Super, Savickas, & Super, 1996). Super (1957, 1980, 1990) noted that people differ in their values and that values partly contribute to a person’s career pattern and satisfaction. In her model of women’s achievement related decisions, Eccles (1987) discusses “Personal values”, conceived of as one component of the “subjective task value” or importance attached to the different career options individuals believe are available to them. She suggests that gender role socialization could lead men and women to develop different core values (interest in people versus interest in things, for example). Consequently, tasks involving different characteristics would have different values for women and men. More specifically, self-schema and “personal values” will influence the “value” one places on various career options.

The values-based holistic career model developed by Duane Brown (1996) gives values the central place in the career decision making process but by no means are they the only basis for decision making. Behavior will be most strongly guided by a small number of values, which are ranked hierarchically. In Brown’s framework, factors such as culture, gender, and socioeconomic level have an impact on the development of values. Life satisfaction depends on values being satisfied in a variety of life roles, which are interactive. Brown recognizes the limiting effects that social structures can have on the availability of opportunities to satisfy values.

Brown (1996) suggests that highly prioritized values are determinants of life role choices, such as the selection of an occupation. Therefore accurate values-based information about an occupation or environment must be available for the most effective decision making. Unfortunately, this type of information is not always readily accessible, and furthermore the stereotypes that people, especially young people, have about various occupations are “typically ill-informed” (Eccles, 1994, p. 143).

Recent qualitative research studies in the area of women’s career development have revealed the centrality of relational values to women’s career identity (Jones, 1997; Lalande, Crozier, & Davey, 1998; Richie, Fassinger, Linn, Johnson, Prosser, & Robinson, 1997; Schuster, 1990; Young & Richards, 1992). Some researchers have described relational ways of being as comprising the “core” or “essence” of the reported career experiences of the women in their samples (Lalande et al., 1998; Schuster, 1990;

Richie et al., 1997). Career plans of women are about more than just finding a “satisfying” career (Schuster, 1990). The opportunity to maintain relationships and connections with others on the job is a very important factor for women. When asked to discuss the most salient aspects of their work, distinct themes suggestive of relational values emerge in the career stories of women, such as teaching, giving to others, helping others, and communication. The support of others such as mentors is also mentioned (Richie et al., 1997; Young & Richards, 1992). Relational values, more global in perspective, also emerge in working for social change to improve the human condition, advocating for others, being involved in the community, and generally making the world a better and more equitable place in which to live. Interestingly, the samples utilized in these studies are not homogenous. In fact they were very diverse, incorporating women of different ethnicity (Jones, 1997; Richie et al., 1997); age (Richie et al., 1997; Young & Richards, 1992); fields of study (Jones, 1997; Lalande et al., 1998); sexual orientation (Jones, 1997) and profession (Richie et al., 1997; Schuster, 1990).

The significance of relational values, such as altruism, connection, helping, and concern for others, for women in traditional professions has been documented through research (Ben-Shem & Avi-Itzhak, 1991; Chatterjee & McCarrey, 1991; Schuster, 1990). More inconclusive are the results concerning the relational values of women in nontraditional professions. Women in these professions have been found to be more oriented to masculine values, such as autonomy and risk (Chatterjee & McCarrey, 1991). They have also shown a desire to satisfy relational values in their professions, such as contributing to society (Ambrose, Lazarus, & Nair, 1998), and being connected to and helping others (Richie, et al., 1997; Schuster, 1990).

The current research attempts to explore the existence and importance of relational values in women’s career role. The research and theorizing of such feminist writers as Miller (1976), Gilligan (1982), and the Stone Center Group (Jordan, Kaplan, Miller, Stiver, & Surrey, 1991) suggests that women possess relational worldviews, valuing connections and interdependence. Thus, “women’s vocational identity may be organized around perceptions of their workplace self as responsive, interdependent, and empathic” (Giordano, 1995, p. 5). One of the difficulties of fully appreciating women’s values in the workplace is that they are often examined through a traditional male lens. The ways that women define achievement and success in their careers may differ from the commonly accepted definitions of those constructs. While there have been numerous calls to examine relational ways of being in the career roles of women (Forrest & Mikolaitis, 1986; Gallos, 1989), there has been little research conducted in this area.

Method

Research Design

The qualitative research being discussed in this article is part of a larger study which combined both quantitative and qualitative methods to understand women’s relational values overall and in the career role (Dorval, 1999). Gender role orientation and age, two factors that have been suggested to influence values, were also examined in Dorval’s study. The qualitative analysis process, according to Dey (1993) consists of three parts: describing the phenomenon under study, classifying the data, and finally making connections within the data. This simple model was followed in the present

study. The first step, describing, involves activities such as summarizing the data, and pulling it together through relating central characteristics. Ultimately, description provides the basis for interpretation. Classification entails, “organizing data into categories or classes and identifying formal connections between them” (p. 275). Finally, connecting categories involves, “identifying substantive connections by associating categories or linking data” (p. 275). Qualitative analysis was conducted with a computer software program entitled HyperQual (Padilla, 1990), designed specifically for the qualitative analysis of text-based data.

The quantitative component of the research involved participants completing the Life Values Inventory (LVI) which is a unique values inventory as it promotes holistic thinking by including a variety of life roles (Brown & Crace, 1996). The LVI was chosen for the study because of its inclusion of a variety of values which could be considered relational, such as belonging, concern for others, and loyalty to family or group, concern for the environment, and spirituality. Other values measured by the LVI include achievement, creativity, financial prosperity, health and activity, humility, independence, privacy, responsibility, and scientific understanding. The LVI was also chosen because in its design the authors were particularly sensitive to the unique concerns of women (Brown & Crace, 1996).

The LVI uses a Likert rating scale for 14 values, open-ended qualitative questions and then a ranking process for values overall and values expected to be satisfied in four life roles: job or career, student, family and important relationships, and leisure and community activities. The qualitative component of the study focussed on the ranking of values, on the LVI, that women expected to have satisfied in their job or career. The following question was presented to each participant, with ample paper to write her response on: Please review the values you ranked as important to be satisfied in your job and indicate in what ways do you hope to have these values satisfied in your job? If possible, provide specific examples.

This question was piloted with a small sample to test for clarity and comprehension. The question was designed to solicit the “underlying meanings” of the career values for these women by understanding the “ways in which they hoped the values would be satisfied” and “through the examples given”. Quantitative analysis can often be enriched by qualitative information that provides “depth” and “understanding” behind the numbers (Polit & Hungler, 1999).

Research Participants

Participation in the study was voluntary with recruitment using numerous methods: e-mail messages, notices, campus newspaper and newsletter articles, and presentations in relevant classes and undergraduate clubs. Ninety-eight full-time female undergraduate students, from a university in Alberta, participated in the study. The age of the participants ranged from 18 to 52 years (Mean = 24.9, S.D = 6.1). A small percentage of the participants were married or living with an intimate partner (20%) with most of the participants identifying as single (80%). A small percentage of the sample had children (11%) with the majority of those having two children (64%).

The traditional group, 50 participants, was made up of 18 from social work and 32 from nursing. The nontraditional group, 48 participants, included 31 from engineering and 17 from science (excluding biology). A faculty was considered traditional if seventy percent or more of the total enrollees were women and

nontraditional if thirty percent or less of the total enrollees were women (Lavallee & Pelletier, 1992). Biology is no longer a nontraditional career area for women (Nevitte, Gibbins, & Coddling, 1990), in fact it is the only department in the Faculty of science where female students outnumber males.

Results

Interpretation of the results highlights the significance of relational meanings in the values that women hoped to have satisfied in their career role. The values women hoped to have satisfied in their career role included achievement, concern for others, responsibility, financial prosperity, belonging, concern for the environment, and spirituality. Each of these values will be discussed revealing the relational themes that were embedded within the meaning of the value.

Achievement

The relational theme in Achievement was evident in the desire to help others or connect with others in some way through the job. Women in nursing and social work, mentioned such things as “making a positive impact on people’s lives,” “achieve good relationships with patients and help them to lead happy, healthy lives,” and “relating to and understanding individuals.” One nursing student stated that, “If I am able to help only one person or an entire community, I will feel achievement.” A social work student mentioned that she would feel personal achievement through witnessing or learning of the achievements of her clients. Helping others to achieve their own goals and success seemed to be an important part of achievement for some women in the sample, particularly those in the traditional group. Only one woman in a nontraditional faculty, an engineering student expressed Achievement in a relational way stating, “I want to do something that really affects the world. I want to help others, and push myself to my limit.”

Concern for Others

Concern for Others was a value that appeared very frequently in the data and by definition would be expected to have relational meaning. Mentioned by women in both the traditional and nontraditional group, it was most frequently discussed by the former. The major way that Concern for Others was expected to be accomplished was through “*Helping others.*” The responses ranged on a continuum within this theme with some less directly relational, such as “helping others by sharing knowledge” as one engineering student commented. Two women from nontraditional faculties explained that concern for others in their career would mean “*Teaching*” or instructing others. Other comments were more directly and deeply relational as expressed by this social work student, “A deep understanding of others’ situation as we walk through their troubles together.” Many women in the traditional faculties alluded to the fact that Concern for Others is inherent in their job by virtue of the nature of the work. Some of these women noted this as the reason for entering the profession.

Some women in both traditional and nontraditional faculties mentioned nurturing, caring for, and comforting others, as well as helping others to attain hope, solace, happiness, and self-actualization. A nursing student phrased her point of view

in this way, “One of my greatest joys is to calm frightened people, help hurt people and just generally help people out when they need it” and “My concern for others drives me and enables me to help people in that really personal way.”

The desire to help others was also expressed on a macro level. Some women in both the traditional and nontraditional group stated that they wanted to help communities or contribute to the betterment of society as a whole. Improving the quality of life of others was also mentioned, particularly of those who are less fortunate. An engineering student stated, “I hope to one day go overseas to work with under-developed countries and assist them with water purification/irrigation/solid waste management.” A science student noted, “I hope to have a job that allows me to improve the quality of life for other people or animals or aspects of the environment.”

A few of the women in both groups mentioned acting as an advocate for those in need, with another theme being “*Responsibility to others*.” An engineering student stated that concern for others should be kept in mind because “a civil engineer’s work is for the direct use of other people; safety and utility must be remembered in what an engineer constructs.” Another engineering student had similar sentiments suggesting that “by entering the engineering profession, the welfare of the public and environment is the main priority; it is the first priority in the Code of Ethics.” This theme is closely connected to the relational dimensions found in the value of Responsibility.

Responsibility

The majority of the women in the study, who stated that they wanted the value of Responsibility to be satisfied in their career role, suggested that this would be possible through being “*Trustworthy*”. It could be argued that by its very definition, the word “trustworthy” implies a relationship, whether this is with another person or a larger entity such as an organization or company. The responses comprising this theme, however, differed as to whether or not they explicitly mentioned demonstrating trustworthiness to someone else. For example, one engineering student stated, “I hope to be known as a responsible engineer. I plan to satisfy this by applying good work ethics, and just doing my job to my full potential.” More obviously relational were the comments such as this statement from another engineering student, “I want people to be able to trust me and depend on me to do what I promise I’ll do and be able to help them.”

Many women in both groups noted that in their careers they would be relied upon and counted on by co-workers, supervisors, organizations, and clients or patients. A few women in the traditional group described the trustworthiness needed to be in a position where one is dealing with patients or clients in great need. Trust seemed to be considered an important precursor to good relationships with others. A science student wrote “It is important to me to know my supervisors and co-workers consider me reliable, and can be trusted.” Similarly, a nursing student stated, “As a nurse it is important to instill a level of trust between the nurse and patient in order to provide optimum care.” Others noted that being in a position of trust carried with it ethical and legal obligations. An engineering student noted, “As an engineer, I will be responsible for every design or procedure I approve. This is a large duty because if anything I approve was to cause damage to property or human life (i.e. collapsed building or

bridge that I designed) I could be held personally accountable, incarcerated with criminal charges...”

Another relational theme that appeared in the data was being responsible through "*Making Contributions*" to others or making a difference in another person's life. A social work student revealed that she personally had been helped in her life and felt responsible to help others through her work. Four students mentioned the responsibilities they had to others such as family members or partners. For example, a social work student stated, "as part of a family, I am responsible for earning a living through working." A science student remarked that there are certain duties that she expects and accepts in her roles as friend, daughter, and girlfriend.

Financial Prosperity

A theme within Financial Prosperity that emerged, "*Provide for family*," had obvious relational overtones. Making enough money in one's career to support one's family was mentioned equally by women from traditional and nontraditional faculties. Some women in both groups spoke about children they already had, "When I have my degree I will be making enough money to support myself and my son" noted a nursing student. Others, like this science student, were planning for the future, "financial prosperity will be satisfied in my future job if I am paid well and given benefits for myself and my potential family." A science student noted that she wanted to be in a position financially to take the time to go to the school concerts of her children and spend time with her husband.

Belonging

Feeling a sense of affiliation, inclusion, or acceptance in the workplace was a desire expressed by some of the women from both groups. Some, like this engineering student, commented on the desire to feel like a valued member of a work group or team, "Belonging would be satisfied by working as part of a team where I feel that my part on the team is important." Developing friendships, bonding with co-workers, and "fitting in" were all discussed as ways of cultivating a sense of belonging. An engineering student expressed that she wanted to be "well-liked" by her co-workers. Another engineering student noted that in order to enjoy work, it is important to get along with co-workers. Expanding beyond co-workers, one nurse mentioned feeling belonging as part of a larger team of health professionals. The nurse-patient relationship was also mentioned as a situation in which one feels a sense of belonging.

Concern for the Environment

Caring for the environment through protection of natural resources, or improving existing conditions (air pollution, water quality, deforestation, and so forth) was important for some women, particularly in the nontraditional faculties. Making the world a better place to live for humans, other animals, and plants was a priority. Some engineering students mentioned, "contributing to society," "making a difference," and "creating designs that will make life better for people." One engineering student noted, "I want to be able to go home at night and feel that aside from just making money, I did

something real. Something that is good for the environment that goes beyond making money.” Another engineering student felt a responsibility not only to humankind at present, but was also concerned about the future stating that it was “our duty to conserve the earth for the generations to come.”

Spirituality

A few women in both groups discussed the ways in which their religion or spirituality could influence their behavior and activities in their careers. An engineering student mentioned incorporating integrity and honor into her work as a method to “glorify God” through her career. Some women in the traditional faculties expressed the fact that Spirituality could be satisfied in their career through putting the needs of others before their own, and helping those who are suffering or in need. A science student stated that she lives her faith by her example. Sentiments regarding feelings of connectedness to God or a higher power and to others were common among both groups of women. A science student revealed that she feels a connection to a higher power through her connection with nature and therefore hoped that her work as a geologist would “get me into nature a lot.”

Discussion

Relational themes are present in women’s expectations of having their career values satisfied, whether they are enrolled in a traditional or nontraditional faculty. Relational themes are obvious within values, which have a “caring” or “concerned” connotation, such as Concern for Others. However, there are also relational themes present in values such as Achievement, where the traditional or “male lens” would generally not display a relational understanding.

Helping others was a major relational theme across the values; this was conceptualized both as helping individuals but also on a more global level of helping society. On an individual level, it included helping others by offering hope or solace but also by assisting them to achieve happiness and self-actualization. Helping others was a very strong theme in the value of Concern for Others and in Spirituality but also, perhaps surprisingly within the value of Achievement. The “usual” definition of career success includes factors such as “career advancement, stable occupational roles, and levels of status symbolized by power and money” not helping others (Hashizume & Crozier, 1994, p.106). Powell and Mainiero (1992) note that the traditionally male vision of career achievement, “getting ahead” in an organization may be “dated” due to the new realities of the workplace such as decreased job security and downsizing. For some of the women in the study, a sense of Achievement was experienced through helping others. Making a difference in the lives of others constituted achievement for these women. Unfortunately, the literature does not often recognize or give credence to this meaning of achievement. Gallos (1989) noted the absence of a language “to talk about what does a career look like that is simultaneously high on achievement and high on relationship” (p. 124).

Three core achievement styles: direct, instrumental, and relational achievement, have been suggested by Lipman-Blumen, Handley-Isaksen, and Leavitt (1983). Relational achievement is when a sense of achievement is attained through collaborating with others, contributing to a group task, or experiencing it vicariously

through the achievements of others. Relational achievement in the career role, note Hashizume and Crozier (1994) is not a contradiction in terms, however when it is mentioned, it is often pathologized. The relational meaning for achievement found in this study offers support to some previous research that found a correlation between achievement/self-development and altruism (Pryor, 1983; Hendrix & Super, 1968).

Helping others is a value that has been well documented in previous research as significant for women (Di Dio, Saragovi, Koestner, & Aube, 1996; McConatha & Schnell, 1997; Skoe and Diessner, 1994). It makes intuitive sense those women who choose a traditional career such as social work or nursing would value helping clients and patients in a variety of ways. Although helping others was definitely more prominent for women in the traditional faculties none the less, it still was mentioned as a value with relational connotations for women from the nontraditional group. This supports the findings of Subotnik and Arnold (1996) and Ambrose, Lazarus, and Nair (1998) who found that women in nontraditional fields have a desire to be helpful or useful to others and to society to serve a greater good.

As noted, helping others on a macro level was also a significant theme, expressed across the values of Concern for Others, Concern for the Environment and Spirituality. The theme here usually involved making the world a better place in which to live on a more global basis. This suggested feelings of connection with not only humankind but also other living things such as plants, animals, and even at times Mother Earth. A feeling of being connected to a higher power was expressed by some women when doing their work. This theme also often involved a longer time dimension of not only helping now but into the future, projecting that the work one does now may have a long lasting positive impact. This is similar to a finding by Lalande et al. (1998) of women in science and art faculties who expressed a connection to the larger universe and a need to make a lasting contribution.

Being connected to others in meaningful relationships at work was another relational theme that appeared across the values of Achievement and Belonging. These women expressed a desire to be part of a team and to have satisfying relationships with co-workers, supervisors, and clients. This theme of affiliation appeared for women planning to work in both traditional and nontraditional areas. It has been recognized that “expressive” traits like connection may play an important role in a nontraditional career like engineering given the amount of teamwork involved (Jagacinski, 1987). One of the most significant ways of being connected was to be in a trusting relationship with others, which was expressed through the value of Responsibility. It was desirable to these women to be viewed as trustworthy or dependable by others, which has definite relational connotations. These women want to be in relationships, which involve being responsible for the safety and welfare of others, whether this is dealing with an ill patient or building a reliable bridge. The women in this study showed a valuing of those relationships whether they were directly or indirectly involved with people, they are still meaningful to them.

Making a contribution was another relational theme that emerged in the values of Responsibility and Financial Responsibility. Many of these women felt it was their responsibility to contribute to the well being of others. One way that this was expressed was towards their families, both in the values of Responsibility and Financial Prosperity; women noted the wish to contribute financially. Although Loyalty to Family or Group was not a highly ranked value to be satisfied directly in the career role

the connection to family, need to balance work with family, and this desire to contribute to family did appear across various values.

Findings of the present study contribute to our understanding of values. Particularly interesting are the relational connotations that emerged from the qualitative data, adding new dimensions to the commonly accepted definitions of certain “work” values such as Achievement, Responsibility, and Financial Prosperity. Moreover, women in both the traditional group and nontraditional groups mentioned these expanded definitions of values that are usually not considered relational. Themes of connecting with or helping others in some way, while endorsed by more women in the traditional than the nontraditional group, were evident for both groups as important facets in career.

The findings of the present study support the theorizing of feminist researchers such as Forrest and Mikolaitis (1986), Gallos (1989), and Crozier (1999) who suggest that a relational dimension should be incorporated into theories of career development applicable to women’s careers. The inclusion of this construct could serve to more fully understand and appreciate the career choices women make. As women’s participation in post-secondary education increases and particularly in the nontraditional faculties researchers may expect to see more traditional or relational values being expressed by women students in nontraditional faculties. The findings of the present study suggest that women desire to have relational values satisfied in their future career role whether they enter a traditional or nontraditional faculty. For women in the traditional group in particular, Concern for Others was the most important value in the career role. However themes of helping clients, patients or society as a whole; being trusted by co-workers and employers; making a meaningful contribution; and feeling a sense of camaraderie with co-workers, emerged from the qualitative data in the present study as important factors for all women. These variables are left largely unaccounted for in the major theories of career choice and development.

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A Career Development Course For Academic Credit: An Outcome Analysis

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Despite the significant body of scholarly knowledge on career development issues, factors, and strategies which have been gathered, researched and reported in the last century, there is a dearth of opportunities for Canadian students to study and apply these understandings to their own career choice and development issues. Although the integration of career development into the academic curriculum is receiving increasing interest in a number of Canadian post-secondary institutions (Crozier, Douglas, Dobbs, & Hung, 1998) only three Canadian universities have awarded credit at the undergraduate level (Crozier, 1998).

In response to the student need for a more knowledgeable approach to their own career issues, and in recognition of the study of careers as a legitimate academic pursuit, Dalhousie University has recently been offering an elective half credit course open to all Arts and Social Sciences and Science undergraduates: Introduction To Career Portfolios (ASSC/SCIE 1100.03).

This course examines theoretical and practical issues in career development. The class explores the scholarly work of career development researchers, economists, demographers, educators, writers and theorists as their work relates to issues in career choice and development. Through an experiential learning model (Kolb, 1984) which is incorporated into discussions, exercises, weekly labs, exams and research papers, students also develop a portfolio which documents their theoretical applications as they reflect on their work and learning history. Through assessing personal and environmental factors impacting on decision-making over one's life span, students create a purposeful context for viewing their careers as well as reflect upon and propose career development strategies.

The course content includes principles, theories and practices relating to the meaning and nature of work, leisure, self and identity; career choice and decision-making; issues and strategies in self-assessment; occupational research; and, the future of work. Special issues are also considered such as gender, culture, special needs, dual careers, stress, burnout, job loss and career management in an uncertain economy. Students are encouraged to tailor the research assignments to meet their personal areas of interest.

The purpose of this study was to examine the impact of this course by conducting a quantitative analysis of factors related to the students' experience of their study and application of career choice and development constructs and issues. The factors which were analyzed were measured on indices of Career Maturity, Career Indecision, Generalized Indecisiveness, Career Certainty, Career Choice Anxiety, Need For Self-Knowledge and Need For Career Information.

Method

Participants

After obtaining the Institutional Ethics Review Board's approval, all students enrolled in this course in 1999 and again in 2000, were invited by the professor to participate in this study. An independent consultant also met with the classes and explained how anonymity was ensured and the safeguards in place to ensure the professor was blind to who was and was not participating in this study. The consultant collected and analyzed the data, interpreted the results to the class, and was available for individual consultation. The class was comprised of students from all years of undergraduate study from primarily Arts and Social Sciences and Science Faculties. After signing an informed consent form, forty eight students (53%) anonymously participated in both pre- and post-course quantitative assessments.

Instruments

Quantitative measures were gathered through the pre- and post- course administration of three career assessment instruments: The Career Decision Scale (CDS); the Career Maturity Inventory (CMI); and, the Career Factors Inventory (CFI)

The Career Decision Scale (CDS) was introduced by Osipow et al. in 1976 and was revised in 1987. It is "intended as a rapid and reliable instrument for surveying high school and college students about their status in the decision making process. The scale provides an estimate of career indecision and its antecedents as well as an outcome measure for determining the effects of interventions relevant to career choice or career development ... " (Osipow, 1987, p.1). Norms are provided for college students for both the Certainty Scale and the Indecision Scale. Test-retest reliability coefficients range from .70 to .90. Percentile scores (grouped as low, middle and high) are provided for both scales. Certainty scores at or below the 15th percentile (low) and Indecision scores at or above the 85th percentile (high) are considered significant. The Career Decision Scale has been reviewed as unsurpassed in the career indecision literature (Meier, 1991, Harmon, 1994 and Herman, 1985).

The Career Maturity Inventory (CMI), (Crites,1978, 1995) provides a measure of career maturity which can be "generally defined as the extent to which the individual has mastered the vocational development tasks, including both knowledge and attitudinal components, appropriate to his or her state of career development. Maturity is assumed to be an underlying psychological construct reflecting this developmental level just as intellectual, moral, and social development are assumed to be psychological constructs " (Betz,1988 p.79).

Similarly, Savickas (1990) stated, " simply defined, career maturity means readiness for making realistic career choices. Clients below a certain threshold of readiness lack the life experiences and personal inclinations to make realistic choices. These clients need to develop attitudes that move them closer to the choice threshold" (p.58). This 50 item instrument yields scores for two scales measuring Attitude and Competence which are combined to form the total Career Maturity score. Crites (1978) recommends using this instrument for "(1) studying career development, (2) screening for career immaturity, (3) evaluating career education..." (p.270).

Internal consistency co-efficients for the five subtests range from .58 to .90, test-retest reliability ranges from .64 to .66 and content validity for the Self Appraisal subtest was built by collecting case records. Criterion related and construct validity was supported through a strong relationship with other Career Choice Competencies (Crites, 1978). The CMI has been highly regarded and used in hundreds of studies (Crites, 1995).

The Career Factors Inventory (CFI), measures four scales: (1) Need for Career Information, (2) Need for Self-Knowledge, (3) Career Choice Anxiety, and (4) Generalized Indecisiveness. The individual results are then profiled in standard score bands derived from general college samples.

The CFI has been administered to over 4,000 people and college students serve as the normative group. Test-retest reliability for college students range from a low of .68 to a high of .82. Internal consistency ranges from .73 to .92. The CFI has been correlated with several instruments to establish convergent validity and research has demonstrated that its scales “are operating in a manner consistent with their definition and development” (Chartrand and Robbins, 1997, p.13). The CFI has been designed, and used successfully, to measure the effectiveness of career planning courses (Chartrand and Robbins, 1997, Chartrand and Nutter, 1996) .

In summary these three psychometric instruments address questions derived from the theoretical and research literature. The results, in addition to being useful to the participants, allowed an exploration of the impact of the course on measures of Career Certainty, Career Indecision, Career Maturity (Attitude and Competence), Need For Career Information, Need For Self- Knowledge, Career Choice Anxiety, and the Generalized Indecisiveness of students enrolled in the course Introduction to Career Portfolios (ASSC/SCIE 1100.03).

Results

Data Analysis

The survey data were examined to determine if there were differences within the group of participants between scores attained on the test instruments at the beginning of the course and scores resulting from a second administration at the end of the course . Group means were compared with paired samples t-tests.

career certainty/career indecision. Career Certainty scores, a measure of the degree of certainty that the student feels in having made a decision about a major and a career, and Career Indecision scores, a measure of career indecision, were received from 48 students pre- and post- course as measured on the Career Decision Scale. These scores are presented in Table 1. On both scales, statistically significant changes were noted in percentile scores from pre- to post-course. Certainty scores increased from a mean of 46.4% pre-course to 54.9% post-course ($p=0.04$). Indecision scores decreased from a mean of 71.4% pre-course to 64.7% post-course ($p= 0.05$).

Table 1

Table of pre- and post- test scores for the combined, female, and male samples on the Career Decision Scale (CDS), Career Maturity Inventory (CMI), and the Career Factors Inventory (CFI).

Scale	Pre-Test Combined	Post-Test Combined	Pre-Test Females	Post-Test Females	Pre-Test Males	Post-Test Males
CDS Certainty	46.4	54.9*	51.7	62.6*	37.5	42.05
CDS Indecision	71.4	64.7*	66.7	56.6*	79.3	78.1#
CMI Attitude	16.7	17.3	16.84	17.30	17.0	17.28
CMI Competence	18.9	18.6	19.5	18.4*	18.0	19.1
CMI Total	35.8	36.0	36.37	35.83	35.0	36.38
CFI Need For Career Info.	23.3	22.6	22.81	21.93	24.37	23.94
CFI Career Choice Anxiety	16.9	14.7***	16.6	14.1**	17.56	15.94
CFI Generalized Indecisiveness	14.2	12.9*	14.5	12.5*	13.69	13.69
CFI Need For Self Knowledge	15.3	16.2	15.90	16.10	14.06	16.44*

* = $p < 0.05$

** = $p < 0.01$

*** = $p < 0.0001$

= $p < 0.05$ when compared to post-test females

career maturity. Career Maturity, a measure of Attitude and Competence, as assessed by the Career Maturity Inventory, was completed pre- and post- course by 48 students. Overall, there were no significant changes in the mean scores. For the Attitude scale, the pre - course mean score was 16.7 and the post - course mean score was 17.3 ($p=0.23$). On the Competency scale the pre - course mean score was 18.9 and the post - course mean score was 18.6 ($p=0.49$). The total Career Maturity score was essentially unchanged as the pre - course mean score was 35.8 compared to the post - course mean score of 36.0 ($p=0.68$).

need for career information, self-knowledge, career choice anxiety and generalized indecisiveness. Pre- and post-course measures were completed by 47 students. Of the four scales, three showed a decrease in mean scores and one showed an increase from pre- to post-course. Significant decreases were measured on the Need for Career Information, Generalized Indecisiveness, and on Career Choice Anxiety. The Need for Career Information, the perceived need to acquire specific information about or experience in various occupations before making a career decision showed a slight decrease (from 23.3 to 22.6, $p=0.22$). Generalized Indecisiveness, the general tendency to have difficulty making decisions showed a decrease in scores over time (from 14.2 to 12.9, $p=0.042$); and Career Choice Anxiety, the level of nervousness one feels when faced with a career decision showed a significant decrease (from 16.9 to 14.7, $p<0.0001$). The Need for Self-Knowledge, the desire to have greater self-understanding before making a career decision showed a slight (non-significant) increase in mean scores (from 15.3 to 16.2, $p=0.135$).

gender differences. When the students were divided on the basis of gender and pre- and post-course score differences examined, statistically significant mean score changes were seen within the group of female students ($n=30$). Female students showed decreases on the measures of Career Choice Anxiety (from 16.6 to 14.1, $p=0.002$), and Generalized Indecisiveness (from 14.5 to 12.5, $p=0.02$) of the Career Factors Inventory. Increased mean scores were noted on both scales of the Career Decision Scale. Certainty scores increased from a pre-course mean of 51.7% to post course mean of 62.6% ($p=0.04$). The Indecision scale showed a decrease from a mean of 66.7% pre-course to a mean of 56.6% post-course ($p=0.03$). The competency scale of the Career Maturity Inventory showed a drop in mean scores from 19.5 pre-course to 18.4 post-course ($p=0.04$).

Male students ($n=18$) showed a statistically significant change in mean scores only on the Need for Self Knowledge subscale of the Career Factors Inventory where the scores increased from 14.1 to 16.4 ($p=0.03$).

When the two gender groups were compared on all scales of the study instruments, the only significant between-group difference seen was on the Career Decision Scale measure of Indecision post-course (mean percentile for males 78.1, for females 56.5, $p=0.02$).

Discussion

The course Introduction To Career Portfolios was designed to teach theoretical models, concepts, and practices relating to career choice and development. Students were encouraged to maximize the personal benefits that could be gained from the study of this material by applying this knowledge to their own personal situations.

Rather than encouraging students to focus on making career decisions, emphasis was placed on examining their career issues from each of the multiple theoretical perspectives that were studied. In spite of this emphasis, or perhaps because of it, career indecision scores decreased. For example, as one student in a lab discussion group commented “... I am ready with answers. I am ready to explain myself. I wasn’t secure in my thoughts and who I was as a person and now I know I am able to confront the questions.”

Sometimes career indecision is an appropriate response to a future that is uncertain, especially for careers which consist of multiple contracts from a variety of

employers. Therefore, students were required to read and reflect on the benefits of indecision (Gelatt, 1989), (Krumboltz, 1992), particularly as indecision can have a positive impact on a portfolio career (Handy, 1989). Students were asked, in their labs, to discuss how studying this material affected their decision making, one student said, “ I don’t have any more answers, but I feel like I have more questions which are going to lead to more answers later on. It is good to be able to have those questions.” Another student commented, “ I realize that I am an ‘undecided’ person not an indecisive one. The distinction was one that I really had never thought of. Now I feel more confident to proceed knowing that the things I am going through are OK, and I can keep going.”

As students became more career certain, perhaps as a result of integrating the theoretical frameworks into their own life experiences, they appeared to become more confident in their interactions with others over career issues. The confidence was not just about being more certain, but about being better able to articulate the basis of that certainty. As one student commented in class, “ now I understand what I *mean* by what I say I want and *why* I want it.” Consistent with decreased career indecision and increased career certainty, career choice anxiety scores also decreased. Career anxiety was usually expressed indirectly e.g., “ We’re talking about evaluating ourselves ...How do I go about doing this? My life seems so cluttered, how do I dig down in this mess and make a foundation for myself?” Career anxiety reduction was expressed more directly e.g., “It’s not so scary anymore.” “I obtained the insight that I am someone to be proud of....I really do have self worth. ...I should be more confident in myself. I learned how to set goals that I could reach and achieve.”(anonymous reflective exercises).

The combined results of the Career Factors Inventory revealed a decrease in the Need For Career Information and a slight non-significant increase on the Need For Self-Knowledge. Perhaps the research and reflective components of the course were sufficient for some students but led others to see the need for further exploration. As one student commented in a lab discussion group, “ There is much more to career development than just picking your career then getting appropriate information. I know there are many influencing factors when choosing a career, and it is important to analyze them while making your decision.”

The Career Maturity Inventory revealed only slight non-significant changes in scores. This could be because neither Attitude nor Competency was impacted by this intervention, or because the sample size was too small which could have caused a Type II error. As this study focused on whether the intervention impacted measures of career maturity, the Career Developer, a supplement to the 1995 CMI and described as an “adjunct” to facilitate “teaching the test” (Crites, 1995, p. 48), was not used for this study. The use of the CMI without its supplement (which teaches the answers to the test questions) may have reduced its sensitivity to changes over time. It is also possible that the most recent revision did not adequately adjust this instrument for use with a post-secondary population. Indeed, an adult population may be better served with the construct of career adaptability rather than career maturity. Career adaptability has been defined by Savickas (1997) as “the readiness to cope with the predictable tasks of preparing for and participating in the work role and with the unpredictable adjustments prompted by changes in work and working conditions” (p. 254). Regardless, as reliability and validity studies are needed for the revised version of the CMI, these results support the recommendation for “extreme caution” (Levinson, Ohler, Caswell, & Kiewra, 1998, p.478).

The scores of female students were more dramatically impacted than the scores of males. Females showed greater decreases in Career Anxiety and Indecision as well as greater increases in Certainty scores at the end of the course. The scores of male students changed significantly only on the increased Need for Self-Knowledge. The two gender groups were different only on the career Decision Scale measure of Indecision post-course. The small sample sizes (18 males, 30 females) may preclude the attribution of true gender differences on these measures. However, it is possible that the females found the introspective nature of the course requirements combined with the cooperative and interactive learning methods as well as the explicit links to societal issues a more immediately beneficial learning environment (Tobias, 1990; Miranda and Magsino, 1990; Beall and Sternberg;1993).

A limitation of this study is that only 53% of the students participated in this research. While a larger sample size may have increased this study's validity, ethical constraints did not allow the researcher to use coercion or rewards to increase the students' participation. There is a potential bias in this sample as it is not clear what motivated some students to participate while others did not. As this course was open to students in all years of undergraduate Arts, Science and Social Sciences, there were a number of uncontrolled variables including a wide range of student interests, needs and career problems. These students were a mix of those who had decided, those still yet to decide, those who did not know how to decide and those who were indifferent to deciding. Personality factors (such as decidedness and motivation) are one of the challenges to analyzing the effectiveness of this course. As Johnson and Smouse (1993) reported, personality variables are not easily changed with a career planning course intervention. Their results suggested that students with problems of decisiveness or motivation did not benefit from a course. Perhaps these students needed an intervention more tailored to their concerns. Similarly, as Oliver and Spokane (1988) stated, "It may well be that clients with poor self esteem, poor sociability, or goal instability will fare better in individual counseling or more structured treatments" (p.459).

Career development courses for academic credit are well established at American universities (Isaacson and Brown, 1993). As Canadian universities increasingly express an interest in offering career courses, they may find that discussions center around concerns of academic credibility, philosophical issues related to the purpose of a university, and the complex nature of designing interventions to influence the career development of a wide range of student needs, interests and concerns. This course, which was designed to have a high standard of scholarly excellence and personal significance, demonstrated that many students can personally benefit from a theoretically integrated approach to the understanding of their career issues. Counsellors with expertise in career choice, career development and work related issues can offer much from the research literature and their professional practices to enrich the career development experiences of students in a classroom.

Conclusions and Implications

These results suggest that the study and application of career development theory, concepts and practices can have a positive impact on the career concerns of university students. Career Choice Anxiety, in particular, appears to be positively affected by this course. Additionally, participants show significantly decreased Career

Indecision and increased Career Certainty. While anecdotal comments from the participants support the view that students benefited from this course to a significant extent, further research in this area is required to substantiate these findings and provide more insight into how and why this course has a positive impact on the students' career concerns.

It is challenging to conduct research which analyses the outcomes of a career course while accepting both ethical constraints and a number of uncontrolled variables. Perhaps as a consequence, there is insufficient information available to maximize the impact of this type of intervention. A qualitative study which asks open ended questions about how this body of knowledge has affected students' understandings of their own personal career issues could provide valuable insights to instructors. In addition, qualitative studies exploring the experiences of expert instructors could also help universities to anticipate some of the pedagogical, political and developmental challenges inherent in offering a course of this nature. This type of data would be invaluable to course instructors, career consultants and administrators who have come to realize that it is time for more Canadian universities to give credit to career development.

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Career Planning and Development for Students: Building a Career In a Professional Practice Discipline

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“Never lose an opportunity of urging a practical beginning, however small, for it is wonderful how often the mustard seed germinates and roots itself” Florence Nightingale

Nurses assume a variety of roles in complex and ever changing health care systems. Moreover, the increasing demands of current work environments require that nurses be well prepared to provide and influence quality health care services. Nurse educators, therefore, are faced with the challenge of creating curricula that prepare and socialize students to take an active role in the evolution of their individual nursing careers as well as help shape the future of the profession.

Changing professional practice environments offer students tremendous opportunities along with significant challenges. To achieve success in the current work environment students must become career resilient and self-directed. Career resilient workers are dedicated to the concept of continuous learning, are ready to adapt and grow in order to keep pace with change, assume responsibility for developing their career, and are committed to both their own success and that of the organization in which they work (Donner & Wheeler, 2004; Waterman, Waterman, & Collard, 1994). Career resilience is congruent with the definitions of nursing practice that include autonomy, self-direction and continuous learning. Developing the skills and professional attitude necessary for career resilience is a process that students should begin in the first year of their nursing education.

Career planning and development is a dynamic process that adapts to the changes students’ experience as they build their professional knowledge, experience, and identity. Fundamental to the career planning and development process is self-discovery. The individual engages in a self-assessment process that requires ongoing examination of personal values, within the context of one’s nursing education and the professional environment. Clark (1997) describes this process as “self-concept and identity formation” (p.8). Active and structured participation in self-discovery can assist students to reflect on their growing professional values and attitudes and to learn and refine skills that will allow them to successfully and confidently participate in a formidable work environment at the outset and throughout stages of their career. The confidence that accompanies affirmation of the value of professional strengths has the potential to enhance and reinforce students’ sense of self-efficacy related to their academic and professional career choices.

The purposes of this article are twofold: to convince academics to participate in formal career planning and development activities with their students, and to report on research about a student-focused career planning and development intervention program for student nurses.

Student Career Planning and Development Needs

Students' career planning needs have long been neglected in nursing education curriculum development. Consequently, students embark on their nursing careers with little knowledge of how they might position themselves to take advantage of the opportunities available to them (Marsland, 1995). Marsland emphasized that for nursing students to achieve their maximum potential, they need expert assistance in their efforts to make career decisions. Yet currently, career planning and development activities are concentrated in the final months before graduation and usually focus on how to prepare for getting a first job (e.g., interviewing skills, resume writing) rather than on developing the skills and perspective necessary to comprehensively plan throughout all the stages of one's career.

Little is understood about how students, particularly those in undergraduate nursing programs, can participate in their nursing education in a way that will prepare them to assume responsibility for their academic and career paths. Nursing education programs have been criticized for continuing to focus on clinical skill development without guiding students in how to develop the career planning skills necessary to optimize those clinical skills within the health care delivery system (Donner, 1993).

The existing literature further suggests that nursing faculties and curricula lack the dedicated expertise, time, and content necessary to adequately prepare students for career success in the current health care environment. Crofts (1992) studied the career guidance needs and experiences of second- and third-year nursing students from four colleges of nursing. Of the 90 students who responded to Crofts' questionnaire, less than 50% indicated that they had discussed their career plans with someone, and only 12% had been offered any career advice. Students identified nursing faculty as resources whom they would be most likely to approach for career advice. However, the majority of faculty members who responded to the questionnaire indicated that they had never received career guidance and did not feel confident to provide it to students.

Marsland (1995) conducted a survey focused on career guidance offered to students and guidance that students claimed to desire but did not receive. Interview data indicated that new graduates felt that they received little career guidance over the course of their nursing education, which left them with a sense of being ill-prepared to establish themselves in their chosen career. Students expressed concerns related to their ability to develop a career path or execute their career goals in a challenging health care system. Marsland's results indicated that the majority of students wanted, and on an ad hoc basis received, some help with how to obtain a nursing job. Fewer received guidance about how they might gain experience related to their future career goals. Students also indicated that they wanted information and guidance in the area of career planning.

Nursing education programs have a responsibility to prepare students to create meaningful careers with confidence and enthusiasm. Fowler Byers and Bellack (2001) maintained that for nursing education programs to remain responsive to a changing health care system, curricular content and educational processes must include innovative strategies designed to enhance nursing students' performance and the development of their professionalism. Secrest, Norwood and Keatley (2003) suggest that the inclusion of reflection on professionalism in nursing curricula is equally important to the knowledge and skills also included. It is through their education

experiences that nursing students form their professional identities, examine their values and learn the norms of professional practice (Clark, 1997).

Socialization into the profession is an interactive process whereby professional identities are founded on values, meanings and norms that students adopt throughout their educational programs (Clark, 1997; Thorpe & Loo, 2003). The formation of professional identity is a developmental process (Clark, 1997). Individuals come to know themselves within their profession by reflecting on experiences, finding meaning in these experiences and incorporating this meaning into their professional being (Smith, 1992). The discovery of professional meaning can be fostered through the integration of career planning and development education and skill development throughout nursing curricula. Nursing education programs are in a prime position to initiate and sustain students' career planning and development skills. The academic environment offers unlimited opportunities for professional role modelling of attributes related to career resilience. Establishing career planning and development as a priority in nursing education can serve to ensure that students are both socialized, and offered the tools and resources to achieve, professional success throughout their nursing career.

Student Career Planning and Development Study

A pilot study examining the effectiveness of a career planning and development program that used a modified version of Donner and Wheeler's career planning model (Donner, 1998, see Table 1) was conducted at an urban Canadian university. The overall goal of the two-phased randomized control study was to examine the impact of a student-focused career planning and development program on the student nurse outcomes of involvement in career planning activities and perceived confidence related to career decision making. Study objectives included assessing (a) within and between group differences in career decision-making self-efficacy following the introduction, and participation in, a student-focused career planning and development program; (b) within and between group differences in the degree to which students were engaged in career planning and development activities; and (c) student nurses' perceptions of the role that career planning and development would play both during their academic nursing program and in their future professional nursing practice.

Table 1

Career Planning and Development Model (Donner, 1998)

Phase	Description of phases and process
Scanning your environment	<ul style="list-style-type: none"> -Foundation of career-planning process -Activity to become better informed and see the world through differing perspectives -Taking stock of the world in which you live -Understanding current realities in your country, health care system, and

	work environment as well as future trends at global, national, and local levels within and outside of health care and the nursing profession
Self-assessment and reality check	<ul style="list-style-type: none"> -Identifying your values, experiences knowledge, strengths and limitations -Key to exploring new opportunities -Together with environmental scan helps you to identify future directions -Reality check allows you to seek validation of your self-assessment and expand your view of yourself.
Creating your career vision	<ul style="list-style-type: none"> -Exploring possibilities guided by your environmental scan and self-assessment -Vision of your potential future -Focus on what is possible and realistic for you in both the short- and long-term -Link between who you are and who you can become.
Strategic career plan	<ul style="list-style-type: none"> -Formulating a blueprint for action -Specifying the activities, timespan and resources you need to help you achieve your goals and career vision.

Methodology

A randomized control study design with a focus group component was utilized to examine quantitative and qualitative differences between and within intervention and control groups in terms of career decision-making efficacy and career planning activities. The research study was approved by the university ethics review board at the study site.

Data Collection

sample. Randomly selected students from the second and third years of a basic baccalaureate nursing program located in an urban university were invited to participate in the career planning and development study. The self-selected participants from the initial randomized group were then randomly assigned to control or intervention groups. The study sample ranged in age between 20 and 40 years. The highest level of education achieved before entering the nursing program ranged from high school to second year of university preparation. The majority of participants reported that they had little, or no, experience using a career planning and development model.

study instruments. The quantitative data collection questionnaire included the Career Planning Activities Measure and the Career Decision-Making Self-Efficacy Scale—short form (CDMSES). Wheeler, Waddell, Donner and McGillis Hall developed the Career Planning Activities Measure in 2001. It is a measure of the activities that each participant has undertaken related to career planning as outlined in the four stages of the Donner and Wheeler's (Donner, 1998) model: scanning, assessing, visioning, and planning. A summative score is created for each participant within each of the four stages of the model. A high score indicates a higher degree of CPDP career planning activities. The Career Planning Activities Measure has been used in two previous studies of career planning and development with nurses with reported Cronbach alphas of .62-.94 with community health nurses and .66-.92 with registered nurses in an acute care setting. Cronbach's alpha was .69-.81 in this study.

The Career Decision- Making Self-Efficacy Scale (Taylor & Betz, 1983) measures students' perceived level of confidence related to career decision making. It contains six dimensions on a 10-point scale where participants are asked to indicate their perceived confidence in accomplishing different tasks necessary to make quality career decisions. Cronbach's alpha has been reported as .97 (Taylor & Betz), and .80 in this study.

The researchers developed a demographic data sheet that obtained data related to selected demographic characteristics such as work-related information, educational preparation, and involvement in career development activities.

phase one. In Phase One of the study during the fall of the 1999/2000 academic year, the intervention group included 14 students, 6 in the second and 8 in the third year of their nursing program. Thirteen of these students were female and one was male. In a three-hour workshop, the intervention group was introduced to Donner and Wheeler's (Donner, 1998) career planning and development model, which was adapted for use with nursing students. Due to conflicting academic and clinical practice demands, the intervention workshops were run on two separate occasions, with the participants choosing the one that best fit their schedule. The intervention group completed the study questionnaire before beginning the workshop and within 2 weeks of completing it. Each participant received a career planning and development book in addition to a student career planning and development workbook folder.

The control group consisted of 11 students, 5 in the second year of the program and 6 in the third year. Control group members did not participate in the career planning and development workshops. They completed the study questionnaire on an individual basis within the same time period as the intervention group. Control group members were informed that they would be offered a comprehensive career planning and development workshop at the completion of Phase Two of the study, scheduled for March, 2001. At that time, control group participants also received a career planning and development book with a student career planning and development workbook folder.

phase two. All participants in Phase One were invited to continue their involvement in Phase Two, with the understanding that participants would remain in the group (intervention/control) to which they were originally randomly assigned. Of the 25 original participants, 5 students dropped out of the study citing academic and family life demands. The remaining 20 participants (10 in each group) requested to continue

their study involvement for the 2000/2001 academic year. Both the intervention and control groups contained 4 third-year students and 6 fourth-year students.

The Phase Two intervention included two 3-hour working sessions in which the career planning and development model introduced in Phase One was explored in further depth and applied to the intervention group's current academic setting and professional experiences. Although individual career coaching was also offered to the intervention group members, none of them requested it during the course of the study. After the end of the project and the academic term, however, 5 of the 10 (3 third-year and 2 fourth-year students) intervention group participants asked for, and received, individual coaching.

The instruments used in Phase One were administered to all study participants immediately before the Phase Two intervention workshops and up to one month after them. All students in the intervention group completed an evaluation form assessing their perceptions of the career planning and development program following the workshops in both phases of the study.

focus groups. All control and intervention group members were invited to participate in a focus group as a means of validating the quantitative study findings and further discovering and understanding the students' personal perception of, and experience with, the career planning and development process. Focus group participants were paid a \$35.00 honorarium. Separate focus groups were conducted for the intervention and control groups. Four students from the intervention group and three from the control group participated in the focus group discussions. They were moderated by the project research assistant, lasted for 1 ½ hours, and were tape-recorded. Participants in both intervention and control groups were asked the following questions:

- What does career planning and development mean to you?
- How would you describe your experience with career planning and development?
- How and where do you think career planning and development fits with your nursing education?
- Where do you see career planning and development fitting with your professional nursing practice?

Data Analysis

Participant questionnaire responses yielded numerical data that were coded and entered into a statistical software program, SPSS, for analysis. All Phase One and Two participants completed and returned their questionnaires. *T*-tests were used to determine between and within group differences between the intervention and control groups on questionnaire items.

All focus group discussions were audio taped and each audio-tape was transcribed by the project research assistant. The qualitative approach to the focus groups and related data analysis was phenomenology. LoBiondo-Wood and Haber's (1998) steps of data analysis were followed to arrive at the final synthesis of the participants' lived experience. The audio-tapes were reviewed twice to ensure transcription accuracy. Using the guiding questions posed in the focus groups, the

research assistant then comprehensively read and analyzed the transcripts to determine and categorize major themes. Significant phrases were identified and the central meaning of participants' responses was paraphrased as a theme. A theme was identified if it was discussed by a majority of the focus group participants. The principal investigator followed the initial review and identification of themes with a blind review, which yielded a final synthesis congruent with that of the research assistant. Themes were grouped under the focus group questions to determine how the data answered the question and to categorize the pertinent findings for both the intervention and control groups.

Results

Questionnaire Data

between group differences. No significant differences in career planning activities and career decision-making were found between the control and intervention groups before the career planning and development program intervention was introduced. After Phase One, the intervention group, compared to the control group, had significantly higher scores on both the Career Planning Activities Measure and CDMSES (see Table 2). The only area in which there was not a significant group difference was on the self-assessment scale of the Career Planning Activities Measure. This scale measures the degree to which individuals engage in an assessment of their personal and professional strengths and limitations, an exercise common to clinical course requirements in all years of the basic baccalaureate program at the institution in which the study was conducted.

Table 2

Phase One Post-Test Between Group Differences on Career Planning Activities Measure and Career Decision Making Self-Efficacy Scale

Scales	Means		<i>t</i>	<i>p</i>
	Int.	Control		
Scanning the environment	40.8	34.6	2.25	.034*
Self-assessment	29.8	28.1	1.16	.258
Career vision	42.1	34.5	2.83	.009**
Strategic career planning	7.1	5.4	2.50	.01**
Career decision-making self-efficacy	105.2	89.5	2.86	.009**

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

In contrast, the only significant between group difference that emerged post-intervention in Phase Two was found in the strategic career planning scale of the Career Activities Measure (see Table 3). This scale measures the extent to which individuals have a documented and specific career plan for the next 6 months.

Table 3

Phase Two Post-Test Between Group Differences on Career Planning Activities Measure and Career Decision-Making Self-Efficacy Scale

Scales	Means		<i>t</i>	<i>p</i>
	Int.	Control		
Scanning the environment	44.1	43.4	.378	.710
Self-assessment	32.6	31.4	.988	.336
Career vision	44.3	41.1	1.19	.251
Strategic career planning	8.3	6.8	3.05	.007**
Career decision- making self-efficacy	112.0	110.4	.193	.849

***p*<.01

within group differences. The intervention group had significant increases in the degree of career planning activity and the level of career decision-making self-efficacy from pre- to post-test in both phases of the study (see Table 4 and 5). In contrast, the control group’s scores in career planning activity scores did not change significantly from pre- to post-questionnaire in Phase One. However, their scores did increase on the self-efficacy scale on the post-test in Phase One. In the study’s second phase, there were no significant changes between the control group pre- and post-test scores in either career planning activities or career decision-making self-efficacy.

Table 4

Phase One Pre-Post Test Within Group Differences on Career Planning Activities Measure and Career Decision-Making Self-Efficacy Scale

Scales	<u>Intervention Group</u>			<u>Control Group</u>		
	Mean difference	<i>t</i>	<i>p</i>	Mean difference	<i>t</i>	<i>p</i>
Scanning the Environment	37.4-40.8	3.30	.008**	32.8-34.6	1.85	.087
Self-assessment	28.8-28.6	1.07	.310	28.1-27.6	.729	.479
Career vision	37.0-42.2	2.31	.04*	31.4-34.5	1.19	.068
Strategic career planning	5.4-7.1	3.01	.01**	5.4-6.8	1.95	.073

Career decision-making self-efficacy	87.4-105.8	4.09	.002**	82.8-89.5	2.83	.014**
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*p<.05. **p<.01.

Table 5

Phase Two Pre-Post Test Within Group Differences on Career Planning Activities Measure and Career Decision-Making Self-Efficacy Scale

Scales	<u>Intervention Group</u>			<u>Control Group</u>		
	Mean difference	t	p	Mean difference	t	p
Scanning the environment	42.6-44.1	1.53	.160	40.9-43.4	1.790	.106
Self-assessment	29.4-32.6	3.73	.005**	30.8-31.4	0.620	.551
Career vision	40.2-44.3	2.51	.034*	38.4-41.1	1.620	.140
Strategic career planning	6.9-8.3	2.26	.050*	6.3-6.8	1.340	.213
Career decision-making self-efficacy	99.7-112	3.02	.015*	95.9-110.4	0.149	.170

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

Summary

Compared to the control group, students who participated in a student-focused career planning and development program achieved significantly higher scores on both career-planning activities and career decision-making self-efficacy measures in the second and third years of their nursing program. After participating in Phase Two of the study during the third and fourth years of their nursing program, these same students did not score significantly higher than the control group on either measure, with the exception of active career planning. In terms of within group differences, the intervention group had significantly higher career activity and self-efficacy scores following participation in the career planning and development program in both phases of the study, whereas post-intervention in Phase Two, the control group did not maintain the significant increase in self-efficacy score they achieved in Phase One.

Focus Group Data

Both intervention and control group participant responses to the four questions guiding the focus groups were reviewed and analyzed for common themes. The four main categories of themes derived from the data were: 1) The meaning of career planning and development, 2) Experience with career planning and development, 3) The fit between career planning and development and nursing education and 4) The fit between career planning and development and professional nursing practice. The themes that have been included under each of these categories are presented individually and supported by participants' quotes that are representative of the identified themes. These are presented in the for the control and intervention groups, respectively.

the meaning of career planning and development.

Control Group.

Employment/health care system drives career planning and development

[Career planning means] starting from graduation, planning from your first job, finding out what you like early and using your jobs to get your goals.

It [career planning] is focusing on different types of careers in nursing, different types of nursing. [Career planning is] looking at the trends in a particular field and seeing where you fit.

Intervention Group.

Individual values drive career planning and development

It's [career planning is] taking your values and using them to formulate a plan that you can use, step-by-step.

Assuming control of one's career

It's [career planning] taking ownership of your career, your future, and making it what you want it to be, rather than feeling adrift

experience with career planning and development.

Control Group.

Searching

I've gone to job fairs in my 4th year, more career searching and job searching. I had different kinds of testing at a career centre where they had different types of tests that were quite extensive and they asked you questions about your preferences and those kinds of things.

CNSA conferences, just talking with people that may help me focus.

Intervention Group.

Empowerment

This is the first time in my program that I have someone really talk to me about what I want, what is important to me, and where I see myself going. I feel empowered to take charge of my career. I feel stronger about standing up for myself and for what I want to do.

Before being involved in the workshops, I did not even know that you could improve your skills in career development. I figured that as soon as you choose what you want to do, you go to school to do that thing and it just happens. I have learned that I can develop my career while in school – I know how to do that now.

I have a goal that I am confident about, and opportunities that can help me reach that goal seem to jump out more and I am able to take those opportunities and use them.

the fit between career planning and development and nursing education.

Control Group.

Lack of career planning and development information and support

We need more focus on different nursing careers – beginning in first year we could have workshops and seminars on different types of nursing so that people could get a feel for some other types of nursing so maybe, by fourth year they would make different choices as far as clinical placements.

There should be faculty who are dedicated to career planning, otherwise it really depends on what your exposure is, you might know a lot of people, or you might lose out on a perfect resource person.

You kind of need an expert, someone who is interested in helping you who is also an expert in the area, it can't be just anyone. Career planning needs to be lead by someone who knows what they are doing, and not just by reading off of a sheet, or giving advice based on their experiences.

Intervention Group.

Need for early and ongoing inclusion of career planning and development into nursing curricula

Career planning needs to be part of our education process right from the get go. You need a consciousness of where each experience is taking you, or you flounder, in the early years you don't have a sense of where your path is leading you, you flounder.

As my values and goals continuously change throughout the nursing program, career planning and development should be included in all levels of the program.

fit between career planning and development and professional practice.

Control Group.

Uncertainty

I am going into left field until I find out what I really want to do, and that may be a few years, I don't know, maybe I can get my plan together and then I'll be on my way, prior to that I'll still be searching I guess.

I really do not have a plan. I want to learn more as to how actually to make a plan and to see where I am going 'cause you know that is one of the things I'm a little perturbed about 'cause in order to get anywhere you need to make a plan. I feel like I am going in circles, I feel like there are many things that I am interested in but where am I going?

Intervention Group.

Personal control and direction

It will help me to just keep opening doors and not getting stuck anywhere – constantly looking ahead and beyond of what is directly in front of me – I am more goal directed.

It helps you to turn things around...you see how the learning fits for me not others.

Discussion

This pilot study examined the effect of a career planning and development program on student nurse outcomes. Given the small number of participants in the pilot project, and the single study site, results cannot be generalized beyond the pilot sample, however, findings do provide insights and directions for further research and curriculum development.

Findings suggest that students who participated in an introductory student-focused career planning and development program in the earlier years of their nursing baccalaureate education (early fall of their second and third years) were significantly more active in the process of career planning and development, and reported greater confidence in their ability to make career-related decisions than those who did not participate in such a program at that stage of their nursing education. These initial findings lend support to the contention that introducing a career planning and development program early within nursing academic programs can provide students with needed tools and guidance so that they may confidently assume responsibility for relevant and timely career-related initiatives. Participation in a career planning and development process offered study participants a structured and continuous process through which they could reflect on their evolving professional self and identify what they need to progress toward their vision of the nurse they wish to be.

The lack of between group differences following Phase Two of the study, when participants were in the late fall of the third and fourth year of their academic program, was initially somewhat puzzling. Since the intervention students were much more intensely involved in all phases of the career planning and development program in Phase Two, it was expected that the significant differences found following the first

phase would be maintained after the second. But when the context of the students' academic experience at the time of Phase Two was examined, it became apparent that some activities and events may have contributed to the non-significant between group findings after the second phase. Sixty percent of both intervention and control group participants were in the final year of their baccalaureate nursing education. In the fall of the fourth year, a plethora of job fairs are held both within the School of Nursing at the institution in which the study was conducted and external to the academic setting. Moreover, the fourth year students are given clinical credit for attending a fall provincial job fair sponsored by the nursing professional organization. Resume and interviewing workshops are also offered at this time of year for third and fourth year students. In addition, fourth-year students are required to take a "Nursing Issues and Trends" course in the fall term that focuses on enhancing the senior nursing students' awareness of the health care system and involvement in professional activities. Overall, there is a strong focus on preparing to graduate within the academic, clinical, and broader professional arenas.

Of interest, the intervention group demonstrated consistent increases in career planning activities and confidence in career decision-making self-efficacy over both Phase One and Phase Two of the study. But the control group's career decision-making self-efficacy score increased only following the first phase, with no significant change in scores in Phase Two. It may be that, given the flurry of events in the fall related to graduation, the control group members participated more actively in some career-related activities. However, they did not maintain this level of active involvement once they secured a job.

Self-selection into the study, the effects of study participation, and student maturity over the course of the study are also factors to take into account when interpreting the findings. A further consideration is the students' differing perspectives on the nature of career planning. The focus group discussions broadly suggested that students who had not participated in a career planning and development program perceived career planning as those activities necessary to secure a job at graduation (i.e., attending job fairs, exploring the different types of available nursing roles, and determining what employment options their current skill level would permit). At the time of this study, such activities were abundant and easily accessible. Moreover, the students in this study were entering the nursing workforce at a time of shortage and were, in most cases, confident that they would have a job after they graduated. Yet in spite of this security, control group discussion participants expressed the theme of "feeling adrift" regarding their professional future, and of needing direction and assistance in formulating a plan for their career.

The nature of support offered to graduating students by the School of Nursing appeared to convey a valuing of the "doing of nursing" through the achievement of employment. Donner and Wheeler (2004) suggest that a career in nursing is "about being a nurse, not doing nursing" (p.29). The distinction lies in the belief that being a nurse is imbedded in who we are as individuals and the values, beliefs, interests and knowledge that we hold in both our professional and personal lives whereas the doing of nursing focuses on the work to be accomplished (Donner & Wheeler, 2004).

In contrast to the focus on searching for and obtaining a job, those in the intervention group discussion seemed to place a broader emphasis on the relevance of values in guiding both short- and long-term career choices. They also expressed a sense of empowerment from having a process to use for career planning, as well as a sense of

confidence in their ability to plan and control their career over time. The cornerstone of the career planning and development process is the discovery of self within the context of nursing. Smith (1992) defines this knowing in nursing as a “holistic and integrative process of making sense out of ourselves in the world..it is weaving the threads of conceptions, perceptions, remembrances and reflections into a fabric of meaning” (p.1). Secrest, Norwood and Keatley (2003) propose that knowing in nursing enhances students’ confidence, competence and sense of professional worth. Structured curricular activities that incorporate reflection on professionalism may serve to socialize students to value both the achievement of professional knowledge and skills and the creation of a meaningful nursing career.

Both groups identified the need to have dedicated, expert career planning and development resources formally integrated into the nursing education curriculum, beginning in the early years of the program. The nature of the need for support differed between the control and intervention groups. Control group participants expressed a desire to have information presented to them with respect to nursing careers and experts who could help them with their career. Participants in the intervention group spoke to the need for a process to be introduced into their education experience that would enable them to reflect on, and respond to their expanding experiences and their changing values and goals. Although both groups highlighted a need for greater support related to career planning and development, it would seem that the control group sought direction from those who were perceived as authorities whereas intervention group participants needed a structure through which they could assimilate new experiences into their career planning and development.

Conclusion

Lack of education about the process of career planning and development during baccalaureate nursing education was an issue for the student participants in this pilot study. Study findings suggest that providing formal guidance in this process makes a difference in the degree to which students confidently participate in goal-directed career planning activities. Educational initiatives targeted to students’ individual and collective career planning and development needs can convey a valuing of the importance of the self within one’s career and help them to assume responsibility for their nursing career throughout the course of their academic program and their nursing career (Donner & Wheeler, 2000). Education programs have a responsibility to prepare students to capitalize on change and create their careers with assurance and enthusiasm. Integrating career planning and development education throughout academic program curricula may be one means of ensuring that students are offered the tools and resources to be active and confident in their ability to achieve professional success in rapidly changing employment environments rife with opportunities rather than certainties. The ability to be career resilient within one’s academic and professional career has the potential to build capacity within the profession (Donner & Wheeler, 2004).

The results of this pilot study provide educators with direction for future research. Intervention and longitudinal research with students across years of nursing curricula and academic settings would provide further information about students’ needs and how the career planning and development process contributes to their perceived professional success and career satisfaction.

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Career Development of First-Year University Students: A Test of Astin's Career Development Model

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Work has been a pervasive part of human existence and philosophical questions on the meaning of work have been raised as early as the time of the ancient Hebrews and Greeks (Axelson, 1993; Engels, Minor, Sampson, & Splete, 1995). Since Parsons (1909) presented the first conceptual framework for understanding individuals' career decision process, a growing number of theories and models of career development and career choice have emerged. Career development theorists have speculated about the meaning of work in people's lives. For example, Super (1951, 1953, 1963) emphasized the development and implementation of self-concept in the career development process. Holland (1966, 1985) sought to match individual personality types and environmental characteristics. Others suggested that work allowed individuals to fulfill certain basic needs (e.g., Astin, 1984; Roe, 1956). An underlying theme in these theories is that the salience of work in people's lives is important.

Although these models have made substantial contributions to the understanding of career decision making and career development, most theories are based on the experiences of white, middle-class males. Moreover, most career development theories also assume that individuals are free to choose from among an array of alternatives which are available to all. Thus, researchers have begun to question the relevance of these theories to women and individuals from different cultural, ethnic, and/or socioeconomic backgrounds (e.g., Betz & Fitzgerald, 1987; Fitzgerald & Crites, 1980; Fouad & Arbona, 1994; Okocha, 1994; Perun & Bielby, 1981). As Okocha (1994) points out, many of the assumptions of career development theories ignore the social realities of special groups where career development may be constrained by such factors as prejudice, discrimination, and opportunity availability imposed by society's socio-political system (Griffith, 1980; Smith, 1983).

Theories Relating to the Career Development of Women

Theories related to women's career development began to emerge in the early 1980's (e.g., Astin, 1984; Farmer, 1985; Gottfredson, 1981; Hackett & Betz, 1981). These theories improved on earlier theories by taking into account variables which influence women's career choices, aspirations, and work behaviors. An extensive examination of each theory is beyond the scope of this paper. However, a brief overview of four selected theories/models is given to provide a context for the present study.

hackett and betz's self-efficacy model. Hackett and Betz (1981) formulated a career development model based on Bandura's (1977) notion of self-efficacy, which attempted to explain some of the processes involved in men's and women's career

pursuits and their beliefs about achievement. Hackett and Betz asserted that self-efficacy could explain the processes by which traditional gender role socialization influenced men's and women's self-referent evaluations in relation to career choices. They argued that women in general lack strong efficacy expectations in relation to career-related behaviors because they are less likely than men to be encouraged to develop their own career paths and have fewer female role models who are successful. They believed that self-efficacy could explain why some women do not fully develop their capabilities and talents in their career pursuit.

gottfredson's circumscription theory. Gottfredson (1981) developed a model which incorporated several elements from earlier theories, namely: self-concept, developmental stages, and match between individuals and occupation. Gottfredson (1981) expanded on Super's (1951, 1953, 1963) idea that individuals seek jobs that are compatible with their self-concept. She suggests that a multi-faceted self-concept, influenced by variables such as gender, social class, and intelligence, plays a significant role in predicting occupational aspirations and career choices.

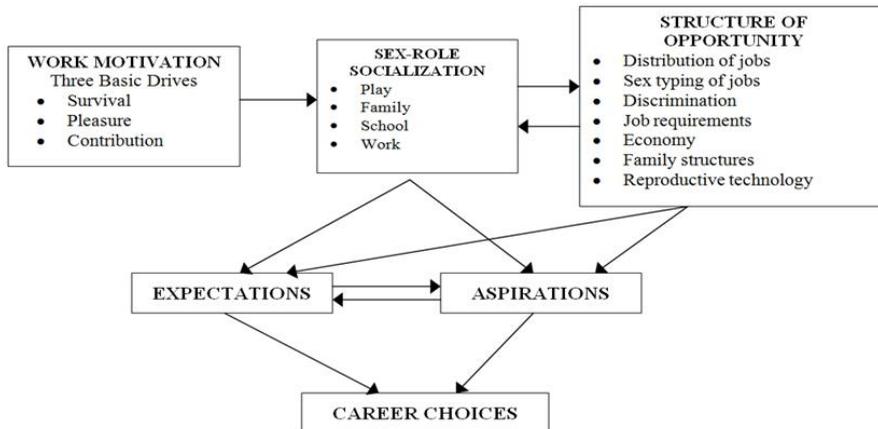
Gottfredson's (1981) model addresses women's career development in two different ways. First of all, it discusses the process of how individuals reach a compromise when they face conflicting goals. Gottfredson (1981) postulates that when career choice compromises are necessary, individuals are more ready to sacrifice their interests than to be in an occupation that is not "appropriate" for their gender, i.e., not compatible with a gender-stereotypic self-concept. The compromise process is particularly useful for understanding why women attempt to juggle priorities such as societal expectations, family obligations, and career aspirations. It also somewhat explains why women are concentrated in lower-pay and lower-status occupations despite their interests and aspirations. Second, Gottfredson maintains that individuals' perceptions of career and training opportunities play a significant role in determining their occupational aspirations and choices. This is particularly relevant to women because their career development is still limited by restricted occupational choices, unequal pay, stereotypes, and lack of role models who have broken the mould (e.g., Betz & Fitzgerald, 1987; Brooks, 1990; US Equal Employment Opportunity Commission, 1991).

farmer's multidimensional model. Farmer (1985) presented a multidimensional model of career and achievement motivation for women and men. Farmer was influenced by Bandura's social learning theory, which maintained that "psychological functioning involves a continuous reciprocal interaction between behavioral, cognitive, and environmental influence" (Bandura, 1978, p. 344). In her model, Farmer (1985) proposed that three sets of variables (background, environment, and personal) interact to influence the aspiration, mastery, and career commitment of men and women. Background variables such as age, gender, and ethnicity influence a person's developing self-concept, aspiration, achievement motivation, and the way the environment is perceived. The developing self-concept is further influenced by interaction with the environment, including experiences at school and support from family and teachers. Personal variables such as academic self-esteem and achievement styles in turn set limit to the influences of environment and have been found to influence career and achievement motivation. It is Farmer's contention that changes in

society's attitude towards women working may influence changes in men's and women's achievement in the future.

astin's sociopsychological model. Astin's (1984) model attempted to incorporate sociological as well as psychological factors, emphasizing that both psychological factors and cultural-environmental factors interact to influence career choice and work behavior. Astin's model includes four inter-related factors: motivation, work expectations, socialization, and structure of opportunity. See Figure 1.

Figure 1



According to Astin, work is important because it is a means to fulfilling certain basic needs such as survival, pleasure, and contribution. Astin (1984) contended that men and women share a common set of work motivations. What differentiates their work expectations and career outcomes is the mediating effect of the other variables. For Astin, work expectations refer to individuals' perceptions of their capabilities and strengths, the options available, and the kind of work which can best fulfill their needs. They are different for men and women because of their differential socialization experiences as well as their perception of the structure of opportunity. According to Astin, children are reinforced for engaging in gender-appropriate behaviors. As children internalize social norms and values regarding appropriate sex-role behaviors and choices, they also become aware of the availability of opportunities. Implied in the theory is that socialization experiences can be either expanding (which promotes widespread options) or restricting (which promotes stereotyping).

The structure of opportunity construct in Astin's model was an important determining factor in the decision to use it as a theoretical framework in the present study. From Astin's perspective, opportunity structure is not static, but changes over time and across different segments of society. As society changes, men and women are faced with different environmental conditions which in turn modify their career aspirations and work behaviors. With rapid development in the world's economic and sociopolitical climate, Astin's (1984) model could be used to understand such career-related issues as life/career transition and career adjustment in people's lives. Implied in the conceptualization of the opportunity structure is the significance of individuals'

perception and/or awareness of available options in the world of work. As such, opportunity structure could also help explain the differential career expectations and choices of men and women. Others have regarded Astin's (1984) model as having potential in both research and practice (Brooks, 1990; Gilbert, 1984). It also has the potential to address the career development of ethnic minorities who are faced with internal and external barriers (e.g., Coleman & Barker, 1992). These individuals' career expectations and choices are likely to be affected by their socialization process as well as availability of opportunities in the world of work.

It is interesting to note that since the publication of Astin's model in 1984, little research has been conducted to test its validity. This may be due to the fact that her model lacks operational definitions of the proposed constructs and specific hypotheses (e.g., Betz & Fitzgerald, 1987; Brooks, 1990; Harmon, 1984), which makes empirical tests of the model difficult. However, two studies indirectly examined some of the ideas proposed in Astin's model. Scott and Hatalla's (1990) data supported Astin's notion of the importance of structure of opportunity as a major determinant in women's career choice. Poole, Langan-Fox, Ciavarella, and Omodei's (1991) findings confirmed Astin's ideas of the differential effects of socialization and structure of opportunity on the career choices of men and women. Astin's inclusion of cultural-environmental factors in her model enhances its efficacy in understanding career choice and work behavior in today's world. Yet, more research is needed to verify the model.

The Current Study

Using Astin's model as a theoretical framework, the present study addressed some missing pieces in the career development literature. One purpose of the study was to examine how the four constructs in Astin's model operate in the choice of career/college major of a selected sample of first-year university students. It was hypothesized that Astin's four constructs would all be important, but would operate differently for students whose socialization and life/work experiences were different.

Methodology

Sample

An invitation to participate in this study was given to 376 first-year students participating in a orientation program in a major university in Western Canada. Responses were collected from 264 students, providing a return rate of approximately 70%. Of these, 11 were either incomplete or spoiled, leaving 253 students for the data analysis. Student language of origin (English or non-English) was used to group students in the data analysis. Approximately 88 % of the participants were in the 17 to 20 year age range. (See Table 1.) About two-third of the sample were female. About 83% of the students were English-speaking and about 81% had resided in Canada since birth. Approximately 84% of the students had previous job experience, 67% had selected a major, and 62% had selected an occupational goal. These figures are roughly proportional to the entire population of first year students, as reported by the office of institutional analysis.

Table 1

Demographic Information on Sample of 253 University Undergraduates

Variable	Language of Origin				Total
	English		Non-English		
	M	F	M	F	
Length of residency Since birth	56 (22.67)	134 (54.26)	5 (2.02)	6 (2.43)	201 (81.38)
Less than 15 years	5 (2.02)	11 (4.45)	14 (5.67)	16 (6.48)	46 (18.62)
Total	61 (24.69)	145 (58.71)	19 (7.69)	22 (8.91)	
Total Language	206 (83.40)		41 (16.60)		247 (100)
Job experience					
Yes	50 (20.08)	129 (51.81)	12 (4.82)	18 (7.23)	209 (83.94)
No	12 (4.82)	16 (6.43)	8 (3.21)	4 (1.61)	40 (16.06)
Total	62 (24.90)	145 (58.24)	20 (8.03)	22 (8.84)	
Total Job Experience	207 (83.13)		42 (16.87)		249 (100)
Major selection					
Yes	42 (16.94)	93 (37.50)	13 (5.24)	17 (6.86)	165 (66.53)
No	20 (8.06)	51 (20.56)	7 (2.82)	5 (2.02)	83 (33.47)
Total	62 (25.00)	144 (58.06)	20 (8.06)	22 (8.88)	
Total Major Selection	206 (83.06)		42 (16.94)		248 (100)
Occupation selection					
Decided	37 (14.98)	89 (36.03)	11 (4.45)	16 (6.48)	153 (61.94)
Undecided	24 (9.72)	56 (22.67)	8 (3.24)	6 (2.43)	94 (38.06)
Total	61 (24.70)	145 (58.70)	19(7.69)	22(8.91)	
Total Occupation Selection	206 (83.40)		41 (16.60)		247 (100)
Total*	62 (24.90)	145 (58.23)	20 (8.03)	22 (8.84)	249 (100)

Note. Some subgroups do not add up to the total because some participants did not provide complete demographic information. The numbers in parentheses are percentages.

Data Source

The survey instrument used in the study consisted of two parts. Part 1 collected demographic data from participants, including: gender, age, residency status, length of stay in Canada, language of origin, English proficiency, proposed major, and occupational goal. Part 2 consisted of 40 items, 10 items for each of the four constructs in Astin's model namely: motivation, work expectation, socialization, and structure of opportunity. Since there is no published instrument reflecting Astin's model, a survey instrument was developed, following the methods suggested by Shaughnessy and Zechmeister (1994). Initially, an extensive item pool was developed, based on descriptions of the constructs in the literature. Then, five experts who were familiar with Astin's work were asked to rate the items independently, indicating which of the four constructs each item represented. Cohen's Kappa was calculated to assess inter-rater agreement. It was used in preference to percentage agreement because it accounts for chance agreement amongst raters. Items where there was a low amount of inter-rater agreement were discarded or revised and the procedure repeated until suitable inter-rater agreement was obtained regarding the subscale to which each item belonged. For the final round of rating, significant Kappa indicates significant agreement amongst raters beyond chance, $p \leq 0.01$.

Procedures

Data were collected during a break in an orientation program for new students. The first author introduced herself, gave a brief description of the study, explained the nature of participants' involvement, and distributed the research packages to students. The package contained: a copy of the questionnaire, a cover letter describing the purpose of the study and the nature of participant involvement, and a consent form. Students who agreed to participate in the study read the cover letter, signed the consent form, and proceeded to fill out the questionnaire, returning it to a collection box in the administration area or at the entrance of the Student Resource Center.

Results

The data were analyzed in several steps. Two-way MANOVAs were used to assess gender and language differences among students. Pearson product-moment correlations were conducted to assess the relationships among the four factors in Astin's model: motivation, work expectations, sex-role socialization, and structure of opportunity.

Gender Differences

Five, 2 (gender) x 2 (demographic variable) MANOVAs were conducted to assess gender differences on the four factors in Astin's model. For each analysis, gender was crossed with one of the following demographic variables: students' language of origin, students' length of residency in Canada, whether students had previous job

experience, whether students had selected a major, and whether students had decided on an occupational goal. Gender was not crossed with other demographic variables because of insufficient number of students in some cells. The results of the MANOVAs indicated a significant main effect for gender, $F(4, 242) = 2.71, p < .05$. See Table 2. More specifically, female students scored significantly higher than male students on the socialization sub-scale and structure of opportunity sub-scale across all five demographic variables. In other words, the socialization experiences of female students were more expanding and less gender stereotypic than was the case for male students. Females also were more aware of the economic conditions, job market realities, and opportunities available to women, than were male students.

Table 2

Means and Standard Deviations Depicting Gender Differences on Astin's Four Factors

Demographic Variable	Structure of opportunity	Motivation	Expectation	Socialization
<hr/>				
Language of origin				
Male (n=82)	5.99* (3.94)	12.15 (4.32)	11.50 (4.65)	8.84** (5.02)
Female (n=167)	6.80* (2.94)	12.77 (4.03)	12.17 (3.79)	10.75** (4.58)
<hr/>				
Length of residency				
Male (n=81)	5.89* (3.91)	12.10 (4.32)	11.43 (4.64)	8.77** (5.02)
Female (n=168)	6.79* (2.93)	12.76 (4.02)	12.17 (3.78)	10.73** (4.58)
<hr/>				
Job experience				
Male (n=83)	5.96* (3.92)	12.17 (4.30)	11.51 (4.62)	8.84** (4.99)
Female (n=168)	6.79* (2.93)	12.76 (4.02)	12.17 (3.78)	10.73** (4.58)
<hr/>				
Major selection				
Male (n=83)	5.96* (3.92)	12.17 (4.30)	11.51 (4.62)	8.84** (4.99)
Female (n=167)	6.77* (2.94)	12.75 (4.03)	12.14 (3.76)	10.71** (4.59)
<hr/>				
Occupation decision				
Male (n=81)	6.14* (3.81)	12.40 (4.02)	11.84 (4.10)	9.06** (4.75)
Female (168)	6.79* (2.93)	12.76 (4.02)	12.17 (3.78)	10.73** (4.58)

Note. The numbers in parenthesis are standard deviations.

* indicates $p < .05$, ** indicates $p < .01$.

Language Differences

Three, 2 (language of origin) x 2 (demographic variable) MANOVAs were conducted to assess differences on Astin's four factors between students whose language of origin was English and those whose language of origin was not English. In these analyses, language of origin was crossed with: length of residency in Canada, whether students had previous job experience, and whether students had decided on an occupational goal. Language of origin was not crossed with other demographic variables because of insufficient number of students in some cells. The results of the MANOVAs indicated a significant main effect for language of origin, $F(4,242) = 4.72$, $p < .01$. See Table 3. More specifically, students whose language of origin was English scored significantly higher than students whose language of origin was not English on the socialization sub-scale across the three demographic variables. In other words, the socialization experiences of students whose language of origin was English was more expanding than that of students whose language of origin was not English.

Table 3:

Means and Standard Deviations Depicting Language Differences on Astin's Four Factors

Demographic Variable	Structure of opportunity	Motivation	Expectation	Socialization
Length of residency				
English (n=207)	6.52 (3.19)	12.59 (4.11)	11.99 (4.08)	10.73** (4.60)
Non-English (n=42)	6.52 (3.94)	12.31 (4.26)	11.57 (4.21)	6.90** (5.26)
Job experience				
English (n=208)	6.54 (3.21)	12.59 (4.10)	12.00 (4.07)	10.74** (4.59)
Non-English (n=43)	6.51 (3.90)	12.42 (4.27)	11.67 (4.22)	7.02** (5.26)
Occupation decision				
English (n=207)	6.58 (3.17)	12.61 (4.10)	12.08 (3.89)	10.82** (4.45)
Non-English (n=42)	6.69 (3.76)	12.76 (3.67)	11.90 (3.99)	7.05** (5.32)

Note. The numbers in parenthesis are standard deviations.

* indicates $p < .05$, ** indicates $p < .01$.

Pearson product-moment correlations were calculated to assess the relationships between Astin's four factors for the entire sample and for four sub-groups of students: male students, female students, students whose language of origin was English, and students whose language of origin was not English. The data show that for the entire sample, all factors were significantly correlated, except for the non-significant relationship between socialization and structure of opportunity. The correlations for males, females, and students whose language of origin was English, demonstrated a similar pattern. However, for students whose language of origin was not English, the pattern was markedly different. Expectation was significantly correlated with the other

three factors, but the other three factors were relatively independent of each other. See Table 4. This suggests that for students whose first language is not English, motivation, socialization, and structure of opportunity are relatively independent of each other, while each of these factors is related closely to the student's expectations of the world of work.

Table 4

Correlations Between the Four Dependent Measures for the Entire Sample and Four Sub-Groups of Students

Variable	Structure of opportunity	Expectation	Socialization
Motivation			
Entire sample (n=253)	.51**	.27**	.34**
Male (n=83)	.58**	.34**	.37**
Female (n=168)	.48**	.24**	.23**
English (n=208)	.50**	.28**	.28**
Non-English (n=42)	.56**	.27	.20
Expectation			
Entire sample	--	.38**	.37**
Male	--	.49**	.54**
Female	--	.29**	.26**
English	--	.39**	.35**
Non-English	--	.41**	.48**
Socialization			
Entire sample	--	--	.11
Male	--	--	.25**
Female	--	--	.22**
English	--	--	.30**
Non-English	--	--	.09

Note. * indicates $p < .05$, ** indicates $p < .01$.

Supplementary Analyses

In order to explore other possible explanations for the above findings, several MANOVAs were conducted using the remaining demographic factors as classification variables. Cross-tabs also were calculated to determine whether the key variables reported above might be disproportionately represented in other demographic factors. The results that reached significance ($p \leq .05$) are reported below. The MANOVAs revealed that students who had previous job experience had higher mean scores on the motivation sub-scale and the expectation sub-scale than students with no previous job experience. This suggests that students with job experience were more motivated towards achieving their goals and were more aware of their own capabilities, strengths, and needs. Similar results were obtained for students who had selected an academic major and those who had decided on an occupational goal. We also found that female students tended to have more previous career-related experience than did male students.

Many females had volunteer experience which helped shape their career interests while others had attended workshops to gather career-related information before they entered university. Females in our study also were more likely to have received support from parents and/or significant others to pursue higher education and to develop their own careers.

Discussion

In general, the findings of the present study suggest that motivation, work expectations, socialization, and structure of opportunity all play an important role in the career development of this group of first-year university students, but they operate differently for males and females and for people whose language of origin is not English. The socialization experiences of female students in our study were more expanding than that of male students. Females also were more aware that women are playing a more significant role in the job market and that gender discrimination may still be present in the world of work. This is consistent with other reports indicating that despite increased participation of women in the labor force, their opportunity is still limited by restricted occupational choices, unequal pay, and discrimination (e.g., Brooks, 1990; Ihle, Sadowsky, & Kwan, 1996; Murrell, Frieze, & Frost, 1991; U. S. Equal Employment Opportunity Commission, 1991). As suggested in Astin's (1984) model, such information is important to female students when they choose academic majors and subsequent career paths.

It is important to acknowledge that some of the findings in our supplementary analyses suggest that gender alone may not be the pivotal factor in creating these differences. Students who had previous job experience were aware of their own interests, strengths, and needs and were more likely to have selected an occupational goal. Females also were more likely to have previous job experiences and have engaged in career exploration activities. These career-related experience likely are a part of the career socialization process which helps refine career interests and goals. Thus, it is not clear at present whether gender per se is responsible for these differences or whether other mediating factors might be operating. Regardless though, these findings confirm the role motivation and expectation play in student career decisions as suggested in Astin's (1984) model.

The findings in this study reveal some interesting observations about language and culture. The differences in the language of origin variable on the socialization subscale provide support for previous reports suggesting that individuals from different cultures are socialized in different ways (e.g., Harter, 1988; Valsiner, 1989). The lower scores on the socialization sub-scale for students whose language of origin was not English may suggest that these students have been socialized to believe that career was secondary for women and that women should not be independent. This may indeed be a reflection on the socialization process of certain cultures. Chinese women for example, are socialized to be dependent, nurturing, and less successful than men. They are also expected to demonstrate "female" traits and to conform to a set of restricted role expectations (e.g., Chiu, 1990; Wang & Creedon, 1989). In a study based on the Hong Kong 1981 census data (Tsang, 1993), it was found that gender was still a crucial factor influencing the educational attainment and status attainment of men and women in Hong Kong. Tsang (1993) maintained that women experienced more constraints and less encouragement than men during the educational and/or status attainment process.

He attributed these findings to the different socialization of men and women in Hong Kong, who grew up with different expectations and aspirations. If such is the case for students whose language of origin was not English in the present study, counselors and faculty will play an important role in assisting these students to deal with both internal and external barriers during their academic and career development process.

When examining the relationships between the motivation, socialization, expectation, and structure of opportunity, our data show mixed support for Astin's model. For the sample as a whole, as well as for males, females, and students whose language of origin was English the four factors are inter-related. However, for students whose language of origin was not English, expectation was significantly related to the other three factors, but the other three factors are independent of each other. This suggests that work expectation is the most operative factor for this group of students. However, in Astin's (1984) model there is no direct path linking motivation and work expectation. In fact, Astin (1984) maintained that work expectation was a function of one's socialization and perceived structure of opportunity, but not of motivation. Our data may suggest an adaptation of Astin's original contention to give more prominence to expectation than was previously given. For the group of students in our study, awareness of their own capabilities, strengths, and needs will most likely enhance their academic and career development process. Furthermore, the strongest positive relationship was obtained between motivation and work expectation. This suggests that students who were more aware of their interests, strengths, and goals were more motivated to achieve their goals, and vice versa.

One caution should be exercised when interpreting our data. One of the limitations of the present study was the homogeneity of the sample. Approximately 80% of the students in our study were between the ages of 17 and 20 and had just graduated from high school before entering university, were born in Canada, and spoke English as their first language. Furthermore, the small number of students whose language of origin was not English made it impossible to investigate the experiences of students who belonged to diverse cultural groups. In the same vein, it is important for readers to consider how similar this sample might be to a sample of first year students in other regions, i.e., to what extent are the characteristics of first year students in a Western Canadian university similar to those of first year students in Atlantic Canada or downtown Toronto? It would be interesting to replicate this study with a cross geographic sample to determine how robust the findings were and how generalizable were the findings to first year Canadian students in general. These cautions notwithstanding, our data do provide some support for Astin's model and suggest that it has potential for explaining the diverse experiences of first year undergraduate students.

To conclude, the findings of the present study suggest that the four constructs in Astin's (1984) model namely, motivation, work expectations, socialization, and structure of opportunity all play a role in the career development of this group of first-year university students. Student retention has been identified as an emerging concern of institutions of higher education (Bishop, 1990). Early career intervention is necessary to identify and assist students who are at risk of dropping out of university. Our data suggest that intervention focusing on broadening the socialization experiences of young people, especial males, may help to increase awareness of opportunities, and heighten work-related expectations. Experiences designed to heighten work-related motivation may also have a similar effect.

The changing demographics and global trends have made career development an increasingly challenging task to this group of young people. It is apparent that the tasks of career counselors and practitioners are also increasingly complex and demanding. More theory-driven research is called for (Betz, 1991) to guide practices. Proactive approaches such as career workshops and seminars, and faculty members as mentors and advisors could provide students with the necessary resources and support. Integration of career-related concepts and attitudes into academic programs could also promote students' self-awareness, career mindfulness, and problem-solving skills. In order to maximize the quality and proficiency of the delivery of educational programs and career services, a closer collaboration among university administrators, faculty members, and student affairs personnel, becomes all the more essential.

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Contextual Factors that Influence the Career Decision Making Process for Indo-Canadian Young Women Entering the Social Sciences

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The educational system of any society inherently is set up with the expectation that certain transitions occur within life. For instance, in Western cultures set transitions occur from middle schools to secondary schools and further, to college, university, or the workplace (Entwisle, 1990). Preparing for a career is considered an age-graded normative task (Nurmi, 1998). As a result of these many institutional transitions, it is likely that an evaluation of contextual or social factors related to career development is needed by career counsellors.

To add more understanding of career decision making among young adults and to reflect the diversity of Canadian culture, the study of children of immigrants needs further exploration. For instance, understanding how socialization within the family, ethnic community, and various other contexts contribute to the development of current career choices is important to explore. Very little research centers on the future career roles of children of immigrants (children born and brought up in their parents' host country) although they form an increasingly important segment of Canadian society (Fitzgerald & Betz, 1994; Maxwell, Maxwell, & Krugly-Smolksa, 1996; Rumbaut, 1994). In particular, limited research focuses on Indo-Canadian young women and the various social contexts that contribute to their career decision-making process. This article attempts to examine the social forces that shape Indo-Canadian young women experience in the career decision-making process to enter the social sciences.

Contextual Influences for South Asian Children of Immigrants

intergenerational conflict in families. A common metaphor used to describe intergenerational conflict experienced by children of immigrants is “walking between two different worlds” (Goodnow, Miller, & Kessel, 1995; Ghuman, 1997; O’Connell, 2000; Patal, Power, & Bhavnagri, 1996; Phelon, Davidson, & Yu, 1991). The metaphor presupposes a straightforward clash between two different value systems, resulting in an unbridgeable gap between generations that causes youth to be in a forced-choice dilemma (Kim-Goh, 1995). Often, when researchers mentioned the challenges of second-generation children of immigrants, as in Saran’s (1985) work on the South Asian experience, they described children of immigrants experience with their parents as leading to depressive and suicidal states. The tensions that children of immigrants experience when navigating between two different cultures and value systems were discussed as a problem of incomplete assimilation (Das Gupta, 1997; Kar, Campbell, Jimenez, & Gupta, 1996). Implicit in the idea of culture conflict is that the children of immigrants see their lives as problematic (Ballard, 1979). Further studies are required to discover how Indo-Canadian young women experience culture conflict in making various decisions regarding how to live their lives.

parental influence on educational decision making. It is important to explore if Indo-Canadian young women receive conflicting messages regarding how to make a career choice and how they might manage opposing messages. For example, the central message in the dominant society might be to view career decision making as an individual process of self-discovery based on personal interests, values, and aspirations (Hartung, Speight, & Lewis, 1996) rather than viewing career decision making as an interpersonal process that incorporates a family perception of what course one should pursue (Basit, 1996; Siann and Knox, 1992; Gibson and Bhachu, 1991). It is important to explore how Indo-Canadian young women engage in the educational decision making process.

Career choice and parental expectations was documented by Beynon and Toohey (1995). They conducted interviews regarding factors that influenced the career choice to enter teaching with students of first- and second-generation Chinese and Punjabi-Sikhs in Canada. The study looked at both men and women for each ethnic group. The parental influence was pervasive, and parents seemed to be more willing to accept teaching as a career choice for women than for men. It was noted that if parents did not view their daughter's career choice in a favorable light and did not approve, the student reported more conflict with the parents, feelings of inadequacy, dissatisfaction, or uneasiness with self. Understanding these parental expectations within the family is an important step to understanding the educational experiences of Indo-Canadian young women.

Development of a Sense of Self-Efficacy during Young Adulthood

According to Bandura, an important developmental task that young adults face is their sense of competence (Bandura, 1997). A sense of competency is related to the ability to achieve goals and adapt to the environment by making use of personal resources (Cote, 1996). Personal resources can include specific skills, abilities, and self-esteem. Bandura formalized this reflection of competence through his concept of self-efficacy. He defined self-efficacy as "people's judgments of their capabilities to organize and execute courses of actions acquired to achieve a good developmental outcome" (1986, p. 81).

Bandura suggests that efficacious people can handle a variety of tasks and can predict a number of outcomes, such as academic achievements, social competence, and career choice (Bandura, 1997; Lent, Brown, & Hackett, 1994; Lent, Brown, & Hackett, 2000). Bandura identified three ways in which self-efficacy effects psychological functioning. First, activities in which people choose to engage are those that they believe they can master. Second, self-efficacy determines the amount of motivation to achieve goals in the face of obstacles or difficulties. Third, one's level of self-efficacy determines if a person's thinking process is self-aiding or self-hindering. In sum, Bandura posited that a strong sense of self-efficacy determines the amount of control people exercise in their lives to help them translate self-belief into accomplishment and motivation.

Deciding to pursue post-secondary education has effects other than gains of knowledge and skills in a particular domain. Other general outcomes correlate with competence such as interpersonal skills, adapting to differing contexts, attitudes, and the development of personal agency (Bandura, 1997). These tasks are of particular significance as young adults make the transition to university and the world of work. A

social cognitive approach to career development, focussing on the processes through which academic and career interests develop, would be useful as self-efficacy and contextual factors are emphasized.

Lent's Social Cognitive Career Theory

Developing a strong sense of self-efficacy is essential for people in transition. Self-efficacy, as defined by Lent, Brown, & Hackett (2000), builds on Bandura's work and is related to whether resources will be properly used in the transition process and whether certain tasks will be attempted or accomplished. Social Cognitive Career Theory (SCCT) focuses on the process through which academic and career interests develop by exploring self-efficacy in relation to contextual factors. Due to ethnic and cultural differences in perception of one's environment, researchers have recognized the importance of applying SCCT to different cultural groups (McWhirter, 1997; Patton & McMahon, 1999). SCCT will be used as a base to study Indo-Canadian young women's career decision-making process to enter the applied social sciences.

Methodology

The research study was based on a qualitative descriptive case study (Yin, 2003) to examine what contextual factors contribute to the career decision-making process among Indo-Canadian young women entering the applied social sciences at the post-secondary level. A descriptive case study approach requires the researcher to begin with a theory in the literature (Yin, 2003). From the Social Cognitive Career theory (SCCT), a selected set of propositions exploring contextual factors were examined. The descriptive theoretic patterns of the study can then be compared to the propositions embedded within the SCCT theoretical framework. The purpose of this methodology is to see if the patterns that emerge within the data set fit the SCCT theoretical propositions under consideration, and to explore the usefulness of the theory to understand an ethnic minority group (Yin, 2003).

Central Research Questions

The research questions for this study were:

- How do vocational interests develop for Indo-Canadian young women?
- How does self-efficacy contribute to their vocational interests?
- What role does socialization in the dominant society, family, ethnic community, and school play in formulating educational and career interests for Indo-Canadian young women?
- How does participating or viewing others' (role models) participation in relevant educational and career activities contribute to their experience of self-efficacy in career decision making?

Participants

In this study, a criterion case selection strategy was used (LeCompte & Schensul, 1999). A criterion case selection strategy requires having pre-set criteria to

guide the selection of participants. The criteria for selecting the participants were: (1) they completed Kindergarten to grade 12 schooling in Canada, which would qualify them as being second generation (Zhou, 1997), (2) both parents of each participant would have been born and raised in India, (3) they were enrolled in an undergraduate program in an applied social science program, (4) they represent the same religious background, and (5) they were young women between the ages of 20-25.

The primary method used to find participants was to approach individuals at random and ask if they would be interested in engaging in the study. A total of 87 Indo-Canadian young women were randomly selected, out of which 7 students completed both sets of interviews and the questionnaires. The seven participants were enrolled in their third or fourth year in undergraduate degree programs in British Columbia and were between the ages of 20-25, completed Kindergarten to grade 12 schooling in Canada, and both parents of each participant were born and raised in India. All the participants also shared the same religious background and were Sikh. The young women were divided into two groups representing the applied social science programs: Social Work and Child and Youth Care. Both academic programs were defined as applied social science programs because they incorporated practicum experiences into their degree requirements.

Interview procedure

The research was conducted in a six-phase process: (1) participants were given a two-part non-standardized qualitative questionnaire created by the researcher prior to the first interview. The first part, called Factors that Influence Career Decision Making Questionnaire, was a modified version of Julien's non-standardized questionnaire (1997) entitled The Search for Career-Related Information by Adolescents. The second part of the questionnaire, called Functions of Coping Efficacy Questionnaire, was based on the tenets of the social cognitive career theory (Lent et al., 2000) and the work of Hackett and Betz (1981). (2) Participants engaged in a 90 minute guided interview which consisted of targeted open-ended questions. Questions were asked in a systematic manner to control for order effects. The questions revolved around: (a) vocational interest development, (b) how self-efficacy appraisals contributed to vocational interest development, (c) explicit and implicit messages received from different social forces regarding women and work, (d) key learning experiences that furthered their understanding of the world of work, and (e) view of role models in the field. At the end of the interview, the researcher collected the questionnaires and invited open-ended descriptions of issues pertinent to the participant that might not have been covered in the interview. (3) Transcription of the first interview and a cross comparison between questionnaires and the interview transcript was conducted to identify gaps. Systematic case study notes were maintained by the researcher documenting observations after each interview. (4) Transcription of the first interview was sent to the participant to review the accuracy of statements. (5) A second 30 minute interview was scheduled with the participant for the researcher to clarify ideas that arose from reviewing the initial transcript. The second interview was also audio taped, transcribed, and reviewed by participants. (6) The transcription of the first interview ranged from 16 to 26 pages in length, typed in 10-point font, and single-spaced per participant. Due to the volume of data, the researcher decided that 25% of each coded interview would be reviewed by

two Sikh Indo-Canadian graduate students who acted as independent raters of the data to ensure consistency of results.

Interview Data Analysis

Data analysis of the interviews and questionnaires consisted of four phases: In the first phase the researcher created a list of domains (topic areas) of analysis. The domains of analysis, based on the predefined concepts found within the social cognitive career theory (Lent, Brown, & Hackett, 2000), were: a) contextual affordance, b) structure of opportunity, c) learning experiences, d) self-efficacy beliefs, e) outcome expectations, f) interest development, g) choice goals, and h) choice actions. In the second phase, a line-by-line analysis of each transcript consisted of categorizing all interview statements into particular domains. The table consisted of each domain of analysis and corresponding interview statements. In the third phase, two Sikh Indo-Canadian graduate students acted as independent raters of the research and reviewed the table to ensure that the interview statements were appropriately sorted into the most appropriate domain. The researcher asked each coder to look at each statement within each domain and state whether they saw an occurrence (+) or a non-occurrence (-) for each statement (Kvale, 1996). Having pre-set definitions formulated from the Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994) for each domain of analysis ensured agreement over the checkers interpretations of the statements. The final phase of analysis consisted of a cross-case analysis by examining the data within a particular domain across participants and representing the patterns in written form. Selected statements from the transcripts were included in the analysis of the results section and appear in quotes. The participants requested that the quotes selected would be used by more than one participant in order to protect their identity. As such, the portrayal of the breadth and depth of the interview statements was limited.

Validity and Reliability Procedures

Validity of the data is based on Yin's (2003) three criteria. First, *internal validity* was achieved through triangulation of different sources of data, having a selective sample, and having the participants check the accuracy of their interview statements. Second, *reliability* was attained through consistent data analysis procedures and by establishing two inter rater reliability checks. Third, *external validity* was established through analytical generalization of the results of multiple cases to theory (Yin, 2003). As such, within the results section further discussion of selected propositions of the Social Cognitive Career Theory will be examined in relation to the research findings.

Results

Proposition #1 An Individual's Occupational or Academic Interests are Reflective of His or Her Concurrent Self-Efficacy Beliefs and Outcome Expectations (Lent et al., 1994; 2000)

All seven participants demonstrated that their academic interests were reflective of their self-efficacy beliefs and outcome expectations. Such interests were formed

when individuals were immersed in the helping field through involvement in their ethnic community at an early age. They all were exposed both directly and vicariously to diverse acts of charity and were reinforced actively by family or ethnic community members for their “good service” to others. Through repeated activity engagement, modeling, and feedback from people in the ethnic community they acquired a set of “helping skills” and developed a sense of their efficacy while engaging in acts of charity. By the time they engaged in volunteer work within the dominant society they were in late adolescence. The participants formed enduring interests based on their sense of efficacy in the helping field. They anticipated positive outcomes and that engaging in the helping field would generate “personal satisfaction”. Evidence from all seven participants supported Lent’s proposition that individuals would aspire to develop choice goals for occupations or academic fields consistent with their primary interests formed at an early age. The data for all seven of the participants also support Lent’s sub-proposition that interests will stabilize for an individual by late adolescence or early adulthood. By completion of high school all the participants recognized that they wanted to be in the applied social sciences. Four of the seven participants had a crystallized career choice goal within the helping field that they were clearly aiming towards while they were in high school. The other three participants discovered their specific career choice within the helping field when they were in their first two years of college or university.

Proposition #2 An Individual’s Occupational Interests Also are Influenced by His or Her Occupationally Relevant Abilities, But This Relation is Mediated by One’s Self-Efficacy Beliefs (Lent et al., 1994; 2000)

Three of the seven young women defined themselves in high school as being a relatively “strong” science or mathematics student. Despite having the ability to persist in the sciences, they chose not to do so, as they did not find the field “personally satisfying”. For these three participants, exploration and discovery of new interest areas was an important factor that they considered as part of their self-development and felt confident enough to engage in “self-exploration”. Another four out of the seven young women felt that neither the sciences nor mathematics were their strongest subjects, but persisted in completing the subjects to see if their experiences would change over time. Despite low performance level in the area, they felt confident enough to complete and pursue the sciences before limiting their career options. Only when they had accumulated enough evidence based on their performance and sense of personal satisfaction did they determine that the area was not a career choice.

In regard to their ability to know that they could help people in the applied social sciences, all seven believed that they had the capacity to do so, based on volunteer and work experiences that they had accumulated over time. Their belief in their ability to do well in the field was based on the feedback that they had received from others about their ability to work with people. In regard to knowing if they would do well academically within the applied social sciences, six of the seven participants knew by the end of high school that their academic strengths and personal interests were in the applied social sciences. However, one participant ventured into the helping field unsure of her academic ability but felt confident that she had the capability to do well in the applied social sciences.

Proposition #3 Self-Efficacy Beliefs Derive From Performance Accomplishments, Vicarious Learning, Social Persuasion, and Physiological Reactions (Emotional Arousal) in Relation to Particular Educational and Occupationally Relevant Activities (Lent et al., 1994; 2000)

Successful accomplishments were considered important for the participants when making self-efficacy appraisals. It was noted in all seven participants that they would identify a success only if a personal goal was achieved under conditions that they felt were challenging. Success achieved under conditions of challenge appears to be more strongly related to self-efficacy than is success achieved under limited difficulty or challenge (Lent, 2000). Lent also proposed as a sub-proposition that being exposed to role models and learning vicariously through them would have an impact on one's sense of self-efficacy. Five participants mentioned that lack of Indo-Canadian women working in their field did not hinder their interest or influence their sense of self-efficacy to enter the career role. In actuality, it acted as further motivation to sustain their career interest as they wanted to address the lack of Indo-Canadian women seen in the helping professions. What did influence their career choice was watching other individuals engaging in career related behavior, and learning vicariously from them. The observed individual was likely in a position of authority and did not have to be Indo-Canadian for their experiences to be meaningful to the young women. In regard to social persuasion, contrary to Lent's sub-proposition that individuals value their own self appraisals over other direct feedback, all seven participants stated that they valued "encouragement and feedback" regarding their performance from people who were working in the field over their own self-appraisals and that it helped them to sustain their career interest. In relation to task performance, the sense of self-efficacy was enhanced for all the participants when they felt "positive and relaxed" about their performance in the field. They were able to maintain their sense of "excitement and stamina" when they could acknowledge their own sense of "personal growth" as a professional in the field.

Proposition #4 Outcome Expectations are Generated Through Direct and Vicarious Experiences with Educational and Occupationally Relevant Activities (Lent et al., 1994; 2000)

Engaging in direct experiences in the field through a practicum placement, volunteer work in the dominant society and ethnic community, and work experiences they were able to develop a better sense of the outcome expectations they could anticipate in the field. Direct experiences held more weight for all seven participants than vicariously experienced accounts of other people's experiences in the field. The aspects that they did allow to have an influence over their career and academic development were in regard to their siblings' advice regarding how to "navigate the educational system". For three of the seven participants, the "practical advice" given by family members who had been through the system held weight for the young women who had older siblings to draw on for support. For these participants, their older siblings were also actively searching for jobs in the participants' field of interest and passing on information. Four participants who were the eldest sibling in the family aided their younger siblings by providing academic assistance, advice, and support.

Proposition #5 Contextual Affordance Would Indirectly Affect A Person's Career Decision-Making Process and Choice of Occupation (Lent et al., 2000)

Contextual affordance consists of the participants indirect perception of social forces and determines if they have a positive, neutral, or a negative influence over the individual (Lent et al., 2000). For all seven of the young women, the idea that socialization remains in the background of experience in a positive, negative, or neutral manner was not reflected by the participants. The young women demonstrated the opposite to what Lent proposes in his theory, as they were aware of the different social agents in their lives and elected whether they wanted to integrate the messages from different social forces into their decision-making, or to leave certain social messages in the background of their experiences. The young women engaged in a process of negotiating their socialization experiences, which they linked to engaging in the process of “developing a bicultural identity”, and felt self-confident that they could manage the negotiation. Future research might posit, based on the young women's experiences, that if negotiation of bicultural identity is high, then self-efficacy appraisal is high, and the impact of contextual affordance is low. Those aspects that they defined as remaining in the background of their experiences, but that they could also draw on in the future if needed, are discussed below.

All the young women perceived that certain values embedded within Canadian dominant society would be values found within the applied social sciences. Since they lived in a multicultural society, the young women believed that the values of “multiculturalism and respect for diversity” would be reflected in the helping professions. They also believed that dominant society valued “equality of women” which would also be supported in the work environment that they were pursuing. The young women drew from the value of respect for diversity and equality for women held by dominant society and wanted to enact the values within their chosen profession.

The family structure served as a socializing force in the participants lives. First, parents emphasized the value of “having an education” and encouraged their daughters to establish themselves within society, which the young women also valued. The parents also thought that it was more valuable for women to enter more male dominated careers than to enter the social sciences, because male dominated fields represented a more “stable career choice and held more prestige”. The young women challenged this belief and decided to follow their own career path.

The young women felt that their mothers were a strong influence in their life, and noted that within the patriarchal structure of the family, their mothers still had a “strong voice”. The participants advocated more equality of roles within the family, but acknowledged that, based on their mothers' roles in the family, it paradoxically allowed their mothers to have more voice and control in the family unit. The participants acknowledged respect for the various roles that both father and mother played; the roles were seen as individual strengths that allowed the smooth functioning of the family unit. The young women also acknowledged that they learned how to “multitask and balance life roles” by observing their mothers manage the household and felt that the skill set allowed them to do well academically in their field of study and would help them in their working life.

The young women also acknowledged that support in the family was shown through “actions” and not through verbal demonstrations of affection, which they also enacted in their relations with others. The participants learned the values of helping

people by observing how their parents helped people within the ethnic community. They also had a strong sense of “obligation” that they felt towards their family in fulfilling certain responsibilities, such as aiding younger siblings. They also felt a strong sense of “responsibility” to help people who were disadvantaged in society through volunteer work in the temple or in various agencies within the dominant community.

Parents also exposed them to many cultural and religious events at the temple to foster a sense of “pride in being different”. The parents also ensured that their daughters could speak Punjabi, which allowed them to communicate with elders in their ethnic community and gain more knowledge about their culture. The young women found that they learned through their religious teachings what it means to be a “good person”, the value of prayer, and the underlying doctrine that men and women should be regarded as equal which they felt could be enacted within their chosen career.

The ethnic community was a socializing force as it held certain norms in common with parents. For example, male dominated fields were encouraged for women to pursue because they were deemed more valuable, “more secure”, “more stable and more prestigious”. Professions in the social sciences were devalued within the ethnic community. The general view was that the reasons for women to pursue a career had less to do with fulfilling personal satisfaction and more to do with contributing to a dual income to accommodate the high cost of living once married. Marriage was still considered a primary goal upon completion of a degree for young women. However, if the individual wanted to pursue a Masters degree, the delay in marriage was perceived as acceptable because it would represent attaining a potentially more stable position in society. The young women did not adopt the views held by their ethnic community.

The educational environment acted as a socialization force. As they progressed from junior high, senior high, to college and university, the participants obtained a clearer conception of how they were perceived as a student. The perception of teachers, professors and practicum supervisors were internalized by the participants and acted as a strong socializing force. Encouragement and feedback from people in the field helped the participants to sustain their level of interest and sense of self-efficacy in career related endeavors. It was also noted in their educational experiences that their peers held the belief that one needed to pursue work that would be “personally satisfying”. Although there were fields within the work force that were considered more prestigious, personal satisfaction in work took precedence. Peers also held the belief that women needed to establish themselves in a career because it would serve as a form of “self-growth”. Peers also held the belief that women could enter any field and that no barriers would be present. Teachers also were viewed as encouraging more women to enter the sciences, but the participants observed that the majority of women still entered the arts or human sciences.

Discussion

The objective of this study was to explicate the various contexts of human development that influence Sikh Indo-Canadian young women’s career decision-making process. The overall findings regarding the applicability of using Lent’s social cognitive career theory (2000) to understand contextual factors in relation to career decision making were mixed. While some propositions of Lent’s social cognitive career theory were very well supported, other areas were found to be in need of further refinement.

Salient findings of the study in support of Lent's social cognitive career theory were: (1) Early immersion in the field determined self-efficacy beliefs and outcome expectations, which contributed to formation of interest development during late adolescence or early adulthood. (2) The young women demonstrated self-confidence in engaging in exploration of their interests, despite having incomplete information regarding their skills and abilities to do well in the field. (3) Direct experiences in volunteer, work, and educational spheres helped the participants form outcome expectations of engaging in the field.

The findings based on the study that were contrary to Lent's social cognitive career theory were that lack of Indo-Canadian role models in the field did not have an effect on their sense of self-efficacy. They still aspired for a career regardless of not having an Indo-Canadian role model. Determining the function that role models play in one's career decision-making process is an important aspect to consider. Future research with various cultural groups who face the same situation of lack of cultural representation in their career could inquire into the function of role models in their life.

Lent had a sub-proposition stating that individual self-efficacy appraisals meant more to an individual than feedback gained from others regarding career performance (Lent et al., 2000). In all cases, evidence contradicts this proposition. Feedback from people in positions of authority, such as siblings in the family system who could offer practical support as well as practicum placement supervisors in the field, held more weight for the participants and was internalized as part of their self-efficacy appraisals. Further studies need to be conducted to assess if attributing more importance to an authority's opinion than to one's own is attributed to a cultural orientation. Another explanation is that it could be attributed to lack of self-confidence in one's new professional role.

Lent considered that socialization experiences exist as a contextual affordance (Lent et al., 2000). Contrary to Lent's social cognitive career theory, contextual affordance was actively negotiated by the participants and drawn upon when necessary to inform their career decision making process. What remained as a contextual affordance represented a selected choice on behalf of the participants. Their values, situated in their upbringing, had a bearing on their career choice. The participants selected their values that they wanted to maintain in their working life. It could be important to see if the formation of one's bicultural identity is linked to the negotiation of contextual affordance. Further studies need to address the relationship between bicultural identity and contextual affordance in relation to career decision making.

This study has implications for career counsellors who work with Indo-Canadian young women entering the applied social sciences. Due to the cultural background of the participants of the study, the research has a bearing on the manner in which career counsellors can frame their practice to address the needs and concerns of this particular cultural group. First, it is important for counsellors to know the norms of the Sikh ethnic community and the various contexts that the participant is affiliated with. Second, a counselor needs to understand the worldview of clients and inquire about the clients perception of the values that they attribute to the different contexts of their lives. Third, exploring how Indo-Canadian young women cope with making various transitions between different contexts could provide young women with more options to consider in helping them engage in career decision making. A sense of control is important for young adults to deal with the multiple challenges and demands in their ever-changing context. In addition, how individuals view various social

contexts for themselves to address the challenges associated with their career choice becomes essential.

As the sample size for this study included seven participants, caution must be exercised in generalizing the findings. The sampling procedure produced a very specific group of young women who all had relatively strong levels of self-efficacy and were enrolled in the same field. The findings are less open to generalization, as it is unknown if similar experiences are held by individuals who vary in their sense of self-efficacy appraisals or by Indo-Canadian women in various educational fields of study. Due to the limited research in the field on Indo-Canadian young women and career decision making to enter the social sciences, the results of this study could serve as a starting point for researchers to examine the various social forces that shape Indo-Canadian young women's career development. Future studies could integrate a larger sample of participants in which specific practical applications can emerge and be tested.

Many research issues still need to be addressed. For example, future research could expand on comparing how the perception of contextual factors in shaping career development of Indo-Canadian young women differs from Indo-Canadian young men. It could also be valuable to explore the differences in life-career planning between rural and urban Indo-Canadian youth, as well as differences established by limited educational and economic opportunity and the effect it has on their life-career plans. Exploring the various contexts in which career decisions are made will shed more light on understanding how to serve the needs for Indo-Canadian young women in their life-career planning.

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Job Search Outcomes For University Graduates: The Role Of Economic Hardship And Work Involvement

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It is well established that a college and university education contributes to graduates' careers from both monetary and non-monetary perspectives (College Board, 2003, October 21). Graduates from post-secondary institutions can expect higher quality of employment, higher earnings potential and greater employment security. Despite the potential employment benefits of higher education, one drawback is student debt, which can impact students during their education and after graduation. In recent years, college and university fees have risen to a greater extent than student aid with the net effect of an increase in education costs (College Board, 2003, October 21). The burden of debt and the stress of loan repayment can have a psychological impact on students.

Past research has examined how the financial strain of debt affects students psychologically. Several studies have shown a link between financial stress and psychological well being for students attending university (Hodgson & Simoni, 1995; Lange & Byrd, 1998; Roberts, Golding, Towell, Reid, & Woodford, 2000). Roberts et al. (2000) surveyed 482 university students about their financial circumstances and psychological well being. The survey found that 72% of the sample experienced some difficulty paying bills, 12% reported great or very great difficulty and just under 10% had seriously considered dropping out of school for financial reasons. Indicators of physical health and psychological well being were lower than the population norms indicating that it was possible to link adverse health to the experience of financial difficulties (Roberts et al.). Hodgson and Simoni (1995) produced similar results with graduate students, finding that financial problems were significantly related to depression, anxiety and suicidality. In addition to short-term effects, economic hardship can also have a long-term impact on university students.

Lange and Byrd (1998) stated that the effects of debt incurred by university students were thought to continue for many years after graduation. They found that higher estimates of future debt and higher levels of daily financial stress produced greater levels of chronic financial strain and a loss of control. Financial counselors have suggested that ongoing levels of student debt could negatively affect individuals' future financial affairs by restricting graduates' ability to purchase a home, educate their children and provide for their retirement (Lange & Byrd, 1998). It is important to note that actual debt reflects only one aspect of economic hardship.

Students without debt may experience hardship as they struggle to pay bills with constrained resources. Similarly, some students may be quite comfortable with debt whereas others find it overwhelming. Several studies have found individual differences with respect to student attitudes towards debt (Davies & Lea, 1995), financial well being (Norvilitis, Szablicki, & Wilson, 2003) and financial risk taking (Carducci & Wong, 1998; Wong & Carducci, 1991). One question that has yet to be addressed is whether student stress due to financial hardship affects the quality of employment they secure after graduation.

Graduating university students facing economic hardship and searching for work are faced with a difficult choice: find and accept any job as quickly as they can to start improving their financial situation or take extra time to find a job that reflects their career interests and educational investments. Work involvement (also known as employment commitment) has been found to predict employment status (Kanfer, Wanberg, & Kantrowitz, 2001), but not employment quality (Wanberg, Kanfer, & Rotundo, 1999) with unemployed job seekers. Prior research has not explored the role of work involvement in job search and employment quality for new job entrants. According to Kanungo (1982) work involvement reflects a normative belief in the value of work, which is developed through parental, school and religious training. Therefore, the importance of work to the student should serve as a motivator for that person to find a meaningful job. Therefore several questions are relevant here. Can high work involvement counter the economic pressures graduating students face in seeking employment? Moreover, how do both variables relate to the job search process?

The job search process for new graduates typically involves the following steps: individuals first generate a list of job alternatives, prepare for the job search process (e.g. revising resume, talking with friends about job leads), then commence the job search process (e.g. mailing resumes, phoning potential employers) (Blau, 1993; Schwab, Rynes, & Aldag, 1987) and finally select a job from the one or more offers that are received. These behaviours have typically been categorized into two domains: preparatory and active job search (see Blau, 1993; 1994). In several studies these have been referred to as job search intensity because they measure the frequency of job search behaviours (e.g. see Wanberg, et al. 1999 and Werbel, 2000).

A third related factor is job search effort, which is the perceived investment of emotional energy in the job search process (Barber, Daly, Giannantonio & Phillips, 1994; Blau, 1993; Kanfer et al., 2001). This factor has also been referred to as job search intensity in several studies (e.g. Saks & Ashforth, 1999; 2000). For simplicity, this study will use the term job search behaviours (preparatory and active) and job search effort to avoid any confusion with the prior literature.

The most obvious and common outcome of job search is the attainment of a job or whether job seekers have found a job by a set time (Brasher & Chen, 1999; Kanfer et al., 2001; Schwab et al., 1987). In addition to securing employment, researchers have identified search duration, number of interviews obtained and job offers as criteria (Brasher & Chen, 1999; Kanfer et al., 2001). A recent meta-analysis by Kanfer et al. (2001) found support for both job search behaviours and effort in securing employment. Interestingly, they also found that effort was more highly related to securing work and negatively related to the length of time individuals were unemployed. However, their data does not show how job search (both behaviours and effort) relate to the quality of employment. In other words, are job seekers sacrificing the quality of jobs in order to secure employment as a means of reducing their economic hardship?

Employment quality can be assessed in different ways via salary, degree of match between academic degree and job, job satisfaction, and turnover or intention to quit (Brasher & Chen, 1999; Wanberg et al., 1999). Although each measure is important, they are all somewhat deficient in assessing overall employment quality. Salary has been used as a measure of employment quality with higher initial salary being indicative of better quality employment despite the confound of labour market variations across different jobs (Brasher & Chen, 1999; Werbel, 2000). Degree of match between academic degree and job has been used as a measure of employment

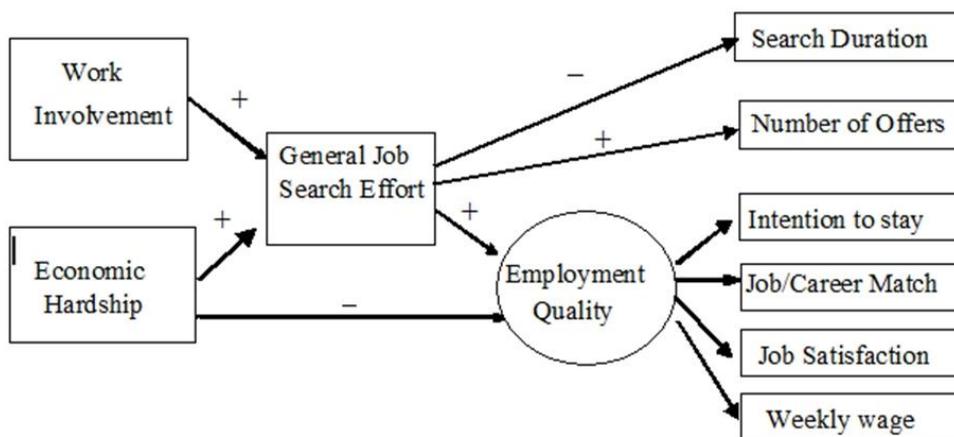
quality (Brasher & Chen, 1999; Saks, & Ashforth, 2002) with a stronger match indicating higher quality. Job satisfaction has also been used as a measure of employment quality (Brasher & Chen, 1999; Saks, & Ashforth, 2002; Werbel, 2000) as well as intention to quit (Brasher & Chen, 1999; Werbel, 2000) as indicative of overall attitudes towards the job.

Although a considerable amount of research has demonstrated the link between job search effort and securing employment (Kanfer, et al, 2001; Saks & Ashforth, 1999; Schmit, Amel, & Ryan, 1993), far fewer studies have explored the link with employment quality. Several studies have explored the relationship between job search behaviours and employment quality (Blau, 1993; Saks & Ashforth, 2002; Wanberg, et al., 1999; Wanberg, et al., 2000) with mixed results, however few studies have explored job search effort and employment quality. Blau (1993) found a direct relationship between job search effort and employment quality (job satisfaction, quit intentions, and organizational commitment) whereas Saks and Ashforth (2002) found no direct relationship between them (i.e. the link was mediated by person-job and person-organization fit).

The present study addresses the relationship between economic hardship and work involvement as antecedents to job search effort with job search outcomes and employment quality as dependent variables. The proposed model extends prior research by including employment quality as an outcome beyond employment status.

Figure 1

Initial research model: Impact of economic hardship and work involvement on general job search effort and employment quality.



Methodology

This study is part of a larger study on the school-to-work transition of university students. The current study represents two phases (1 month prior to graduation and 6 months after graduation) of the longitudinal survey across two graduating cohorts.

Participants

Participants in the study were 2003 and 2004 graduates of a medium sized university who were searching for a job during the administration of the first survey and had secured employment at the time of the second survey. The 2003 cohort included 365 graduating students at Phase 1 (51.5% response rate) and 215 at Phase 2 (69.8%). The 2004 cohort included 700 participants (32.5% response rate) at Phase 1 with 281 at Phase 2 (40.0%). A total of 123 respondents met the criteria for the study and completed all of the measures.

Procedure

Graduating students were contacted one month prior to graduation (in class for 2003 cohort and via e-mail for 2004 cohort) and asked to participate in two surveys. Six months after graduation all respondents who had consented to a follow-up survey were contacted by phone and/or e-mail and directed to a web site for the Phase 2 survey. Students were offered three draws of \$75 for their participation.

phase 1 survey. Demographic information was collected to provide necessary background information such as: participants' degree program, their plans after graduation, whether they were currently employed or still searching for a job, and how long they had been searching for a job. Economic hardship, job search effort and work involvement were assessed in Phase 1. Economic hardship (Vinokur & Caplan, 1987) was measured using three questions with a higher score indicating a greater amount of hardship (Cronbach's alpha = .66). General Job Search Effort (Blau, 1993) was measured with four-items with a higher score indicating greater effort (Cronbach's alpha = .93). Work Involvement (Kanungo, 1982) was measured with six-items with a higher score indicating greater involvement (Cronbach's alpha = .72).

phase 2 survey. After graduation respondents were asked to provide information about any current jobs, whether their current job was in the direction of their desired career path (job/career match with 1 = YES and 0 = NO), duration of their job search, and the number of offers they received. Job satisfaction and intent to turnover were measured at Phase 2. Job Satisfaction (Rice, Gentile & McFarlin, 1991) was assessed using six-items (Cronbach's alpha = .92) with higher scores indicated more satisfaction. Intent to stay (Mobley, 1977) was measured with three items with higher scores indicated a greater intention of staying (Cronbach alpha = .87). It should be noted that although this measure is typically scored with higher values indicating intention to leave, it was recoded to be consistent in direction with the other measures of employment quality.

Analysis

All variables were reviewed for univariate normality, outliers, and missing data. Values for outliers were replaced with the next largest value within the z value of +/- 3.29. Mean substitution was used to replace missing values. Bivariate scatterplots were reviewed for multivariate normality, linearity and homoscedasticity with no notable concerns. Structural equation modeling was employed to assess the fit of the proposed

model to the data. Model fit was assessed using the generalized likelihood ratio (χ^2) ratio, the root mean square error of approximation (RMSEA), the Goodness of Fit Index (GFI), the adjusted Goodness of Fit Index (AGFI), the Comparative Fit Index (CFI), the Akaike Information Criterion (AIC), the Incremental Fit Index (IFI) and the Expected Cross Validation Index (ECVI). IFI was used instead of the Bentler-Bonett Normative Fit Index (NFI) because the NFI may underestimate the fit of the model if the sample size is small (Tabachnick & Fidell, 2001). Individual parameter estimates within the model were also examined as the above fit indices determine the overall fit of the model and not the fit of the individual paths.

Results

Means, standard deviations, minimum and maximum values, skewness and kurtosis are reported in Table 1. Demographic data was measured for cohort (50% 2003 graduates and 50% 2004 graduates) and degree (44% Bachelor of Science, 38% Bachelor of Arts and 19% Bachelor of Commerce). These were comparable to the percentage of degrees granted across the university for both years (48% Sciences, 37% Arts, and 14% Commerce).

A one-way ANOVA was conducted to determine if there were significant differences between majors on the variables of interest. Significant differences were found between majors in economic hardship, $F(2, 114) = 3.53, p < .05$, job/school match, $F(2, 114) = 10.09, p < .001$, and total weekly wage, $F(2, 114) = 8.79, p < .001$. An independent samples t-test was conducted to determine if there were significant differences between cohorts. Significant differences were found between cohorts in economic hardship, $t(121) = 3.65, p < .001$, general job search effort, $t(121) = -3.99, p < .001$, job/school match, $t(121) = 3.63, p < .001$, job satisfaction, $t(121) = 2.08, p < .05$, and intention to stay, $t(121) = 7.34, p < .001$. The model was tested with degree and cohort as covariates, however, no meaningful differences were found in either the paths or the model as a whole. The original model without covariates was retained to maintain an acceptable sample to estimated parameter ratio (Tabachnick & Fidell, 2001).

Significantly skewed variables were transformed as recommended by Tabachnick and Fidell (2001). Search duration, number of job offers, total weekly wage and job satisfaction were transformed using a square root transformation. The model was tested with the transformed variables and no meaningful differences were found and therefore the original distributions were retained.

Table 1

Descriptive Statistics

	<i>M</i>	<i>SD</i>	Min	Max	Skewness	Kurtosis
Economic Hardship	3.52	.86	1.00	5.00	-.60	-.20
Work Involvement	2.72	.77	1.00	4.80	.24	-.25

General Job Search Effort	2.56	.72	.75	4.00	.08	.08
Search Duration	7.03	6.35	0	24	.88*	-.16
Number of Job Offers	.97	1.20	0	5	1.11**	.67
Intention to Stay	3.57	1.31	1.00	5.00	-.71	-.73
Job/Career Match	1.58	.49	1.00	2.00	-.34	-1.91
Job Satisfaction	3.75	1.00	1.00	5.17	-.79*	-.04
Total Weekly Wage	554.57	242.81	100.00	1313.00	.75*	.96

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

Model Estimation and Parameter Estimates

Path analysis (mixed model) was used to test the fit of the model. Table 2 shows the fit indices for the original model and the revised model. Parameter estimates within the model were examined to determine if each path in the model was predicting what was expected. The standardized path coefficients are presented in Figure 2. All of the parameters estimated in the model were in the expected direction and five of the nine estimated parameters were significant. The proposed model produced a good fit to the data.

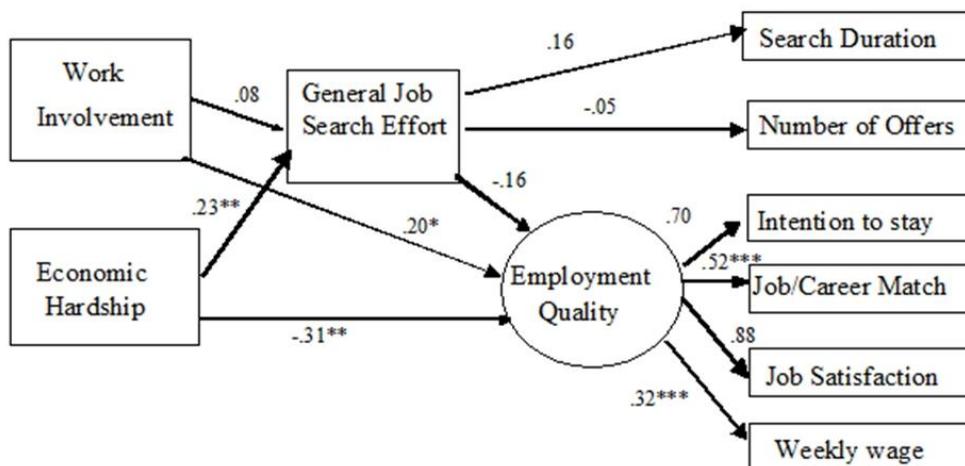
Table 2

Model Fits Indices

Model	X ²	df	N	GFI	AGFI	IFI	CFI	ECVI	AIC	RMSEA
Revised model	33.42	26	123	.94	.90	.95	.95	.59	71.42	.05
Thesis model	37.90	27	123	.93	.89	.92	.92	.61	73.90	.06
Null Model	170.19	36	123	.74	.67	.00	.00	1.5	188.186	.17

Figure 2

Standardized path coefficients: Impact of economic hardship and work involvement on general job search effort and employment quality.



Post Hoc Model Modifications

Although the original model resulted in a relatively good fit to the data, the AGFI and NFI were slightly discrepant from accepted levels (Tabachnick & Fidell, 2001). Therefore, post hoc analyses based on modification indices were conducted to explore for a better fitting model. The addition of a path from work involvement to employment quality produced an improvement across all indices. The AIC was lower with the addition of a path and the chi-square difference was significant ($X^2(1, N = 123) = 4.48, p < .05$). Overall the revised model appeared to fit the data very well. These results, the overall findings and their implications are explored in more detail in the discussion.

Discussion

The primary goal of the current study was to determine the impact of economic hardship and work involvement on job search outcomes and employment quality. Economic hardship was significantly related to both job search effort and employment quality, which suggests that this is an important consideration in the job search process of university graduates. Those graduates who felt more economic hardship prior to graduation felt that they invested more effort in their job search and took jobs of lesser employment quality six months after graduation. In general, these jobs were not the first job in their career path, lower paying, less satisfying with more likelihood of being left for another position. The finding that economic hardship significantly and negatively relates to employment quality is consistent with Wanberg, et al. (1999) who found a positive relationship between financial need and intention to turnover (one aspect of employment quality).

Prior research has explored the relationship between economic hardship and job search effort. Kanfer et al. (2001) found a negative relationship between financial need (similar to economic hardship) and effort, however all of the studies cited in their meta-analysis focused on individuals who had lost jobs. It may be that economic hardship plays a different role in job search effort between these two groups. Saks & Ashforth (1999) suggest that there may be considerable differences in job search between new graduates and older unemployed workers.

In contrast to economic hardship, work involvement was not related to job search effort and positively related to employment quality, which suggests that graduates who see work as important to their lives choose better jobs but do not perceive themselves as investing more effort in their job search. This finding is inconsistent with prior research. For example, Wanberg, et al. (1999) found no relationship between work involvement (employment commitment) and job satisfaction/intent to turnover with unemployed individuals. Two potential explanations can be offered. First, it may be that the sample differences explain the results and work involvement is more salient for new university graduates (similar to the argument made by Saks & Ashforth, 1999). Secondly, the current study's measure of employment status includes several variables (i.e. salary and job/career match) that when combined may more strongly reflect employment quality for those high in work involvement beyond just satisfaction and intent to turnover.

Job search effort did not relate to search duration, number of job offers nor employment quality, which is not consistent with Kanfer, et al. (2001) who found a significant relationship between effort with duration and job offers. Interestingly, Saks and Ashforth's (2000) study of university graduates may provide some insight into these differences. They found job search effort (referred to as intensity) to be related to job offers prior to graduation but not 4 months later. It may be that job seekers' self-assessments of job search effort at one point in time are not predictive of longer-term outcomes. This gap may be due to a lack of sustained effort over time.

Strengths of the Study

This is the first study to measure employment quality beyond work attitude measures (e.g. organizational commitment, job satisfaction, and intent to turnover) by including job/career match and weekly salary. The strong loadings for each of the observed variables support this conceptualization. Another strength of the study is its predictive design with employment quality being measured six months after the antecedent and job search measures were administered. Although there may be additional factors, the predictive design does allow the conclusion that work involvement and economic hardship have an impact on subsequent employment quality. In addition, this study adds to the limited research in job search effort and suggests that effort may not have long-term impact on employment outcomes.

Limitations and Directions for Future Research

Despite the distinct contributions of this study, there are several limitations. First, the sample was a limitation with respect to size and diversity. Although a large number of students were surveyed, the focus of the study on currently searching students (in Phase 1) who secured employment 6 months later (Phase 2) was quite

restrictive. In addition, the current sample came from one university. Future research should cross-validate the results using a larger and more diverse sample.

Secondly, significant differences were found between degrees of study and cohorts. The sample size was insufficient to fully integrate both of these variables into the model and still maintain an acceptable sample to estimated parameter ratio (Tabachnick & Fidell, 2001). The models did not change significantly when the covariates were included but this conclusion is tentative. Future research should confirm the model with sufficiently large subgroups (by degree and cohort).

Finally, the timing of the survey was not optimal for analyzing job search effort. The survey was administered in March, which is one month prior to graduation in students' final semester. It is likely that students were not heavily focused on searching for a job but instead on completing their course assignments. When comparing the mean values from this study with other student job search samples (e.g. Saks & Ashforth, 1999; 2000, 2002) in all cases the mean here was substantially lower. In addition, graduates may have increased or changed their job search effort after graduation with a greater impact on search success. As a result, this may have reduced the relationship between job search effort and employment outcomes. Future research should conduct the study immediately following graduation and over repeated occasions to better capture graduates' job search effort.

In addition, future research should expand the use of different measures by including job search behaviours (preparatory and active) and more frequent data collection periods between searching and securing employment. The increased focus on employment quality rather than simply employment should continue as it reflects an important outcome for many job seekers as well as the mediators and moderators of these relationships. Saks & Ashforth's (2002) study, which incorporated person-job and person-organization fit is an excellent example of this. Finally, future research should include the career focus of job seekers as this becomes especially relevant when considering employment quality, particularly with new job entrants.

Although some researchers have lamented the strong focus of job search research on new entrants to the labour market (e.g. Kanfer, et al. 2001), there are several good reasons to continue research with this group. First of all, they represent a large, relatively homogeneous group of job seekers and their role in employment is considerable. Secondly, the early job search experiences may have significant implications for graduate's careers and employment success. Finally, many students attend university in order to secure better employment after graduation and therefore it is important to understand the unique factors that affect the job search process for them. Kanfer, et al.'s study points to the important job search differences between new entrants and other job seekers which reinforces the focus on each group specifically.

Conclusions

This study is the first to produce a model assessing the impact of economic hardship, work involvement, and job search effort on employment quality. Both economic hardship and work involvement were found to be important predictors of employment quality. As a result, they warrant on-going research to support an effective school-to-work transition. As university fees increase, the negative impact of economic hardship on subsequent employment outcomes is considerable. Universities and

governments need to recognize the full implications of fee increases and subsequent economic hardship on graduates as these have implications for early career decisions.

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Footnotes

¹It should be noted that a large portion of the students were not searching for jobs just prior to graduation and a smaller portion had already secured positions which partially explains the drop in useable data.

Effective Career Services Practices: The Case of Canadian Business Schools

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As economic uncertainty rises, graduating students increasingly consider the marketability of their degree (Brathwaite, 2003) when selecting a business program. Business school rankings published in high profile publications such as *Financial Times* and *Canadian Business* are often used as a tool in selecting a business program. One of the most important determinants of rank is student satisfaction—in particular, satisfaction with the Career Centre (CC). A review of 6 of the top business school ranks (*Canadian Business*, *Wall Street Journal*, *The Economist*, *Financial Times*, *Business Week*, and *US News and World Report*) finds that at least one determinant of rank and an average of 57% of the rank calculation are associated with career services. In fact, student satisfaction with career services ranks second only to the quality of faculty in required courses among factors influencing overall student satisfaction business programs (AACSB Report, 2001).

Historically, university level career services have served business schools students. However, since career services have such an impact on school ranking, reputation, and student enrollment, we suggest that strong career service support dedicated to their own students is a strategic activity for any business school. In the U.S., and more recently in Canada, an increasing number of business schools have established dedicated Career Centres (CCs) to serve their students. The 30 highest ranking business schools world-wide in the 2002 *Financial Times* top 100 schools all have a dedicated career centre.

Analyses of effective practices at top performing career centres (e.g., AACSB (2002 and 2001) have been conducted in U.S. schools, and provide a benchmark for analysis of Canadian CCs. In these studies, four years of data for 168 schools was used to identify 5 top-performing MBA schools (2001) and 184 schools to identify 3 top performing undergraduate programs. Quantitative and qualitative analysis of interviews with stakeholders, students, alumni, faculty, recruiters and CC personnel in MBA programs (2001) revealed 6 effective practices that distinguish exemplary CCs from their counterparts:

1. Coherent business strategy
2. Relationship management.
3. Comprehensive student support
4. Corporate outreach activities.
5. Continuous quality improvement
6. Staff resource development systems

Similar analysis for undergraduate programs (2002) did not reveal effective practices, although the following key findings were reported:

1. Student satisfaction with a CC is the second strongest predictor of overall satisfaction with an undergraduate business program.

2. A strong link exists between high admissions standards and high levels of student satisfaction with CC performance.
3. A link exists between CCs with staff and resources dedicated to business students and high levels of student satisfaction.
4. Schools that view the CC as integral to achieving their mission tend to have higher levels of student satisfaction.
5. The quality of CC infrastructure, such as technology and facilities, influence the level to which undergraduate business students are satisfied with its performance.

These practices and findings reflect changes in career service offices at the university level over the past 25 years, who have shifted toward core activities focused on students' desire for work experience in their chosen profession prior to graduation, and eliminate some services that are no longer necessary (McGrath, 2002). There has been a significant increase in cooperative education, internship, and experiential education, from 26 percent in 1975 to 78.3 percent in 2000 (Nagle and Bohovich, 2000).

Data and Methodology

Sixty Canadian business schools were drawn from Erkut's (2002) study of research productivity in Canadian business schools. Websites were examined to identify schools with a CC dedicated to their own students. Forty-nine of the 60 business schools have their own websites, and from these sites a preliminary summary of web-based and in-house services offered was developed, and 18 schools were identified as having a dedicated CC. Schools without their own website were contacted by phone and 2 of them confirmed the presence of a CC. Tables 1 and 2 present the business schools with a dedicated CC and those without (respectively).

Table 1

Canadian Business Schools with dedicated CC

Brock University, Faculty of Business
Concordia University, Faculty of Commerce and Administration
Dalhousie University, Faculty of Management
HEC (Université de Montréal), École des Hautes Études Commerciales
McGill University, Faculty of Management
McMaster University, DeGroote School of Business
Queens University, School of Business
Saint Mary's University, Frank H. Sobey Faculty of Commerce
 UBC, Faculty of Commerce
Université du Québec à Montréal, École des sciences de la gestion
University of Alberta, School of Business
University of Calgary, Faculty of Management
 University of Lethbridge
University of Manitoba, I. H. Asper School of Business
 University of Ottawa

University of Toronto, Rotman School of Management
University of Victoria, Faculty of Business
University of Western Ontario, Richard Ivey School of Business
Wilfrid Laurier University, School of Business and Economics
York University, Schulich School of Business

Table 2

Canadian Business Schools without dedicated CC

Acadia University, Fred C. Manning School of Business*
Algoma University College, Department of Business Administration
Athabasca University, School of Business
Bishop's University, Williams School of Business and Economics
Brandon University, Business Administration
Carleton University, Sprott School of Business
Kings University College, Department of Commerce/Business
Lakehead University, Faculty of Business
Laurentian University, School of Commerce and Administration
Laval
Memorial University of Newfoundland, Faculty of Business Administration
Mount Allison University, Department of Commerce
Mount Saint Vincent University, Business & Tourism Department
Royal Military College of Canada, Dept of Business Administration/Administrative Studies Program
Royal Roads University, Management Programs Division
Ryerson Polytechnic University, School of Business Management
Saint Francis Xavier University, Gerald Schwartz School of Business and Information Systems
Simon Fraser University, Faculty of Business Administration
Trent University*
Trinity Western University, Faculty of Business and Economics
U du Québec en Abitibi-Témiscamingue, Département d'administration
Univ of New Brunswick at Fredericton, Faculty of Administration
Université de Moncton, Faculté d'administration
Université de Sherbrooke, Faculté d'administration
Université du Québec à Chicoutimi, Département des sciences économiques et administratives
Université du Québec à Hull, Département des sciences administratives
Université du Québec à Rimouski, Département d'économie et de gestion
Université du Québec à Trois-Rivières, Département des sciences de la gestion et de l'économie
Université Sainte-Anne, Département des sciences administratives
University College of Cape Breton, School of Business
University of Guelph, Faculty of Management
University of New Brunswick., Faculty of Business
University of Nipissing, School of Business and Economics
University of Northern British Columbia, Faculty of Management

University of Prince Edward Island, School of Business*
University of Regina, Faculty of Administration
University of Saskatchewan, College of Commerce
University of Waterloo, School of Accountancy and Dept of Management Science
University of Windsor, Faculty of Business Administration
University of Winnipeg, Department of Business Computing and Administrative Studies

*Undergraduate program only

All schools in Table 1 were invited to participate in the study, and fourteen agreed to be interviewed. Table 3 presents a summary of characteristics of these schools.

Table 3

Characteristics of the Participating Business School CCs

Size of CC (number of employees in CC)	1-3 personnel	4-6 personnel	7-9 personnel	10-13 personnel
	3 (25%)	3 (25%)	3 (25%)	3 (25%)
Size of Business School (Undergrad & Graduate student enrollment)	<1000	1000-1999	2000-2999	3000 +
	2 (14%)	4 (29%)	4 (29%)	4 (29%)
Size of Full Time MBA Program (Student enrollment)	< 150	150-299	300-449	450-600
	6 (46%)	3 (23%)	3 (23%)	1 (8%)
Ratio of all business students to CC Staff	< 200:1	200-399:1	400-599:1	600+:1
	2	6	3	2
Primary Organization of CC¹	Functional: By CC job function such as “admin”, “counselor”, etc.	Industry Segment: By industry sector such as financial services, high tech, manufacturing,	Sector: By area of specialization such as: marketing, HR, finance	Program: Primarily by program - Undergrad vs MBA

		etc.		
	4 (33%)	1 (8%)	1 (8%)	6 (42%)
CC Funding Source	100% University	100% Student Fees	Combination: Student Fees & University	Combination: Mainly University + Corp Sponsorship
	6 (50%)	2 (16.5%)	2 (16.5%)	2 (16.5%)

Source: Interview data and Websites

¹This represents the primary organization of the CC, as indicated by the respondents during the telephone interview (12 respondents). However, many of the CCs were matrixed (i.e., organized along 2 or more of these lines).

A 30 minute structured telephone interview protocol was employed and telephone interviews were conducted with the director of each participating CC or a designate¹. Interview transcripts were analyzed using NVivo software. Five essential themes emerged, all of which align with effectiveness practices identified in top U.S. schools:

1. ***Relationship Management***: building and maintaining relationships with stakeholders, namely students, employers (recruiters), and alumni.
2. ***Comprehensive Student Support***: delivery of continuous, relevant services to undergraduate and MBA students and alumni.
3. ***Corporate Outreach Activities***: participation in a number of diverse activities off-campus, complemented by events such as career fairs and information session sponsored to attract recruiters on-campus.
4. ***Continuous Quality Improvement***: improving services through the use of informal and formal feedback mechanisms.
5. ***Technology and Facilities***: leveraging technology by offering comprehensive, interactive web services for all stakeholders. High quality physical facilities optimized recruiters' time on campus.

Two notable differences in the findings from our study and those from the AACSB (2001) emerge. It is not obvious whether Canadian business school CCs have developed a coherent business strategy, or that there are staff resource development systems in place. It may be that the relative youth of Canadian CCs is the main reason for the absence of these characteristics. One could argue that in the organizational life cycle, that these are activities associated with mature organizations. However, it is beyond the scope of this paper to address this question.

Effective Practices in Canadian Business School CCs

Results from interview and website analysis indicate that four practices correspond to MBA effective practices in the U.S. (AACSB 2001) – relationship management, comprehensive student support, corporate outreach activities and

¹ A copy of the interview protocol is available upon request.

continuous quality improvement. Our fifth category, technology and facilities is consistent with undergraduate practices in the U.S. (AACSB 2002). We consider this a key finding because all fourteen participants leverage technology effectively to optimize CC service delivery, and because a direct link to student satisfaction has been found: “the quality of [career centre] infrastructure, such as technology and facilities, influence the level to which undergraduate business students are satisfied with its performance” (AACSB, 2002, p. 3).

practice 1: relationship management (students, recruiters and alumni). All participants in our study indicated that effective relationship management with various stakeholders and clients, students, alumni, and prospective employers and recruiters, is key to success. The report on CC practices for MBA students by AACSB (2001) finds relationship management as central to exemplary CC performance. The customer relationship management (CRM) approach “encourages symbiotic relationships” (Fayerman, 2002: p. 58), and is a strategy that must be synchronized with the customer life cycle (CLC), defined by Meta Group (2000) as having four main elements: engage, transact, fulfill and service. Applied to the CC environment, these stages can be described as:

- **Stage 1: engage.** Initial client awareness is created via advertising or marketing activities. This creates basic awareness, which results in client interaction with the CC.
- **Stage 2: transact.** Actual transactions occur, such as a student registering for a workshop or signing up for an interview with an employer, a recruiter visit to the campus for interviews or a graduate searching for information on job openings.
- **Stage 3: fulfill.** Customer transactions are complemented by an institutional response, such as conducting the workshop, arranging interviews with prospective employers or inviting alumni to CC events.
- **Stage 4: service.** The institution continues to support clients, including students and alumni, by providing and processing information, or resolving issues on an ongoing basis.

The CC key informants reported a wide variety of activities that synchronize with the customer life cycle. Respondents in our study viewed their relationships with *students* as a continuous process that must begin as early as possible. All participants reported that getting to know their students was a top priority. The relationship can be complicated—not only are students viewed as a client of the CC, at the same time they are a product whose quality is ‘sold’ to employers. This corollary relationship motivates much of the long-run relationship building strategy practiced by our participants. The following practices were identified.

Orientation Sessions & Classroom Visits (CLC Stage 1) – Participants emphasized that getting an early start on building student relationships was critical. Seven respondents reported that CC staff conducted classroom visits at the beginning of the school year to introduce their services and gain exposure with students. Special orientation sessions such as “Open Houses” or “Career Breakfasts” were mentioned by 4 schools.

One-on-one meetings (CLC Stage 2) – Eight respondents mentioned individual meetings or personal coaching to become better acquainted with their students. Ability to support individual relationships depends on the size of the student population served; while some knew all of their students on a first name basis and had an “open door policy”, others were able to respond only to *requests* for meetings. All 14 participants reported that individualized coaching or counseling was a service available to students, on their web-site or face-to-face.

Partner with Student Associations to Organize Events (CLS Stage 3 and Stage 4) - To get better acquainted with their students’ experience and interests, and to help them connect with employers, 5 schools reported that CC staff participate in student activities and frequently collaborate with student associations in hosting events. This activity allows CC staff to cultivate student relationships, build alliances with employers and gain greater insights into industry needs. Events such as receptions for alumni and/or employers, regular workshops on topics related to job search, or invited speakers and student “question period” are among the most frequently mentioned by the study participants.

The CC has a unique role in linking students with *employers* and *recruiters*. For successful CC activities and programs, cooperation and participation of employers is essential. Not only are they a ‘client’, but they can be instrumental in CC activities that promote career development. Employers can be a valuable resource for career counseling. Insights gained from interaction with employers add reality and credibility to CC staff assisting students with career concerns. They may participate in campus recruiting and career job fairs, serve as speakers, establish or coordinate internships and host student or faculty visits to their companies. At the same time, employers can raise their own visibility on campus (McGrath 2002).

Respondents at Canadian business schools reported that their relationship with recruiters is built upon mutual trust. They see their role as consistently delivering top quality students and providing top quality service throughout the entire customer life cycle. In return, employers provide feedback to CC staff on their recruitment needs, the current business marketplace, and their satisfaction with recruits. Recruiters participate in a variety of activities organized by CC staff: career and job fairs, workshops, open houses or breakfasts, or student association events.

Two themes related to relationship with recruiters and employers emerged from the interviews:

Strong Customer Service Orientation (CLC Stages 1-4) – Participants emphasized the need to build trust with recruiters by consistently delivering on promises. They recognized the need to stay in frequent contact, to understand employer needs and to provide exceptional follow-up, from providing a strong pool of candidates to streamlined processing of resumes, coordination of interviews, and post interview support.

Use of Relationship Managers (CLC Stages 1-4) – A number of organizational models are used to facilitate relationship management between CC staff and recruiters as well as between students and recruiters. Half of participants reported that their staff are primarily aligned to particular programs (i.e., undergraduate or MBA) to meet the different needs of those two groups. Secondary alignments included geographic, or

functional (e.g., counseling and business development), or sectoral (e.g., finance, marketing, HR, etc.). One of the respondents described the CC organizational structure as aligned by industry sector, (manufacturing, financial services, high technology, etc.), in which relationship managers develop expertise in particular industries and long term relationships with certain companies within those industries. Irrespective of their primary alignments, CCs are organized to best meet their clients' needs and to foster the development and maintenance of strong relationships.

Alumni are one of the most important stakeholders for participating CCs, not only as products of the institution and clients of the CC, but also as important links in the recruitment process. Nine of the participant schools mentioned in interviews or on their websites the importance of establishing and maintaining formal links with alumni through special programs or events. A reliable, active alumni database is considered to be a critical tool in developing and nurturing a relationship with alumni. To promote alumni involvement, 90% of the respondents reported that career services are available to alumni at no extra cost. At some schools, alumni career services are limited to a particular time period after graduation, or restricted to certain services, and at other schools there was no limit. CC staff and recruiters are frequently alumni themselves, which offers synergies in terms of student and alumni relationship building.

Formal Alumni Programs (CLC Stage 1) –Five schools offer formal mentorship programs, whereby students are linked up with alumni who can provide career advice and practical insight into working in a particular field and/or industry.

Alumni Outreach (CLC Stages 1-4) –An additional 4 respondents offer alumni programs or events. They take a proactive approach, contacting alumni and fostering alumni relationships. For instance, alumni are personally invited to speak at company information sessions; they are contacted for business development activities (as “door openers” to targeted companies); and they are key participants in other networking events.

practice 2: comprehensive student support. Participants reported that a wide range of services are offered to support students throughout the entire career planning and job search process. They offer a full suite of services rather than just placement. Starting with an early self-assessment, CCs assist students in identification of career goals, preparation and improvement of resumes, conducting company research, practicing their interviewing skills, and negotiating an offer.

Student Self-Assessment – Six respondents reported that students are advised to undertake skills self-assessments as the first part of their career development activities. These self-assessments are mainly available on-line and assist students in identifying “what they want to do after they graduate”.

Job Search Skills – To improve the placement success of their student clients, all respondents offer workshops or seminars on job search skills: resume writing, job search strategies, interviewing skills and networking pertinent to business school graduates. Some schools employ technologies such as videotaping to practice mock interviews with the students. Others invite recruiters to their workshops to address specific topics. At one school, an executive search firm speaks to students about their

approach to sourcing and placement. Common to all, however, is the availability of additional support, as required, through individualized coaching or one-on-one counseling.

Skill development training and assistance is sometimes delivered in more informal settings (such as Brown Bag Lunches) or on-line. At four schools, special provisions are made for international students. To assist the students through their career transition, these CCs offer special workshops, assist international students in obtaining their employment authorization, and facilitate relationship building with employers, both here and abroad.

Job Postings – When asked about the services offered by CCs to assist students in identifying job openings, the most frequent response was “job postings” (9 respondents). However, a review of the CC websites indicate that, in fact, 12 schools offer this service for employers and 11 offer on-line search capability for students, to facilitate finding a “match”. Four participants mentioned that they perform informal “matching” by emailing job opportunities to particular students or actively searching for opportunities. One of these participants described their role as similar to a recruiting company, whereby they perform direct matching for employers by screening candidates and recommending the best ones to meet the requirement. Two other respondents reported that they did not provide this service out of respect for fairness and confidentiality, stressing that it is up to the employers and the students to make their own decisions.

Recruiting and Interviewing Process – On-campus interviewing is a very common, popular and expected function of university career services (McGrath 2002). Career and job fairs provide a way for CCs and employers to work together to mutual benefit. Career fairs are characterized as events open to first year to fourth year students to help students find out about various job opportunities. The purpose is for employers to provide career information rather than seeking to fill current openings. Job fairs target graduating students.

Staff in all participating CCs facilitates the selection and interview process. Respondents reported that students appreciate the opportunity for on-campus interviews as it offers a convenient way to meet with prospective employers and minimizes their time away from classes. Employers also find this process to be useful, as they have access to a number of interested and qualified candidates (McGrath, 2002).

Special Events – In addition to workshops provided for students to hone their job search strategies and skills, all participating CCs host a number of special activities that support students in their career planning and job search. Worthy of mention are events such as Open Houses and Career Breakfasts, (frequently during orientation), Job Fairs, or dedicated networking opportunities such as Employee Panels, (sometimes co-hosted with the University CSO), MBA cocktail parties with employers, or company information sessions.

practice 3: corporate outreach activities. All CC participants reported outreach activities to connect with the business community. These events fulfill a variety of functions: CC staff promote their students, their school, and their services,

nurture existing client relationships, develop new business, and increase their understanding of the ever-changing marketplace.

Business and Community Association Membership – CC staff increase their exposure to the external market through active membership of industry and community associations. Eight respondents mentioned their involvement in organizations as a key way to improve their networks. A common practice is to invite students to accompany them to association meetings and facilitate the student networking process as well. Associations commonly mentioned include local Chambers of Trade or Commerce, Institute of Chartered Accountants, Canadian Marketing Association, or other industry or professional groups.

Networking Events: Business school CCs host events aimed at bringing prospective employers together with students. Staff partner with student associations to co-organize targeted events such as dinners where they can network with employers and students and facilitate relationships between them. Eleven of the participants offer career days to attract employers to campus, which provide mutual benefits to both employers and CCs. The former may enjoy increased name recognition and publicity for both his/her company and profession, and the latter may also benefit through increased visibility to students. Other “connecting” events which bring together employers and students include: receptions, cocktail parties, breakfasts, information sessions, and golf tournaments. Thirteen CCs invite employers to campus for company information sessions. Two schools organize employer site visits.

Marketing a Strong Product – Participants reported that the products they ‘market’ are the school’s reputation and its students. Five participants identified the necessity to “market students to employers”. In addition to the techniques such as leveraging alumni contacts and hosting events already described, strategies include ‘cold calls’ and events organized on the employers’ ‘turf’. Two of the participants indicated that taking students to these events is an effective way to facilitate networks for both the students and the CC with employers.

practice 4: continuous quality improvement. Peppers and Rogers (1999) argue that one of the most significant components of the CRM theoretical framework is the process of identification, differentiation, interaction and customization. The collection of data about customer needs and preferences is essential to tailoring future delivery and communications (Fayerman 2002). CC performance can be monitored through a variety of integrated feedback systems. Quantitative data can be collected on measures such as the number of recruiters visiting campus, percent of students with job offers and jobs by a certain date, graduates average starting salaries, etc. Input can also be sought from students, through internal student satisfaction surveys, focus groups, and feedback on workshops and events. These results can be benchmarked against others by monitoring third-party survey results.

Continuous quality improvement is a key criterion in differentiating top performing CCs from their counterparts studied by AACSB (2001). Exemplary CCs used a number of feedback systems, (including AACSB benchmarking data), to identify weaknesses, develop and implement appropriate interventions, and assess the success of their efforts.

Several of the participants in this study mentioned the importance of continuous improvement in their CC. Two respondents described specific, systematic mechanisms that were used to collect feedback from employers to improve customer service. A third mentioned that this feedback is bi-directional—while the CC collects performance data from recruiters, they also provide feedback to them as they are interested in knowing more about students' perceptions of their companies and approach to recruitment. Given the number of respondents who reflected on feedback mechanisms and the relative paucity of data collection for analysis, the commitment of Canadian CCs to continuous quality improvement exists but is not yet fully developed.

practice 5: technology and facilities. Client career services historically have relied on on-site delivery at the Career Centre (Mackert and McDaniels 1998). However, funding constraints and rapid changes in technology have facilitated greater flexibility in service delivery, most notably the use of the computer to provide services to customers. By 1993, a U.S. survey of career centers by the National Association of Colleges and Employers (NACE) reported that 94 percent of respondents used computers in providing services to customers (Mackert and McDaniels 1998). The Internet has become a reliable medium for service delivery and new service opportunities continue to appear.

Technology has been extensively incorporated into university career services operations and by employers recruiting students. Career counselors use computer software to help students in self-assessment and career information searches. Students typically conduct the preponderance of their research on employers electronically, and employers have recognized the importance of attractive and informative web sites. The management of the entire campus recruiting process is often handled electronically, and some employers require all applications for employment to be submitted on-line (McGrath 2002).

Technological advances are one of the most significant transforming influences on the future of career services (Mackert and McDaniels 1998). Convenience is the overarching advantage, with information available 24/7 from anywhere in the world from a computer with an Internet connection. Students and other users can take advantage of easy sorting and searching capabilities that make specific career information easily accessible. Career Centre staff can update the website easily, without paper or printing costs. Costs are also lowered because there is a reduction of repetitious tasks and client reliance on CC staff, so staff time is freed up for other activities.

In fact, the influence of the Internet is not so much on the content provided to clients, as it is a tool for decentralization that changes the way we think about how things are done (Miller and McDaniels, 2001). Since clients can do some of the work without the help of CC staff, they get a sense of ownership of their progress.

In addition to the potential for maximum quality service through web-based utilities, there are some considerations that are more relevant today as more and more CCs offer services on the Web. Fewer walk-in students is a consequence of a website (Davidson 2001). Although technology has made it easier for students to communicate with employers, it has also required a significant investment on the part of career services in terms of equipment and staff with technical expertise (Nagle and Bohovich, 2000). The results of our study indicate that participating CCs have clearly made that investment.

Our review of participating CC web-sites finds that all participants leveraged technology effectively by offering comprehensive, interactive web services for students and recruiters. Recruiters and students can reach the CC web-site either directly through the school's homepage, or through a link provided in the university's Career Services menu or Student section. The available services are well documented on the sites.

Quality Facilities – All of the participants realized their critical role in facilitating the interview and selection process for employers. A big part of this role is providing top notch facilities, to streamline the recruiting process and make a good impression on behalf of the university and the students. Thirteen schools have interview rooms (identified on the web – see above), and 3 have the capability for videoconferencing.

Conclusions

In an increasingly competitive field, business schools in North America are responding to student demand for quality career development and placement services. In two studies of business school CCs in the U.S., AACSB identified top performing programs, examined the practices used by those career services offices (CCs), and identified several effective practices at both the MBA and undergraduate levels. The results of the key informant study described here were undertaken to understand and describe the practices used by Canadian business school CCs and determine whether these practices are compatible with current theory and best practices, represented by those used at top performing business schools in the U.S.. Structured telephone interviews with fourteen key informants revealed five essential themes of Canadian CC practices emerged: relationship management, comprehensive student support, corporate outreach activities, continuous quality improvement, and technology and facilities. These themes align closely with AACSB assessment of effective practices in top performing schools in the U.S.. This result is important because in the U.S. study, only top performing schools are examined. In this uniquely Canadian study, business schools with their own CC were invited to participate. Also, the study sample included 14 schools, whereas the U.S. studies included 5 in the MBA study and 3 in the undergraduate study. Interesting questions to pursue include whether these practices can be considered effective or best practices in Canada, and whether the absence of a comprehensive business strategy and staff development program are a function of the stage in the organizational life cycle that Canadian CCs find themselves.

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Career Decision-Making Difficulties of First-Year University Students

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First-year university students are faced with many life challenges, not least of which is the decision about which career path to follow. Unfortunately, many first-year students often experience career indecision, which is conceptualized as “a construct referring to problems individuals may have in making their career decision” (Gati, Krausz, & Osipow, 1996, p. 510). While few if any students are “ideal career planners” (primarily due to the complexity of career planning), some appear to have less career indecision and seemingly find it easier to decide on a career path than others do. Those who struggle with career indecision are likely unable to resolve one or more career decision-making difficulties.

Gati, Krausz, and Osipow (1996) developed a taxonomy for understanding the various difficulties contributing to career indecision. In their taxonomy, a basic distinction was made between career decision-making difficulties occurring prior to the beginning of the career decision-making process and those occurring during the career decision-making process itself. They further subdivided the latter factor, resulting in three subfactors overall: lack of readiness, lack of information, and inconsistent information.

The lack of readiness subfactor was used to account for those career decision-making difficulties that precede engagement in the career decision-making process. Gati, Krausz, and Osipow (1996) identified three theoretical categories of career decision-making difficulties that they believed contributed to a lack of readiness to begin the career decision-making process. These three categories were: (1) a lack of motivation on the part of the individual to begin career decision-making, (2) a general indecisiveness that permeates all types of decision-making for the individual, and (3) various beliefs in dysfunctional career decision-making myths (e.g., career decisions are best made by experts).

The lack of information and inconsistent information subfactors were used to account for those career decision-making difficulties that occur during the process of career decision-making. The lack of information subfactor was divided into four additional categories of career decision-making difficulties: (4) lack of information about the career decision-making process (i.e., not knowing how to make a career decision); (5) lack of information about the self (e.g., not having knowledge about capabilities, personality traits, or interests); (6) lack of information about occupations (e.g., not understanding what work is involved in specific occupations and not knowing about the wide range of occupational options available); and (7) lack of information about ways of obtaining career information (i.e., confusion about how to begin researching vocational options).

The inconsistent information subfactor was divided into three categories of career decision-making difficulties: (8) inconsistent information due to unreliable information (i.e., difficulties related to unreliable or fuzzy information); (9) inconsistent information due to internal conflicts (e.g., difficulties related to the evolving personal identity of the individual); and (10) inconsistent information due to external conflicts (e.g., conflicts involving significant others).

Gati, Krausz, and Osipow (1996) developed a questionnaire (the Career Decision Difficulties Questionnaire) to empirically examine their taxonomy of career decision-making difficulties. They administered this questionnaire to a sample of 259 young Israeli adults who were at the beginning of their career decision-making process and to an American sample of 304 university students. Their results indicated that the pattern of relationship among the 10 decision-making difficulty categories was generally similar to the hypothesized pattern in both samples and that there were no significant differences between the two samples (despite age and cultural differences). They believed their taxonomy of career decision-making difficulties needs further elaboration, especially the 10 decision-making difficulty categories, before it can be claimed that the construct of career indecision is well understood (Gati, Krausz, & Osipow, 1996).

For the current study, we were interested in examining the relationship of their model of career decision-making difficulties with career decision-making self-efficacy, sex-role identification, and stage of identity development.

We included the variable of career decision-making self-efficacy because there is substantial research to show that it is a major predictor of career indecision (e.g., Betz & Vuyten, 1997). The concept of self-efficacy originated from Bandura's (1986) contention that people who believe in their ability to successfully complete the tasks required to achieve an outcome are more likely to engage in and persist at those tasks. This idea has been extended to career development and has become an important variable in understanding the career decision-making process (see reviews by Hackett, 1995; Hackett & Betz, 1992; 1995). For example, Blustein (1989) found that higher self-efficacy about career decision-making was positively related to engagement in career exploratory behaviours. Also, students' self-efficacy beliefs about their capabilities relate to the range and nature of career options considered and that levels of self-efficacy predict "academic performance and persistence as well as career decision-making intentions and behaviors" (Betz & Vuyten, 1997, p. 180). Considering these findings, we predicted a significant negative relationship between career decision-making difficulties and self-efficacy.

We included the variable of sex-role identification to examine its relationships with career decision-making difficulties. Several recent studies have examined the relationship among sex-role orientation and choice of major and occupation with conflicting results. Dawson-Threat and Huba (1996) reported that males in male-dominated and female-dominated majors were comparable in masculinity. In contrast, Jome and Tokar (1998) found that career-traditional men endorsed significantly higher stereotypic male attitudes (e.g., "toughness", anti-femininity) than men in non-traditional careers, though there were no differences in conflicts between work and family relations. With a mediated model in a second study, these authors reported that vocational interests mediated the relationship between masculinity and traditionality of career choice (Tokar & Jome, 1998), suggesting the importance of including multiple variables when examining the relationship between sex-role identification and career choice.

Earlier research appeared to more strongly support the contention that sex-role orientation was related to occupational choice. For example, women who were working in more traditional male occupations and who had not attained a college education were found to be more outgoing, active, ambitious, direct and task-oriented than those working in more traditional female occupations (Mazen & Lemkau, 1990). Women in

more traditional male occupations have also been found to score higher on the masculinity scale of the Bem Sex Role Inventory (Bem, 1981) than did women in more traditional female occupations. Finally, women in male-dominated majors viewed themselves as less feminine than women in female-dominated majors (Dawson-Threat & Huba, 1996).

Although these studies have identified relationships among sex-role orientations and choice of majors and careers, they have not examined whether there is a significant relationship between sex-role orientation and the degree of career decision-making difficulties or self-efficacy and we wanted to examine those relationships in this study.

Another area that has received attention for its relationship to the career decision-making process is stages of identity development. Several developmental theorists have identified the process of developing one's vocational identity as an important part of becoming an adult. For example, Erikson (1968) conceptualized vocational identity as an important aspect of overall development. Marcia (1966, 1980) operationalized Erikson's conceptualizations and identified four main stages of identity development, which are related to the degree of commitment to one's beliefs and values on a variety of issues. These four stages are conceptualized in a hierarchy, starting with the Diffusion status, when the individual has not experienced a developmental crisis yet and therefore would not have made a commitment to vocational choice. The second stage is Foreclosure, which represents an ongoing identification with childhood values and although they may have made a vocational commitment, it likely was without sufficient self-exploration. The third stage is Moratorium, in which the individual is beginning to question her/his values and is exploring options but has not yet made a commitment. The final stage is Achievement, which represents a clear commitment to a vocational area.

For first-year university students, it is unlikely that many will be at the Achievement stage and be able to make a career decision that is well-researched and congruent with their interests, personality, skills, and values. There have not been many studies that have researched career decision-making and stage of identity development. One study that researched grade seven to 12 students' identity status and degree of career indecision found that those in the Achievement category has significantly less career indecision than those in the other three identity categories (Vondracek, Schulenberg, Skorikov, Gillespie, & Wahlheim, 1995). We wanted to investigate whether this pattern of results would be replicated with a first-year university sample.

In summary, our hypotheses were that career decision-making difficulties would be negatively related to career decision-making self-efficacy, that participants who identified with a masculine or androgynous sex-role orientation would have fewer difficulties and higher self-efficacy than those with feminine or undifferentiated sex-role orientations, and that those participants in the Achievement identity category would have fewer career decision-making difficulties and higher self-efficacy than those in the other three identity categories.

Method

Participants

We received responses from 189 students initially and 155 of these students were in their first year of university. Data from six of the 155 first-year students were

removed due to low response rate, missing data, and multivariate outliers. Therefore, we had 149 first-year participants' responses included in the analyses.

Sixty-two percent of the respondents were women and 38% were men. The question about the participants' current age was presented in categorical format. For the 149 participants, their age range was "under 18" to "over 25" years, with the majority (48.3%) indicating that they were 18 years of age; 80% were 19 years of age and younger. Seventy-three percent indicated their racial background to be Caucasian, 8.7% indicated Asian, and the remaining participants indicated other responses.

Instrumentation

demographic, career decision-making strategies, and qualitative questionnaire. On this questionnaire, participants indicated their sex, age, racial background, year at university, socioeconomic status, current career decision-making status using very undecided, slightly undecided, or not at all undecided (which is a question from the CDDQ, described below), and the strategies they have used to make career decisions to date by endorsing items on a checklist.

career decision difficulties questionnaire (CDDQ; gati, krausz & osipow, 1996). The CDDQ is a 44-item questionnaire developed to assess career decision-making difficulties based on the taxonomy proposed by Gati, Krausz, and Osipow (1996). The internal consistency reliability coefficients ranged from .70 to .93 for the three scales and it was .95 for the full questionnaire. For our study, the alpha internal consistency reliability coefficients were .80, .95, .91, and .96 for the Lack of Readiness, Lack of Information, and Inconsistent Information subscales, and the full scale, respectively. The CDDQ has been found to have a good convergent validity with the Career Decision Scale and good discriminant validity (Lancaster, Rudolph, Perkins & Patten, 1999; Osipow, 1999).

career decision-making self-efficacy - short form (CDMSE-SF; betz, klein, & taylor, 1996). The CDMSE-SF is 25-item questionnaire that uses a 5-point scale. The full test score can range from 25 to 125, with higher scores indicating more self-efficacy. Reliability of the short form as measured by coefficient alpha is .94 (Betz, Klein, & Taylor, 1996), which compares well to the coefficient alpha (.97) of the original Career Decision-Making Self-Efficacy Scale (CDMSES). For our study, the alpha internal consistency reliability coefficient was .92. The CDMSE-SF has been found to have good concurrent validity with the Career Decision Scale and My Vocational Situation (Betz, Klein, & Taylor, 1996).

bem sex role inventory (BSRI; bem, 1981). The BSRI is a 60-item questionnaire that uses a 7-point scale. Twenty items are considered to be stereotypically feminine, 20 stereotypically masculine and 20 are used as filler items (e.g., reliable). Masculine and feminine scores are computed by averaging the raw score of the 20 items designated for each scale. A median split method is used to classify participants into one of four groups: masculine identified, feminine identified, androgynous, and undifferentiated. Internal consistency for the masculinity and femininity scales are reported to be between .75 and .87 (Bem, 1981). For our study, the

alpha internal consistency reliability coefficients were .85 and .82 for the masculinity and femininity scales, respectively. The BSI has adequate validity (Bem, 1981).

extended objective measure of ego identity status (EOM-EIS; bennion & sdams, 1986). The EOM-EIS is a 64-item questionnaire that measures the presence or absence of crisis and commitment in different domains of identity development. It is based upon the identity development interviews constructed by Marcia (1966, 1980) and participants' responses are scored to correspond with one of Marcia's four identity stages: diffusion, foreclosure, moratorium, and achievement. The EOM-EIS has been found to have good internal consistency and good discriminant, convergent, concurrent, and predictive validities (Bennion & Adams, 1986).

Procedure

Students who were enrolled in the Introduction to Psychology course at a large, urban university in western Canada were asked to voluntarily and anonymously complete the package of questionnaires as an option for meeting requirements for experimental credits. The participants completed a consent form that reminded them that they were free to withdraw from this study at any time without penalty. Following completion of the questionnaires, the participants were provided with a feedback sheet that indicated university career counselling services that they could access.

Results

Two of the main questionnaires that we used required classification of participants' scores, which is outlined in the questionnaires' manuals. For the BSRI, which measured sex-role orientation, 24.8% were "masculine", 24.8% were "feminine", 18.1% were "androgynous", and 28.2% were "undifferentiated", while 4.0% were not classified. For the EOM-EIS, 21.5% were "diffusion", 16.8% were "foreclosure", 38.3% were "moratorium", and 8.7% were "achievement", while 14.8% were not classified.

In response to a question regarding degree of career undecidedness from the CDDQ that is not included in the scoring of the subscales or total, 16.1% were very undecided, 48.3% were slightly undecided about their career choice, while the remainder indicated that they were "not at all" career undecided (one participant did not answer this item). Also, we asked a question regarding whether students had changed their career plans during their first year at university and 36.7% responded affirmatively (two participants did not answer this item).

The means for the CDDQ and the CDMSE-SF were 152.32 ($SD = 61.56$) and 91.24 ($SD = 14.59$) respectively and the correlation was -0.63 ; these scores were dependent variables in the analyses.

To determine whether there were significant differences by sex-role identification on the main variables, a MANOVA was performed with the four categories of sex-role identification as the independent variable and the CDDQ total and the CDMSE-SF total as the dependent variables. The analysis was significant, $F(6, 278) = 3.95, p < 0.05$. Post-hoc analyses were performed to determine what specific differences contributed to the significant multivariate result. Bonferroni t tests revealed that the "masculine" and "androgynous" sex-role identifications had significantly

higher CDMSE-SF scores than “feminine” and “undifferentiated” sex-role identifications.

To determine whether there were significant differences by stage of identity development on the main variables, a MANOVA was performed with the four categories of stage of identity development as the independent variable and the CDDQ total and the CDMSE-SF total as the dependent variables. The analysis was not significant, $F(15, 363) = 1.27, p = 0.22$.

To determine whether there were significant differences by stage of identity development and one subscale from the CDDQ, “lack of information about self”, an ANOVA was performed with stage of identity development as the independent variable and the total for the CDDQ subscale as the dependent variable. It was significant, $F(3, 123) = 3.16, p = 0.03$. Bonferroni post-hoc analyses indicated that participants in the first identity category, diffusion, had significantly higher scores on the “lack of information about self” subscale than those in the fourth identity category, achievement. However, this result needs to be interpreted cautiously due to the low internal consistency reliability value of the Diffusion category.

A discriminant function analysis was performed to determine whether scores on the CDDQ and the CDMSE-SF would predict group membership for the career undecidedness category (not at all, slightly, or very undecided) for the 148 participants who answered that question. The discriminant function analysis with the two main variables were predictors and the three categories of career undecidedness as the dependent variable was significant, $\chi^2(4) = 61.92, p < 0.01$. Because there were three groups of participants, t tests were performed to determine which group differences were significant. Those analyses indicated that participants who were “slightly” or “very” career undecided had significantly higher scores on the CDDQ and significantly lower scores on the CDMSE-SF than those who were “not at all” career undecided. Also, those who were “very” career undecided had significantly higher CDDQ scores than those who were “slightly” career undecided.

A second discriminant function analysis was performed to determine whether scores on the CDDQ and the CDMSE-SF would predict whether participants had changed their career plans or not for the 147 participants who answered that question. The discriminant function analysis was significant, $\chi^2(2) = 22.08, p < 0.01$, indicating that those who had changed their career plans had higher CDDQ scores and lower CDMSE-SF scores than those who had not changed their career plans.

Discussion

The main focus of this study was to examine the relationship of Gati, Krausz, and Osipow’s (1996) taxonomy of career decision-making difficulties to career decision-making self-efficacy, sex-role orientation, and stage of identity development. In general, our findings provided support for our hypotheses that those with fewer career decision-making difficulties would have higher career decision-making self-efficacy and would indicate “masculine” or “androgynous” sex-role identification than those with more career decision-making difficulties. Our results provided partial support for our hypothesis that participants at a higher stage of identity development would indicate fewer career decision-making difficulties. Finally, we did two additional analyses and those results indicated that those who were more career-undecided and had

changed their career plans had more career decision-making difficulties and lower self-efficacy scores.

The relationship between career decision-making self-efficacy and the taxonomy of career decision-making difficulties as developed by Gati, Krausz, and Osipow (1996) appears complex. Our finding that a significant negative relationship exists between career decision-making difficulties and career decision-making self-efficacy is neither surprising nor unpredicted as extensive research in the area of career decision-making self-efficacy has resulted in similar findings (e.g., Hackett, 1995; Hackett & Betz, 1992; 1995). The fact that the CDDQ is also related to career decision-making self-efficacy appears to provide support for the construct validity of this instrument. Whether career decision-making difficulties preceded or resulted from low career decision-making self-efficacy is unclear. The finding that students who changed career plans within their first year of university study were more likely to be experiencing continued career decision-making difficulties and lower career decision-making self-efficacy compared to those who had not changed career plans does not clarify this issue. Clearly, the need to change career plans suggests some difficulty with initial career planning but whether or not students who changed career plans are destined to have continued career decision-making difficulties and lower career decision-making self-efficacy likely depends on the new career plan they have constructed and the process used. Students who have not changed career plans may yet need to do so and the impact of the need to change on their career decision-making self-efficacy would be interesting to examine.

It is important to acknowledge that changes in career plans, while sometimes stressful for the student, are neither unusual nor unexpected, especially if we consider career development theory. For example, in Super's (1990) life-span theory, individuals in the *exploratory* stage of career development examine and consider a variety of occupations before selection of a specific occupational goal. Individuals in this stage also *recycle* in the early stages of career planning as initial career plans are revised to incorporate new information. Perhaps the challenge to career counsellors therefore is to promote the message that career plan changes are normal and should not be viewed as indicative of a greater underlying problem (e.g., decision-making difficulties). Students accepting this message may be more likely to maintain a positive level of career decision-making self-efficacy while students who do not receive nor believe this message may be more vulnerable to experiencing decreased career decision-making self-efficacy.

Our finding that students with "masculine" or "androgynous" sex-role identifications had fewer career decision-making difficulties and higher levels of career decision-making self-efficacy than their "feminine" or "undifferentiated" peers was also expected and consistent with previous research. For example, Dawson-Threat and Huba (1996) found that "androgynous" sex-role types had a clearer sense of purpose than those with other sex-role types, which could be related to fewer career decision-making difficulties. One reason for these findings may be related to the personality traits associated with the masculine sex-role. Masculine sex-roles have been associated with assertiveness, competence, and decisiveness (Spence, 1993), and these factors could be related to higher career decision-making self-efficacy. In contrast, feminine sex-roles have been associated with dependence, worrying, and low general self-efficacy (Marsh & Myers, 1986; Ricciardelli & Williams, 1995), which may be related to lower career decision-making self-efficacy.

These results suggest that sex-role identification can be an important factor in the career decision-making process and that the career counselling process could benefit from considering a student's sex-role identity. For example, when conducting career counselling with students with feminine sex-role identifications, counsellors may be well advised to examine the student's self-confidence, decisiveness and assertiveness abilities because these personal attributes may need to be enhanced to allow the student to overcome their career decision-making difficulties. Enhancing these attributes could lead to increased career decision-making self-efficacy.

Our main analysis examining the relationship between stages of identity development, career decision-making difficulties, and career decision-making self-efficacy was not significant. One contributing factor to this non-significant result may have been the uneven distribution of students in the four identity status groups. Although there was not a significant difference by identity status and the CDDQ total, examination of the group means suggested a trend towards those in the achievement category having lower CDDQ scores than those in the diffusion category. This pattern is consistent with developmental theories, including Marcia's theory of identity development, which predict that those who are further along in the process of identity development would experience fewer difficulties with making a career decision because their sense of self is more developed than those whose identity is at an earlier stage of development.

However, our secondary analysis with stages of identity and one subscale total from the CDDQ, lack of information about self, was significant. Specifically, the results indicated that students in the achievement category had significantly lower CDDQ scores than those in the diffusion category. The finding that identity development is an important factor in the career decision-making process is not surprising given that the first stage of career planning often focuses on identification of a student's interests, values, skills, personality preferences, and life goals. Students with a more clearly defined identity would likely have an easier time discussing these personal factors. Assisting with the promotion of student identity development, which is a common component of the mission of university counselling services, could therefore assist in reducing the career decision-making difficulties of students.

One of the greatest challenges in working with students in their first year of university study is the likelihood that their identity will be at an early stage of development resulting in a greater tendency for these students to request "too much" career guidance from identified experts. Several identity development theorists (e.g., Belenky, Clinchy, Goldberger, & Tarule, 1997; Chickering & Reisser, 1993) suggest that individuals at an early stage of identity development are more likely than individuals at latter stages of identity development to not trust their own judgment in decision-making and instead to look to "experts" for answers. Certainly that has been the experience of career counsellors working in our center. It is not uncommon for first-year university students to ask career counsellors and other career service professionals the following questions: "What career should I go in?"; "What courses should I take?"; "What is the best career to enter?" One suggestion for responding to these types of questions is to maintain the image of an "expert" (e.g., indicating that you have expertise in helping students career plan and use career planning resources) when first working with such students in order to facilitate development of a positive counselling relationship. A second suggestion is to employ a simple, straightforward approach to counselling in order to reduce the risk of creating disabling anxiety in the student.

Please see Knefelkamp and Slepitza (1976) for additional information on the integration of identity theory into career counselling practice.

One of the applications of our findings is the development of career counselling programming tailored more effectively to the career decision-making needs of first-year students. Specifically, we need to continue to develop specific activities and interventions that increase students' career decision-making self-efficacy, which would be predicted to decrease their career decision-making difficulties. We also need to continue to develop career services targeting each of the career decision-making difficulties as suggested by Gati, Krausz, and Osipow (1996). For example, at our counselling service, we have incorporated some of these ideas into a Career Exploration Workshop, which is the starting point of accessing career services at our counselling service. The Career Exploration Workshop actively involves students in discussions and activities about career myths and beliefs, career planning models, identity development, occupation identification and research, and conflict resolution. Counsellors assist students throughout this process by normalizing the challenges of career planning and by providing supportive feedback. Attendance and participation in the Career Exploration Workshop has been found to significantly increase students' levels of career decision-making self-efficacy (Degen & Ness, 2001).

When considering the implications of these findings, the limitations of this study need to be considered. One main limitation is the use of self-report methodology without any external corroboration. However, as indicated, the focus of the study was to understand more about these participants' career decision-making difficulties and their perception of the level of their self-efficacy. Another limitation is the correlational nature of the strong negative relationship between career decision-making difficulties and career decision-making self-efficacy. Future research should explore whether or not additional mediating or moderators variables are impacting this relationship. Finally, a third limitation of this study is that we only included first-year university students and therefore these participants were likely in the earlier stages of their career planning process. Future research should include participants prior to their attendance at a post-secondary institution, as well as participants in various stages of their education, to examine the applicability of the Gati, Krausz, and Osipow (1996) model.

In conclusion, this study supported our main hypothesis regarding the interrelationships of several key variables with career decision-making difficulties. In particular, the significant negative correlation between career decision-making difficulties and career decision-making self-efficacy suggests the importance of understanding more about this relationship and other variables that may be related. It is particularly important for future research to examine these variables with students beyond first-year university. At present, we plan to conduct such research and we also plan to begin examining possible path models of career decision-making using the CDDQ and career decision-making self-efficacy measures.

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