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## The Role of the Resiliency Process in Skilled Immigrants' Job Search

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Graduate Program in Psychology  
A thesis submitted in partial fulfillment of the requirements for the degree in Master of Science  
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THE ROLE OF THE RESILIENCY PROCESS IN SKILLED IMMIGRANTS' SEARCH FOR  
EMPLOYMENT

(Spine title: Resiliency and Skilled Immigrant Job Search)

(Thesis format: Monograph)

by

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Graduate Program in Psychology

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Science

The School of Graduate and Postdoctoral Studies  
The University of Western Ontario  
London, Ontario, Canada

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THE UNIVERSITY OF WESTERN ONTARIO  
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entitled:

**The Role of the Resiliency Process in Skilled Immigrants' Search for Employment**

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requirements for the degree of

**Master of Science**

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Chair of the Thesis Examination Board

## ABSTRACT

For many skilled immigrants settling in Canada, the obtainment of employment is a difficult and lengthy process. The current study seeks to examine how skilled immigrants deal with the adversity of the job search by applying a process model of resiliency (King & Rothstein, 2010) to the job search of skilled immigrants. The study examined the interplay between individuals' psychological characteristics, knowledge, and environment and their self-regulatory processes, and how those processes influenced the job search individuals performed and subsequent job search outcomes. Using a cross sectional design, 94 immigrants throughout Canada completed an online survey. The findings showed individuals' knowledge and environment moderated how those individuals responded and regulated their thoughts. As well, individuals' self-regulatory processes were related to the job search they performed. The study provided supportive evidence for the process model of resiliency and its application to the job search of skilled immigrants.

**Keywords:** Resilience, Skilled immigrants, Job search, Employment, Job search intensity, Job search clarity, Job search self-efficacy

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## The Role of the Resiliency Process in Skilled Immigrants' Search for Employment

At some point during their lives, individuals may experience an event with the potential to cause significant disruption in their daily functioning. While some people are able to persevere through such events and ultimately reach or exceed previous levels of functioning, others fall to the wayside, unable to restore their previous abilities. Resilience refers to the achievement of a positive outcome despite serious threats to one's well-being or development (Masten, 2001). The personal and environmental characteristics, as well as the self-regulatory processes which contribute to a successful outcome, are of particular interest to resilience research (King & Rothstein, 2010). One area in which resilience research can be applied is the job search process of skilled immigrants. Because skilled immigrants face a variety of barriers to employment they often take long periods of time to obtain employment (Chan, 2001, as cited by Mace, Atkins, Fletcher, & Carr, 2005), are underemployed (Reitz, 1998), and as a result, are at a higher risk of developing poor mental health than native born job seekers (i.e., Dooley, Catalano, & Wilson, 1994). Previous job search literature has identified job search behaviours related to positive employment outcomes (Guerrero & Rothstein, 2011), but to this author's knowledge, no research has examined the role of resilience in individual differences in job search outcomes of immigrants. This poses the question, to what degree is resilience associated with the job search outcomes of skilled immigrants. The proposed research seeks to link resilience research to the job search of skilled immigrants as a means to identifying and understanding the personal and environmental characteristics and internal processes related to job search behaviours and outcomes.

Despite possessing the required education and credentials, many skilled immigrant workers have difficulty finding work and their employment outcomes are less positive than those of Canadian born workers, (Reitz, 1998). Desjardins and Cornelson (2011) reported that 40% of immigrants who enter Canada possess (at minimum) a Bachelor's degree compared to the 17% of Canadian born individuals, thereby exceeding the education level of Canadian born workers. As well, in 2010, unemployment among Canadian born citizens holding a university degree was 3.5% while landed immigrants with a university degree residing in Canada for five years or less, had an unemployment rate of 14.4% (Canada Immigrant Job Issues, 2011).

For skilled immigrants who do obtain employment, differences in income exist between themselves and native born workers. Using census data from Statistics Canada (2006), Desjardins and Cornelson (2011) demonstrated that immigrants on average earned \$45 000 annually, which is approximately 2% below the average income of Canadian born workers. Further, for persons who immigrated within the last five years, their average income was \$28 700 per year, far below the average income of Canadian born workers. Such differences are due in part to the underutilization of immigrants' skills and abilities, a situation that has been termed underemployment (Reitz, 1998), and wage gaps between native born workers and skilled immigrants holding equivalent employment positions (Desjardins & Cornelson, 2011).

But despite the grim employment outlook for many immigrants, foreign skilled workers continue to immigrate to Canada as many immigrants are unaware of the negatively trending employment outcomes prior to their arrival (Desjardins & Cornelson, 2011). Expectations of improved employment opportunities and financial security can

often be persuasive factors in individuals' decisions to immigrate to a new host country (Negy, Schwartz, & Reig-Ferrer, 2009). One contributor to skilled immigrants' expectations of prosperous employment is the application process they must complete prior to entering Canada as a skilled worker or professional. As defined by Citizen and Immigration Canada, skilled workers are "people who are selected as permanent residents based on their ability to become economically established in Canada" (2012). To be eligible to apply for skilled immigrant status, individuals must have a valid offer of employment, or be enrolled in or graduated within the last 12 months from a PhD program in Canada. After meeting the criteria to apply, applicants are evaluated based on their education, language abilities, work experience, age, whether they have arranged employment in Canada, and their adaptability. But as the expectations of positive employment outcomes fail to materialize, negative consequences for individual job seekers, organizations, and the host country result.

For individuals seeking work, unemployment and underemployment have been linked to detrimental effects on mental and physical well-being (Dooley & Catalano, 1980; Dooley, Prause, & Ham-Rowbottom, 2000; Kasl & Cobb, 1970; Vinokur & Caplan, 1987), as well as long term career success (Reitman & Schneer, 2005). In a meta-analysis by McKee-Ryan, Song, Wanberg, and Kinicki (2005), findings demonstrated that persons who transitioned from being employed to unemployed demonstrated declines in their overall psychological and physical well-being. Specifically, individuals reported lower life satisfaction and subjective physical well-being, and scored lower on measures of mental health. For skilled immigrants who have developed professional identities through high educational credentials and years of job

experience they obtained outside the host country, the lack of acknowledgment of their accomplishments may be even more disheartening and they may experience a loss of identity (Lee & Westwood, 1996).

The relationship between mental health and employment status also appeared to be moderated by the length of time an individual partook in the job search process (McKee-Ryan et al., 2005). As the length of time spent searching for employment increases, so does job seekers' exposure to rejection (Kursmark, 2007, as cited by Fleig-Palmer, Luthans, & Mandernach, 2009). The types of rejection job seekers are exposed to include a lack of employer interest in a job seeker's resume or job application, as well as the absence of a job offer following an interview. Financial strain also increases in accordance to the length of time a person is without work, thereby increasing stress which is linked to negative effects on mental and physical well-being (Wanberg, Kammeyer-Mueller, & Shi, 2002). Because the focus of resilience research is to increase our understanding of the mechanisms that promote individuals' success in overcoming events threatening their well-being, examining resilience to determine how individuals overcome the accumulating negative experiences that threaten individual well-being during job search would be beneficial.

Outside the realm of mental health risks, individuals migrating to a new country experience disruption in their careers which can detrimentally affect career earnings long term (Reitman & Schneer, 2005). In the longitudinal study by Reitman & Schneer, individuals who experienced interruptions in their careers earned less than persons whose careers were continuous, and the gap in earnings existed for many years following the disruption. Therefore, despite obtaining employment in their chosen career, the lag in

employment opportunities can have long term effects on the career earnings of immigrants following relocation.

Because the immigration of skilled workers brings diverse and desired skills into organizations and Canadian industries, the underutilization of their skills due to underemployment and unemployment is detrimental to both organizations and the Canadian economy (RBC Financial Group, 2005). By hiring skilled immigrants, organizations are able to fully utilize the untapped potential available in the workforce, gain a diverse set of skills in their workforce, fill vacant job positions, and thereby contribute to the economic growth of the company. Accordingly, host countries try to attract skilled workers to supplement labour shortages, particularly with the large number of workers expected to retire in upcoming years and birth rates of native workers being low. A highly skilled workforce strengthens Canada's economy (Boyd & Thomas, 2002), but when skilled immigrants remain unemployed for long periods of time, their skills remain unused and they are unable to contribute to the country's economic growth or tax revenues. On the contrary, they end up relying on social assistance programs until employment is obtained and financial stability is achieved (Faelli & Carless, 1999).

Because of the numerous barriers to employment skilled immigrants must overcome, they are at even greater risk of poor employment outcomes than unemployed native Canadians. Prior research has identified a variety of factors contributing to poor employment outcomes among skilled immigrants. Some of the major obstacles skilled immigrants face include poor language fluency in official languages, a lack of Canadian work experience, and unrecognized academic credentials (Aycan & Berry, 1996). Exacerbating the problem of unrecognized credentials is the increased access to native

born skilled workers due to improved education of Canadian born workers (Reitz, 2001). In an examination of the effect of institutional structures on employment in Canada, Reitz proposed that the value employers place on immigrant skills has depreciated. In the context of a “knowledge economy” (p. 580), a term referring to the increased expansion and importance of education in today's industries, the increase in native born skilled workers has contributed to the economic disparity between Canadian born and non-native born workers.

When competing with native born applicants with similar educational backgrounds, immigrant job applicants are at a disadvantage due to discriminatory hiring practices (Boyd & Thomas, 2002; Hakak, Holzinger, & Zikic, 2010; Reitz, 2001). In Hakak et al.'s (2010) study, Latin American immigrants who graduated from a MBA program in Canada were interviewed in regard to their job search experiences and the barriers they faced while searching for employment. Despite receiving their education from a Canadian university, interviewees reported experiencing forms of discrimination such as not being hired because they lacked Canadian work experience or because they spoke with a non-Canadian accent. As mentioned by Hakak et al., job performance for certain jobs requires Canadian work experience, but this is not the case for all employment positions (Esses, Dietz, & Bhardwaj, 2006).

According to Guerrero and Rothstein (2011), skilled immigrants can improve on certain factors to enhance their job search skills and contribute to more positive employment outcomes. Often, the activities required to obtain employment in the host country differ from those in the country of origin. When competing with persons with similar credentials, applicants who are more efficient at performing job search tasks



common to the host country are more likely to obtain employment (Hakak et al., 2010). In the study by Hakak et al., Latin American job seekers expressed concern regarding their lack of social networks and inexperience with the task of social networking, both being important behaviours of the job search process in Canada and uncommon in their native homeland.

Within the job search literature, the behaviours job seekers engage in have consistently been identified as important predictors of employment outcomes (Kanfer, Wanberg, & Kantrowitz, 2001). In a meta-analysis by Kanfer et al., the researchers developed a job search model based on a “motivational, self-regulatory conceptualization of job search” (p. 837). Their model conceptualizes job search as a carefully considered plan of action carried through with purposeful, dynamic, and self-regulated patterns of behaviour with the intent to achieve a previously identified employment goal.

In their meta-analysis, Kanfer et al. (2001) viewed job search behaviour as a function of job search intensity, or the amount of activity directed toward the job search a person partakes in, and job search effort, measured as the amount of effort a person feels they are expending in the job search process. The antecedent variables examined for their influence on job search behaviour and employment outcome included personal characteristics of the job seeker such as personality (eg. Big Five personality factors), generalized expectations of the outcome (eg. locus of control, optimism), and self-evaluation (eg. self-esteem, job search self-efficacy). A person's motivation to find employment was examined by looking at job seeker's financial need and commitment to employment. As well, social support and demographics were included for their relationships with job searching behaviours and outcomes.

What Kanfer et al. (2001) found was that a variety of antecedent variables do influence a person's job search behaviours. All of the antecedent variables included in the study except optimism, had a significant relationship with job search behaviour. However, specific antecedent variables showed distinctly larger relationships with job search behaviours than others. As well, job search behaviours mediated the relationship between antecedents and employment outcomes, as signified by smaller relationships found between personality, motivation, and demographic antecedents and employment outcomes. These findings also suggest a tendency for employers to hire workers high in certain desirable characteristics such as conscientiousness compared to those high in less desirable traits such as neuroticism. The results of Kanfer et al.'s meta-analysis also provided support for the predictive capabilities of job seeking behaviours on employment outcomes, as job seekers who engaged in greater job search behaviours were more likely to obtain employment.

The importance of an effective job search, within the context of a host country was further supported by Guerrero and Rothstein (2011). Adapting the job search model developed by Kanfer et al. (2001), Guerrero and Rothstein examined the antecedents and job search process specific to skilled immigrants. The purpose of Guerrero and Rothstein's study was to identify factors immigrants could improve upon in order to improve employment outcomes. As shown in Figure 1, the modifiable factors Guerrero and Rothstein examined were language fluency, cultural knowledge, and social support. Cultural knowledge and language fluency were both related to both job seekers' clarity of their job search goals and confidence in their ability to perform job seeking tasks (Guerrero & Rothstein, 2011). According to Guerrero and Rothstein, a positive

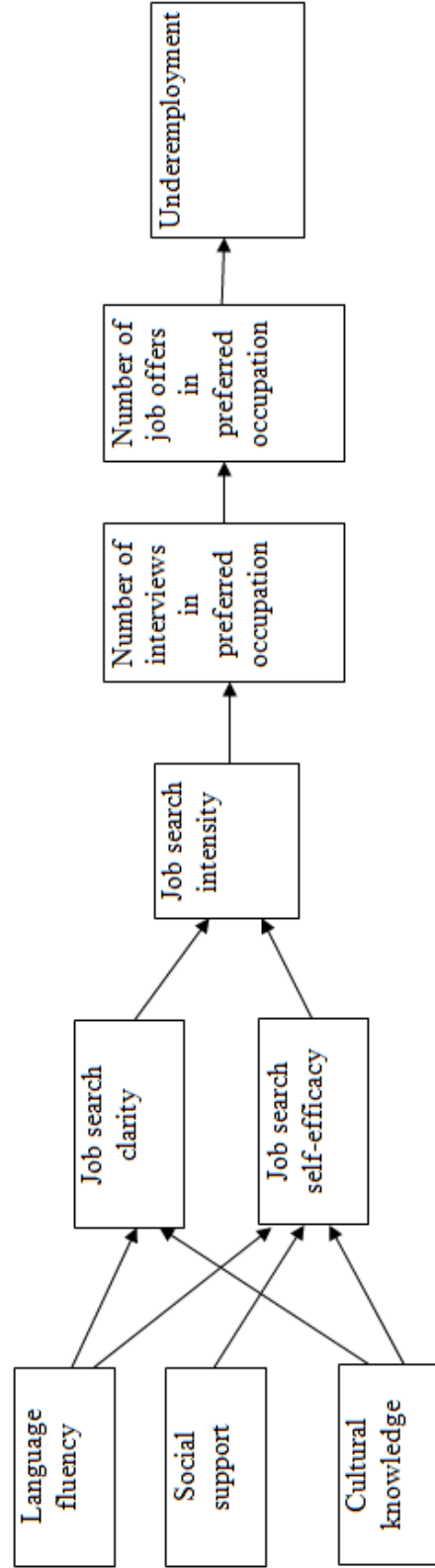


Figure 1. Guerrero and Rothstein's (2011) immigrant job search model.

relationship may be due to an improved understanding of the job market as well as feelings of mastery through enriched social interactions. However, contrary to the findings of Hakak et al. (2010), social support was not a key variable in job seekers' employment outcomes. One explanation Guerrero and Rothstein provided for the discrepancy was that social resources of immigrants are more likely to provide emotional support rather than provide information that would assist in the job search.

As shown in Figure 1, the job search model developed by Guerrero and Rothstein (2011) is an unfolding model in which the antecedents influenced job search clarity and job search self-efficacy, which in turn influenced job search intensity. Job search clarity is the degree to which one knows the type of employment they would like to obtain and the steps required to obtain that employment goal (Wanberg, Hough, & Song, 2002). Job search self-efficacy refers to a job seeker's confidence in his or her ability to perform a variety of job search activities (Saks, 2006). Job search intensity showed a positive relationship with the number of job interviews, which led to increased job offers, followed by employment or underemployment. Guerrero and Rothstein's findings provided support for the job search model put forth by Kanfer et al. (2001) and provided insight into factors immigrants can develop through training and education to assist them in obtaining employment.

Empirical research examining how skilled immigrants deal with the failures and frustration of the job search has yet to be conducted. The proposed research seeks to address the gap in empirical research using the model of resiliency developed by King and Rothstein (2010), which takes into account the factors and processes that may influence skilled immigrants' engagement in the job search process.

### **Resiliency and Positive Psychology**

Despite the negative trend in employment outcomes, some skilled immigrants do secure gainful employment. In attempt to explain these individual differences in employment outcomes, the domain of positive psychology is considered. Prior to World War II the purpose of psychology was not only to treat persons with mental illness, but to identify and nurture people's strengths by finding activities they could excel at, thereby assisting them in living more productive and fulfilling lives (Seligman & Csikszentmihalyi, 2000). However, following the Second World War, psychological research and clinical practice began to predominately focus on the treatment of mental illness or the treatment of what was wrong with people, which resulted in a much more negative focus for the discipline (Luthans, 2002). With the work of positive psychologists, individuals' strengths, invulnerability, and the achievement of a fulfilling and prosperous life again reigned important in psychological practice and research.

According to Seligman, Steen, Park and Peterson (2005), research based on positive psychology “enhance[s] our understanding of how, why, and under what conditions positive emotions, positive character, and the institutions that enable them flourish” (p. 410). Such a definition renders its concepts applicable to a number of contexts in which the goal is to identify the factors that lead to a positive outcome.

Applying positive psychology to an organizational context, Luthans and colleagues identified employee behaviours thought to improve organizational effectiveness and the likelihood of an organization's survival during difficult economic times (Luthans & Youssef, 2004). According to Luthans (2002), positive organizational behaviours are state-like capacities that can be “measured, developed and effectively

managed” (p. 698) to improve performance in the workplace. These behaviours include self-efficacy, hope, optimism, and resilience which are encompassed by the higher-order construct, psychological capital (PsyCap). Under the umbrella of the PsyCap construct, the synergistic interplay of the four facets result in a greater effect on performance and attitudes than any of the facets individually (Avey, Avolio, & Luthans, 2011) thereby increasing organizational effectiveness. Shortcomings of the PsyCap model will be revisited when measurement and conceptualization issues of resilience are discussed.

Stemming from the domain of positive psychology, the “superordinate construct” of resiliency (King & Rothstein, 2010, p. 369) seeks to understand the personal and environmental factors that contribute to a positive outcome despite an adverse situation (Rutter, 1990). Masten, Best, and Garmezy (1990) defined resilience as “the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances” (p. 426). In essence, the term resiliency refers to an overall process that occurs over time as a person moves from a state of disequilibrium, which is triggered by an adverse event, to a state of acceptance and personal well-being (King & Rothstein, 2010). A theoretical model of the resiliency process developed by King and Rothstein is illustrated in Figure 2. Affecting the process are the personal characteristics of the individual such as his or her tendency to view things in a positive or negative light, and environmental factors such as being surrounded by a strong support network. As individuals proceed through the process they self-regulate their emotions, thoughts, and behaviours. Again, a person’s ability to self-regulate is influenced by that individuals’ personal traits and surrounding environment. Over time, personal and environmental

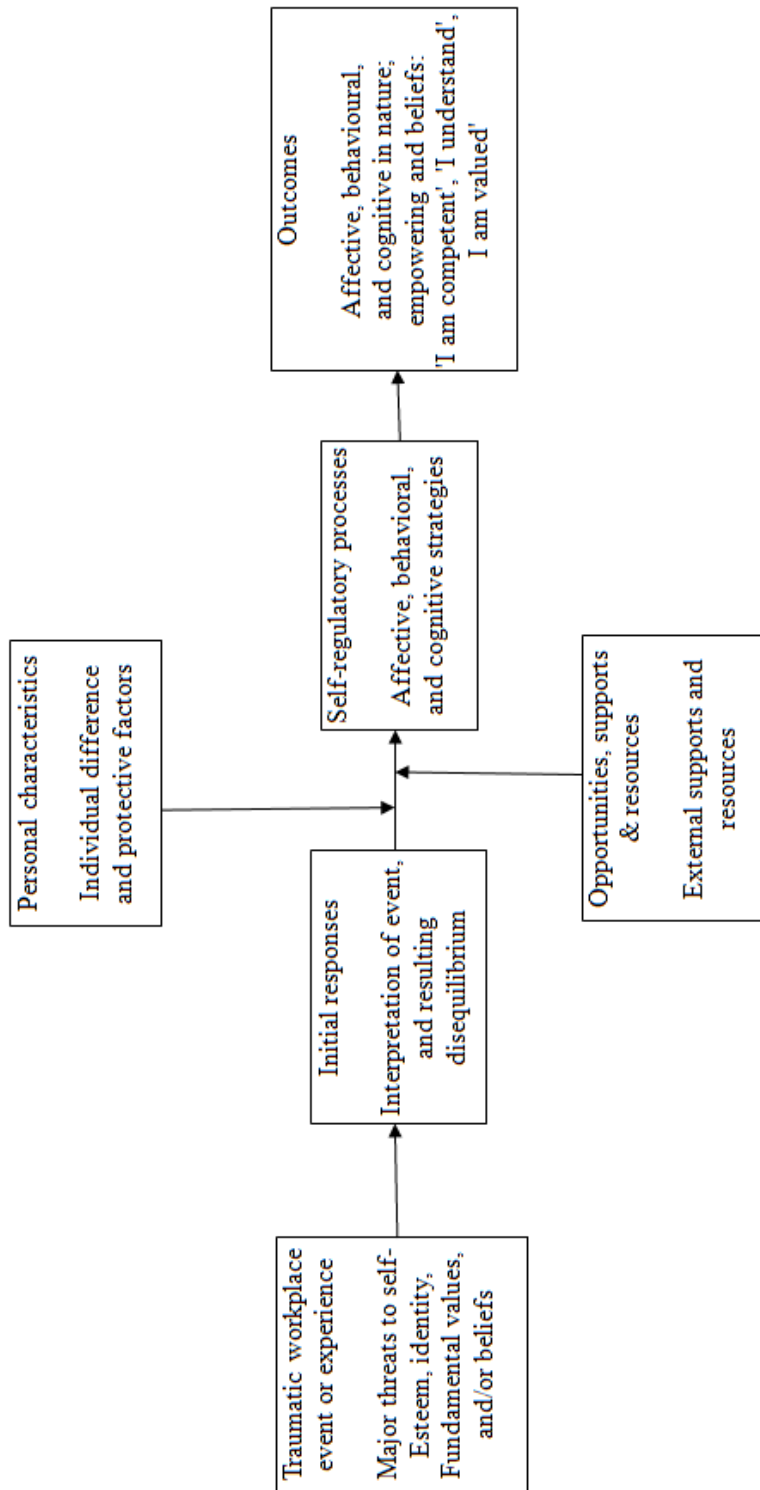


Figure 2. King and Rothstein's (2010) process model of resiliency as depicted in McLamorn and Rothstein (in press).

factors interact with self-regulatory processes in a synergistic and dynamic manner, evolving to a state in which the person has accepted and grown from the situation and is able to continue to develop to his or her full potential. The emphasis on resilience as a process that develops over time led King and Rothstein (2010) to suggest that in fact the more appropriate term for this construct is resiliency.

During earlier work on resiliency, researchers placed a special emphasis on identifying protective characteristics of individuals and their environments that shield them against threats to their well-being. Protective factors are the personal and environmental characteristics that ameliorate or modify an individual's response to an event (Rutter, 1985). In the absence of a stressor, protective factors may have no effect on an individual's functioning; however, in the face of a threatening event, these attributes interact to moderate the relationship between the event and an individual's response.

One of the major areas of research on resiliency that has gained theoretical and empirical value is the investigation of adaptive outcomes of children whose mothers were diagnosed with schizophrenia (Masten et al., 1990). Children of mothers with the illness had an increased risk of developmental problems due to genetic predispositions for mental illness and poor living conditions consequential of the illness (Masten, 2001). In accordance with the principles of positive psychology, research in this area sought to identify the protective factors and mechanisms associated with the positive adaptation of children living in undesirable situations, and to differentiate those children from the ones whose adjustment was less favourable (Luthar, Cicchetti, & Becker, 2000).



Since this earlier research on resiliency, a myriad of protective factors have been identified. In Garmezy's (1991) article examining the outcomes of children raised in impoverished living conditions, he identified cognitive skills, activity level, sociability, and reflectiveness in new situations as personal characteristics that modified children's responses to stressors. Coutu (2002) purported that the three characteristics resilient people possess are an exceptional ability to improvise, a deep belief and strongly held value that life is meaningful, and a steadfast acceptance of reality. Other named protective factors include intellectual ability (Masten, Hubbard, Gest, Tellegen, Garmezy, & Ramirez, 1999), attribution style, ability to appeal to others, ability to internalize social supports (Hauser, 1999), self-efficacy, self-esteem (Hauser, 1999; Rutter, 1985), above average problem solving skills (Rutter, 1985), optimism (Coutu, 2002), and hardiness (Bonano, 2004).

In addition to naming protective characteristics of the person, protective environmental factors have also been of interest to researchers. One factor that has received considerable empirical support is the formation of strong, supportive relationships with others. In the literature examining the developmental outcomes of at risk children, social support has proven to be a valuable factor in buffering against unfavourable life trajectories (Rutter, 1990). Children who had strong, secure relationships with their parents had higher levels of self-esteem and self-efficacy which protected them from later environmental risks. In Masten et al.'s (1999) study, parenting resources were related to higher academic achievement, good conduct, and greater social competence among peers. In the absence of a caring parent, the company of an attentive

adult or presence of an institution that fosters positive relationships within the community (e.g., church) have demonstrated buffering effects against risks (Garmezy, 1991).

A more recent approach to resiliency research has been to examine the psychological processes that influence positive adaptation (Luthar et al., 2000; Richardson, 2002). These protective processes highlight the integral passage of time that occurs between an individual's initial reaction to an event and the positive outcome that ensues (Richardson, 2002). Research on psychological processes regards the interplay between an individual's personal characteristics and elements of the environment, and how the interplay unfolds over time as the individual's increased understanding of the situation brings about new life trajectories away from threats to his or her well-being (Rutter, 1990). How people interpret an event can vary depending on their personal characteristics and environmental factors, and the meaning they assign an event or how they understand a situation influences how they react.

The view of individuals as active participants in their environment corresponds with the resurgence of positive psychology. Individuals' cognitive and affective responses to experiences play integral roles in resilient outcomes (Rutter, 2000). For example, a person who has a tendency to remain calm in highly stressful situations may assign different meaning to an event than a person who becomes very anxious in the same situation. Therefore the meaning a person assigns to a situation and the process they undergo to understand the significance of the event may vary greatly between the two individuals. According to Rutter, effects caused by stress inducing events are in fact consequences of the meaning individuals assign the event and not the event itself. In

fact, individuals are capable of altering the meaning they assign a situation as a means of reducing caused stress (Brandstadter & Renner, 1990).

Often times, an individual's acquirement of meaning stems from a turning point. Turning points are "emotionally compelling experiences, events, and realizations" (King et al., 2003, p. 196) to which a person acquires the meaning of a situation and understanding of his or herself, and the environment. These experiences can take many forms (i.e., single event versus accumulation of events, gradual gain in understanding versus a sudden understanding, be controllable versus uncontrollable, personal inner experience versus an external event), but the key component is the increased understanding a person gains from the experience.

Following a turning point, the protective processes that ensue to promote a person's understanding and lead to new life trajectories are of interest to researchers. In King et al.'s (2003) qualitative study on the protective processes occurring within individuals with chronic disabilities, the protective processes that assisted individuals in altering their life paths were ceasing negative events, developing desirable qualities (i.e., perseverance) and developing self-confidence and self-efficacy, and a new understanding of their situation.

Brandstadter and Renner (1990) suggested that personal development in the face of a crisis involves the activation and interplay of two separate strategies: assimilation and accommodation. Assimilation involves the active adaption of behaviours and lifestyle to decrease discrepancies between actual and preferred situations. Accommodation, on the other hand, is the removal of discrepancies through the alteration of preferences to be in line with the given circumstances of the situation. Brandstadter

and Renner found when people's efforts to assimilate their actual and preferred situations failed, they would change their preferences and goals to be within the constraints of the situation.

In Richardson's (2002) metatheory of resilience, resilience is discussed as a process of personal growth that occurs through adverse situations. At the onset, disruptions in well-being can lead to feelings of loss, disillusionment, and confusion. During the resilience process, people are motivated to identify and develop resilient qualities through self-reflection which are then reintegrated by the individual. As people proceed through the situation, reintegration of their resilient qualities leads to personal growth and further development of protective qualities beneficial to them for dealing with future disruptions.

### **Issues in Resiliency Research**

Despite the general consensus that resilience involves an individual's tendency to function well despite adversity, how resilience is conceptualized, measured, and interpreted varies across studies (Glantz & Sloboda, 1999; Luthar et al., 2000). As stated by Masten et al. (1999), in order to study resilience, investigators must specify “the threat to development, the criteria by which adaptation is judged to be successful, and the features of the individual and the environment that may help to explain resilient outcomes” (p. 144).

Following Masten et al.'s (1999) recommendations, the clear presence of a risk must be indicated. If a threat to an individual's development does not exist, it is difficult to assert that they are resilient. Such a judgment is usually based on whether a condition has been statistically shown to be a predictor of a negative outcome (Masten, 2001).

However, effects of adversity can be altered depending on the vulnerability and protective factors influencing a person's response (Luthar et al., 2000; Rutter, 1990). Vulnerability factors are the mechanisms that may exacerbate a person's reaction to a traumatic event, while protective factors are those that ameliorate a person's reaction. A person's response to threatening circumstances is dependent on the interaction between the risk factor and protective and vulnerability mechanisms (Rutter, 1990). At the other end of the process, the criteria by which an outcome is judged as resilient must be defined (Masten, 2001). Of course, how one defines an adaptive outcome will depend on the context to which resilience is being applied.

How resilience is conceptualized is a major issue in resilience research. In most research, resilience is conceptualized as either a trait, state, process, or outcome (Luthar et al., 2000) and much disagreement exists on which of these is most appropriate. In the proposed research, the model that is employed conceptualizes resilience as a dynamic process and therefore the construct is more appropriately called "resiliency". This takes into account characteristics of the person and environment, and the self-regulatory processes exercised by the individual (King & Rothstein, 2010). Shortcomings of other conceptualizations of resilience are discussed in the following paragraphs.

The view of resilience as a trait depicts the construct as a relatively stable personal characteristic that endures across situations, such as the big five personality traits, creativity, and bravery (Luthans, Youssef, & Avolio, 2007). But concluding that someone overcame a traumatic event because they were resilient is not a useful conclusion and such a conclusion has numerous shortcomings (Glantz & Sloboda, 1999). First, such an explanation contributes very little to furthering our understanding of how

individuals thrive when faced with adversity and the factors that are involved. Viewing resilience as a trait suggests one's environment and other personal characteristics would have little role in overcoming adversities. A second shortcoming is the multidimensionality of resilience (Luthar et al., 2000). A person entrenched in an adverse situation may be exhibiting competence in some domains but struggling in others. Conceptualizing resilience as a single trait does not account for the factors present or absent that improve proficiency in one area but not others.

As previously discussed, the resilience construct originates in the domain of positive psychology. One of the fundamental focuses of this branch of psychology is to identify and build on individuals' strengths in order to assist them in living highly productive and satisfying lives. By conceptualizing resilience as a trait, one asserts that resilience is a relatively stable, unchangeable characteristic across situations, which is a direct contradiction to the principles from which it stems. Similarly, with one of the benefits of studying resilience being the identification of protective mechanisms that can nurture an individual facing difficult challenges, conceptualizing the construct as a trait does little for the advancement of prevention and intervention strategies (Masten et al., 1990; Rutter, 1990).

Conceptualizing resilience as a state or state-like variable suggests that, relative to a trait, it is more fluid across situations and open to development (Luthanset al., 2007). Similarly to trait-like conceptualizations, resilience as a state limits the information available regarding how people proceed through adverse circumstances. Contributing factors such as the personal qualities of the individual, the surrounding environment, and the protective mechanisms that bring about a positive outcome remain unexamined.

Although it is seen as being malleable across different situations, information regarding the factors present in those situations is not gained, limiting the utility of the research in developing preventative or remedial programs.

In one of the first initiatives to apply resilience to an organizational context, Luthans and colleagues applied a state-like conceptualization of resilience (Luthans, 2002; Luthans, Vogelgesang, & Lester, 2006; Luthans et al., 2007; Peterson, Luthans, Avolio, Walumbwa, & Zhang, 2011; Youssef & Luthans, 2007). According to their model, employee behaviour can be predicted by the synergistic interplay of the “positive state-like capacities” self-efficacy, hope, optimism and resilience, which make up the overlying construct of PsyCap. As an early stage of resilience research in an organizational context, numerous conceptual and measurement problems exist with Luthans and colleagues' model (McLarnon & Rothstein, in press).

Luthans and colleagues defined resilience as “the capacity to rebound or bounce back from adversity, conflict, failure, or even positive events, progress, and increased responsibility” (Peterson et al., 2011, p.430). As discussed by McLarnon and Rothstein (in press), this definition of resilience has numerous problems. The first issue raised is the implied unidimensional nature of the construct is not adequate to measure the contributions of the construct. As discussed with trait conceptualizations, resilient outcomes are often multidimensional with persons excelling in some areas and struggling in others. And considering the substantial amount of research identifying and examining protective factors and processes of resilience, a unidimensional construct is not adequate to measure the contributions of these constructs (McLarnon & Rothstein, in press).

A second problem with viewing resilience as a person's "capacity to rebound or bounce back from adversity" is the lack of information given about the processes (affective, behavioural, or cognitive) the individual progresses through in order to respond to the event. As well, "bouncing back" gives no indication of the timeline required for an individual to adjust and overcome adversity. Such a term indicates a reflexive reaction to outside pressures with no effortful coping processes required of the individual. Bringing to light the work of Bonano (2004) and Neenan (2009), McLarnon and Rothstein (in press) suggests resilience is not just a "passive reaction or mechanism of adapting to a stressor" (p. 15), but an active and dynamic process individuals must progress through to achieve normal functioning. A more integrative view of resilience is to conceptualize it as a process. When resilience is viewed as a process, resiliency, multiple perspectives are integrated to establish its predictive value (King & Rothstein, 2010).

### **A Process Model of Resiliency**

One model that adopts the process viewpoint of resiliency is that developed by King and Rothstein (2010). Designed to investigate resiliency to adverse experiences in the workplace (e.g., being fired), the model conceptualizes resiliency as an overlying construct, composed of protective factors and self-regulatory protective processes. In an elicited response to a highly emotional experience, the various components of the model function in a successive and repetitive process. As shown in Figure 2, the model articulates the interplay between personal resiliency-related characteristics of the individual, resources available in the environment, and protective self-regulatory processes. This interplay between protective factors and self-regulatory processes



influence one's resilient outcome. As individuals proceed through the process they assign meaning to their experiences and decrease their feelings of unrest, which eventually leads to previous or superior levels of performance.

King and Rothstein's (2010) model builds on the assumption that a person's ability to monitor and control his or her own thoughts, emotions, and behaviours contributes to a successful outcome. Therefore, personal characteristics associated with a person's normal tendency to function affectively, behaviourally, and cognitively are examined in the model. These personal characteristics involve such habits and tendencies as practicing goal-setting and one's work habits. The other component of the model theorized to contribute to a person's ability to maintain equilibrium when faced with adverse situations is the supportive relationships the individual has around them.

Also built into the model is the regulation of protective processes individuals engage in during difficult time. More specifically, the model examines the means through which a person regulates his or her emotions, thoughts, and behaviours following an adverse event. Because the model accounts for the time and effortful processing an individual must go through, if measured over multiple occasions, these behaviours may change, becoming more regulated overtime. The model also takes into account the various combinations of protective factors and processes possessed and utilized by an individual, accounting for the multidimensionality of the construct.

In the study by McLarnon and Rothstein (in press), empirical evidence provided support for King and Rothstein's (2010) model of resiliency. The purpose of the study was to develop and validate the Workplace Resilience Inventory (WRI), a measure of workplace resiliency based on the King and Rothstein's (2010) model. Findings showed

significant relationships between measures of individuals' initial reactions, personal characteristics (affective, behavioural, cognitive), opportunities, supports, and resources, and self-regulatory processes (affective, behavioural, cognitive), and outcomes. The outcome variables were composed of measures of individual well-being.

These results suggest that a person's personal characteristics and their ability to moderate their thoughts, behaviours, and emotions played an important role in that person's ability to recover from traumatizing workplace events. Adding to the support of the model was the diversity of facets that contributed to the predicted outcomes, and the empirical support of the relationships found between facets and the outcomes (McLarnon & Rothstein, in press). In addition to providing support for the King and Rothstein (2010) model, McLarnon and Rothstein's findings suggest that the WRI facets provide incremental predictive validity above that of Luthans, et al.'s (2007) PsyCap questionnaire.

### **Literature Search: Job Search and Resiliency**

Among the plethora of research pertaining to resiliency, few studies apply resiliency to job search. To this author's knowledge, no studies have directly applied resilience to the job search among immigrants. And, of the studies that have applied resilience to the job search, none have applied a process viewpoint of the construct.

In the theoretical article by Fleig-Palmer, Luthans, and Mandernach (2009), the researchers outlined an adapted version of Kanfer et al.'s (2001) job search model. Within the described theoretical model, resilience and job search skills are viewed as risk activated protective factors that influence unemployed individuals' search for reemployment. In their model, Fleig-Palmer et al. conceptualize resilience as a state-like,

unidimensional variable that integrates the influences of a job seeker's environment as well as their internal state. Being a state-like variable, resilience was depicted as a relatively fluid construct that could be developed through training (Luthans, 2002).

In Fleig-Palmer et al.'s (2009) theoretical article, resilience was hypothesized to influence the job search process in that job seekers high in resilience could engage in more job search behaviours thereby improving their job search outcomes (e.g. increase the number of interviews and offers) and likelihood of reemployment. Job search skills and the interaction of resilience and job search skills were also hypothesized to influence the job search process and outcomes. Job search skills included skills in networking, developing a resume, interviewing, and completing application forms. Persons who have more effective job search skills were expected to perform better during the job search process, therefore receiving more job offers. As for the interaction between resilience and job search skills, Fleig-Palmer et al. hypothesized that the interaction would predict behaviours and outcomes better than either resilience or job search skills alone.

However, despite their efforts to create a job search model that applies individual differences in resilience in relation to job search outcomes, Fleig-Palmer et al.'s (2009) model has some limitations. Referring to Masten's (2001) guidelines for resilience research, certain requirements, as discussed by the authors, should be met. These requirements include the specification of the risk individuals face, factors that protect the individual from threats, the protective processes individuals progress through, and the desired positive outcome. Of these requirements, Fleig-Palmer et al.'s model accomplishes the specification of the risk and the outcome. What the model does not account for is how an individual progresses from the absence of employment to a desired

employment outcome. From the model, no knowledge is gained in regards to the protective factors and mechanisms that promote job search behaviours, outcomes, and reemployment. When resilience is conceptualized as a state-like or trait-like variable, the dynamic and effortful adaptation processes that occur in response to difficult situations, are not considered (McLarnon & Rothstein, in press).

Further, some skeptics of resilience research express doubt over the use of resilience as a construct, stating concerns that resilience has more value when used to explain a phenomenon rather than predict an outcome (Glantz & Sloboda, 1999). The attribution of positive job search outcomes to an individual's personal resiliency characteristics provides more of an explanation of why they succeeded in the job search. However, a more integrative view of resilience is to conceptualize it as a process. When resiliency is viewed as a process, multiple perspectives are integrated to establish resiliency's predictive value rather than explanatory capacities (King & Rothstein, 2010).

Moorhouse and Caltabiano (2007) examined resilience in the context of unemployment. Specifically, they were interested in the influence of a person's resilient qualities and the length of time a person had been seeking employment on depression and assertiveness in the job search. In the study, resilient qualities were viewed as protective agents against the risks associated with job search, particularly depression. The Resilience scale (Wagnild & Young, 1993), made up of 25-items assessing resilient qualities was used. Increased time in the job search was positively related to depression for persons low in resilient qualities, but for those high in resilience, length of time did not increase the risk for depression. As well, the people who scored higher on the measure of resilience were more assertive in their job search.

Referring back to Rutter's (1985) definition of protective factors as influences “that modify, ameliorate, or alter a person's response to some environmental hazard that predisposes to a maladaptive outcome” (p. 600), Moorhouse and Caltabiano (2007) viewed resilience as a protective factor that alleviates the risk of depression for persons searching for employment. Again, the use of resilience as a personal trait inadequately captures the complexity of the construct. To understand the degree of risk to individuals, information must be known about the influential factors that support positive outcomes, indicating both personal characteristics and environmental resources (Glantz & Sloboda, 1999). Glantz and Sloboda suggest the investigation of resilience should involve the interaction of positive and negative factors, adaptive behaviours, and protective mechanisms. Moorhouse and Caltabiano's study fails to further the reader's understanding of the factors and mechanisms that promote positive employment outcomes.

In an investigation of the relationship between social support and job search behaviour, Slebarska, Moser, & Gunnesch-Luca (2009) examined the underlying processes that influenced the relationship. Among these processes was resilience. The researchers used the measurement scale developed by Schumacher, Leppert, Gunzelmann, Strauß & Brähler, 2004, as cited by Slebarska, Moser, & Gunnesch-Luca, 2009) to assess participants' resilience. The researchers found resilience to be a partial mediator of the relationship. However, more relevant to the current discussion is the view of resilience used in the study. Again resilience was shown as a personal trait of the individual and the issues with this viewpoint have already been discussed. One

contribution the study makes is the identification of social support as a protective factor in the promotion of job search behaviour.

Despite the utility of resilience as an organizing construct, a review of the research reinforces the standpoint that it is not a unidimensional construct that lends itself to a succinct and determinate summary (Rutter, 1990; 2000). Further, resiliency is not a characteristic or trait of an individual that facilitates the overcoming of difficult events. Rather, consideration of the function personal and environmental mechanisms play in response to difficult events provides a more complete account of how individuals overcome barriers (Rutter, 1990). A person's response to an adverse event reflects the dynamic interaction of vulnerability and protective mechanism operating over time (Rutter, 2000). Such interactions provide a catalytic effect which may elicit further risk or protective mechanisms.

### **The Current Study**

The current study seeks to further the progress of resiliency research in the context of immigrant job search. Upon arrival in Canada, immigrants face numerous barriers to employment making them vulnerable in regards to threats to their personal well-being and future career success. Repeated exposure to barriers during the job search can lead to experiences of anxiety and mental upset which can be detrimental to future job search efforts (Vinokur & Schul, 2002). Individual differences in job search outcomes lead one to suspect that diversity in how individuals understand and respond to difficult experiences may contribute to the variation in outcomes. Factors such as the personal characteristics of the individual and the presence of a support network can influence individual responses to adversity. Under the umbrella construct of resiliency,

this study seeks to examine the personal and environmental factors and psychological processes that buffer against threats specific to skilled immigrant job search.

In this study, a multidimensional process viewpoint of resiliency was adopted to account for the interplaying risk and protective mechanisms immigrants encounter when searching for employment. An adapted version of Guerrero and Rothstein's (2011) model of the skilled immigrant job search was integrated with an adapted model of resiliency developed by King and Rothstein (2010). Due to the dynamic and unfolding nature of both resiliency (e.g. King & Rothstein, 2010; Rutter 1990; 2000) and job search (Kanfer et al., 2001; Wanberg, Glomb, Song, & Sorenson, 2005), integrating the two models resulted in a complementary model accounting for individual differences in immigrant job search. An illustration of the integrated model used for the current study is shown in Figure 3. In this section, the relationships between factors in the resiliency process with those factors involved in job search process are discussed.

As shown in Figure 3, integrating King and Rothstein's (2010) model of resiliency with the immigrant job search model (Guerrero & Rothstein, 2011) incorporates the eight domains from the resiliency model for which McLarnon and Rothstein (in press) found empirical support. The domains involve an individual's response to the struggles associated with the job search process, the behavioural, affective, and cognitive characteristics of the individual, opportunities, resources, and supports, and the behavioural, affective and cognitive self-regulatory processes the individual employs. The eight facets of resiliency interact to influence the job search variables. In the proposed study, the facets of resiliency will be examined to identify their possible influences on individual variation in skilled immigrants' job search self-efficacy, job

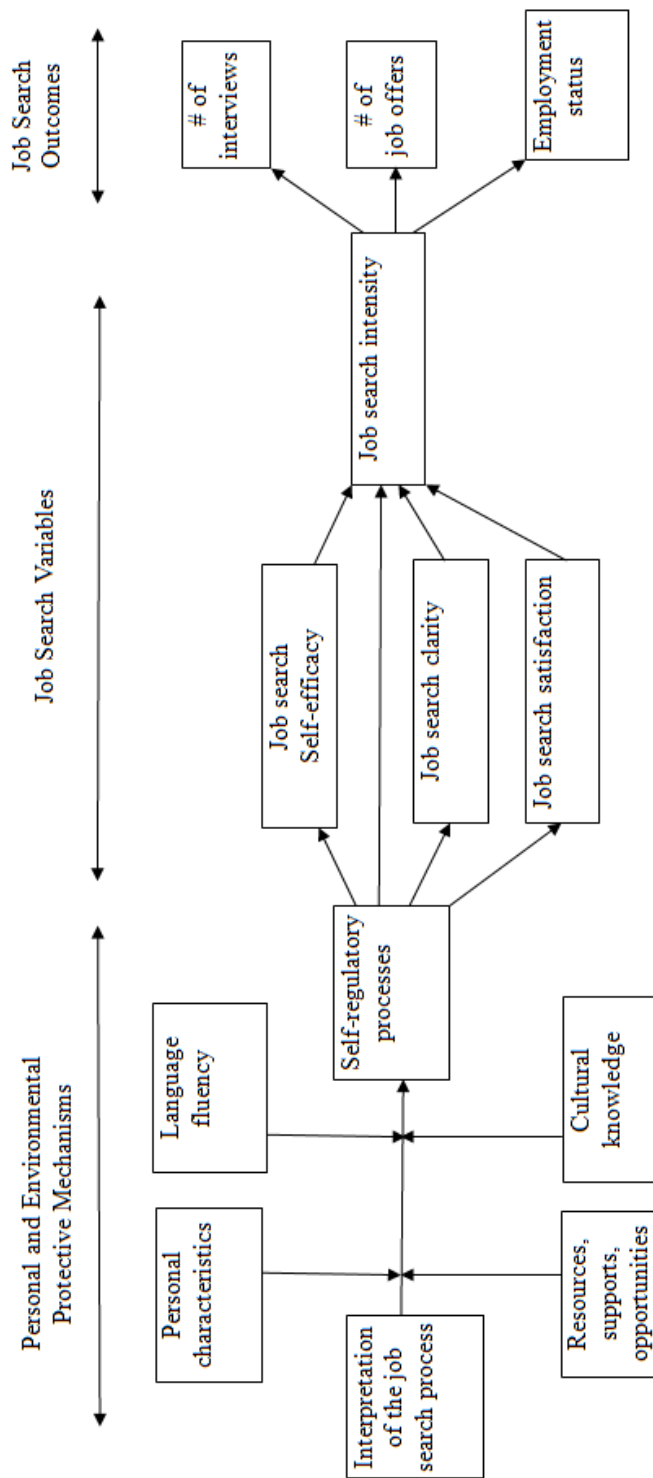


Figure 3. The theoretical model integrating King and Rothstein's (2010) process model of resiliency and Guerrero and Rothstein's (2011) immigrant job search model.



search clarity, job search satisfaction, and job search intensity. In turn, the influence of the job search variables on job search outcomes will be investigated.

### **Interpretation of the Job Search Experience**

Because the study occurred in the context of immigrant job search where the individual experiences an accumulation of difficult events compared to an organizational setting, as undertaken by McLarnon and Rothstein (in press), in which the adverse event was viewed as more acute, the initial response domain of the model was modified. Rather than investigating the skilled immigrants' initial reactions, the buildup of events over time was considered by measuring individuals' interpretations of the job search experience.

As shown in Figure 3, the *interpretation of the job search process* refers to how individuals understand and react to the barriers and difficulties met during their search for employment. Included in this domain are individuals' understandings of the mental upset that occurred as a result of their job search experience. As discussed by Rutter (2000), an individual's interpretation of a threatening experience is more indicative of the individual's cognitive and affective processing of the experience than of the experience itself. How an individual interprets an event may be indicative of a resilient outcome. In addition, highly emotional reactions to a situation are indicative of a greater amount of anxiety and mental upset. Highly affective responses and negative interpretations of events require the utilization of greater self-regulatory processes to restore a person's well-being.

### **Self-regulatory Processes**

Individuals' engagement in the regulation of their thoughts, emotions, and behaviours is an integral component of the resiliency process (King & Rothstein, 2010). Self-regulation allows individuals to restrain negative thoughts and emotions, as well as behaviours that may be maladaptive to a successful outcome. The measures of self-regulatory processes developed by McLarnon and Rothstein (in press) were utilized in the current study. *Affective self-regulatory processes* refer to the mechanisms individuals use to regulate negative emotions. These processes are related to a person's awareness and regulation of emotions, as well as emotion-based decision making. *Behavioural self-regulatory processes* refer to the mechanisms associated with regulating negative and ineffective behaviours. The processes included in the domain are associated with planfulness, self-discipline, and impulse control. *Cognitive self-regulatory processes* refer to the mechanisms associated with understanding and regulating negative, self-defeating thoughts. The processes included in the domain include the control of intrusive negative thoughts, self-reflection, cognitive flexibility, resourcefulness, and the tendency to view experiences positively.

*Hypothesis 1.* Individuals' interpretation of the job search experience will be positively correlated with their (a) affective (b) behavioural and (c) cognitive self-regulatory processes. More specifically, individuals who experience a greater amount of disequilibrium in response to the barriers encountered during their job search will engage in more self-regulatory processes to control their thoughts, emotions, and behaviours.

### **Personal and Environmental Protective Factors**

Both personal and environmental protective factors were considered for their role in psychological and job search outcomes. Obtained from King and Rothstein's (2010) resiliency model, the personal protective factors are affective, behavioural, and cognitive characteristics of the individual, while opportunities, supports and resources were incorporated as environmental protective factors. *Affective personal characteristics* are the traits of an individual that promote a sense of emotional well-being (McLarnon & Rothstein, in press). Included are an individual's awareness of his or her own emotional state and the person's ability to maintain a steady emotional state. *Behavioural personal characteristics* are the traits of an individual that provide a sense of personal control over his or her behaviours. The characteristics included are self-efficacy, self-discipline, competence, and persistence to attain challenging goals. *Cognitive personal characteristics* refer to the traits of an individual that provide a sense of coherence and meaning. Characteristics included are an individual's tendency to be open-minded and attentive, actively ascribe meaning to situations, and seek out new learning experiences. These personal characteristics play a role in how an individual responds and interprets an adverse situation and the protective processes utilized (i.e., Bonanno, 2004; Coutu, 2002; Garmezy, 1991; Hauser, 1999; Rutter, 1985).

*Hypothesis 2a.* Individuals' personal characteristics will moderate the relationship between individuals' interpretations of the job search experience and self-regulatory processes. For persons possessing personal characteristics related to one's ability to control his or her thoughts, behaviours, and emotions, the relationship between individuals' interpretation of the job search experience and self-regulatory processes will be stronger.

The social supports and resources available to individuals in the environment also influence their responses to adverse situations. *Opportunities, supports, and resources* refer to the close, trusting relationships a person has with family members, significant others, or members of the community (McLarnon & Rothstein, in press). In McLarnon and Rothstein's study, a significant positive relationship was shown between opportunities, supports and resources and cognitive and affective self-regulatory processes, as well as with individuals' initial reactions to the adverse circumstances. His results suggest persons with strong, supportive social networks are better able to control their negative emotions and self-defeating thoughts. In the literature on the resilience of children at risk for poor development, the presence of warm family relationships, or a supportive and caring adult, were found to buffer against risk in stressful life situations (e.g., Garmezy, 1991; Masten, et al., 1999).

*Hypothesis 2b.* The opportunities, supports and resources available to individuals are expected to moderate the relationship between individuals' interpretations of the job search experience and self-regulatory processes. For persons with more opportunities, supports, and resources available to them in the environment, the relationship between individuals' interpretation of the job search experience and self-regulatory processes will be stronger.

### **Language Fluency**

From Guerrero and Rothstein's (2011) immigrant job search model, language fluency and cultural knowledge were included as personal protective mechanisms. Language fluency and cultural knowledge are characteristics specific to skilled immigrants shown to be influential in job search outcomes (Guerrero & Rothstein, 2011).

*Language fluency* refers to a person's ability to communicate both verbally and in writing in the official language of the country. In regards to resiliency, Coutu (2002) states that individuals who are better able to form attachments to others increase their likelihood of a positive outcome. Greater language fluency may improve persons' interactions with others, thereby assisting them in forging relationships with others in the community, thereby increasing access to resources. Language fluency has also been found to be an important contributor to employment outcomes in the job search of skilled immigrants. Guerrero and Rothstein found immigrants who had a greater ability to express and understand language were better able to acquire information regarding their job search and the types of opportunities available.

*Hypothesis 2c.* Language fluency will moderate the relationship between individuals' interpretations of the job search experience and self-regulatory processes. For persons who have greater language fluency, the relationship between individuals' interpretation of the job search experience and self-regulatory processes will be stronger.

### **Cultural Knowledge**

An additional factor that may protect against the stressors of the immigrant job search process is cultural knowledge. *Cultural knowledge* refers to a person's knowledge regarding the differences that exist between cultures and the processes through which cultural differences influence behavioural differences (Thomas, 2006). Cultural knowledge may act as a protective factor against job search stressors for two reasons. First, cultural knowledge may improve a person's understanding of his or her own, as well as others' behaviour (Thomas et al., 2008). Improved understanding can lead to

increased competence and effectiveness during social interactions, and improved accuracy of the attributions they assign to others. Consequently, a strong knowledge of the culture one lives in can assist in acquiring knowledge about the job market and job search, as well as increase self-confidence during social interactions essential to the job search (Guerrero & Rothstein, 2011). As Guerrero and Rothstein have shown, cultural knowledge is an asset for immigrants seeking employment.

The second reason that cultural knowledge might act as a protective factor during the immigrant job search is its association with improved adjustment in individuals residing in foreign cultural environments (Morris & Robie, 2001). The meta-analysis by Morris and Robie examining the effects of cross-cultural training on expatriate adjustment showed a significant positive relationship between expatriate cultural knowledge and adjustment. Improved adjustment due to cultural knowledge may act as a protective factor against stressors associated with the job search, as persons with lower amounts of stress are better able to regulate their thoughts, feelings, and behaviours.

*Hypothesis 2d.* An individual's cultural knowledge will moderate the relationship between an individual's interpretation of the job search experience and self-regulatory processes. For persons with greater cultural knowledge, the relationship between individuals' interpretation of the job search experience and self-regulatory processes will be stronger.

### **Job Search Variables**

Self-regulatory processes are integral to the conception of job search behaviour (Kanfer et al., 2001). As stated by Kanfer et al., job search behaviours “as part of a self-regulatory process directed toward obtaining an employment goal indicates that job

search refers to a pattern of thinking, affect and behaviour” (p. 838). Comparatively, self-regulatory processes are an integral component of the resiliency process. A person's ability to regulate their emotions, thoughts and behaviours will affect that individual's adaptation to stressful life circumstances (McLarnon & Rothstein, in press). In McLarnon and Rothstein's study, self-regulatory processes predicted theoretically related behavioural (intention to withdraw), affective (life satisfaction) and cognitive (depression) outcomes. The degree to which an individual can regulate his or her thoughts, behaviours and emotions will affect the job search process carried out.

### **Job Search Clarity**

In the context of the job search, cognitive, behavioural, and affective job search variables shown to significantly predict job search outcomes will be measured. As a measure of job seekers' thoughts regarding the job search, job search clarity and job search self-efficacy will be examined. *Job search clarity* refers to a person's certainty of the type of job he or she is looking for and the individual's knowledge of how they will go about obtaining that type of job (Côté, Saks, & Zikic, 2006). Job search clarity has shown to act as a motivating factor in job search, increasing the energy and tenacity of job search behaviours (Guerrero & Rothstein, 2011). It is expected that people who are better able to regulate self-defeating thoughts and negative affect will focus more on relevant job search information, such as information pertaining to the type of job sought, as well as information on how to obtain that type of job.

### **Job Search Self-efficacy**

On the other hand, *job search self-efficacy* refers to a person's confidence in his or her ability to perform job search activities (Saks & Ashforth, 1999). Theories pertaining

to job search self-efficacy assert that people are more likely to perform a behaviour when they view it as attainable. Therefore, it is expected that people who are able to regulate ineffectual thoughts are able to maintain confidence in their ability to perform job search tasks.

### **Job Search Satisfaction**

Measures of a person's affect toward the job search will be measured by job search satisfaction. *Job search satisfaction* refers to a job seeker's contentment with the job search process he or she performed. It is hypothesized that individuals who are better able to engage in positive thoughts, emotions, and behaviours are more satisfied with the job search they conduct.

### **Job Search Intensity**

Job search intensity will be the measure used to examine the behaviours job seekers engage in. *Job search intensity* refers to the frequency and scope of behaviours relevant to the job search (Guerrero & Rothstein, 2011). Job search behaviours include activities such as filling out applications, and perusing job advertisements. Behavioural self-regulatory processes refer to behaviours that bring about a sense of control over a situation (King & Rothstein, 2010). Saks (2006) found that the more frequently an individual performed job search behaviours, the more interviews and job offers that person received. More job interviews lead to an increase in job offers, thereby improving the likelihood of obtaining employment in one's desired occupation. Therefore, persons who are better able to regulate their thoughts, emotions, and behaviours are more likely to perform behaviours that will bring about desired employment outcomes.



*Hypothesis 3.* Affective, behavioural, and cognitive self-regulatory processes will each be positively related to job search variables: (a) job search satisfaction, (b) job search intensity, (c) job search clarity, and (d) job search self-efficacy.

### **Job Search Outcomes**

The main purpose of the proposed research is to determine how resiliency in immigrant job seekers is related to employment outcomes. The employment outcomes included in the study are the number of interviews an individual receives, the number of offers an individual receives, and a person's employment status (Guerrero & Rothstein, 2011). In the study by Guerrero and Rothstein, job search clarity was related to job search intensity, which predicted the number of interviews, offers and the employment status of the individual. As mentioned, Cote et al. (2006) found job search self-efficacy to be related to job search intensity, again predicting job search outcomes. Job search satisfaction has yet to be measured in the job search literature; however, it is expected that satisfaction would be related to positive outcomes of the job search process. Persons who are satisfied with the job search process and the job search they are undertaking are more likely to continue those job search behaviours than persons who are dissatisfied with the process.

*Hypothesis 4.* (a) Job search clarity, (b) job search satisfaction and (c) job search self-efficacy will be positively related to job search intensity.

*Hypothesis 5.* Job search intensity will be positively related to the (a) number of interviews an individual receives, (b) the number of job offers an individual receives, and (c) an individual's employment status.

### **Method**

## **Participants and Procedure**

Participants for the study were individuals who immigrated to Canada under the Immigration Canada classification of skilled or professional immigrant. To meet the criteria set by Immigration Canada in 2011, a person must have received a sufficient mark on the official language proficiency test, have a valid offer of employment or pre-arranged employment, or obtained paid work experience for a continuous year or the equivalent in part time work in an eligible occupation.

Participants were recruited through not for profit immigrant service provider organizations (SPOs) in Ontario, Manitoba, Alberta, and British Columbia. Through the assistance of a contact, the SPOs were contacted for their agreement to assist in the study. The SPOs then emailed members who were immigrants searching for employment. Emails contained information on the purpose of the study, the voluntary nature of participating, participant confidentiality, instructions for participating in the online survey, and a hyperlink to the survey. Participants were also informed that responding to items in the online survey implicitly provided consent. An incentive consisting of a \$20 Tim Hortons gift card was offered for participation. Due to confidentiality and the emphasis on trust between SPOs and clients, participants' contact information was not obtained prior to consent and follow up emails were not sent. As well, the response rate was not obtained as the number of potential participants initially contacted via email was unknown.

The survey was set up in a predetermined order for two reasons. The first reason was due to the priming exercise that preceded resiliency items. During the priming exercise, participants were asked to recall the job search they performed. They were

asked to focus on the barriers they faced during their search for employment and the associated feelings as they proceeded through the difficult experiences. Participants were then asked to provide a brief written description of their job search experiences. The priming exercise's focus on the negative experiences of the job was necessary in order to assess participants' resiliency responses.

Priming exercises have shown to be effective in stimulating the activation of memories and therefore are useful for collecting data based on specific past experiences of interest (Laney, Heuer, & Reisberg, 2003). A similar priming exercise was used in McLarnon and Rothstein's (in press) resiliency study and showed successful in helping participants develop the frame of mind required to respond based on certain memorable events. Immediately following the priming activity, respondents completed items examining their resiliency responses to the experiences and the personal and environmental factors that influenced those responses.

Because respondents are at different stages of their job search, having them refer back to the experiences that occurred and how they responded, can account for their different responses at different stages of their job search. Following the resiliency items were questions examining the job search including their thoughts, feelings, and behaviours during the process. These items did not require priming.

The second reason for the order of the items was to increase the likelihood participants would fully complete the survey. The last portion of the survey pertained to the demographic information of the respondents which tends to be more intrusive in its inquisition into personal information. Some respondents may be put off by this and

discontinue the survey. Therefore, items concerning more personal information such as employment, financial need, and demographics were placed at the end of the survey.

A total of 121 surveys were completed online. Of these surveys, 21 were removed because large portions of the surveys were left blank. Of the remaining surveys, four participants were excluded who were not looking for employment and two participants were excluded who had been living in Canada for more than 10 years. Respondents who did not immigrate under the classification of skilled or professional immigrant were included in the study but variable means of those respondents were compared with means of participants falling under other classes of immigrants to ensure they did not differ significantly. In total, 54 participants were classified as skilled or professional immigrants, 39 were classified as other, and one respondent did not provide his or her immigrant classification. The two groups differed significantly only on job search intensity which will be discussed later. In total, 94 surveys were included in the analyses.

Of the total participants, 39.4% were employed but all participants included were looking for employment suggesting they were dissatisfied with their current employment situations. Of the 54 skilled participants, 37% were employed and 41% of the participants falling under other immigrant classifications were employed. Men accounted for 65 (70.7%) of the respondents and women made up 27 (29.3%) of the survey participants. Of the 94 participants, 39 (41.9%) had obtained a university degree, 12 (12.9%) had some graduate school, and 25 (26.9%) had obtained a Master's degree, Doctorate of Philosophy (PhD), Medical Degree (MD), or Judicial Degree (JD). Further

Table 1

*Sample characteristics by immigration classification*

	Skilled		Other		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Currently employed	20	37	16	41.00	37	39.4
Age (years)						
20-24	1	1.9	3	7.9	4	4.3
25-29	4	7.4	14	36.8	18	19.4
30-34	8	14.8	11	28.9	20	21.5
35-39	14	25.9	2	5.3	16	17.2
40-44	11	20.4	2	5.3	13	14.0
45-49	9	16.7	4	10.5	13	14.0
50-54	5	9.3	1	2.6	6	6.5
55-59	2	3.7	1	2.6	3	3.2
Gender						
Male	36	67.9	28	73.7	65	70.7
Female	17	32.1	10	26.3	27	29.3
Skills by Job Sought						
People skills	27	50.0	27	69.2	54	57.4
Technical skills	27	50.0	12	30.8	40	42.6
Highest Education Level						
< high school	0	0.0	1	2.6	1	1.1
High school	0	0.0	6	15.4	6	6.5
College degree	1	1.9	2	5.1	3	3.2
Some university	2	3.7	2	5.1	4	4.3
University degree	20	37.0	19	48.7	39	41.9
Some graduate school	10	18.5	2	5.1	12	12.9
Masters, PhD, MD, JD	19	35.2	6	15.4	25	26.9
Other	2	3.7	1	2.6	3	3.2
Country of Education						
Canada	4	7.5	4	10.8	8	8.9
Central/South America	5	9.4	5	13.5	10	11.1
Europe	4	7.5	3	8.1	7	7.8
Commonwealth of Independent Republics	4	7.5	3	8.1	7	7.8
Asia	28	52.8	12	32.4	40	44.4
Africa	4	7.5	8	21.6	12	13.3
Southern continents	1	1.9			1	1.1
United States	3	5.7	2	5.4	5	5.6

Table 1 Continued

	Skilled		Other		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
<b>Immigration Class</b>						
Skilled worker	-	-	-	-	54	58.1
Business class	-	-	1	2.6	1	1.1
Family class	-	-	24	61.5	24	25.8
Live-in caregiver	-	-	1	2.6	1	1.1
Refugee or refugee claimant	-	-	3	7.7	3	3.2
Temporary worker	-	-	1	2.6	1	1.1
Temporary student	-	-	2	5.1	2	2.2
Other	-	-	7	17.9	7	7.5
<b>Country of Birth</b>						
Central/South America	8	15.4	7	17.9	15	16.5
Europe	1	1.9	3	7.7	4	4.4
Commonwealth of Independent Republics	3	5.8	4	10.3	7	7.7
Asia	33	63.5	15	38.5	48	52.7
Africa	6	11.5	9	23.1	15	16.5
Southern continents	0	0.0	0	0	0	0
United States	1	1.9	0	0	2	2.2
<b>Time in Canada</b>						
<= 1 month			2	5.6	2	2.6
> 1 to 3 months	1	2.4	2	5.6	3	3.8
> 3 to 6 months	2	4.8	2	5.6	4	5.1
> 6 to 9 months	4	9.5	3	8.3	7	9.0
> 9 months to 1 year	14	33.3	4	11.1	18	23.1
> 1 to 2 years	8	19.0	7	19.4	15	19.2
> 2 to 3 years	7	16.7	9	25.0	16	20.5
> 3 to 5 years	4	9.5	2	5.6	6	7.7
> 5 to 10 years	2	4.8	5	13.9	7	9.0
<b>Marital Status</b>						
Never married	5	9.6	11	28.2	16	17.4
Married	39	75.0	26	66.7	65	70.7
Divorced	3	5.8	1	2.6	4	4.3
Separated	2	3.8	1	2.6	3	3.3
Prefer not to answer	3	5.8	0	0.0	4	4.3

Table 1 Continued

	Skilled		Other		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Number of Dependents						
0	12	22.2	22	56.4	34	39.5
2	13	24.1	2	5.1	15	17.4
3	5	9.3	0	0.0	5	5.8
4	4	7.4	0	0.0	4	4.7
5	0	0.0	1	2.6	1	1.2
6	1	1.9	0	0.0	1	1.2
Occupational Class						
Management	9	17.3	5	12.8	15	16.3
Business, finance, administration	21	40.4	15	38.5	36	39.1
Natural and applied sciences	8	15.4	2	5.1	10	10.9
Health occupations	2	3.8	4	10.3	6	6.5
Sales and services	3	5.8	8	20.5	11	12.0
Trades, transport, and equipment operators	1	1.9	1	2.6	2	2.2
Natural resources, agriculture	4	7.7	1	2.6	5	5.4
Manufacturing and utilities	1	1.9	0	0.0	1	1.1
Art, culture, recreation, and sport	3	5.8	3	7.7	6	6.5

descriptive participant information is listed in Table 1, categorized into skilled, other immigrant classifications, and total participants.

## **Materials**

### **Outcome Variables**

**Job status.** To measure the current job status of participants Bolino and Feldman's (2000) scale was adapted for use with skilled immigrants (Guerrero & Rothstein, 2011). The scale consists of items examining job status, and for employed individuals, the adequacy of employment in terms of the utilization of skills and abilities. An example item from the measure for participants who are currently employed is “I am overeducated for this job” with answers ranging from 1 (strongly agree) to 7 (strongly disagree).

**Number of interviews and number of job offers.** The number of job interviews and job offers a person receives and the number of interviews and job offers in their preferred occupation is obtained as the total number of each reported by the participant. For example, in regards to the number of interviews an individual has had the question would state “How many interviews have you had in Canada?” and “How many of those interviews were for jobs in your preferred occupation?”

### **Job Search Behaviours, Emotions, and Cognitions**

**Job search clarity.** Participants' job search clarity was measured using a modified 5-item scale developed by Côté et al.'s (2006). A Cronbach's alpha of .84 has been reported for the scale (Côté et al., 2006). The original scale was developed for university students which was modified by Guerrero and Rothstein (2011) to be applied to skilled immigrants. An example item from the scale is “I had clear knowledge of



when I would search for a job.” Participants responded on a scale ranging from 1 (strongly disagree) to 7 (strongly agree).

**Job search self-efficacy.** To measure participants' confidence in performing job search activities, Saks and Ashforth's (1999) 10-item measure of job search self-efficacy was employed. The Cronbach's alpha reported for the scale was .87 in Saks and Ashforth's study. The scale asked participants how confident they are in successfully completing specified job search activities such as “Prepare a persuasive statement of why you should be considered for a job that will attract the interest of employers”. To which the participant responds on a 1 (not at all confident) to 10 (totally confident) scale.

**Job search satisfaction.** Participants' satisfaction with the job search they performed was measured using an adapted version of Diener, Emmons, Larsen, & Griffin's (1985) Satisfaction with Life scale. The original scale by Diener et al. had a Cronbach's alpha of .87. An example item from the measure is “If I could start my job search over, I would change almost nothing” to which participants answer on a scale ranging from 1 (strongly disagree) to 7 (strongly agree).

**Job search intensity.** Job search intensity was measured using the Vuori and Vesalainen's (1999) scale. In Vuori and Vesalainen's study, job search activity was measured at two separate times for which Cronbach's alpha is available. At time 1 Cronbach's alpha was equal to .70 and at time 2 Cronbach's alpha was .75. An example item from the measure asks participant how often they “filled out or submitted a job application”. Responses ranged from 1 (never) to 6 (every day).

### **Knowledge Antecedents**

**Language fluency.** The protective factor of language fluency was measured using the Language Experience and Proficiency Questionnaire (Leap-Q) developed by Marian, Blumenfeld and Kaushanskaya (2007). The measure is based on self-report ratings of one's ability to speak, read, and write in English. Responses range from 0 (no ability) to 10 (perfect ability).

**Cultural knowledge.** An adapted version of the cultural knowledge measure dimension of Thomas et al.'s (2008) cultural intelligence scale was used to measure cultural knowledge. The version modified by Guerrero and Rothstein (2011) asks participants about their knowledge of Canadian culture rather than knowledge of culture in general. The Cronbach's alpha was .91 (Thomas et al., 2008).

### **The Resiliency Process**

**Resiliency.** The resiliency process of immigrants was measured using McLarnon and Rothstein's (in press) Workplace Resilience Inventory. The scale measures the eight components of the resiliency process (initial response, personal characteristics-affective, personal characteristics-behavioural, personal characteristics-cognitive, opportunities, supports and resources, self-regulatory processes-affective, self-regulatory processes-behavioural, self-regulatory processes-cognitive). All items on the scale range from 1 (strongly disagree) to 5 (strongly agree).

The initial response items (McLarnon & Rothstein, in press) was adapted from the original version which referred to adverse events in the workplace (e.g., getting fired) to correspond with the immigrant job search process. Therefore the initial response domain of the questionnaire was altered to reflect immigrants' interpretation of the job search process. For example, the item "Following the event I was unusually depressed" was

changed to “While searching for employment I was unusually depressed” to measure participants’ responses to the job search process. The cronbach's alpha of the original scale was .85.

The original personal characteristics-affective, personal characteristics-behaviour, and personal characteristics-cognitive items were used. Examples of each domain are “I am not easily bothered”, “I push myself very hard to succeed”, and “I enjoy reading challenging material”, respectively. The cronbach's alphas were .87, .83, and .84 (respectively). Items examining the opportunities, supports, and resources remained in their original form as well. An example item being “I know there is someone I can depend on when I am troubled”.

The domains examining self-regulatory processes were also adapted to be consistent with the context of immigrant job search. For example, items pertaining to affective self-regulatory processes were altered from their original format of “Since the significant experience/event I have planned my life logically and rationally” to “Since beginning my search for employment I have planned my life logically and rationally”. Example items of behavioural self-regulatory processes and cognitive self-regulatory processes are, respectively, “Since beginning my search for employment I have rarely overindulged”, and “Since beginning my search for employment I have found it easy to control my thoughts”. The cronbach's alphas of the self-regulatory processes scales were .76, .82, and .86 (respectively).

### **Control Variables**

Perceived financial need was measured using three items from Vinokur and Caplan's (1987) economic hardship scale. Perceived financial need was measured and

controlled for as it has shown to have a positive relationship with job search intensity (Kanfer et al., 2001). The length of time participants have been in Canada was measured and controlled for as well (Guerrero & Rothstein, 2011). The occupational class in which participants were seeking work was also examined for differences in means among the variables; however, no differences were found so the occupational class was not included as a control variable.

### **Demographics**

A questionnaire composed of items pertaining to participants' age, education, amount of time they have been in Canada, job search duration, gender, and ethnicity were administered (Guerrero & Rothstein, 2011).

### **Pilot Study**

One concern regarding the administration of the Workplace Resilience Inventory (McLarnon & Rothstein, in press) was the level of language used in the questionnaire and whether it was suitable for administering to immigrant participants in which English was not their first language. To investigate the issue, a pilot test was conducted with undergraduates as participants. The inclusion requirements for participation were English was not their first language and they had to be a landed immigrant, permanent resident of Canada, or an international student on a Canadian student visa. Six students enrolled in the study.

Prior to the commencement of the study the participants were informed that participation in the study was completely voluntary, they were free to withdraw at any time throughout the study with no penalty, the confidentiality of the information they provided, and that participation would cause no harm to them. Sessions were run both

individually and in groups of two or three. Prior to starting, it was explained to participants that the purpose of the study was to examine the readability of the questionnaires and they were encouraged to ask questions and highlight any words or phrases they found, or thought others, might find difficult. Only one concern was noted in the study which is included in Table 2 with the parenthetical clarification statement. To further ensure readability of the questionnaire, experts in the service provider organizations were contacted for their input on any items they thought participants might have problems understanding. Again, these items are listed in Table 2 with clarifying statements in parentheses.

The pilot study fulfilled a second function which was to measure the length of time required to complete the study. Survey length was raised as a concern because of the online format, an excessively long survey might reduce the likelihood of participants completing the survey carefully and entirely. The amount of time required by participants to complete the survey which consisted of the WRI and job search satisfaction questionnaire ranged between 10 and 15 minute. To further assess the length of time required to complete the entire survey, a paper copy of the survey was administered to graduate students who measured the time they required to complete it. The amount of time to complete the full survey ranged from 15 to 30 minutes.

### **Method of Analysis**

The main purpose of the study was to examine whether a relationship exists between the resiliency process and job search outcomes. The relationships between protective mechanisms and job search outcomes were examined using correlation analyses. Moderation of the relationship between respondents' interpretations of the job

Table 2

*Clarification statements added to the Workplace Resilience Inventory (McLarnon & Rothstein, in press)*

Item	Item with clarification statements in parentheses
9	I get easily caught up with (involved in) my emotions
10	I push (challenge) myself very hard to succeed
11	I am exacting (attentive to details) in my work
32	While searching for employment I felt as if my world was falling apart (becoming unmanageable)
43	Since beginning my job search I have rarely overindulged (acted excessively)
45	Since beginning my job search I have often liked to act on a whim (act on impulse)
48	Since beginning my job search I have been able to refrain from doing things that may be bad for me in the long run (over a long period of time), even if they might make me feel good in the short term
55	Since beginning my job search I have a dark (negative) outlook on life

search process and their affective, behavioural, and cognitive self-regulatory processes by the hypothesized moderating variables of affective, behavioural, and cognitive personal characteristics, language fluency, cultural knowledge, and the opportunities, supports, and resources present in the environment were performed. In total, 18 different moderation analyses were be conducted.

As well, regression analyses were conducted to examine how resiliency processes contribute to job search behaviours, cognitions, and satisfaction. Further regression analyses were conducted to predict job search outcomes, such as the number of interviews and job offers participants received, from the job search variables.

## **Results**

### **Psychometric Properties of Scales**

Reliabilities for most of the predictor variables were acceptable, according to guidelines discussed by Murphy and Davidshofer (2001), with internal consistencies lower than .70 being considered low. The scales used in the study had internal consistencies ranging from .71 to .94, except for the job search clarity scale which had an internal consistency of .66. Reliability assessments were not conducted on items inquiring about the number of job interviews and offers participants received, employment status, or the length of time the person had lived in Canada since these were all single item measures.

In regards to the intercorrelations among the WRI scales (as shown in Table 3), patterns of significant correlations among variables measuring the resiliency process of job seekers were consistent with those found by McLarnon and Rothstein (in press). For example, in the current study and the study by McLarnon and Rothstein, affective

personal characteristics were significantly correlated with nearly every scale on the WRI. Additionally, in the current study, cognitive self-regulatory processes are also correlated with each of the scale facets, while in McLarnon and Rothstein's study, cognitive self-regulatory processes were correlated with all but one of the other scale facets, demonstrating similarities across the studies. A correlation matrix consisting of predictor and outcome variables included in the study is provided in Table 3.

An examination of the resiliency measurement model was also conducted using confirmatory factor analysis. The confirmatory factor analysis was performed using Mplus version 6.11 statistical software. The measurement model was examined by randomly dividing the items for each WRI facet into two parcels. According to Kline (2011), when homogenous items are parceled, each parcel is treated as a continuous variable that loads onto a specified factor. Indicators loaded onto designated factors should have a sufficient standardized loading. Again, Kline suggests loadings of greater than .20. The analysis showed all items of the WRI factors loaded significantly onto the predetermined facets with standardized loadings ranging from .70 to .94.

### **Group Differences**

Because only 54 of the participants included in the study immigrated to Canada as skilled immigrants, tests of mean differences between the groups was conducted. With skilled immigrants in one group and all other classifications in the other group, variable means were compared between the two groups using a one-way analysis of variance (ANOVA). The results showed the two groups statistically differed on only the job search intensity variable. Statistical differences were not found for the other predictor or outcome variables. To account for any variation that occurred as a result of immigrant



classification, immigrant classification was entered as a covariate into regression analyses when job search intensity was a predictor or an outcome variable.

### **Hypothesis Testing**

To test the Hypotheses a correlation analysis was conducted using SPSS.

Hypothesis 1 states that there is a positive relationship between individuals' interpretation of their job search experience and the self-regulatory processes they enact. As shown in Table 3, there is a statistically significant correlation at the less than .001 level between individuals' interpretations and their (a) affective ( $r = 0.37, p < .001$ ), (b) behavioural ( $r = 0.43, p < .001$ ), and (c) cognitive ( $r = 0.65, p < .001$ ) self-regulatory processes. In other words, individuals who interpret the events as less threatening and experience less mental and emotional upset exhibit the utilization of greater regulation of their emotions, thoughts, and behaviours. To examine if other factors influenced the relationships between self-regulation and interpretation, a set of moderator variables were examined.

The next set of hypothesis concerns the moderation of the relationship between immigrants' initial interpretations of the job search and their self-regulatory processes by their personal characteristics, language fluency, cultural knowledge, and opportunities, support, and resources present in the environment. In total, 18 moderation analyses were conducted. Variable centering was used, and the interaction term calculated as endorsed by Cohen, Cohen, West, and Aiken (2003). The interaction term and individual interpretation were then regressed on to the self-regulatory processes of interest.

Hypothesis 2a states that a person's affective, behavioural, and cognitive characteristics will moderate the relationship between a person's interpretation of the job search and self-regulatory processes. This hypothesis was not supported. Hypothesis 2b

Table 3

*Correlation matrix of study variables*

	Mean	SD	PCA	PCB	PCC	INTERP	OSR	SRA
1. PCA	3.78	.64	(.83)					
2. PCB	4.20	.54	.26*	(.71)				
3. PCC	3.66	.70	.20	.33**	(.82)			
4. INTERP	3.54	.83	.49***	.23*	.21*	(.85)		
5. OSR	3.49	1.09	.30**	.25*	.12	.31**	(.94)	
6. SRA	3.82	.75	.46***	.45***	.35***	.37***	.12	(.84)
7. SRB	3.63	.58	.38***	.45***	.34**	.43***	.20	.56***
8. SRC	3.34	.85	.41***	.42***	.32**	.65**	.39***	.44***
9. CK	3.73	.76	.17*	.33**	.25*	.20	.24*	.19
10. Fluency	9.49	1.40	.09	.36***	.42***	.13	.26*	.19
11. Efficacy	6.59	1.80	.18	.31**	.28**	.38***	.21*	.10
12. Clarity	5.78	1.14	.09	.42***	.25*	.25*	.03	.31**
13. Satisfaction	4.37	1.18	.03	.22*	.11	.02	.06	.11
14. Intensity	4.03	1.14	.08	.19	-.02	.07	.08	.05
15. Interview	5.80	8.79	.02	.05	.02	.16	.19	.08
16. Offer	2.44	6.43	-.01	.12	.03	.12	.20	.05
17. Employed	.39	.491	-.07	.12	.11	-.17	.05	-.06
18. Time In Canada	26.52	24.95	-.17	-.16	.05	-.04	-.05	-.02
19. Financial need	3.50	1.10	-.06	.09	.05	-.03	-.24*	.10

*Note:* Parentheses on the diagonal contain coefficient alpha. SD = Standard deviation, PCA = Personal characteristics - affective, PCB = Personal characteristics - behavioural, PCC = Personal characteristics - cognitive, INTERP = Individuals' interpretation, OSR = opportunities, supports, and resources, SRA = Self-regulatory processes - affective, SRB = Self-regulatory processes-behavioural, SRC = Self-regulatory processes-cognitive, CK = Cultural knowledge, Fluency = Language fluency. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 3 continued

	SRB	SRC	CK	Fluency	Efficacy	Clarity	Satisfaction	Intensity
1.PCA								
2.PCB								
3.PCC								
4.INTERP								
5.OSR								
6.SRA								
7.SRB	(.74)							
8.SRC	.48***	(.90)						
9.CK	.40***	.27**	(.93)					
10.Fluency	.26*	.15	.32**	(.92)				
11.Efficacy	.29**	.56***	.34**	.33**	(.84)			
12.Clarity	.29**	.42***	.30**	.29**	.33**	(.66)		
13.Satisfaction	.14	.17	.31**	.04	.12	.34**	(.74)	
14.Intensity	.16	.08	.10	.22*	.13	.19	.07	(.86)
15.Interview	-.10	.12	-.06	.19	-.02	-.01	-.04	.07
16.Offer	.031	.18	.17	.17	.20	-.07	.03	.04
17.Employed	-.10	.03	-.12	.25*	-.02	.01	.03	.13
18.Time In Canada	-.16	-.09	.06	.21	-.18	.02	-.17	-.14
19.Financial need	.18	-.02	-.07	.10	.12	.13	-.14	.20

Note. Parentheses on the diagonal contain coefficient alpha. SD = Standard deviation, PCA = Personal characteristics - affective, PCB = Personal characteristics - behavioural, PCC = Personal characteristics - cognitive, INTERP = Individuals' interpretation, OSR = opportunities, supports, and resources, SRA = Self-regulatory processes - affective, SRB = Self-regulatory processes-behavioural, SRC = Self-regulatory processes-cognitive, CK = Cultural knowledge, Fluency = Language fluency. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

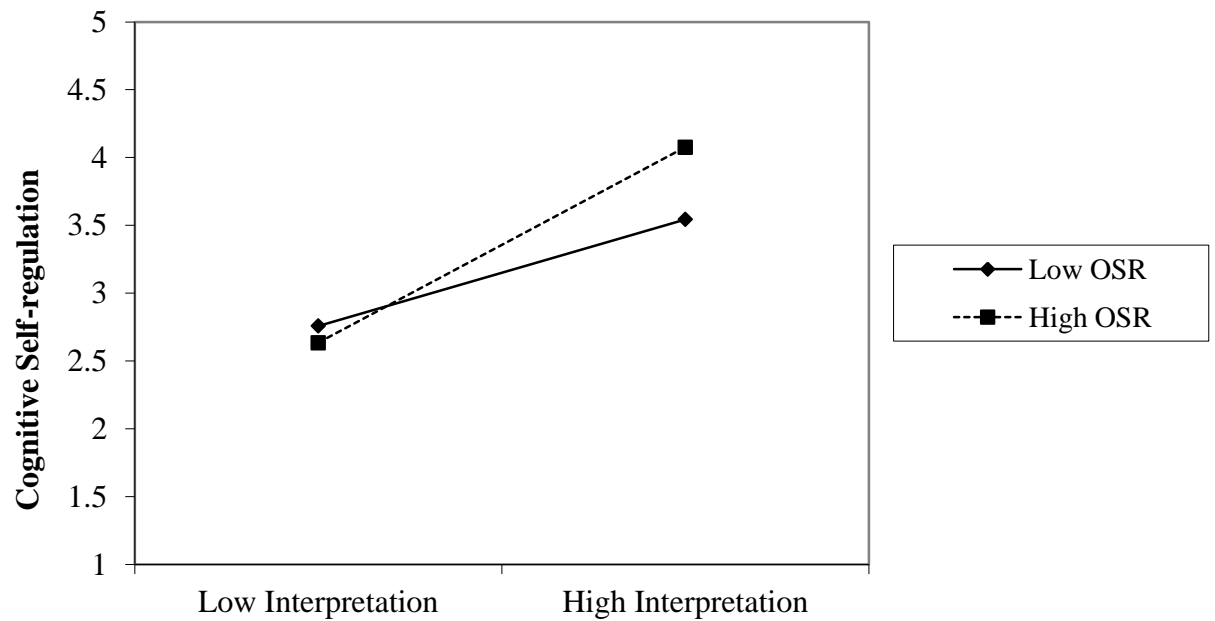
Table 3 continued

	Interview	Offer	Employed	Time in Canada	Financial need
1. PCA					
2. PCB					
3. PCC					
4. INTERP					
5. OSR					
6. SRA					
7. SRB					
8. SRC					
9. CK					
10. Fluency					
11. Efficacy					
12. Clarity					
13. Satisfaction					
14. Intensity					
15. Interview	(na)				
16. Offer	.21*	(na)			
17. Employed	.27**	.11	(na)		
18. Time In Canada	.24*	.11	.39**	(na)	
19. Financial need	.06	-.13	-.01	-.06	(.86)

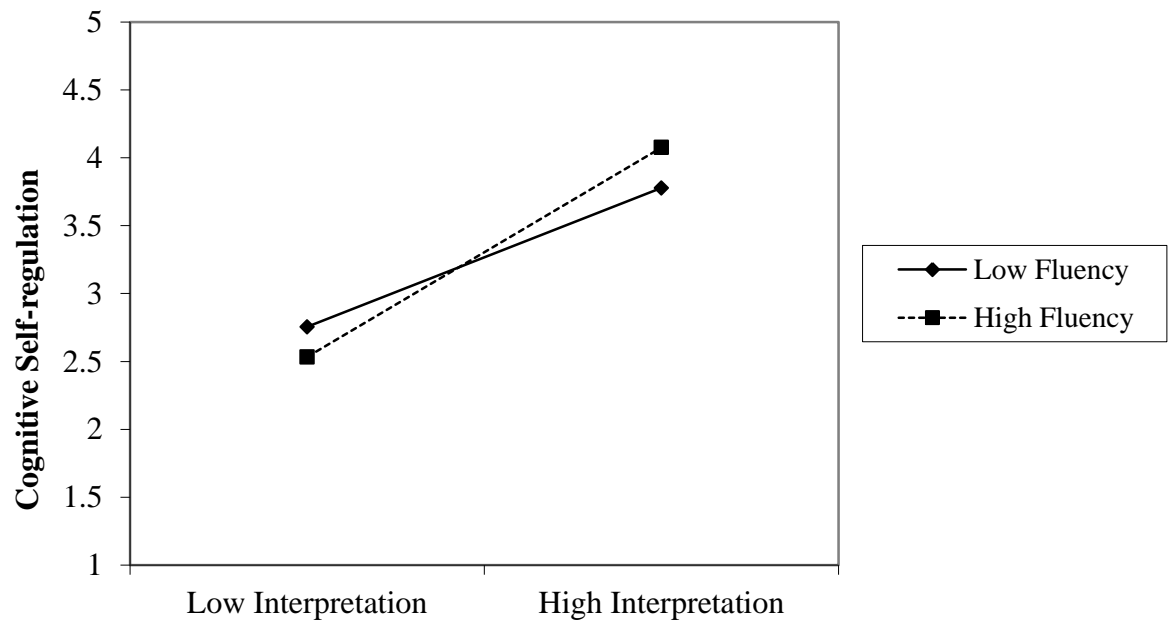
Note. Parentheses on the diagonal contain coefficient alpha. SD = Standard deviation, PCA = Personal characteristics - affective, PCB = Personal characteristics - behavioural, PCC = Personal characteristics - cognitive, INTERP = Individuals' interpretation, OSR = opportunities, supports, and resources, SRA = Self-regulatory processes - affective, SRB = Self-regulatory processes-behavioural, SRC = Self-regulatory processes-cognitive, CK = Cultural knowledge, Fluency = Language fluency. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

states that the opportunities, supports, and resources available to the individual will moderate the relationships between job seekers' interpretations of the job search and their self-regulatory processes. The relationship was partially supported. As shown in figure 4, the opportunities, supports, and resources available significantly moderated the relationship between individuals' interpretations and their cognitive self-regulatory processes ( $\beta = .18, p = .046$ ). These findings suggest people with high a high degree social support have higher cognitive self-regulation than people with less social support under conditions when their interpretation of the job search is positive. When individuals have close, trusting relationships available for support, they are able to regulate their thoughts to a greater extent in comparison to a person who does not have supportive relationships. The relationships between opportunities, supports, and resources and affective and behavioural self-regulatory processes were not statistically significant.

Hypothesis 2c states that language fluency will moderate the relationship between job seekers' interpretations and their self-regulatory processes. This hypothesis was partially supported. As shown in Figure 5, language fluency interacted with the relationship between individuals' interpretations of the job search and cognitive self-regulatory processes ( $\beta = .19, p = .020$ ). These findings suggest that a person who is more fluent in the official language of the country demonstrates greater cognitive self-regulation than a person who is less fluent, under the condition of when their interpretation of the job search is positive but not when it is negative. Language fluency did not interact with interpretations to influence the relations with affective and behavioural self-regulatory processes.



*Figure 4.* Moderation of the relationship between individuals' interpretation of the job search and their cognitive self-regulatory processes by opportunities, supports, and resources. OSR = opportunities, supports, and resources, Interpretation = individuals' interpretation of the job search experience.

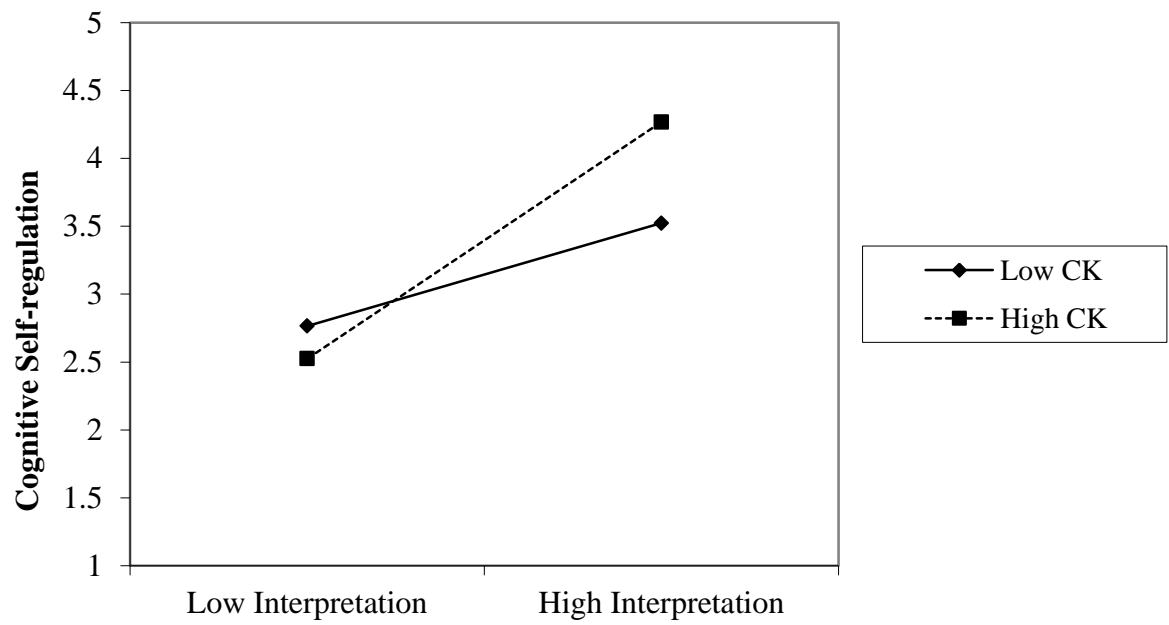


*Figure 5.* Moderation of the relationship between individuals' interpretation of the job search and their cognitive self-regulatory processes by language fluency. Fluency = language fluency, Interpretation = individuals' interpretation of the job search experience.

The final hypothesized moderator variable was cultural knowledge. Hypothesis 2d states that an individual's cultural knowledge will moderate the relationship between a person's interpretation of the job search and self-regulatory processes. Again this hypothesis was partially supported. As shown in Figure 6, cultural knowledge interacted with job seekers' interpretations of the job search to influence their cognitive self-regulatory processes ( $\beta = .19, p = .015$ ). Again, these findings suggest that when a person is more knowledgeable about the culture they are living in, he or she has greater cognitive self-regulation than a person with low cultural knowledge, when the interpretation of the job search experience is positive but not when it is negative. However, cultural knowledge did not moderate the relationships between job seekers' interpretations and affective and behavioural self-regulatory processes.

A person's ability to regulate his or her thoughts, emotions, and behaviours were expected to be related to the job search they conducted. The job search they conducted was composed of their job search clarity, self-efficacy, intensity, and satisfaction. To examine the next set of hypotheses, each facet of self-regulatory processes (affective, behavioural, and cognitive) was correlated individually to measure its relationship with each job search variable. As Hypothesis 3a states, individuals who are higher in self-regulation (affective, behavioural, and cognitive) would be more satisfied with the job search they conducted. This hypothesis was not supported. Relationships between each of the self-regulatory processes and job search satisfaction were not significant at the .05 level. Hypothesis 3b was also not supported by the data. Hypothesis 3b stated that affective, behavioural, and cognitive self-regulatory processes are each related to the





*Figure 6.* Moderation of the relationship between individuals' interpretation of the job search and their cognitive self-regulatory processes by cultural knowledge. CK = cultural knowledge, Interpretation = individuals' interpretation of the job search experience.

intensity with which a person searches for employment. Job-search intensity differed between immigrants classified as skilled compared to those classified into other immigrant categories. The discrepancy between group means may have contributed to the absence of a statistically significant relationship. However, when only skilled immigrant participants were included in the correlation analysis, the relationship between job search intensity and self-regulatory processes was again not statistically significant.

Hypothesis 3c stated that a person's affective, behavioural, and cognitive self-regulatory processes would be related to his or her job search clarity, or the degree to which they planned their job search, set goals, and knew the type of employment they were seeking. Full support for this hypothesis was found. Positive relationships were found at the .05 level of significance between job search clarity and affective, behavioural, and cognitive self-regulatory processes ( $r = .31, p = .002, r = .29, p = .004, r = .42, p < .001$ , respectively). These findings provide evidence that persons who control their thoughts, emotions, and behaviours are more likely to set goals and have a clear idea of the type of job they are seeking and the steps required to obtain that job.

Partial support was found for hypothesis 3d, which stated that self-regulatory processes would be positively related to job-search self-efficacy. Both behavioural and cognitive self-regulatory processes were positively related to job-search self-efficacy ( $r = .29, p = .005, r = .56, p < .001$ , respectively) at the .05 level of significance. Therefore, persons who regulate their thoughts and behaviours to a greater extent had more confidence in their ability to perform job search activities. However, emotional regulation by job seekers was not related to job-search self-efficacy.

Hypothesis 4 stated that job search intensity would be positively related to (a) job search clarity, (b) job search satisfaction, and (c) job search self-efficacy. This hypothesis was not supported when all participants were included in the analyses. All three relationships with job search intensity were not shown to be statistically significant. However, because of differences in job search intensity between individuals classified as skilled immigrants and those falling under other classifications, when only skilled immigrants were included in the analyses, Hypothesis 4c was supported as a positive relationship with job search self-efficacy was found ( $r = .28, p = .042$ ). When only skilled immigrants were included in the analysis, a significant relationship between job search clarity and satisfaction was still not found.

Hypothesis 5 states that job search intensity would be positively related to (a) the number of job interviews a person receives, (b) the number of job offers that person is given and (c) the person's employment status (employed versus unemployed). Hypotheses 5a, 5b, and 5c were not supported. In two sets of analyses, one including only skilled immigrants and the other including both skilled and other classifications of immigrants, the relationships between job search intensity and the (a) number of job interviews, (b) number of job offers, and (c) employment status were not statistically supported. However, for those who did obtain interviews, they were more likely to receive offers of employment ( $r = .21, p = .040$ ) and to be employed ( $r = .27, p = .010$ ). A summary of the findings for the hypothesized relationships is provided in Table 4.

### **Regression Analyses**

Additional exploratory analyses were conducted to examine how the resiliency process predicts job search among skilled immigrants. Using hierarchical regression

Table 4  
*Summary of findings regarding hypothesized relationships*

Hypotheses	Supported	Not Supported	Partially supported
1a) A positive relationship between individuals' interpretation of the job search experience and their affective self-regulatory processes.	X		
1b) A positive relationship between individuals' interpretation of the job search experience and their affective self-regulatory processes.	X		
1c) A positive relationship between individuals' interpretation of the job search experience and their affective self-regulatory processes.	X		
2a) Affective, behavioural and cognitive personal characteristics will moderate the relationship between a person's interpretation of the job search and their self-regulatory processes (affective, behavioural, cognitive).		X	
2b) Opportunities, supports, and resources will moderate the relationship between a person's interpretation of the job search and their self-regulatory processes (affective, behavioural, cognitive).			Moderated the relationship with SRC
2c) Language fluency will moderate the relationship between a person's interpretation of the job search and their self-regulatory processes (affective, behavioural, cognitive).			Moderated relationship with SRC
2d) Cultural knowledge will moderate the relationship between a person's interpretation of the job search and their self-regulatory processes (affective, behavioural, cognitive).			Moderated the relationship with SRC
3a) Affective, behavioural, and cognitive self-regulatory processes will be positively related to job search satisfaction.		X	
3b) Affective, behavioural, and cognitive self-regulatory processes will be positively related to job search intensity.		X	

Table 4 Continued

Hypotheses	Supported	Not Supported	Partially supported
3c) Affective, behavioural, and cognitive self-regulatory processes will be positively related to job search clarity.	X		
3d) Affective, behavioural, and cognitive self-regulatory processes will be positively related to job search self-efficacy.			SRB was related to job search self-efficacy SRC was related to job search self-efficacy
4a) Job search clarity will be positively related to job search intensity.		X	
4b) Job search satisfaction will be positively related to job search intensity.		X	
4c) Job search self-efficacy will be positively related to job search intensity.		X	
5a) Job search intensity will be positively related to the number of interviews a person receives.		X	
5b) Job search intensity will be positively related to the number of job offers a person receives.		X	
5c) Job search intensity will be positively related to an individual's employment status (employed versus unemployed).		X	

*Note.* SRB = behavioural self-regulatory processes, SRC = cognitive self-regulatory processes.

analyses, variables of the resiliency process and job search process were entered into the regression equation. As an individual proceeds through the model, different variables play a role in the outcomes of interest. Depending on where the individual is in the resiliency process the outcome variable of interest will vary. To account for the different stages of progression, the model shown in Figure 3 was divided into three sets of criterion outcomes. The first of the three outcomes was the prediction of each of the affective, behavioural, and cognitive self-regulatory processes an individual enacts. The second set of predicted outcomes was the job search variables, including job search clarity, job search self-efficacy, job-search satisfaction, and job search intensity. The third set of predicted outcomes was the job search outcomes which included the number of interviews and number of job offers an individual received, and the individual's employment status.

In the first set of hierarchical regression analyses, the prediction of the affective, behavioural, and cognitive self-regulatory processes was of interest. In three separate hierarchical regression analyses, the three blocks of variables were regressed on each of the self-regulatory processes (as shown in Tables 5, 6, and 7). The first set of predictor variables was composed of the control variables and denoted as Model 1 in the tables. Included in Model 1 were the length of time a person has lived in Canada and their perceived financial need.

In Model 2 of the analysis, an individual's interpretation of the job search process was entered. As shown in Figure 3, there is a direct link between a person's interpretation of the job search process and the self-regulatory processes that person

enacts. Therefore, in the prediction of self-regulatory processes, interpretation of the job search would be entered into the second set of predictors. Also shown in the model is the moderation of this relationship by job seekers' personal characteristics, cultural knowledge, language fluency, and the opportunities, supports, and resources available in the environment. When testing Hypothesis 2, the moderating variables were regressed on each of the self-regulatory processes. The analyses showed, of the 18 analyses, only cultural knowledge, language fluency, and opportunities, supports and resources significantly moderated the relationship between individuals' interpretations of the job search and cognitive self-regulatory processes. No variables moderated the relationships between interpretation of the job search and affective or behavioural self-regulatory processes. Therefore, in Model 3, these variables were entered into the hierarchical regression equation to examine if they still added to the prediction of one's self-regulatory processes.

As shown in Table 5, hierarchical regression analyses were performed to assess whether the set of specified predictors in Model 3 significantly predicted affective self-regulatory processes. The specified predictors were job seekers' interpretations of the job search, affective, behavioural, and cognitive personal characteristics, opportunities, supports, and resources, cultural knowledge, and language fluency. As well, financial need and the amount of time in Canada were controlled for. Using the squared multiple correlation value, the proportion of variance in affective self-regulatory processes scores accounted for by the set of predictors was .52,  $p < .001$ . The test for a significant multiple correlation indicated a significant relationship existed between the set of predictors and affective self-regulatory processes  $F(9, 67) = 8.00, p < .001$ .

Upon examination of the standardized regression coefficients, when all the predictors were included in the regression equation, four predictor variables significantly contributed to prediction of affective self-regulation. These predictor variables were participants' initial interpretations of the job search ( $\beta = .25, p = .011$ ), behavioural personal characteristics ( $\beta = .43, p < .001$ ), cognitive personal characteristics ( $\beta = .19, p = .032$ ), and opportunities, supports, and resources ( $\beta = -.21, p = .023$ ). By including the personal characteristics, cultural knowledge, language fluency, and opportunities, supports, and resources incremental predictive validity at the .05 level of significance was added to the model over and above that added by persons' initial interpretations ( $\Delta R^2 = .30, F_{\text{change}}(6, 67) = 17.37, p < .001$ ).

A hierarchical regression analysis was conducted using the same set of predictor variables to predict behavioural self-regulatory processes. As shown in Table 6 (Model 3), when all predictor variables were included in the equation, the proportion of variance in behavioural self-regulatory processes accounted for by the predictor variables is .41. The test for a significant multiple correlation indicated a significant relationship was present between the set of predictors and behavioural self-regulatory processes  $F(9,68) = 5.27, p < .001$ .

As shown in Table 6, when all the predictors were included in the regression equation (Model 3), financial need ( $\beta = .19, p = .034$ ), initial interpretation ( $\beta = .27, p = .013$ ), and cultural knowledge ( $\beta = .25, p = .008$ ) significantly contributed to the prediction of behavioural self-regulatory processes. The inclusion of the affective, behavioural, and cognitive personal characteristics, opportunities, supports and resources, cultural knowledge and language fluency provided incremental predictive validity over



Table 5

*Hierarchical regression analysis predicting affective self-regulatory processes*

	Model 1	Model 2	Model 3
Time in Canada	-.01	.01	.06
Financial need	.16	.19	.08
Initial interpretation		.43**	.25*
Personal characteristics – affective			.17
Personal characteristics – behavioural			.43***
Personal characteristics - cognitive			.19*
Opportunities, supports, & resources			-.21*
Cultural knowledge			.05
Language fluency			.04
	$R^2$	.03	.21*
	$\Delta R^2$		.19*
			.52***
			.30*

*Note.* The values represent standardized regression coefficients. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 6

*Hierarchical regression analysis predicting behavioural self-regulatory processes*

	Model 1	Model 2	Model 3
Time in Canada	-.15	-.13	-.11
Financial need	.20	.23*	.19*
Initial interpretation		.44***	.27*
Personal characteristics – affective			.13
Personal characteristics – behavioural			.19
Personal characteristics - cognitive			.08
Opportunities, supports, & resources			-.06
Cultural knowledge			.25**
Language fluency			.03
	$R^2$		
	.07	.26**	.41***
	$\Delta R^2$		
		.19*	.15*

*Note.* The values represent standardized regression coefficients. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 7

*Hierarchical regression analysis predicting cognitive self-regulatory processes*

	Model 1	Model 2	Model 3
Time in Canada	-.10	-.07	-.01
Financial need	-.02	.03	.00
Initial interpretation		.63***	.52***
Personal characteristics – affective			-.03
Personal characteristics – behavioural			.30**
Personal characteristics - cognitive			.11
Opportunities, supports, & resources			.09
Cultural knowledge			.04
Language fluency			-.10
	$R^2$		
	.01	.41***	.52***
	$\Delta R^2$		
		.40*	.11*

*Note.* The values represent standardized regression coefficients. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

individuals' initial interpretation of the job search ( $\Delta R^2 = .15$ ,  $F_{change}(6,68) = 30.77$ ,  $p < .001$ ).

Cognitive self-regulatory processes were also predicted using hierarchical regression analysis. Again the set of predictors was the amount of time in Canada, perceived financial need, affective, behavioural, and cognitive personal characteristics, opportunities, supports and resources, cultural knowledge, and language fluency. The squared multiple correlation showed the proportion of variance in cognitive self-regulatory processes accounted for by the set of predictors was  $.52$ ,  $p < .001$ . As well, the test for a significant multiple correlation showed a significant correlation between the set of predictors and cognitive self-regulatory processes  $F(9, 68) = 8.22$ ,  $p < .001$ .

As shown in Table 7, when all seven predictors and two control variables were included in the regression equation in Model 3, individuals' initial interpretations of the job search experience ( $\beta = .52$ ,  $p < .001$ ) and their behavioural personal characteristics ( $\beta = .30$ ,  $p = .001$ ) contributed to prediction of cognitive self-regulatory processes. This was a significant increase in the predictive validity over that of Model 2 in which only initial interpretation, financial need, and time in Canada were included ( $\Delta R^2 = .11$ ,  $F_{change}(6, 68) = 16.04$ ,  $p < .001$ ).

As shown in Figure 3, affective, behavioural, and cognitive self-regulatory processes were expected to predict individuals' job search self-efficacy, job search clarity, job search satisfaction, and job search intensity. Depending on one's progression through the resiliency process, how well a person regulates his or her thoughts, emotions, and behaviours was expected to influence the job search the person performed. Therefore

the next set of regression equations looked at the prediction of the job search a person conducted as a function of the person's self-regulatory processes.

A set of four hierarchical regression analyses were conducted to predict individuals' job search self-efficacy, clarity, intensity, and satisfaction. Control variables for each set of analyses consisted of the amount of time individuals had lived in Canada and their perceived financial need, which were entered in Model 1 (shown in Tables 8, 9, 10, 11). The three predictor variables included in Model 2 consisted of individuals' affective, behavioural, and cognitive self-regulatory processes.

In regards to the prediction of job search self-efficacy, when affective, behavioural, and cognitive self-regulatory processes were included in the set of predictor variables (denoted by Model 2), a significant multiple correlation between the set of predictors and job search self-efficacy was found,  $F(5, 77) = 7.82, p < .001$ . As well, the variables included in Model 2 accounted for .36,  $p < .001$  of the variance in individuals' job search self-efficacy, which added to the incremental prediction of job search self-efficacy over that of time in Canada and financial need,  $\Delta R^2 = .31, p < .05, F_{\text{change}} = 11.19, p < .001$ . As shown in Table 8, examination of the standardized regression coefficients in Model 2 shows individuals' cognitive self-regulatory processes were significant predictors of job search self-efficacy when all predictors were included in the analysis in Model 2 ( $\beta = .62, p < .001$ ).

Looking at the prediction of job search clarity when time in Canada, financial need, and affective, behavioural, and cognitive self-regulatory processes were included in the regression equation, there was a significant multiple correlation between the set of predictors and job search clarity  $F(5, 71) = 4.44, p = .001$ . The set of predictors

Table 8

*Hierarchical regression analysis predicting job self-efficacy*

	Model 1	Model 2
Time in Canada	-.18	-.11
Financial need	.13	.16
Self-regulatory processes – affective		-.13
Self-regulatory processes – behavioral		.00
Self-regulatory processes – cognitive		.62***
$R^2$	.05	.36***
$\Delta R^2$		.31*

*Note.* The values represent standardized regression coefficients. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

accounted for .24,  $p = .005$  of the variance in individuals' job search clarity. Inclusion of the affective, behavioural, and cognitive self-regulatory processes added to the prediction of job search clarity over control variables, time in Canada and financial need,  $\Delta R^2 = .22$ ,  $F_{change}(3, 72) = 6.83$ ,  $p < .001$ . As shown in Table 9, when all predictors were included in the regression equation, affective self-regulatory processes were the only significant predictor of job search clarity ( $\beta = .38$ ,  $p = .003$ ).

As shown in Table 10 the prediction of job search satisfaction was not improved by the addition of self-regulatory processes to the equation. As well, examination of the standardized regression coefficients revealed that affective, behavioural, and cognitive self-regulatory processes were not statistically significant predictors of job search satisfaction when time in Canada, financial need, and affective, behavioural, and cognitive self-regulatory processes were included in the regression equation.

As previously mentioned, both skilled and other immigrant classifications were included in the analyses. Because the means of the two groups differed in regards to job search intensity, immigration class was controlled for in the hierarchical regression analysis predicting job search intensity, as shown in Table 11. The set of independent variables included in Model 2 were time in Canada, financial need, immigrant classification, and affective, behavioural, and cognitive self-regulatory processes. The inclusion of self-regulatory processes in the prediction of job search intensity did not account for a significant amount of variance in job search intensity scores ( $R^2 = .11$ ) and it did not add incremental validity to that of Model 1. In fact, examination of the standardized regression coefficients in Model 2 showed that immigration class was the

Table 9

*Hierarchical regression analysis predicting job search clarity*

	Model 1	Model 2
Time in Canada	.03	.06
Financial need	.15	.09
Self-regulatory processes – affective		.38**
Self-regulatory processes – behavioral		-.02
Self-regulatory processes – cognitive		.16
	$R^2$	.24**
	$\Delta R^2$	.22*

*Note.* The values represent standardized regression coefficients. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .



Table 10

*Hierarchical regression analysis predicting job search satisfaction*

	Model 1	Model 2
Time in Canada	-.18	-.15
Financial need	-.16	-.18
Self-regulatory processes – affective		.09
Self-regulatory processes – behavioral		.02
Self-regulatory processes – cognitive		.20
$R^2$	.05	.10
$\Delta R^2$		.05

*Note.* The values represent standardized regression coefficients. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 11

*Hierarchical regression analysis predicting job search intensity*

	Model 1	Model 2
Time in Canada	-.13	-.11
Financial need	.22*	.21
Immigrant classification	.26*	.24*
Self-regulatory processes – affective		-.07
Self-regulatory processes – behavioral		.09
Self-regulatory processes – cognitive		.04
$R^2$	.11	.11
$\Delta R^2$		.00

*Note.* The values represent standardized regression coefficients. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

only significant predictor of job search intensity ( $\beta = .24, p = .023$ ). In the analysis, immigrants not falling under the skilled immigration classifications demonstrated greater job search intensity than skilled immigrants. This difference between the two groups may be due to a more focused job search by skilled immigrants. For individuals trained in a particular occupation, the job search they conduct may be more focused on jobs that fall under their specific skill set.

In the last set of regression analyses, the prediction of the job search outcomes was examined as a function of the job search people conducted. More specifically, three hierarchical regression analyses were conducted to determine if the number of interviews people received, the number of job offers people received, and whether individuals were employed, could be predicted by a person's job search self-efficacy, clarity, intensity, and satisfaction. As shown in Figure 3, job search self-efficacy, job search clarity, and job search satisfaction were expected to predict job search intensity. However, examination of the correlations of these variables with job search intensity showed they were not statistically related and job search intensity was not related to job search outcomes. Therefore, the current regression analyses looked at whether the inclusion of all the job search variables better predicted job search outcomes.

For each analysis, three variables were controlled for, time in Canada, financial need, and immigration class. Immigration class was included as a control variable due to significant differences between the means of skilled and other classifications of immigrants regarding the predictor variable, job search intensity. The control variables are entered into the regression equation first and denoted as Model 1 in Tables 12, 13,

Table 12

*Hierarchical regression analysis predicting number of job interviews*

	Model 1	Model 2
Time in Canada	.26*	.27*
Financial need	.07	.04
Immigrant classification	.28**	.28*
Job search clarity		.04
Job search self-efficacy		.09
Job search intensity		.01
Job search satisfaction		-.05
	$R^2$	.15*
	$\Delta R^2$	.01

*Note.* The values represent standardized regression coefficients. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 13

*Hierarchical regression analysis predicting number of job offers*

	Model 1	Model 2
Time in Canada	.42***	.44***
Financial need	.16	.13
Immigrant classification	.38***	.39***
Job search clarity		.06
Job search self-efficacy		.18
Job search intensity		-.01
Job search satisfaction		-.05
	$R^2$	.36***
	$\Delta R^2$	.04

*Note.* The values represent standardized regression coefficients. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 14

*Hierarchical regression analysis predicting employment status*

	Model 1	Model 2
Time in Canada	.32	.33*
Financial need	-.08	-.10
Immigrant classification	.35	.31*
Job search clarity		-.01
Job search self-efficacy		-.06
Job search intensity		.16
Job search satisfaction		.02
	$R^2$	.28***
	$\Delta R^2$	.02

*Note.* The values represent standardized regression coefficients. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

and 14. The other predictor variables, besides job search intensity were job search clarity, self-efficacy, and satisfaction which are included in Model 2 of the Tables.

As shown in Tables 12, 13, and 14 none of the job search variables significantly predicted the number of interviews or offers individuals received, or their employment status. As well, the addition of these variables in Model 2 provided no incremental predictive validity above that of a person's time in Canada, immigrant classification, and financial need. Examination of the standardized regression coefficients showed (in Model 2) the amount of time a person had lived in Canada and the person's immigration classification to be significant predictors of job interviews ( $\beta = .27, p = .012, \beta = .28, p = .010$ , respectively), job offers ( $\beta = .44, p < .001, \beta = .39, p < .001$ , respectively), and employment status ( $\beta = .33, p = .001, \beta = .31, p = .002$ , respectively) when job search clarity, self-efficacy, intensity, and satisfaction are included in the regression equation.

### **Path Analysis of Theorized Model**

Although statistical testing of the theorized model (shown in Figure 3) was not part of the hypotheses, a path analysis was conducted to examine the hypothesized effects of the observed variables. In accordance with the model presented by this study, the observed variables included in the path analysis were initial interpretations of the job search, personal characteristics (affective, behavioural, cognitive), language fluency, cultural knowledge, opportunities, supports, and resources, self-regulatory processes (affective, behavioural, and cognitive), job search self-efficacy, job search satisfaction, job search intensity, job search clarity, number of job offers, number of interviews, and employment status (see Figure 3). Since employment status is a dichotomous variable,

Table 15

*Weighted least squares with missing values for a recursive path model of the causes and effects of the resiliency process on job search outcomes*

Parameters			Unstandardized	SE	Standardized
			Direct effects		
INTER	—	SRA	1.36	.89	1.68
PCA	—	SRA	-.59	.66	-.52
INTER X PCA	—	SRA	.21	.17	1.45
PCB	—	SRA	2.08*	.90	1.64
INTER X PCB	—	SRA	-.44	.25	-2.89
PCC	—	SRA	-.43	.64	-.44
INTER X PCC	—	SRA	.15	.17	1.01
OSR	—	SRA	-.04	.43	-.07
INTER X OSR	—	SRA	-.01	.12	-.10
FLU	—	SRA	.40	.27	.82
IR X FLU	—	SRA	-.12	.08	-1.68
CK	—	SRA	-.29	.55	-.32
INTER X CK	—	SRA	.10	.15	.64
INTER	—	SRB	-.22	.87	-.32
PCA	—	SRB	-.72	.45	-.80
INTER X PCA	—	SRB	.24	.13	2.11
PCB	—	SRB	.92	.68	.92
INTER X PCB	—	SRB	-.20	.19	-1.64
PCC	—	SRB	.34	.48	.44
INTER X PCC	—	SRB	-.08	.13	-.70
OSR	—	SRB	0.32	.31	.65
INTER X OSR	—	SRB	-.10	.08	-1.14
FLU	—	SRB	-.07	.21	-.18
INTER X FLU	—	SRB	.03	.06	.52
CK	—	SRB	-.46	.38	-.64
INTER X CK	—	SRB	.18	.11	1.55
INTER	—	SRC	-1.34	1.02	-1.43
PCA	—	SRC	-.37	.52	-.29
INTER X PCA	—	SRC	.08	.16	.48
PCB	—	SRC	.39	.84	.27
INTER X PCB	—	SRC	.03	.24	.15
PCC	—	SRC	.38	.49	.34
INTER X PCC	—	SRC	-.07	.14	-.38
OSR	—	SRC	-.13	.40	-.18
INTER X OSR	—	SRC	.03	.11	.25
FLU	—	SRC	-.37	.27	-.65
INTER X FLU	—	SRC	.18	.08	1.37
CK	—	SRC	-.32	.42	-.31



INTER X CK	—	SRC	.12	.13	.71
SRA	—	Clarity	.25	.14	.16
SRB	—	Clarity	.01	.18	.00
SRC	—	Clarity	.60 **	.21	.45
SRA	—	Efficacy	-.50 *	.25	-.22
SRB	—	Efficacy	-.17	.26	-.06
SRC	—	Efficacy	1.25***	.32	.62
SRA	—	Intensity	-.05	.19	-.04
SRB	—	Intensity	.23	.17	.12
SRC	—	Intensity	.24	.19	.19
SRA	—	Satisfaction	.24	.17	.15
SRB	—	Satisfaction	.01	.18	.01
SRC	—	Satisfaction	.38 *	.16	.27
Clarity	—	Intensity	.10	.09	.10
Efficacy	—	Intensity	-.054	.07	-.09
Satisfaction	—	Intensity	-.039	.08	-.04
Intensity	—	Interviews	-.90	1.05	-.11
Intensity	—	Offers	.09	.21	.04
Intensity	—	Employed	.31*	.15	.31
Interviews	—	Offers	12.81***	1.65	.76
Offers	—	Employed	1.51**	.47	.71
	—				
			Disturbance variances		
SRA			.27***	.05	.61
SRB			.18***	.03	.59
SRC			.26***	.06	.41
Intensity			.94***	.19	.97
Clarity			.81***	.15	.72
Satisfaction			1.07***	.20	.88
Efficacy			1.66***	.32	.69
Interviews			63.57***	7.46	.98
Offers			4.50***	.73	.46

*Note:* INTER = individuals' interpretations, PCA = personal characteristics - affective, INTER X PCA = interaction term between individuals' interpretation and personal characteristics - affective, PCB = personal characteristics - behavioural, INTER X PCB = interaction term between individuals' interpretation and personal characteristics - behavioural, PCC = personal characteristics - cognitive, INTER X PCC = interaction term between individuals' interpretation and personal characteristics - cognitive, OSR = opportunities, supports, and resources, INTER X

OSR = interaction term between individuals' interpretation and opportunities, supports, and resources, FLU = Fluency, INTER X FLU = interaction term between individuals' interpretation and fluency, CK = Cultural knowledge, INTER X CK = , SRA = Self-regulatory processes - affective, SRB = Self-regulatory processes - behavioural, SRC = Self-regulatory processes - cognitive, Intensity = Job search intensity, Clarity = Job search clarity, Efficacy = Job search self-efficacy, Satisfaction = Job search satisfaction, Interviews = Number of job interviews, Offers = Number of job offers, Employed = Employment status. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

the default estimation technique used was weighted least squares with missing values estimation in MPlus (Muthén & Muthén, 2010). The model produced a  $\chi^2(115) = 121.77, p = .315$  and demonstrated good fit with the data.

Parameters were estimated using Weighted Least Squares with Missing Values (WLSMV). Of the 59 parameters tested, eight showed to be statistically significant at the .05 level. As shown in Table 15, the unstandardized direct effect of behavioural personal characteristics on the affective self-regulatory processes variable was 2.08. This means that a 1-point increase on behavioural personal characteristics predicts a 2.08 increase in affective self-regulatory processes.

As well, an increase in cognitive self-regulatory processes had a direct effect on job search clarity, with an increase of .60 for every 1-point increase in cognitive self-regulation. An increase in affective self-regulation predicts a .50 decrease in job search self-efficacy while cognitive self-regulatory processes predict 1.25 point increase in efficacy. A 1-point increase in cognitive self-regulatory processes predicts a .38 point increase in job search satisfaction. For every 1-point increase in job search intensity, there is a predicted increase of .31 likelihood of being employed. And finally, the number of interviews an individual receives predicts the number of job offers that person will also receive, with every one interview, there is a predicted 12.81 increase in the number of job offers received. For every job offer a job seeker receives, there is a predicted increase of 1.51 on employment scores.

### **Discussion**

The current study examined the relationship between the resiliency process and skilled immigrants' job search. The resiliency process was applied to skilled immigrants'

job search to better understand the personal and environmental factors that influence individuals' responses to adversities often encountered when searching for employment, and how those responses influenced their continuing job search behaviours and outcomes. Support for the relationships regarding how the resiliency process predicted the job search and outcomes was mixed. In the next section, the hypothesized relationships will be discussed followed by how these relationships support the overall role of resiliency in immigrant job search. Because the model on which the hypotheses are based (shown in Figure 3) is an unfolding, integrative process model, discussing the underlying relationships in terms of how they relate to overall process is appropriate.

The first set of hypotheses was concerned with the interplay of protective personal and environmental factors in individuals' responses to the job search. Hypothesis 1 predicted that individuals' interpretations of the job search would have positive relationships with their affective, behavioural, and cognitive self-regulatory processes. As predicted, individuals who interpreted the job search as threatening and experienced anxiety as a result, were less controlled in terms of their affective, behavioural, and cognitive processes. In other words, these individuals were less able to ward off negative thoughts, were more likely to make decisions based on their emotions and to act on impulse.

Hypotheses 2a, 2b, 2c, and 2d, which were concerned with the personal and environmental influences on the relationships between individuals' interpretations and affective, behavioural, and cognitive self-regulatory processes, had mixed and partial support. Hypothesis 2a which predicted individuals' affective, behavioural, and cognitive characteristics would influence the relationship between their interpretations of

the job search and their affective, behavioural, and cognitive self-regulatory processes, was not supported.

Although the moderating role of personal characteristics was not supported, findings of the regression analyses did support the role of individuals' personal characteristics in predicting self-regulatory processes. When the hypothesized moderators were included in each of the regression analyses, behavioural and cognitive personal characteristics were significant predictors of affective self-regulatory processes, while behavioural personal characteristics predicted cognitive self-regulatory processes. Although not moderators of the relationship, these findings show that one's personal characteristics do have a direct relationship with the self-regulatory processes a person employs.

This finding is important for a number of reasons. First, it provides support for past studies on resilience that have identified internal characteristics of the individual that act as protective factors against threats (i.e., Luthar, et al., 2000; Richardson, 2002). For example, Luthans and colleagues (i.e., Luthans & Youssef, 2007; Luthans, et al., 2006; Youssef & Luthans, 2007), have asserted that within their PsyCap model which encompasses the four core constructs of hope, optimism, confidence, and resilience, the constructs of hope, optimism, and confidence act as pathways to resilience. The current study supports these findings that personal characteristics are agents in resilient outcomes. However, from the model, the means through which personal characteristics lead to resilient outcomes is not understood, leading to the second reason the findings of the current study are important. The findings from this study highlight the role of self-regulatory processes in resilient outcomes. Individuals' characteristics have a direct

relationship with self-regulatory processes but not with outcomes. What this suggests is that, in order for personal characteristics to play a protective role in the resiliency process, they must function through their influence on self-regulatory processes.

Hypotheses 2b stated that the opportunities, supports, and resources individuals had access to would moderate the relationship between their initial interpretations and affective, behavioural, and cognitive self-regulatory processes. This hypothesis was partially supported as opportunities, supports, and resources moderated the relationship with cognitive self-regulatory processes but not affective or behavioural self-regulatory processes. As suggested by the findings, when job seekers have strong supportive relationships, they experience fewer intrusive negative thought patterns. These findings speak to the protective role of supportive interpersonal relationships for people going through difficult times.

Hypotheses 2c and 2d involved the moderation of the relationship between individuals' interpretations of the job search process and self-regulatory processes by protective factors specific to the job search of immigrants. The variables of interest were language fluency and cultural knowledge, respectively. In the study, language fluency positively moderated the relationship between individuals' interpretations of the job search and their cognitive self-regulatory processes, but not their affective or behavioural self-regulatory processes. As well, full support was found for the moderating role of cultural knowledge on the relationship between individuals' interpretations and their affective, behavioural, and cognitive self-regulatory processes.

The results suggest two factors are at play for individuals with higher language fluency and cultural knowledge. The first factor concerns the beneficial effect these

variables have during interpersonal interactions (Miglietta & Tartaglia, 2009). In regards to language fluency, increased competence during interactions increases individuals' understanding and allows them to inquire about questions or concerns they may have. Similarly, cultural knowledge improves interactions with others in the community by improving the accuracy of individuals' attributions of others behaviours (Thomas et al., 2008). Greater understanding of why others are behaving in certain ways and what behaviours are appropriate during particular situations may decrease uncertainty and anxiety during interactions. In turn, individuals can focus on the conversation and not get caught up in the niceties of the interaction.

The second means through which cultural knowledge and language fluency influence the relationship between interpretations and self-regulatory processes is the requirement of less cognitive resources when interacting with others, thereby allotting more energy to regulate negative thoughts. When individuals do not require high amounts of concentration to communicate with others, they free up cognitive resources for dealing with other issues.

In a study by van der Linden, Frese, and Meijman (2003), the researchers examined the relation between one's ability to regulate mental processes associated with goal-directed behaviour and mental fatigue. Van der Linden et al. found that individuals who were assigned a mentally demanding task scored lower on tests measuring executive control and planning ability, suggesting that increased cognitive demands have detrimental effects on individuals' ability to regulate their own thoughts.

The next set of hypotheses was concerned with the relationship between individuals' affective, behavioural, and cognitive self-regulatory processes and the job

search they performed. Relationships between each form of self-regulation (affective, behavioural, cognitive) and job search variables were examined separately. Again, support for the hypotheses was mixed. Hypothesis 3a and 3b which stated there would be positive relationships between individuals' self-regulation and job search satisfaction and job search intensity, respectively, were not supported. On the other hand, Hypothesis 3c which stated there would be a positive relationship between self-regulatory processes and job search clarity was fully supported. Individuals who were able to recognize and regulate their affective states, who planned and acted in a disciplined manner, or who were flexible in their thinking scored higher on job search clarity. This finding makes sense as job search clarity involves establishing clear job search goals and developing a plan of action on the best means of achieving those goals.

Hypothesis 3d which predicted self-regulatory processes would be related to job search self-efficacy was supported. Individuals' behavioural and cognitive self-regulatory processes were positively related to their job search self-efficacy; however, their affective self-regulatory processes were not related. Again these findings make conceptual sense. Job search self-efficacy refers to a person's ability to perform job search activities. Individuals who are disciplined in their actions are more likely to feel confident that they can achieve their goals. This relationship may also be reciprocal. As Bandura (1986) discussed, self-efficacy is a motivating variable to behaviours as well. When a goal seems attainable, individuals are motivated to strive towards that goal thereby acting in ways that increase the likelihood of goal achievement (i.e., planning, self-discipline). In terms of the relationship between job search self-efficacy and cognitive self-regulatory processes, cognitive self-regulatory processes involve seeing



things in a positive light. Therefore, it seems natural that if someone has a generally positive outlook, that person probably has a positive view of their ability to search for a job effectively. As well, the ability to think flexibly, which is associated with cognitive self-regulation, allows individuals to develop job search strategies and means of completing job search related tasks.

The hypotheses pertaining predominately to the job search processes were not supported. Hypothesis 4 asserted that (a) job search clarity, (b) job search satisfaction, and (c) job search self-efficacy would be positively related to job search intensity. In other words, individuals who were clear on their goals, satisfied with how they were performing their job search, and confident in their abilities to search for employment, would be more active and vigorous in the job search they were performing. However, this was not the case. No statistically significant relationships were found between job search intensity and job search clarity, satisfaction, or self-efficacy. As well, Hypothesis 5 stated job search intensity would be positively related to (a) the number of interviews an individual received, (b) the number of job offers an individual received, and (c) an individual's employment status. Again, these predicted relationships were not supported. However, post hoc analyses showed the number of job interviews an individual received was positively related to the number of job offers received. Job offers were in turn positively related to the person's employment status with individuals who received more job offers having an increased likelihood of employment. Reasons for why these hypotheses were not supported are discussed here.

### **Examination of Job Search Intensity**

As mentioned previously in this section, the construct of job search intensity did not show the hypothesized relationships or the relationships that have been demonstrated in past research. In the model developed and investigated by Guerrero and Rothstein (2010), job search clarity predicted job search intensity, which then predicted the number of interviews a person received. However, in the current study, job search intensity did not demonstrate relationships with any of the job search variables.

One possible explanation for the discrepancies in the findings is differences in population samples. In Guerrero and Rothstein's (2010) study, participants were registered with a not for profit organization established to assist employers in recruiting qualified skilled immigrants. To register with this agency, individuals had to meet specified criteria which involved qualifications over and above that set by the Canadian government. As described in Guerrero and Rothstein's study, in order for immigrants to register with the organization, they were required to:

“(1) be legally allowed to work in Canada; (2) have an adequate level of English language fluency; (3) have a clearly defined job goal and action plan; (4) have a job search portfolio including resumes, cover letters, references, and interview preparation skills; (5) have a referral from an employment preparation agent; (6) have licensing and certification of foreign credentials when required; and (7) have knowledge of the industry and occupation terminology and minimum technology standards” (p. 9).

In the current study, participants only had to be classified as skilled immigrants according to criteria set by the Canadian government, to participate. Therefore, to meet the specifications set by the organization, one could assume job seekers were highly

motivated and engaged in their job search at the time of the study. For the current study, because participants were recruited through outside contacts from agencies across Canada, information on the criteria set by organizations that participants had to meet was not known. As well, individuals' engagement in the job search cannot be assumed. Therefore, differences in participants' across the samples may be cause for discrepancies in the found relationships between the studies.

Furthermore, studies have found job search intensity is not a static variable. As found by Wanberg et al. (2005), job search intensity fluctuates across time. In their study which measured job search intensity every two weeks for a 20 week period, individuals demonstrated more job search behaviours at the beginning and end of their job search. Considering in the current study, participants had been living in Canada for up to 10 years and had an average job search of nine months, with a range of one to 48 months, there could be much variability in the intensity and length of job search individuals engaged in.

Adding to the discussion of fluctuations in job search intensity over time is the issue of job searches becoming more focused over time. As Barber, Daly, Giannantonio, and Phillips (1994) found, at the beginning of a job search, individuals search broadly for employment opportunities. As time goes on, their search becomes more focused requiring the performance of less job search behaviours. In terms of how that would influence the findings of the current study, although individuals may have progressed through the resiliency process and established clear employment goals and plans, they engage in less job search behaviours less frequently. However, the job search behaviours they do engage in are more focused on their specific area of interest.

Besides the differences in participant samples, another potential contributor to the lack of relationships between job search intensity and outcomes is the measure of job search outcomes used. In terms of outcomes, participants were asked to provide the number of job interviews and offers they had received during their time in Canada, as well as their employment status. Alternatively, at the beginning of the measure examining job search intensity, participants are asked to focus on the last three months of their job search. Had the items referring to job search outcomes specified the same time period as that stated by the job search intensity measure, the number of job interviews and offers provided may have been reflective of that period of job search behaviours.

### **Support for the Theoretical Model?**

Despite the lack of findings supporting the role of resiliency in job search behaviours (i.e., job search intensity) and outcomes, support for the influence the resiliency process has on immigrant job search was still found. For example, in the exploratory analyses examining how self-regulatory processes predicted immigrant job search, self-regulatory processes were found to predict job search clarity and job search self-efficacy. Cognitive self-regulatory processes predicted job search self-efficacy while affective self-regulatory processes predicted job search clarity. Job search satisfaction and job search intensity were not predicted by self-regulatory processes. As mentioned, past research has identified job search clarity and job search self-efficacy as predictors of job search behaviours.

Again using regression analyses, evidence was found for the influence of protective factors underlying the resiliency process on the individuals' affective, behavioural and cognitive self-regulatory processes. When the protective factors, along

with initial interpretations, financial need, and time in Canada were regressed on each form of self-regulatory process (affective, behavioural, cognitive), the predictors accounted for significant portions of the variance in scores for each of the self-regulatory processes.

One of the improvements of King and Rothstein's (2010) model of the resiliency process over other models of resilience is the conceptualization of a multidimensional, dynamic process, rather than a state or trait as in previous research. King and Rothstein's model encompasses the constant interplay of environmental and personal characteristics that over time influence the adaptive processes individuals engage in. Depending on the interaction among factors and the context within which the process occurs, resilient outcomes are achieved.

Findings of the exploratory regression analyses supported this dynamic process model put forth by King and Rothstein (2010). For example, predictors of each of the self-regulatory processes varied depending on the self-regulatory process of interest. Affective self-regulatory processes were most strongly predicted by individuals' interpretations of the job search, behavioural and cognitive personal characteristics, and opportunities, supports and resources. Behavioural self-regulatory processes were most strongly predicted by individuals' financial need, interpretation of the job search, and cultural knowledge. Further, individuals' cognitive self-regulatory processes were most strongly predicted by their interpretation of the job search and behavioural personal characteristics. Similarly, significant predictors of the job search variables varied depending on the job search variable of interest, but as previously discussed, job search

clarity and self-efficacy were the only variables for which incremental predictive validity was found over the control variables.

### **Implications**

The current paper contributes to the knowledge in two areas of research. First off, the study provides supportive evidence for the resiliency process model proposed by King and Rothstein (2010) and extends the theory to individuals outside of organizational settings. As well, the application of the Workplace Resilience Inventory developed by McLarnon & Rothstein (in press) provides further evidence that it is a reliable and valid measure that can be applied to individuals who may not have English as a first language.

The study also identified protective factors specific to the context of immigrant job search. This implication is also in line with the contributions to the second area of study. Studies in the area of job search for both immigrant and non-immigrant job seekers have discussed the need for research that identifies factors contributing to individual differences in job search outcomes, as well as the mechanisms of how these factors function (Guerrero & Rothstein, 2010, Kanfer et al., 2001). The current study extends findings regarding job search behaviours to identify how an individual's characteristics interact to influence the person's job search. Language fluency and cultural knowledge were identified in Guerrero and Rothstein's (2010) study as antecedents to job search factors of clarity and self-efficacy. The current study extends those findings by increasing our understanding of the processes through which they influence the job search.

In an applied setting, the identification of protective factors specific to immigrant populations may be of great benefit in shortening the length of time individuals spend

looking for employment. Recognizing variables that buffer against the adversities of the job search, such as repeated rejections and financial strain, may decrease the negative impact job search has on individuals' mental well-being. In turn, with less psychological resources contributed to dealing with the adversities, immigrants can focus on their search for employment.

Organizations designed to assist immigrants in finding employment can use identified factors when designing job search training programs or counseling clients during their job search. As the resiliency process involves the interplay of protective factors through protective mechanisms, programs designed to understand these mechanisms and regulate internal states would help immigrants to maintain focus on their job search. Of particular interest is the identification of factors that can be developed in immigrant job seekers such as cultural knowledge and language fluency which were shown to be valuable for individuals' self-discipline and warding off negative thought patterns. Supportive relationships, which showed beneficial to people's ability to remain flexible in their thinking and maintain a positive outlook, can be fostered in the community through various agencies such as support groups, community centers, or religious organizations. By identifying individual and environmental characteristics that promote the obtainment of gainful employment, and understanding the mechanisms through which they function, steps can be taken to foster these abilities in individuals to increase the likelihood of obtaining employment.

As well, skilled immigrants can take steps to decrease negative responses to the adversities of the job search. Taking language classes to improve fluency may be of benefit for interactions with individuals. Improved language abilities may increase the

acquisition of information pertinent to the job search. As well, courses geared towards improving one's knowledge about the new culture can again help to improve interactions with others and increase the amount of job search information gained from those interactions. Getting involved in the community through volunteer experiences, courses, or other activities through which social networks can be formed, may also be of benefit. The development of a supportive network of relationships showed to be effective in helping individuals adapt during difficult situations. Another benefit from the development of a social support system is the knowledge that can be gained from local members of the community about potential employment opportunities and job search techniques.

### **Limitations and Future Research**

Future research on the resiliency process and skilled immigrant job search should seek to identify and understand the factors and mechanisms that contribute to positive employment outcomes. Studies have found unemployment has detrimental effects on jobs seekers overall well-being, such as increases in depressive symptoms which can stunt future job search efforts (Dooley & Catalano, 1980). Therefore future studies of the resiliency process and job search need to include measures of mental well-being (i.e., life satisfaction, depression inventories) to further understand the psychological effects of job search on immigrants and how individuals overcome them to become successfully employed in their chosen field.

One limitation of the current study is the consecutive, linear process depicted by the model. In the current study, the model depicts a sequential, unfolding process in which constructs lead directly to the next construct with no reciprocal influences or



feedback loops. In actuality, both resiliency and job search are process models and involve personal growth as individuals progress through. Future research in the area needs to encompass the recursive nature of the process.

Another limitation of the study is the cross-sectional design to measure an unfolding process that occurs over a period of time. In order to improve our understanding of how the process manifests, studies need to be conducted in which measures are taken at multiple time points throughout the study in a longitudinal design.

Because of the small sample of participants recruited for the study, issues of low power are of concern. Prior to commencing to the study a power analysis was conducted using the GPower 3.1 program to calculate the necessary number of participants for the multiple regression analyses and moderation analyses using regression. To detect an effect size of .30 or greater, a sample size of 96 participants was required. Sample sizes in the current study varied from 77 to 94 participants, depending on the analyses. Therefore conclusions drawn from the study must be done so with caution.

### **Conclusion**

From the current study three key points of interest can be drawn. The first point is in regard to the role of the resiliency process in the job search of skilled immigrants. The study demonstrated that the resiliency process does play a role in skilled immigrants' job search. Although the study did not find the resiliency process to be related to job search outcomes, significant relationships were found with individuals' confidence in their ability to perform job search behaviours and their job search clarity, which studies have shown to be antecedents to job search outcomes. The second point refers to the personal characteristics of the job seeker. The study increases our knowledge of how

personal characteristics function to influence positive outcomes for individuals experiencing adverse circumstances. Not only did the study support previous work on resilience in which characteristics of the individual were found to play a role in resilient outcomes, but demonstrated that personal characteristics functioned through their influence on self-regulatory processes. The third point is in regard to the presence of protective factors specific to the resiliency process of skilled immigrants. Language fluency and cultural knowledge, both specific factors to immigrant job search, showed influential on the relationship between individuals' interpretations of the job search and their regulation of thoughts. The identification of immigrant specific protective factors is valuable information for both organizations and individuals in order to improve adaptation to the adverse situations and bring about positive employment behaviours.

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## Appendix A – Ethics Approval Form



**Department of Psychology** The University of Western Ontario  
 Room 7418 Social Sciences Centre,  
 London, ON, Canada N6A 5C1  
 Telephone: (519) 661-2067 Fax: (519) 661-3961

**Use of Human Subjects - Ethics Approval Notice**

<b>Review Number</b>	12 02 13	<b>Approval Date</b>	12 02 16
<b>Principal Investigator</b>	Mitchell Rothstein/Kelly Kisinger	<b>End Date</b>	12 04 30
<b>Protocol Title</b>	Job search experiences among skilled immigrants		
<b>Sponsor</b>	n/a		

This is to notify you that The University of Western Ontario Department of Psychology Research Ethics Board (PREB) has granted expedited ethics approval to the above named research study on the date noted above.

The PREB is a sub-REB of The University of Western Ontario's Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario. (See Office of Research Ethics web site: <http://www.uwo.ca/research/ethics/>)

This approval shall remain valid until end date noted above assuming timely and acceptable responses to the University's periodic requests for surveillance and monitoring information.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the PREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of research assistant, telephone number etc). Subjects must receive a copy of the information/consent documentation.

Investigators must promptly also report to the PREB:

- changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- all adverse and unexpected experiences or events that are both serious and unexpected;
- new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to the PREB for approval.

Members of the PREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the PREB.



Clive Seligman Ph.D.

Chair, Psychology Expedited Research Ethics Board (PREB)

The other members of the 2011-2012 PREB are: Mike Atkinson (Introductory Psychology Coordinator), Rick Goffin, Riley Hinson Albert Katz (Department Chair), Steve Lupker, and Karen Dickson (Graduate Student Representative)

CC: UWO Office of Research Ethics

*This is an official document. Please retain the original in your files*



## Appendix B – Ethics Approval Form



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 Telephone: (519) 661-2067 Fax: (519) 661-3961

**Use of Human Subjects - Ethics Approval Notice**

<b>Review Number</b>	12 01 22	<b>Approval Date</b>	12 01 26
<b>Principal Investigator</b>	Mitch Rothstein/Kelly Kisinger	<b>End Date</b>	12 04 30
<b>Protocol Title</b>	Job search experiences among skilled immigrants		
<b>Sponsor</b>	n/a		

This is to notify you that The University of Western Ontario Department of Psychology Research Ethics Board (PREB) has granted expedited ethics approval to the above named research study on the date noted above.

The PREB is a sub-REB of The University of Western Ontario's Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario. (See Office of Research Ethics web site: <http://www.uwo.ca/research/ethics/>)

This approval shall remain valid until end date noted above assuming timely and acceptable responses to the University's periodic requests for surveillance and monitoring information.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the PREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of research assistant, telephone number etc). Subjects must receive a copy of the information/consent documentation.

Investigators must promptly also report to the PREB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to the PREB for approval.

Members of the PREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the PREB.



Clive Seligman Ph.D.

Chair, Psychology Expedited Research Ethics Board (PREB)

The other members of the 2011-2012 PREB are: Mike Atkinson (Introductory Psychology Coordinator), Rick Goffin, Riley Hinson Albert Katz (Department Chair), Steve Lupker, and Karen Dickson (Graduate Student Representative)

CC: UWO Office of Research Ethics

*This is an official document. Please retain the original in your files*



Appendix C - Priming Exercise

Please refer to your own job search experience in Canada when filling out this survey. Please recall any difficult experiences you have encountered during your search for employment. Try to think of specific events that happened during your job search that may have caused these difficult experiences.

Please briefly describe the job search experience that you have recalled

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## Appendix D - Workplace Resiliency Inventory

**Please refer to your own job search experience in Canada when filling out this survey. Please recall any difficult experiences you have encountered during your search for employment. Try to think of specific events that happened during your job search that may have caused these difficult experiences.**

Questionnaires and responses are collected anonymously.  
Please respond to the following items as honestly as possible.

Please read the following statements **keeping in mind difficult experiences during your job search as you respond to each statement.**

Beside each statement you will find five numbers:

1 – Strongly Disagree (on the left) to 5 – Strongly Agree (on the right).

Indicate which number best fits your feelings and responses to the statement.

For example, if you strongly disagree with a statement, circle the “1” corresponding with that statement. If you are neutral circle “3”, and if you strongly agree, circle “5”.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I can control my emotions	1	2	3	4	5
2. I am not easily bothered	1	2	3	4	5
3. I am not easily irritated	1	2	3	4	5
4. I rarely get mad	1	2	3	4	5
5. I get stressed out easily	1	2	3	4	5
6. I get upset easily					
7. My mood changes frequently	1	2	3	4	5
8. I am often overwhelmed by my emotions	1	2	3	4	5
9. I get easily caught up with (involved in) my emotions	1	2	3	4	5
10. I push (challenge) myself very hard to succeed	1	2	3	4	5
11. I am exacting (attentive to details) in my work	1	2	3	4	5
12. I complete tasks successfully	1	2	3	4	5
13. I stop working when it becomes too difficult	1	2	3	4	5
14. I set high standards for myself	1	2	3	4	5
15. I am a goal-oriented person	1	2	3	4	5
16. I maintain my focus on completing tasks	1	2	3	4	5
17. I don't complete tasks that I start	1	2	3	4	5
18. I know how to get things done	1	2	3	4	5

19. I enjoy reading challenging material	1	2	3	4	5
20. I find political discussions interesting	1	2	3	4	5
21. I am interested in a broad range of things	1	2	3	4	5
22. I avoid difficult reading material	1	2	3	4	5
23. I am not interested in abstract ideas	1	2	3	4	5
24. I try to avoid complex people and issues	1	2	3	4	5
25. I try to avoid philosophical discussions	1	2	3	4	5
26. I am not interested in discussing theoretical issues	1	2	3	4	5
27. While searching for employment I was afraid that I would not be able to cope with the change	1	2	3	4	5
28. While searching for employment I was more anxious than usual	1	2	3	4	5
29. While searching for employment I was more stressed than usual	1	2	3	4	5
30. While searching for employment I was unusually depressed	1	2	3	4	5
31. While searching for employment I was unable to maintain a positive outlook on things	1	2	3	4	5
32. While searching for employment I felt as if my world was falling apart (was becoming unmanageable)	1	2	3	4	5
33. I know there is someone I can depend on when I am troubled	1	2	3	4	5
34. I know there is someone that I can go to for advice	1	2	3	4	5
35. I know there is someone that I can count on to be there for me	1	2	3	4	5
36. I feel that there is somebody I can talk to that will listen to my problems and concerns	1	2	3	4	5
37. I know that someone will make time for me if I need them	1	2	3	4	5
38. Since beginning my job search I have more often based my goals in life on feelings, rather than on logic	1	2	3	4	5
39. Since beginning my job search I have preferred to plan my life based on how I feel	1	2	3	4	5
40. Since beginning my job search I have planned my life logically and	1	2	3	4	5

rationally					
41. Since beginning my job search important decisions I have had to make have been based on logical reasoning	1	2	3	4	5
42. Since beginning my job search I have preferred to make decisions based on facts, not feelings	1	2	3	4	5
43. Since beginning my job search I have rarely overindulged (acted excessively)	1	2	3	4	5
44. Since beginning my job search I have often jumped into things without thinking through them	1	2	3	4	5
45. Since beginning my job search I have often liked to act on a whim (act on impulse)	1	2	3	4	5
46. Since beginning my job search I have often made last-minute plans	1	2	3	4	5
47. Since beginning my job search I have been a highly disciplined person	1	2	3	4	5
48. Since beginning my job search I have been able to refrain from doing things that may be bad for me in the long run (over a long period of time), even if they might make me feel good in the short term	1	2	3	4	5
49. Since beginning my job search I have tended to start tasks right away	1	2	3	4	5
50. Since beginning my job search I have found myself procrastinating from work more often	1	2	3	4	5
51. Since beginning my job search I have needed more of a push to get started on a project	1	2	3	4	5
52. Since beginning my job search I have tended to be discouraged easily	1	2	3	4	5
53. Since beginning my job search I have been disappointed with my shortcomings	1	2	3	4	5
54. Since beginning my job search it has been easy for me to look on the bright side	1	2	3	4	5
55. Since beginning my job search I have a dark (negative) outlook for the future	1	2	3	4	5

56. Since beginning my job search I have tended to see potential difficulties everywhere	1	2	3	4	5
57. Since beginning my job search I have questioned my ability to do my work properly	1	2	3	4	5
58. Since beginning my job search I have been filled with doubts	1	2	3	4	5
59. Since beginning my job search I have been afraid I will do the wrong thing	1	2	3	4	5
60. Since beginning my job search I have found it easy to control my thoughts	1	2	3	4	5

## Appendix E - Language Fluency

On a scale from zero to ten, please select the level of ability in speaking, understanding, reading, and writing English.

	None		Poor		Adequate		Good		Perfect		
a. Speaking	0	1	2	3	4	5	6	7	8	9	10
b. Understanding	0	1	2	3	4	5	6	7	8	9	10
c. Reading	0	1	2	3	4	5	6	7	8	9	10
d. Writing	0	1	2	3	4	5	6	7	8	9	10

## Appendix F - Cultural Knowledge

Please think about examples from your personal experiences in Canada reading and talking with others. Please indicate how much you know about Canadian culture in terms of the following items.

	No knowledge		Some knowledge		Very extensive knowledge
1. How much time passes before someone is considered late.	1	2	3	4	5
2. The importance of norms (correct ways of doing things).	1	2	3	4	5
3. The treatment of family members as compared to non-family members.	1	2	3	4	5
4. How and when people express disagreements with each other.	1	2	3	4	5
5. The manner in which negotiations take place.	1	2	3	4	5
6. Whether people want to perform as a member of a group or as an individual contributor.	1	2	3	4	5
7. The extent to which people accept that they should agree with the wishes of powerful people.	1	2	3	4	5
8. Which foods are acceptable to eat.	1	2	3	4	5
9. The acceptance of drinking of alcohol.	1	2	3	4	5
10. The giving and receiving of gifts.	1	2	3	4	5
11. The extent to which people recognize others as equals.	1	2	3	4	5
12. The expectations about the behaviour of men and women	1	2	3	4	5

in the workplace.					
13. The extent to which outsiders are accepted.	1	2	3	4	5

## Appendix G - Job Search Self-efficacy

Using the following scale, please indicate how confident you are (or were in your previous job search) that you can successfully do each of the following job search activities:

	Not at all Confident			Moderately Confident				Totally Confident		
1. Impress interviewers during employment interviews.	1	2	3	4	5	6	7	8	9	10
2. Obtain more than one good job offer.	1	2	3	4	5	6	7	8	9	10
3. Be successful in your job search.	1	2	3	4	5	6	7	8	9	10
4. Prepare a persuasive statement of why you should be considered for a job that will attract the interest of employees.	1	2	3	4	5	6	7	8	9	10
5. Find out where job openings exist.	1	2	3	4	5	6	7	8	9	10



## Appendix H - Job Search Clarity

Please select the level of agreement that best represents what took place during your job search. This section is about whether you had goals during your job search, regardless of whether you have achieved them or not.

	Disagree Strongly						Agree Strongly
1. I had set a goal for the type of job I wanted to have.	1	2	3	4	5	6	7
2. I had set goals for how I would search for a job.	1	2	3	4	5	6	7
3. I had not set any goals for my search for a job	1	2	3	4	5	6	7

## Appendix I - Job Search Satisfaction

Below are five statements with which you may agree or disagree.

Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item.

Please be open and honest in your responding.

The 7-point scale is:

1 = Strongly disagree

2 = Disagree

3 = Slightly disagree

4 = Neither agree nor disagree

5 = Slightly agree

6 = Agree

7 = Strongly agree

1. \_\_\_ In most ways I feel the job search I have conducted has been close to ideal.
2. \_\_\_ I am satisfied with how I am performing my job search.
3. \_\_\_ So far I believe I have performed the activities necessary to find employment.
4. \_\_\_ If I could start my job search over, I would change almost nothing.
5. \_\_\_ I feel I could not have done anything more to improve my job search outcome.

## Appendix J - Job Search Intensity

In the last three months of your current (or most recent) job search, how often did you engage in the following activities?

	Never	Once every couple of weeks			Two or three times per week	
	Every 3 to 4 weeks or less			Every week	Every day	
1. Prepared and revised my résumé.	1	2	3	4	5	6
2. Sent or emailed résumés to potential employers.	1	2	3	4	5	6
3. Filled out or submitted a job application.	1	2	3	4	5	6

Appendix K - Job Search Outcomes

1. How many interviews have you had in Canada?
2. How many of those interviews were for jobs in your preferred occupation?
3. How many job offers have you had in Canada?
4. How many of those job offers were for jobs in your preferred occupation?

## Appendix L - Current Job Search

Please provide the answer that most accurately describes your current job situation.

1. Are you currently looking for a job? Yes \_\_\_\_ No

If you are employed but looking for another job, please answer yes.

*(If the answer is no, please go to question 3)*

2. How many months have you been looking for a job?

3. Are you currently employed? Yes \_\_\_\_ No

Please answer the following section considering your current job.

	Strongly Disagree						Strongly Agree
a. I am overeducated for this job.	1	2	3	4	5	6	7
b. I have more formal education than this job requires; that is, someone with less formal education could perform my job well.	1	2	3	4	5	6	7
c. I feel overqualified for my current job	1	2	3	4	5	6	7
d. I can imagine more challenging jobs than the one I have.	1	2	3	4	5	6	7
e. I feel underemployed on this job	1	2	3	4	5	6	7

4. Approximately, how many months did it take you to get your current job?

5. Currently, what is your job title?

Please answer the following in reference to your current (or most recent job search in Canada):

6. The job that you are seeking (or the one you were previously seeking) primarily uses:

People skills (e.g. communication, leadership, working in a team, etc.)

- Technical or functional skills (e.g. finding information, processing data, etc.

## Appendix M - Demographics

## Individual Information

1. Please check your highest education level (or approximate Canadian equivalent to a degree obtained in a different country):
  - Less than High School
  - High School diploma
  - Some College
  - Obtained College degree
  - Some University
  - Obtained University degree
  - Some Graduate School (Masters PhD, MD, JD)
  - Obtained Masters, PhD, MD, JD
  - Other:
2. In what country did you obtain your highest degree?
3. Please indicate the immigration class in which you entered Canada:
  - Skilled worker or provincial nominee
  - Business class (investor, entrepreneur, self-employed)
  - Family class
  - Live-in caregiver
  - Refugee or refugee claimant
  - Temporary worker
  - Temporary student
  - Other
4. In what country were you born?
5. How long have you lived in Canada?
6. Gender:  
Male \_\_\_\_\_ Female
7. Age:
  - 19 or under
  - 20-24
  - 25-29
  - 30-34
  - 35-39
  - 40-44
  - 45-49
  - 50-54
  - 55-59
  - 60 and over
  - Prefer not to answer

## 8. Marital status

- Never married
- Married
- Widowed
- Divorced
- Separated

## 9. Number of dependents?

## 10. What occupational class are you seeking employment in?

- Management occupations
- Business, finance, and administration occupations
- Natural and applied sciences and related occupations
- Health occupations
- Sales and services
- Trades, transport, and equipment operators and related occupations
- Natural resources, agriculture and related occupations
- Occupations in manufacturing and utilities
- Occupations in art, culture, recreation, and sport



## Appendix N – Perceived Financial Need

	Not at all difficult				Extremely difficult
1. How difficult is it for you to live on your total household income right now?	1	2	3	4	5
	Not at all				A great deal
2. How much would not having another job in the next two months create actual hardships for you and your family, such as inadequate housing, food, or medical attention?	1	2	3	4	5
3. How much would not having a job in the next two months reduce your standard of living to the bare necessities of life?	1	2	3	4	5

Curriculum Vitae  
**Kelly Kisinger**

**EDUCATION**

**Masters of Science in Industrial/Organizational Psychology** (in progress)  
University of Western Ontario, London, Ontario

**Bachelor of Arts Degree in Psychology** (2009)  
University of Calgary, Calgary, Alberta  
GPA: 3.93

**SCHOLARSHIPS AND AWARDS**

- Social Sciences and Humanities Research Council of Canada (SSHRC) – Joseph Armand Bombardier Canada Graduate Scholarship, Master's, 2011, \$17,500
- Wilfred Archibald Walter Bursary, University of Calgary, 2008, \$2,500
- Louise McKinney Scholarship, University of Calgary, 2008, \$2,500

**RESEARCH EXPERIENCE**

**Research Assistant**, May 2011 – July 2011  
University of Western Ontario, London, ON  
Supervisor: Dr. Mitch Rothstein

- Conducted literature searches
- Collaborated on questionnaire design
- Participated in research discussions

**Research Assistant**, Sept. 2007 – 2010  
Red Deer College, Red Deer, AB  
Supervisor: Dr. Bob Uttl

- Conducted literature searches, analyzed, and summarized findings
- Participated in research discussions and seminars
- Administered questionnaires and tests to research participants
- Collaborated on study designs
- Coded avalanche accident records using content analysis
- Scored eyewitness reports for the presence and absence of conditions
- Entered data
- Performed statistical analyses
- Presented findings at professional conferences

**Research Assistant**, May 2009 – 2010  
LifeMark Health Center, Calgary, Alberta  
Supervisor: Dr. Amy Siegenthaler

- Entered data from neuropsychological test protocols
- Conducted literature searches
- Conducted statistical analyses

## **EMPLOYMENT EXPERIENCE**

**University of Western Ontario, Teaching Assistant**, September 2011 – present  
London, Ontario

- Teaching assistant coordinator for undergraduate research methods course
- Acting liaison between course professors and teaching assistants
- Provide direction and address course related issues raised by fellow teaching assistants
- Administer the setup and smooth operation of lab component of the course

**University of Western Ontario, Teaching Assistant**, September 2009 – Present  
London, Ontario

- Conduct lectures and facilitate class discussions
- Marked assignments
- Facilitated students in the completion of their own research studies
- Proctored student examinations
- Acting liaison between course professors and teaching assistants

## **REFEREED PUBLICATIONS**

Uttl, B., & Kisinger, K. (2010). *Meaning of Missing Values in Eyewitness Recall and Accident Records*, PLoS One, 5(9): e12539. doi:10.1371/journal.pone.0012539

## **CHAPTERS AND CONFERENCE PROCEEDINGS**

Uttl, B., Kibreab, M., Kisinger, K., & Uttl, J. (2009). *Trend Analysis of Canadian Avalanche Accidents: The Avaluator Avalanche Accident Prevention Card Has Not Reduced the Number of Accidents*. Proceedings of the International Snow Science Workshop, Davos, Switzerland, pp. 610-613.

Uttl, B., Kisinger, K., & Kibreab, M. (2009). *Avaluator's Obvious Clues Prevention Values Are Inflated: Evidence from Canadian Avalanche Accidents*. Proceedings of the International Snow Science Workshop, Davos, Switzerland, pp.619-622.

Uttl, B., & Kisinger, K. (2009). *Pitfalls in the Analyses of Accident Records: The Meaning of Missing Values*. Proceedings of the International Snow Science Workshop, Davos, Switzerland, pp. 614-618.

## **CONFERENCE PRESENTATIONS**

Uttl, B., Kisinger, K., McDouall, J., Mitchell, C., & Uttl, J. (2010). *Human factors in*

*avalanche avoidance and survival: Consequences of violating the rules of safe travel.* Poster presented at the International Snow Science Workshop, California, United States.

Uttl, B., Kibreab, M., Kisinger, K., & Uttl, J. (2009, September). *Trend analysis of Canadian avalanche accidents: The Avaluator avalanche accident prevention card has not reduced the number of accidents.* Paper and poster presented at the International Snow Science Workshop, Davos, Switzerland.

Uttl, B., & Kisinger, K. (2009, September). *Pitfalls in the analyses of accident records: The meaning of missing values.* Paper and poster presented at the International Snow Science Workshop, Davos, Switzerland.

Uttl, B., Kisinger, K., & Kibreab, M. (2009, September). *Avaluator's obvious clues prevention values are inflated: Evidence from Canadian avalanche accidents.* Paper and poster presented at the International Snow Science Workshop, Davos, Switzerland.

Uttl, B., & Kisinger, K. L. (2009, July). *Analyses of accident records: Meaning of missing values?* Paper presented at the Canadian Society for Brain, Behaviour and Cognitive Science, York, UK.

Uttl, B., & Kisinger, K. L. (2009, July). *Analyses of accident records: What is the meaning of missing values?* Paper presented at the Society for Applied Research in Memory And Cognition, Kyoto, Japan.

Uttl, B., Kisinger, K., Kibreab, M., & Uttl, J. (2009, May). *Canadian avalanche accidents: Avaluator's obvious clues prevention values are inflated.* Poster presented at the Banff Annual Seminar in Cognitive Science, Banff, AB.

Uttl, B., & Kisinger, K. (2009, May). *Analyses of accident records: Meaning of missing values.* Poster presented at the Banff Annual Seminar in Cognitive Science, Banff, AB.

Uttl, B., Kibreab, M., Kisinger, K., & Uttl, J. (2009, May). *Trend analysis of Canadian avalanche accidents: Avaluator avalanche accident prevention card has not reduced number of accidents.* Poster presented at the Banff Annual Seminar in Cognitive Science, Banff, AB.

Uttl, B., Kibreab, M., Kisinger, K., & Uttl, J. (2009, March). *Trend analysis of Canadian avalanche accidents: Avaluator avalanche accident prevention card has not reduced number of accidents.* Poster presentation at 5th Annual Student Perspectives Conference, Red Deer, AB, Canada.

Uttl, B., & Kisinger, K. (2009, March). *Analyses of accident records: Meaning of missing values.* Poster presented at the 13th Annual Student Perspectives Conference, Calgary, AB, Canada.

Uttl, B., & Kisinger, K. (2009, March). *Analyses of accident records: Meaning of missing values.* Poster presented at the 5th Annual Student Perspectives Conference, Red Deer, AB, Canada.

Uttl, B., Kisinger, K., Kibreab, M., & Uttl, J. (2009, March). *Canadian avalanche accidents: Avaluator's obvious clues prevention values are inflated.* Poster presented at the 5th Annual Student Perspectives Conference, Red Deer, AB, Canada.

- Uttl, B., Kisinger, K., Henry, M., & Odegard, B. (2008, June). *Meta-analysis of meta-analysis: Transparency matters*. Poster presented at the Canadian Society for Brain, Behaviour and Cognitive Science, London, ON, Canada.
- Uttl, B., Kisinger, K., Henry, M., & Odegard, B. (2008, March). *Meta-Analysis of Meta-Analysis: Pictures That May Save Thousands of Trees*. Poster presented at 4th Annual Student Perspectives Conference, Red Deer College, Red Deer, AB, Canada.