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Testing Moderating Effects for the Causal Structure Model of Self-Action-Outcome (SAO Model).

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Abstract

This study focuses on developing the Self-Action-Outcome (SAO) model and testing the moderating effects based on gender and academic performance. The SAO model examined the relationship between self-esteem, job-search intensity and career decision-making self-efficacy among graduating students. The instruments used to develop this model were, the Rosenberg Self-Esteem Scale, Job-Search Intensity Scale, and Career Decision-Making Self-Efficacy Scale. Participants were recruited using a cluster sampling procedure. Data were collected using a self-reported questionnaire. Data collected from 678 graduating students were tested with confirmatory factor analysis to obtain three best-fit measurement models from the three latent variables. The results showed that the overall fit of the SAO model was adequate with CFI = .977, TLI = .971 and RMSEA = .048. The statistics indicate that the parameters were free from offending estimates, ranging from .52 to .90. The moderators' variables such as gender and academic performance did not moderate the hypothesized SAO model means that the hypothesized SAO model is a good model among graduating students. Implications of the findings for social work practice such as guidance counsellor, research, theory, policy and education were also discussed.

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Keywords: Moderating effects, gender, academic performance, SAO model and graduating students.

Introduction

In the twenty-first century workplace, possessing a bachelor degree is no longer the passport to secure jobs (Mazwin, 2006). Employers are increasingly looking for more than just content knowledge and hard skills; they want 'work-ready' graduates with desired soft-skills. Employers worldwide have been critical about graduates and their readiness for the world of work (NCIHE, 2009). Similarly, Malaysian employers are generally not happy with

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the level of soft-skills possessed by graduates entering the workforce. According to Malaysian employers, Malaysian graduates normally were qualified in their area of studies, but they lacked self-confidence and skills in preparation for job-search (Zuraidah, 2008), and their main drawbacks are lack of positive attitude, confidence, and prepare for job-search (Lazaroo, 2008). In other words there has been lack of soft-skills and competency among newly graduating students (self-confidence, positive attitude, job-search preparation skills, and communication skills) in relation to employability

These drawbacks are closely related to self-esteem, job-search behaviour and career decision-making self-efficacy as the variables involved in the present study. Self-esteem has a vast definition by different scholars. For example, self-esteem is refers as an overall evaluation of oneself in either a positive or negative way and believes himself or herself to be competent and worthy of living (Ranjit, 2009). Self-esteem is also viewed as a global judgment of the worth or value of the self (Crocker, 2004). Job-search intensity is defined as the frequency whereby job seekers engage in job-search activities such as preparing a resume or contacting an employment agency (Kanfer, Wanberg, & Kantrowitz, 2001). Career decision-making self-efficacy specifically refers to individuals' feelings of competency in their abilities for self-appraisal, gathering occupational information, selecting career goals, engaging in career planning, and problem solving when difficulties are encountered (Swanson, & D'Achiardi, 2005).

Several studies had investigated certain variables related to self-esteem (Salmero-Aro, & Nurmi, 2007; Baumeister, Campbell, Krueger, & Vohs, 2003; Schaufeli, Martinez, Marques Pinto, Salanova, & Bakker, 2002; Betz, 2004 and Saks, 2005) , job-search intensity (Aharon, Efrat, & Limor, 2004; Crossley & Stanton, 2005; Brown, Cober, Kane, Levy, & Shalhoop, 2006; Cote, Saks, & Zikic, 2006) and career decision-making (*Feinstein-Messinger*, 2007; *Ennis*, 2006; **Montgomery**, 2006; *Crespin*, 2006; Foster, 2005 and **Rowland**, 2004). However, there has been little discussion about the relationship on these three variables. Knowing about our own self (Self-knowledge), behaviour (Action) and the results (Outcome) is very important for the job seekers, especially for the graduating students before they enter the job market. Therefore, this study aimed to examine the relationship between self-esteem (individual differences variable), job-search intensity (job-search behaviour) and career decision-making (outcome predictor) among graduating students and propose a model of self-action-outcome for the graduating students. To validate the SAO model, testing moderating effects were used based on gender and academic performance.

Objective of the Study

The research objective and the hypotheses tested for this study are as follows:

Research Objective:

RO 1: What is the propose model of SAO based on self-esteem, job-search intensity and career decision-making self-efficacy?

RO 2: Does gender moderates the causal structure of the SAO model?

RO 3: Does academic performance moderates the causal structure of the SAO model?

Hypotheses:

H1: Gender moderates the causal structure of the SAO model.

H2: Academic performance moderates the causal structure of the SAO model.

Literature Review

Self-Esteem

Many studies have been conducted to examine the relationship between self-esteem and academic achievement among students, for example studies which focused on the level of self-esteem and academic self-image, (Nurzarimah, 2002), emphasized between self-esteem and students' academic achievement, (Siti Mariam, 2006), and relationship of academic and general self-esteem to school achievement among students (Pullmann & Allik, 2008). Students who have high self-esteem are usually the students with high academic self-image and they are capable and confident of their academic work (Nurzarimah, 2002). Another study, conducted a survey related with general self-esteem and academic achievement for the students age ranging from 17 to 40 years old at the University of Tartu. The academic achievement was measured through the Grade Point Average (GPA), general self-esteem was measured by the Rosenberg Self-Esteem Scale (RSES). Academic self-esteem was measured to assess students' academic self-esteem or perception of self-competence in the academic domain. Results showed that relationship between general self-esteem and school performance was significantly positive. Students who thought highly about their academic competence tended to have a higher self-esteem with an increase of their school grades (Pullmann & Allik, 2008).

In summary, research related to self-esteem as the main variable has been studied by various researchers. Studies related to self-esteem and academic achievement have been done by Nurzarimah (2002), Siti Mariam (2006), and Pullmann and Allik (2008). Whereas, studies conducted by McMullin and Cairney (2004), Kundu & Rani (2007), Sherina et al. (2008), Karagozoglu et al. (2008), and Duran and Tezer (2009) have explored the relationships between self-esteem, age, and gender.

The current research will focus on the aspects of global self-esteem and the relationships between job-search intensity and career decision-making self-efficacy as a self-action-outcome (SAO) model among students. This model will be tested to find out whether graduating students' academic achievement, gender, faculty and residential setting influence the causal structure of the SAO model.

Job Search Intensity

Studies related to job-search intensity and other variables have been done previously, such as job-search intensity, self-concept and personality (Suzuki, 2005; Aharon et al. 2004; Crossley & Stanton, 2005; Brown et al. 2006; Boswell, Roehling & Boudreau, 2006; and Cote et al. 2006), job-search intensity' and employment, (Kanfer et al. 2001; Barber, Daly, Giannantonio, & Philips, 1994; Saks & Ashforth, 2000; Wanberg et al. 2002; Werbel, 2000; and Cote et al. 2006), job-search intensity as a measure of the frequency of job seeking behaviours (Kulik, 2000 & 2001; Saks & Ashford, 1999 & 2000; Tziner, Vered & Ophir,

2007; Vinokur & Schul, 2002; Wanberg et al. 1999 & 2000; Werbel, 2000), job seeking behaviour and outcomes (Mau & Kopischke, 2001; Saks, 2006; Van Hooft, Born, Taris & Flier, 2004; Sverko et al. 200; Creed et al. 2008), and job-search objectives and job-search methods (Haye & Saks, 2008; Stevenson, 2008; Koen et al. 2010),

Based on the research done with undergraduate students in Japan, Suzuki (2005) found that the job-search for undergraduates was extremely difficult for students with low self-esteem. Self-confidence had to be built before beginning the job-search. Job-search strategies had a connection between personality traits (extraversion, conscientiousness, openness) and general search (advertisements, employment agencies) (Aharon et al. 2004).

In addition to the previous studies, the current research focuses on the relationship between job-search intensity and self-esteem. As mentioned by Schwab et al. (cited in Saks, 2005), self-esteem is the most common personality variable included in job-search, and a number of studies have found that self-esteem predicts job-search behaviour. Undergraduate students have to build self-confidence before beginning the job-search (Suzuki, 2005) which is similar to the respondents in the current research.

Career Decision-Making

Decision-making is the process of identifying and choosing action to solve a problem. Career decision-making is something that occurs throughout life as people seek to manoeuvre through education, work, and other life experiences. Career decision-making process requires the decision-making techniques, people perceptions, need for a decision, and how decisions are implemented (Amundson, 2005).

Studies on career decision-making self-efficacy related to gender and ethnicity have been conducted by many researchers such as, Weiss (2000), Melati (2006), Aleidan (2002), Barry Chung (2002), and Feinstein-Messinger (2007). Studies conducted by Weiss (2000) and Melati (2006) showed that gender and ethnic affect career decision-making self-efficacy. Weiss (2000) in his study examined gender and racial/ethnic differences in perceived career barriers, career decision-making self-efficacy, and vocational indecision. The results showed that hypothesized relationships among career barriers, career decision-making self-efficacy, and indecision were supported. Gender and racial/ethnic differences were also found in both total barrier scores and specific barrier scales among Asian American, Black/African American, and Caucasian students. Similarly the finding by Melati (2006) indicated that gender and ethnicity factors affected career decision-making self-efficacy. The study indicated that there was a difference in career decision-making self-efficacy between male and female students and among the three ethnic groups.

Conversely, the finding from the studies by Aleidan (2002), Barry Chung (2002) and Feinstein-Messinger (2007) showed that there was no significant relationship between gender and career decision-making self-efficacy. The study examined the relationship between career decision-making self-efficacy, occupational preferences, and gender (Aleidan, 2002). The results of the study found no significant relationship between gender and career decision-making self-efficacy. Career decision-making self-efficacy was not related to occupational preferences for any of the fields in this study. Moreover, Barry Chung (2002) evaluated the career decision-making self-efficacy scale short form using the career commitment scale as a criterion measure. However, no gender or ethnic differences were found in the correlation. Furthermore, Feinstein-Messinger (2007) also examined the contribution of ethnic identity, parental attachment, and career decision self-efficacy to the career difficulties of college

students. Results from the findings showed that there were no significant differences in career decision self-efficacy among the different racial and ethnic groups.

Previous studies focused on career decision-making and the effect of other moderators' variables to career decision-making. The current research will investigate the career decision-making self-efficacy and its relationships with self-esteem and job-search intensity as a self-action-outcome (SAO) model among students. Other moderators' variables that predict the causal structure of the SAO model such as gender and academic performance, among the graduating students will be tested.

Research Model

As illustrated in Figure 1, there are three unobserved variables also known as latent variables or dependent variables. All three latent variables – Self-Esteem (SE), Job-Search Intensity (JSI) and Career Decision-Making Self-Efficacy (CDMSE) are indicated by ovals or circles. The first latent variable, self-esteem (SE), is assumed to cause variation and covariation between the ten observed variables or indicators represented by boxes on its left, indicated by arrows from the latent SE variable. The ten indicators or observed variables are se1 (self-esteem 1), se2 (self-esteem 2), se3 (self-esteem 3), se4 (self-esteem 4), se5 (self-esteem 5), se6 (self-esteem 6), se7 (self-esteem 7), se8 (self-esteem 8), se9 (self-esteem 9), and se10 (self-esteem 10) (Rosenberg, 1965).

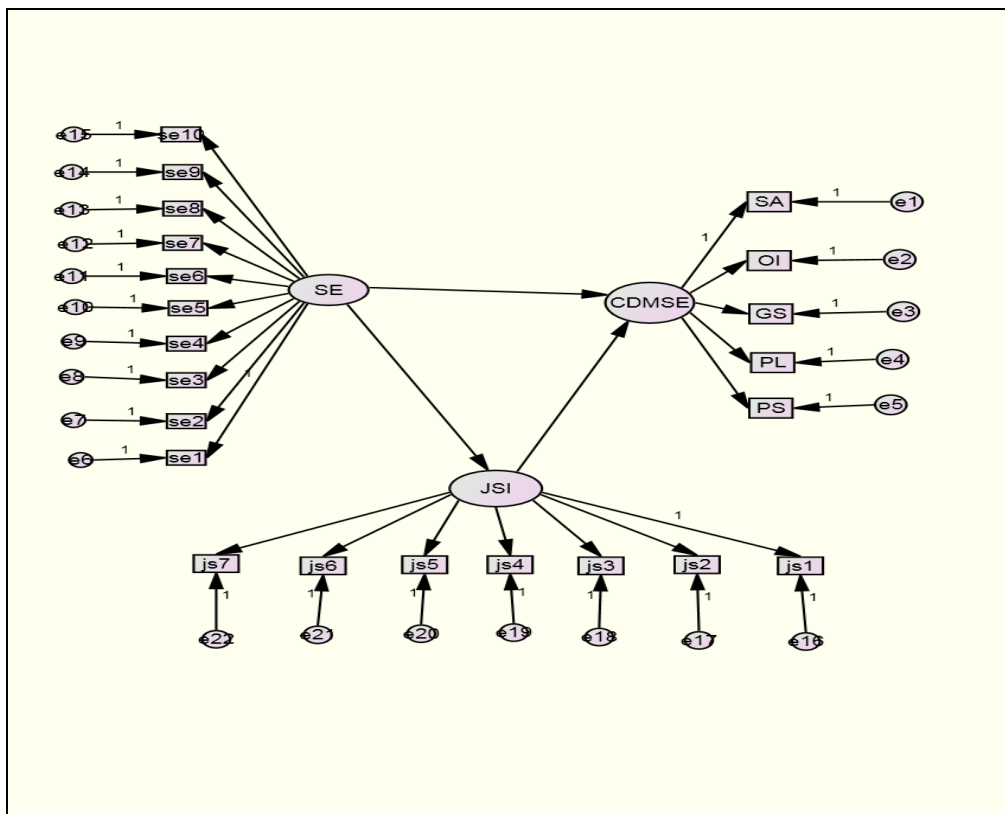


Figure 1: The research framework (Self-Action-Outcome model)

The second latent variable is job search intensity (JSI). As a latent or unobserved variable, JSI is also assumed to cause variation and covariation between the seven observed variables or indicators represented by another seven boxes, indicated by arrows coming from the latent JSI variable. The observed variables for JSI are js1 (job-search intensity 1), js2 (job-search intensity 2), js3 (job-search intensity 3), js4 (job-search intensity 4), js5 (job-search intensity 5), js6 (job-search intensity 6), and js7 (job-search intensity 7) (Wanberg et al., 2000; Blau, 1994).

The third and last latent or unobserved variable in the research framework is CDMSE or career decision-making self-efficacy. Another five variables in boxes are indicated by arrows from the latent variable CDMSE. In the same way as the other two latent variables, CDMSE is assumed to cause variation and covariation between the five observed variables or constructs – self-appraisal (SA), occupational information (OI), goal selection (GS), planning (PL) and problem solving (PS) (Betz, Klein & Taylor, 1996).

The three latent variables later made up the hypothesized confirmatory factor model. Accordingly, in reference to the research framework, there were three purposes here. First, it aimed to obtain estimates of the parameters of the three confirmatory models, i.e. the factor loadings, the variance and covariance of the factors, and the residual error variances of the observed variables. The second purpose was to assess the fit of the model, i.e. to assess whether the model itself provided a good fit to the data. The third purpose was to validate the structural model group-invariant, i.e. to assess whether the moderator variables (gender-, academic performance-, faculty-, and residential setting-) influence the causal structure of the SAO model.

Data Analysis

This research was a survey-based type and participants were recruited using cluster sampling procedure. This research used the test-retest to determine the reliability of the instrument, and then SEM to test the validity of the constructs. To testing the moderating effects based on gender and academic performance, on Self-Action-Outcome (SAO) model, the frequency and percentage distributions of the respondents according to personal characteristics setting are shown below.

Table 1: Respondents' distribution based on gender and academic performance

Respondents' Distribution	Type	Frequency	Percentage
Gender	Male	404	59.4
	Female	274	40.6
Academic Performance	Low (2.00-2.99)	356	52.5
	High (3.00-4.00)	322	47.5

Figure 2 presents the empirical results of hypothesized structural relationship (SAO) model of self-esteem, job-search intensity, and career decision-making self-efficacy. The overall fit of the model was adequate with CFI = .977, TLI = .971 and RMSEA = .048. The statistics indicate that the parameters were free from offending estimates, ranging from .52 to .90. The CFI (.977) and TLI (.971) fit indicators exceeded the threshold of .90, indicating a very good fit. The root mean square error of approximation (RMSEA = .048) has met the cut-off point requirement for a reasonable error of approximation. The normed chi-square of 2.578 for a good fit is also met (Byrne, 2010). The final fit index indicates that the test failed to reject the hypothesized model. Therefore, there is strong significant relationship with value of .35 between self-esteem and career decision-making self-efficacy among graduating students. There is significant relationship with value of .27 between job-search intensity and career decision-making self-efficacy among graduating students and there is significant relationship but rather weak with value of .15 between self-esteem and job-search intensity among graduating students. As such, the researcher concludes that the Figure 2 to be the validated structural equation model. Therefore, a Self-Action-Outcome (SAO) model is developed as shown in Figure 2.

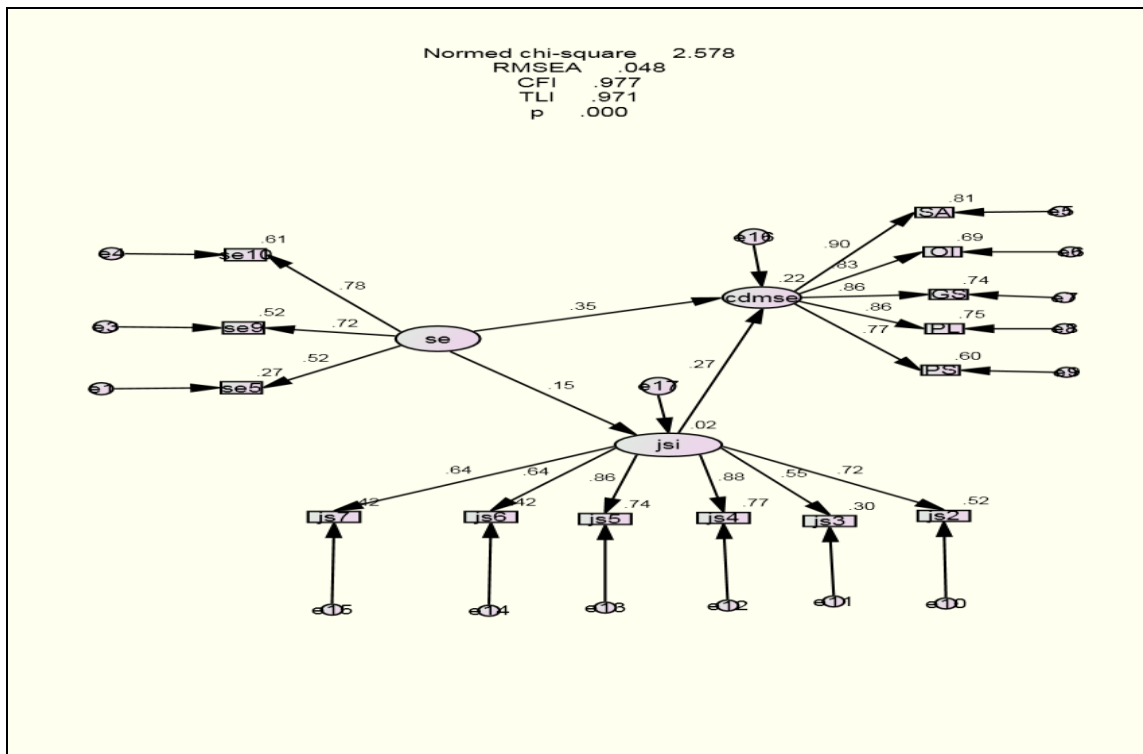


Figure 2: Self-Action-Outcome (SAO) model of self-esteem, job-search intensity and career decision-making self-efficacy

To answer hypothesis 1 and 2 in this multi-group analysis, hypothesized SAO model is constructed to test the adequacy of the model based on a four step procedure (Hair et al, 2010). The four steps involved are: Step 1 – to test the adequacy of the hypothesized SAO model on pooled data, Step 2 - to test the hypothesized SAO model for each group separately. , Step 3 - to test the structural equivalence (configural) invariance across samples simultaneously-creation of baseline model. Step 4 – to test for metric invariance, at varying degree of stringency: i) equality of loadings, ii) equality of variances & covariances. Findings for these hypotheses as shown in Table 2.

Table 2: Summarized Results of Multiple Group Modeling – Gender and Academic performance invariant

	χ^2	df	χ^2 Change	Critical-Value
Gender				
Baseline	309.43	148	17.80	36.12
Constrained	327.23	162		
Academic Performance				
Baseline	305.01	148	18.79	36.12
Constrained	323.79	162		

Statistically significant at .001

The factor loadings for the tested baseline model for gender in the male and female groups' model are substantially significant with the chi-square (χ^2) of 309.432 with df of 148. The factor loadings for tested constrained model in the male and female groups' model are substantially significant with the chi-square (χ^2) of 327.230 with df of 162.

The factor loadings for the tested baseline model for academic performance in the low academic performance and high academic performance groups' model are substantially significant with the chi-square (χ^2) of 305.006 with df of 148. The factor loadings for tested constrained model in the low academic performance and high academic performance groups' model are substantially significant with the chi-square (χ^2) of 323.793 with df of 162.

Table 2 shows the result that critical values (χ^2 value table) more than χ^2 change means that the hypothesized SAO model is a good model. The result shows that gender and academic performance did not moderate the causal structure of the hypothesized SAO model among graduating students.

Discussion

The summarized results of multiple groups modeling from Table 2 show that the difference in the chi-square values between the baseline model and the constrained model do not produce a poorer-fit model. The path coefficients do not vary significantly across gender (male and female) and academic performance (high academic and low academic. It can be concluded that gender and academic performance are not moderating variables to mediate the SAO model.

Gender chi-square critical value (36.12) bigger than chi-square change (17.80) means that the hypothesized model (SAO model) is a good model. In fact, gender does not mediate the SAO model which is in contrast to the finding from other scholars which found that gender mediated self-esteem (Duran & Tezer, 2009, Karagozolu et al. 2008, Sherina et al.

2008, Kundu & Rani, 2007, Aricak, 2007, and McMullin & Cairney, 2004). Another study done by Mau & Kopischke (2001) reported that gender influenced job-search intensity, and also career decision-making (Melati, 2006, Gushue, 2006, and Foster, 2005).

Similarly, the finding of this research supports other findings (Norida, Tajudin & Kalthom, 2012; Feinstein-messenger, 2007; Aleidan, 2002; and Barry Chung, 2002) in which gender did not mediate career decision-making. More importantly, the present research finds that gender does not influence students' self-esteem, job-search intensity and career decision-making self-efficacy when all the three variables are combined in a relationship model as an SAO model. It shows that the SAO model is a good fit model and did not mediate by gender. This finding is in contrast to other findings because this research tested the SAO model which included self-esteem, job-search-intensity and career decision-making self-efficacy. Previous researchers tested each variable separately with gender.

Structural invariance across academic performance from this research shows that chi-square critical value (36.12) bigger than chi-square change (18.79) means that academic performance does not mediate the SAO model. Results from previous researchers (Pullmann & Allik, 2008; Nurzarimah, 2002; and Siti Mariam, 2006) found that academic achievement mediated students' self-esteem which is in contrast to the findings of this research. However, the result from this research is congruent with the results of the study done by Van der Klaauw and Van Vuuren,(2010) which found that job-search effort was not influenced by academic achievements of students when entering the labour market. Indeed, academic achievement does not mediate job-search intensity among students. More importantly, the present research finds that academic performance does not influence students' self-esteem, job-search intensity and career decision-making self-efficacy when all the three variables are combined in a relationship model as an SAO model. It shows that the SAO model is a good fit model and did not mediate by the academic performance.

In conclusion, based on the results of multiple groups modelling across gender (male and female) and academic performance (high academic and low academic), it can be concluded that the hypothesized SAO model results have validated a good-fit. Gender and academic performance are not moderating variables to influence the SAO model. The present study is focused on testing the moderating effect based on gender and academic performance on SAO model that was developed previously. Furthermore, it would be interesting to investigate other moderator variables involved that can be tested again to prove the validity of a good-fit of SAO model.

The findings of the present research have expanded the knowledge on relationship among self-esteem, job-search intensity, and career decision-making self-efficacy among graduating students. The results indicate that self-esteem is strongly related to career decision-making self-efficacy among graduating students. The self-esteem and career decision-making self-efficacy has a positive relationship in the full fledged structural equation modeling model. Result of this finding shows that if self-esteem increase the career decision-making self-efficacy also increase among graduating students. Therefore, it is important for the graduating students to build up their self-esteem in order to make them more confident in preparing themselves for career. Individuals with high self-esteem are generally confident of themselves, self-directed, decisive, loving and lovable, eager to express idea, assertive and get along well with others. They also accept themselves unconditionally and are willing to take calculated risks (Ranjit, 2009).

The results indicate that the job-search intensity have a significant relationship with career decision-making self-efficacy. Result of this finding shows that if job-search intensity increase the career decision-making self-efficacy also increase among undergraduates' students. Therefore, it is important for the graduating students to actively involve with job search behaviour in order to make them more confident in preparing themselves for career. The finding of the research affirms the study done by others researchers (Kanfer, Wanberg, & Kantrowitz, 2001; Salmero-Aro, & Nurmi, 2007; Saks, 2005; Tziner, Vered, & Ophir; 2004, and Saks, & Ashforth, 2000) and shows that there is a significant relationship between job-search intensity and career decision-making self-efficacy.

The results also indicate that self-esteem have a significant relationship with the job-search intensity. Therefore, it is important for the graduating students to build up their self-esteem in order to make them more productive behaviour. Individuals with high self-esteem will take more risks in job selection and more likely to choose unconventional jobs than people with low self-esteem (Ranjit, 2009). Individuals with high self-esteem tend to be successful in their job searches than those with low self-esteem.

The results of the research have highlighted several invaluable contributions of the conceptual framework and implications for professionals practitioners. Based on the theoretical implication, the results of this research support the idea of the relationship among self-esteem and job-search intensity with career decision-making self-efficacy as mentioned in Saks' model (2005). Based on this model, self-esteem has a relationship with the job choice decision-making. On the whole, students who are good at career decision-making and choose a quality job and employments are students who have high self-esteem.

The main practical contribution of this study for practitioners is to bring to their attention the relationship among self-esteem, job-search intensity and career decision-making self-efficacy. The results are useful in helping the transition process of students from university to work. Such information could lead to an improvement in planning and policy-making for the development of a more effective and efficient counselling and career guidance system in the university settings. Practices of counselling by Guidance Counsellors are to provide guidance to students in preparing for their working life. This includes the development of attitude, beliefs, and students' psychological development.

Based on tracer study reported by the Ministry of Higher Education Malaysia (MOHE), only 23.5% of the students sought help from the guidance and counselling services centre, and only 39.9% of the students sought help related to career guidance (Tracer study report 2007). This report indicated a gap in the MOHE tracer study. The gap is caused either by the guidance counsellor, counselling service or the graduates. As a policy maker at the Ministry of Higher Learning, the MOHE can enforce undergraduate students to go through the process of career guidance in preparing them for the world of work. At the same time it is possible to make it compulsory for universities to offer courses or programmes for the career guidance centre related to help prepare student readiness for the careers available.

Career counsellors can assist through training workshops and provided with tools, manuals, annual labour supply/demand report. Alumni mentorship programmes can be created to link students with successful alumni working in a career field of similar interest. Online community portal can include an interactive website for posting questions and answers to facilitate collaboration among career counsellors, students, new graduates and employers. It is imperative for policy makers at faculty or centre level to scrutinize the contents in educational institutions. Curricula with psychology and soft skills will go a long way in building student confidence in dealing with the environment of work. Hopefully, issues pertaining to students soft-skills and confidence level as reported in the UNESCO

report (UNESCO Report, 2007) as well as feedback from CEO of large corporations (Zuraidah, 2008, Lazaroo, 2008) can be dealt and looked into.

The current study used the self-report methodology without any external corroboration, thus, the findings are limited to what have been included in the self-report measures. Future study needs to address this limitation. Longitudinal studies using self-report measures combined with other research methods, including qualitative methods (e.g., interviewing, observations), would be likely to reveal more outcomes that may be useful in understanding students' self-esteem, job-search intensity, and career decision-making process of young adults.

Conclusion

In conclusion, this study examined the relationship between self-esteem, job-search intensity and career decision-making self-efficacy among graduating students.

The hypothesized structural relationship (SAO) model of self-esteem, job-search intensity, and career decision-making self-efficacy was developed. The findings show that the moderators' variables such as gender and academic performance did not moderate the hypothesized SAO model means that the hypothesized SAO model is a good model among graduating students.

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