Asia Pacific Education Review
2008, Vol. 9, No.2, 157-167.

A Typology of Career Barriers

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While most studies have focused primarily on the correlates of career barriers, research examining specific career barrier typology experienced among college students remains limited. Employing cluster analysis, this study explored the career barrier typology of 318 college students using the Korean college students' Career Barrier Inventory (KCBI). The variables used in this study included 'personality' (hardiness, trait anxiety, locus of control, resilience, and optimism) and 'career maturity attitude'. Two major conclusions were drawn. Firstly, cluster analysis of the KCBI identified four groups of participants; (a) a salient external career barrier group, (b) a well adjusted group, (c) a salient internal career barrier group, and (d) the worst career barrier group. Secondly, the results suggest discrepant differences of personality variables and career attitude maturity among the clustered groups. Limitations of the present study and suggestions for future research are also discussed.

Key words: career barriers, typology, personality variables, career maturity attitude

Introduction

Although the importance of perceived barriers in career decision-making has been recognized in earlier career development research (Crites, 1971; Gottfredson, 1981), it is only recently that researchers have begun to scientifically examine the role they play in the career decision-making process (Patton, Creed, & Watson, 2003). Past studies have regularly highlighted college students' perceived multiple barriers to career goal attainment (Lent, Brown, & Hackett, 2000; Luzzo, 1993, 1995; Luzzo & Hutcheson, 1996; Luzzo & McWhirter, 2001; McWhirter, 1997; McWhirter & Luzzo, 1996; Swanson, Daniels, & Tokar, 1996; Swanson & Tokar, 1991a, 1991b). As the unemployment crisis of Korean college graduates has become a salient issue (The Ministry of Labor, 2007), it is important to investigate career barriers in order to better understand their role in career development.

The Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994) model has also shown that an individual's perceived career barriers are significantly related to shaping their career maturity, attitudes, and behavior. According to Swanson and Woitke (1997), career barriers are defined as "events or conditions, either within the person or in his/her environment which makes career progress difficult" (p. 434).

This definition includes the concepts of both intrapersonal barriers (e.g., lack of interest) and environmental barriers (e.g., gender discrimination), which impede career development (Crites, 1969). Currently, most career barrier researchers have adopted this definition (Luzzo, 1993;

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This research was supported by the 2007 grant from Kwangwoon University.

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McWhirter, 1997). Crites (1969) also described barriers as either internal conflicts (e.g., self-concept, motivation to achieve) or external frustrations (e.g., discrimination, wages), which may interfere with one's career development. Accordingly, researchers have frequently treated intrapersonal and environmental barriers as conceptually equivalent (e.g., Lent, Brown, & Hackett, 2000; Luzzo, 1993; McWhirter, 1997). Based on Crites' (1969) study, Farmer (1976) identified six internal or self-concept barriers (e.g., low academic self-esteem) and three environmental barriers (e.g., discrimination).

Although Swanson and Tokar (1991a) argued for three categories of career barriers (social/interpersonal, attitudinal, and interactional), few researchers have used their classification system. Social/interpersonal barriers were described as barriers related to one's family of origin and future marriage and children. Attitudinal barriers were characterized as those mainly internal in nature (e.g., self-concept, interests, and attitudes to work), while interactional barriers were described as those difficulties relating to demographic characteristics (e.g., age and gender), preparation for work (e.g., work and experience), and the work environment itself. Although some form of classification is necessary for the analysis of a complex phenomenon, in reality, the various types of barriers interact and overlap (Swanson & Tokar, 1991a; Swanson & Woitke, 1997).

A number of studies have focused on exploring the relationship between career barriers and other potentially relevant variables (Lent, Brown, & Hackett, 2000; London, 1997; Luzzo, 1996, 1998; Swanson & Daniels, 1994; Swanson & Daniels, 1995a, 1995b). Studies have frequently reported that career barriers are related to locus of control (Kim, 2001; Luzzo, 1996), optimism (Creed, Patton, & Bartrum, 2004; Lee, 2006), trait anxiety (Kim, 2001; Lee, 2006), career decision self efficacy (Kim, 2001; Luzzo, 1996, 1998), career indecision and vocational identity (Swanson & Daniels, 1995a, 1995b), and career maturity (Creed, Patton, & Bartrum, 2004; Kim, 2001; Lee, 2006). London (1997) also suggested that cognitive and emotional variables such as coping, resilience, and hardiness may also play a part in career barriers.

While most career barrier studies have focused primarily on the correlates of career barriers, including students' characteristics, family environments, and self concepts, research examining specific career barrier typology experienced among college students remains limited. The present study attempts to address the lack of knowledge in this area. That is, the present study attempts to explore these typologies further.

In addition, responding to a call from Swanson and Tokar (1991a) for research examining the relationship between subscales of career barriers and other related variables, we explore the relationship between career barrier types and other career barrier related variables such as hardiness, optimism, locus of control, trait anxiety, resilience, and career maturity. Assessing and understanding the precise nature of career barrier types may be especially relevant to identifying students who may encounter subsequent difficulties (e.g., career immaturity) in their career development. Identified career barrier types could thus be used to design differential interventions for college students who experience career barriers (Kim, 1997). Furthermore, career and vocational counselors might be able to tailor interventions to meet individual needs.

Purpose of the Study

In this study, we use the Korean college students' Career Barrier Inventory (KCBI), a measurement specifically developed for Korean college students and an instrument designed to analyze a graduates' level of career barriers (Kim, 2001). The KCBI is also the most frequently used instrument in career counseling (Lee, 2007). The purpose of this study was to identify groups of individuals based on their patterns of career barriers formulated by the KCBI. The pattern-based interpretation using cluster analysis may increase the utility of KCBI scores by capturing potential interactive effects inherent in score patterns. The following two research questions were addressed. (1) Could individuals be meaningfully categorized into discrete groups according to a pattern of career barriers? (2) Do the groups of individuals identified through the cluster analysis differ in their types and levels of personality characteristics and career maturity?

Methodology

Participants

The target population was comprised of Korean college student who are currently attending university. For the purposes of this study, convenience-sampling procedures were used to distribute 337 research questionnaire packets at undergraduate lectures in four universities within the metropolitan regions of South Korea. The participants completed the KCBI, a personality inventory, and a career maturity scale. After exclusions of the 19 incomplete packets, 318 research packets were included in the statistical analysis. Of the total respondents, 124 (39.0%) were male and 194 (61.0%) female. Initial summary statistics revealed that 46 freshmen (14.5%), 119 sophomores (37.4%), 84 juniors (26.4%), and 69 seniors (21.7%).

Cluster Measure

Career barrier inventory. The Korean College Students' Career Barrier Inventory (KCBI; Kim, 2001) was designed to measure the perceived career barriers of Korean college students. The KCBI consists of 45 items divided into nine subscales; Interpersonal Relationship (IP), Career Indecisiveness (CI), Financial problem (F), Pressure from Significant others (PS), Lack of Vocational information (LV), Age-Related problem (AR), Physical Health (PH), Lack of Interest (LI), and Future Anxiety (FA). Each item has a five-point response scale (1 = strongly disagree, 5 = strongly agree), with higher scores indicating more perceived career barriers for each subscale. The measurement characteristics of reliability and validity are well established with the KBCI (Lee, 2006). For example, support for construct validity was obtained through exploratory factor analysis that identified a nine-factor solution and confirmatory factor analysis with all goodness of fit indexes also indicating an adequate fit to the data (Kim, 2001). In the present study, reliability coefficients (i.e., Cronbach's alphas) for each of the subscales were estimated to be 0.84 for Interpersonal Relationship, 0.78 for Career Indecisiveness, 0.79 for Financial Problem, 0.71 for Pressure from Significant others, 0.73 for Lack of Vocational information, 0.84 for Age-Related, 0.80 for Physical Health, 0.76 for Lack of Interest, 0.77 for Future Anxiety.

Outcome Measures

Career attitude maturity scale. The Career Maturity Attitude Scale (Lee, 1997) is made up of 47 items with five subscales (Career Decidedness, Career Readiness, Career Independence, Career Aspiration, and Career Certainty), designed to assess an individual's career maturity. The first subscale, Career Decidedness, consists of 10 items and measures the degree of an individual's decidedness regarding their career choice. The second subscale, Career Readiness, contains 10 items and assesses readiness for career information and career concerns. The third subscale, Career Independence, consists of 9 items and measures independence to decide on career. The fourth subscale, career aspiration, contains 8 1tems and assesses the individual's concrete aspirations. The fifth and last subscale, Career Certainty, consists of 10 items and measures the degree of an individual's comfort and certainty regarding their career choice. For the purpose of this study, total scores were used. Each item has a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), with higher scores indicating higher career attitude maturity. In validation studies for CAMS, internal consistency reliabilities ranging from 0.75 to 0.88 have been reported (Lee, 1997). In this study, the Cronbach's alpha for career maturity attitude scale was 0.89.

Hardiness. Hardiness was measured using The Self Hardiness Scale (SHS) developed by Min (1989). The SHS is comprised of 10 items assessing personal hardiness for stress. This measurement includes three elements; commitment, control and challenge. Each item has a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). In validation studies for SHS, internal consistency reliabilities of 0.75 have been reported (No, 1997). In this study, the Cronbach's alpha for the Self Hardiness Scale (SHS) was 0.72.

Trait anxiety. Trait anxiety was measured by the Spielberger's Trait-Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970). In this study, the Korean version of the Spielberger's Trait-Anxiety Inventory (K-STAI) [the scale standardized by Kim and Shin (1978)] was used. Trait anxiety is conceptualized as the more pervasive tendency to respond to situation in an anxious manner (Kim

& Shin, 1978). This instrument comprises of 20 items assessing enduring symptoms of anxiety. Each item has a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The total score was obtained by tallying the item scores. In validation studies for Trait anxiety, internal consistency reliabilities of 0.87 and test-retest reliabilities of 0.86 have been reported (Kim & Shin, 1978). The Cronbach's alpha for this scale in this study was 0.86.

Locus of control. Rotter's (1966) Internal-External Scale was administered to the participants. This scale has been translated into Korean (Cha, 1973) and frequently used in a previous study with Korean college students (Kim, 1989). In validation studies for Locus of control, internal consistency reliabilities of 0.67 and test-retest reliability of 0.92 have been reported (Kim, 1989). This instrument comprises 20 items assessing a person's perception of their control over a situation. Each item, of which a student chooses one, consists of internal locus of control and external locus of control. Higher scores indicate a greater internal locus of control. The Cronbach's alpha for this scale in this study was 0.73.

Resilience. The self-resilience scale (Block & Block, 1980) was administered to the participants. This scale has been translated into Korean by Go (1997) and frequently used in a previous study with Korean college students (Lee, 1996). This measurement comprises of 12 items assessing intrapersonal and interpersonal protective resources that may facilitate adaptation and tolerance to stress and adverse negative life events. Each item has a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The Cronbach's alpha for this scale in this study was 0.80.

Optimism. The Life Orientation Test-Revised (LOT-R; Scheier, Carver, & Bridges, 1994) is a 10- item scale assessing generalized positive outcome expectancies. This scale has been translated into Korean by Jo (1994) and frequently used in a previous study with Korean college students (Lee, 1996). LOT-R total scores are calculated by summing the three positively worded and three negatively worded items (these are reversed coded). Each item has a five-point response scale (1 = strongly disagree, 5 = strongly agree). Higher scores indicate a more optimistic disposition. Scheier, Carver, and Bridges (1994) reported an internal reliability coefficient of 0.78. In validation studies for LOT-R, internal consistency reliabilities of 0.68 have been reported (Jo, 1997). In this study, the Cronbach's alpha for LOT-R scale was 0.89.

Data Analysis

In order to be able to address the research questions, cluster analysis was initially used to see if a viable typology of career barrier emerged. First, the cluster variables were standardized to the dame T score metric (M = 50, SD = 10) and Ward's method was used to cluster the data. Using a line chart from a coefficient of agglomeration schedule table, an examination of the dendrogram, and an interpretability of the clusters, the optimal number of clusters was identified. Next, Analysis of Variance (ANOVA) was employed to test for statistical significance in career-related variables of hardiness, locus of control, trait anxiety, resilience, optimism, and career maturity.

Results

Cluster Analysis

Based on results of a line chart from coefficients of agglomeration schedule table, an examination of the dendrogram, and an interpretability of the clusters, a four-cluster solution was identified as optimal. Mean profile configurations for the resulting four-cluster solution are presented in Figure 1. It is important to note that the profile (type) names were derived from the patterns of cluster that reflect the variation in needs of this sample of students as found through empirical methods.

According to Figure 1, the first type of cluster was characterized by high scores (almost one full standard deviation above the mean) on scales assessing financial and age-related barriers with moderate to high scores on scales assessing interpersonal relationships, career indecisiveness, physical health, and future anxiety. Sixty-one (n = 61, 19.2%) of the cases fit this pattern. Students grouped in this type seem to have perceived a higher degree of external barriers (e.g. financial and physical) than other groups. Accordingly, we labeled this type "the external career barrier group".

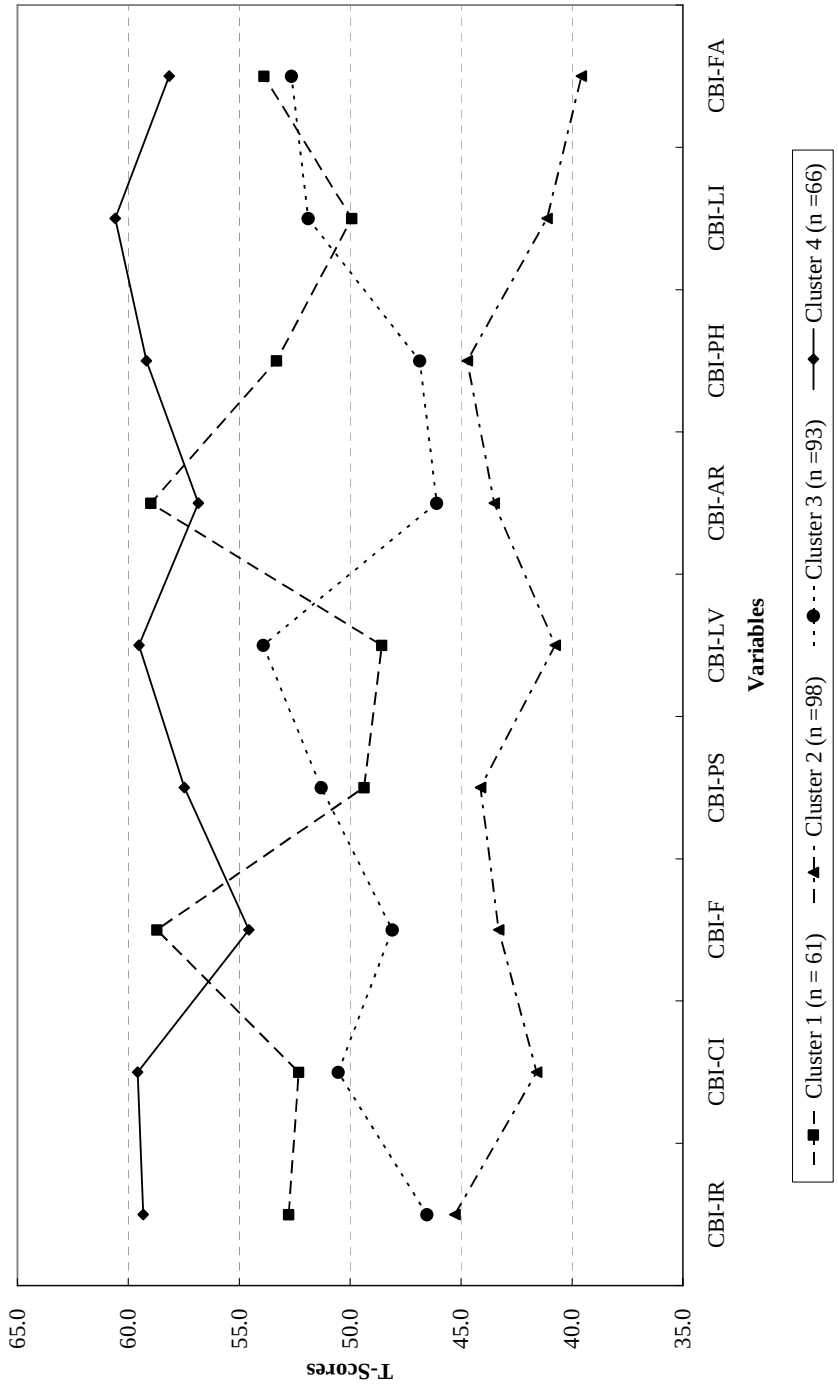

Figure 1. Cluster comparison for standardized variable scores

Note. CBI = Career Barrier Inventory; IR = Interpersonal Relationship; CI=Career Indecisiveness; F=Financial problem; PS=Pressure from Significant others; LV=Lack of Vocational information; AR=Age-Related Problem; PH= Physical Health; LI=Lack of Interest; FA=Future Anxiety

The second type of cluster (n = 98, 30.8% of the total sample) had the lowest scores on every career barrier scales. Students in this profile seem to perceive less career barriers than those in other cluster groups. Accordingly, we labeled this type "the well adjusted group (fewer career barriers perceived group)."

The third type of cluster (n = 93, 29.2% of the total sample) combined moderate to low scores on scales assessing interpersonal relationships, financial, age-related, and physical health barriers with moderate to high scores on scales assessing lack of vocational information, lack of interest, and future anxiety barriers. The results indicate that the students in this group seem to perceive fewer external-related career barriers (e.g., low scores on financial and physical barrier scales) and perceive more behavioral and psychological career barriers (e.g., high scores on lack of vocational information, lack of interest, and future anxiety barrier scales). Accordingly, we labeled this type "the internal career barrier group."

The final pattern (fourth cluster) was made up of the highest score on nearly all career barrier scales except for financial problem and age-related barrier scales. Sixty-six

Table 1
Type Effect on Outcome Variables

Variables	Clusters	*n*	Mean	*SD*	*F* ratio	Tukey HSD
Hardiness	1	61	33.69	3.43	17.91**	2 > 3, 1, 4 3 > 4 1 > 4
	2	98	36.62	4.58		
	3	93	34.12	3.80		
	4	66	31.97	4.39		
Locus of Control	1	61	8.98	2.80	7.85**	2 > 1, 4 3 > 4
	2	98	10.10	2.63		
	3	93	9.88	2.22		
	4	66	8.30	2.85		
Trait Anxiety	1	61	61.57	8.47	41.58**	4 > 1, 3, 2 1 > 3, 2 3 > 2
	2	98	50.18	10.58		
	3	93	56.97	8.63		
	4	66	65.56	8.41		
Resilience	1	61	47.92	7.21	11.44**	2 > 3, 1, 4
	2	98	51.37	7.07		
	3	93	47.92	6.70		
	4	66	45.17	6.10		
Optimism	1	61	21.16	2.95	26.73**	2 > 1, 4 3 > 1, 4 1 > 4
	2	98	23.84	3.25		
	3	93	22.92	2.69		
	4	66	19.91	3.09		
Career Maturity	1	61	105.13	9.85	91.29**	2 > 1, 3, 4 1 > 4 3 > 4
	2	98	120.27	11.12		
	3	93	104.17	9.92		
	4	66	95.12	8.42		

Note. ** $p < .01$

(n=66, 20.8%) of cases fit this pattern. Accordingly, we labeled this type “the maladjusted career barrier group”.

Type Effects on Career-related Variables

Using ANOVA, the effects of career-related variables (i.e., hardiness, locus of control, trait anxiety, resilience, optimism, and career maturity) on cluster groups was examined. Results revealed that significant differences existed among four identified clusters on all career-related variables. The results of post-hoc test (Tukey's Honestly Significant Difference [HSD]) are presented in Table 1. These results revealed that cluster 2 (the well adjusted group) showed significantly higher scores on hardiness, resilience, and career maturity and significantly lower scores on trait anxiety than the other three clusters of career barriers. The results also revealed that cluster 2 showed significantly higher scores on locus of control and optimism than cluster 1 (the external career barrier group) and cluster 4 (the maladjusted career barrier group). In addition, cluster 1 (the well adjusted group) and cluster 3 (the internal career barrier group) showed statistically significant higher scores in terms of hardiness, optimism, career maturity and lower scores on trait anxiety than cluster 4. Finally, cluster 3 showed a statistically significant higher optimism score and lower trait anxiety score than cluster 1.

Discussion

The purpose of this study was to; (a) identify career barrier types through cluster analysis, and (b) gather validity data on the resulting career barrier types. Based on the responses of undergraduate students, participants were classified into four identifiable groups, (1) the external career barrier group, (2) the well adjusted group, (3) the internal career barrier group, and (4) the maladjusted career barrier group. “The external career barrier group”, constituting 19% of the sample, perceives financial problems and age-related barriers at the highest level. Students in this group seem to have felt more external frustrations (e.g., finances) as described by Crites (1969). In addition, they seem to experience more interactional barriers (e.g., age), as described by Swanson and Tokar (1991), than other groups. While students in this profile have significantly lower scores in terms of hardiness, locus of control, resilience, optimism, and career maturity scale than cluster 2 (the well-adjusted group), they have higher scores in terms of hardiness, optimism, and career maturity than cluster 4 (the maladjusted career barrier group). We found no statistically significant differences in terms of hardiness, locus of control, resilience, and career maturity between cluster 1 and cluster 3 (the internal career barrier group).

However, it is interesting to note that type 1students reported a lower optimism score and a higher degree of anxiety than cluster 3. Thus, this study indicates that students who experience more external barriers are more anxious and less optimistic than students who experience internal career barriers. These findings are somewhat inconsistent with a previous study’s findings (Creed et al., 2004), in which external barrier subscales are more accounted for by personality variables. Key methodological and sampling differences could account for these discrepant findings. For example, in Creed et al. (2004), the sample composed of American high school students, while methodological differences in definitions and criteria could have also been a contributing factor. Furthermore, the career barrier measures used in the above study differed with the one used here. The basis for these conflicting findings deserves further exploration.

This second barrier type or the well adjusted group, constituting about 31% of the sample, perceived the lowest career barriers as compared to the other three groups. Students in this profile have the highest scores in terms of resilience, hardiness, and career maturity scales and the lowest scores in terms of anxiety among all types. They also reported higher scores on internal locus of control, and optimism than cluster 1 (the external career barrier group) and cluster 4 (the maladjusted career barrier group). However, we found no statistically significant differences in terms of locus of control and optimism between cluster 2 and cluster 3 (the internal career barrier group). Consistent with the findings of previous studies (Creed, Patton, & Bartrum, 2004; Kim, 2001; Lee, 2005; Son, 2001), students who experience fewer barriers reported a stable personality profile and higher career maturity than students who experience more internal and external barriers.

The third career barrier type or “the internal career barrier group”, constituting 29% of the sample, perceived moderate to high scores in terms of barriers assessing lack

of vocational information, lack of interest, and future anxiety. The students in this profile have significantly higher scores in terms of hardiness, locus of control, optimism, and career maturity scale, and lower scores inanxiety than cluster 4 (the maladjusted career barrier group). However, there is no statistically significant difference in terms of resilience between cluster 3 and cluster 4. Furthermore, students in this type reported a higher optimism score and lower anxiety than cluster 1 (the external barrier group). That is, students of this type are less anxious and more optimistic than students who experience external barriers. These results are also inconsistent with the findings of previous studies (Creed et al., 2004). Therefore, further research is needed to demonstrate the different effects of these two barrier types.

The fourth career barrier type or "the maladjusted career barrier group", constituting 21% of the sample, perceived the highest career barriers except for financial and age-related barriers. Students in this type have significantly lower scores on hardiness, optimism, and career maturity scales and higher scores on trait anxiety than the other three groups. They also reported lower scores in terms of locus of control than cluster 2 (the well-adjusted group) and cluster 3 (the external career barrier group). They also reported lower scores in terms of locus of control than cluster 2 (the well-adjusted group). However, we found no statistically significant difference in terms of the locus of control scale between cluster 1 (the external career barrier group) and cluster 4 (the maladjusted career barrier group). In addition, there is no statistically significant difference on the resilience scale among clusters 1, 3, and 4. These results are consistent with the findings of previous studies (Creed et al., 2004; Kim, 2001; Lee, 2005; Son, 2001). That is, students who experience greater barriers reported an unstable personality profile and higher career maturity than students who experience fewer barriers.

Implications

Because perceived career barriers play an essential role in career development, it is important for practitioners and counselors to have a conceptual framework for the development and implementation of effective interventions that help students overcome career barriers. The career barrier typologies identified here may extend the notion of career barriers as a multidimensional construct. Therefore, awareness of a college student's unique career barrier profile could offer significant assistance in uncovering both individual and environmental contributors, and offer assistance in devising specific intervention strategies. For example, the students of the external career barriers group do not appear to be experiencing internal conflicts such as lack of interest and lack of vocational information. However, elevated levels of financial problems and age-related problems are also seen in this external career barrier profile. As a result, college students in this type may experience helplessness due to situations which are fundamentally not amenable to change. The result of this study also indicates that students who experience more external barriers are more anxious and less optimistic than students who experience internal career barriers. Therefore, interventions could be devised to address environment stressors that impede the students' ability to pursue their career goals.

On the other hand, the students of the internal career barriers group do not appear to be experiencing external stresses such as financial and age-related problems. However, high scores on barriers assessing lack of vocational information, lack of interest, and future anxiety are also seen in this group. Although students in this group are less anxious and more optimistic than students who experience external career barriers, their resilience and locus of control scores are relatively lower than students who did not experience career barriers. Therefore, interventions could be devised to focus on cognitive and emotional factors such as improvement of self-efficacy and emotional regulations. Considering the career barrier types found in this study, differentially designed interventions are ultimately needed for college students who experience career barriers.

Limitations and Suggestions for Future Research

Certain limitations inherent in the present research may have affected the outcome of this study. Firstly, the sample was limited to college students, specifically in Seoul, Korea. That is, by including only college students from a geographically limited and administratively convenient sample, the conclusions are limited and may not be generalized across all college students in the world. Therefore, data from other areas and countries should be collected to determine if the clusters identified in this study

could be replicated. Secondly, all measures were obtained by self-report questionnaires. Students who may have experienced high levels of career barriers may have been less motivated to respond to the barriers questionnaire in this study in order to avoid painful issues. Future studies could use multiple measures (e.g., direct observation) to assess career barrier variables, thereby giving a clearer picture of their long-term effects on students. Thirdly, this study only used a few of the criterion measures to determine the effects of the career barrier types' differences. In future research, multiple measures (e.g., career decision self-efficacy scale) should be used to examine the effects of barrier types. In addition, there is also a need to determine what type of interventions might be effective in overcoming career barriers for each different barrier profile.

Conclusion

This study points to the value of using a system of classifying career barriers to form the patterns (types or profiles) that reflect the more consistent elements of career barriers. Based on this research, we also identified distinct patterns of counselor burnout that differentially influence student's hardiness, locus of control, resilience, optimism, and career maturity. Therefore, career counselors need to develop differential treatments by the identified career barrier types. That is, different interventions should be tailored to focus on the patterns of needs and concerns of each type. This study establishes a guideline for additional work to validate career barrier types. Subsequent studies should examine the relationship between other career related variables such as academic achievement or work adjustment and different barrier types.

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Received November 13, 2006
Revision received November 22, 2007
Accepted January 19, 2008