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Unpacking the role of self-esteem in career uncertainty: A self-determination perspective

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Abstract

The aim of this study is to explain why students with high self-esteem have lower career uncertainty than students with low self-esteem. Based on self-determination theory, students with high self-esteem would have higher efficacy in making decisions, which would encourage them to choose a major for self-concordance, such as interest and ability, and increase their course involvement. Both factors are assumed to be related to lower career uncertainty. Data from a national survey of the Taiwan Higher Education Database within the Survey Research Data Archive from juniors at 92 colleges and universities in Taiwan ($N = 7,418$) were analyzed to examine the model. Results supported the proposed model by showing that students with high self-esteem had lower career uncertainty because they chose a major for self-concordant reasons and had a strong motivation to learn, both of which contribute to lower career uncertainty.

Keywords: self-determination, career uncertainty, self-esteem, education

Finding a job and building a career are primary goals for undergraduate students after they finish their education and graduate from school. However, not all students are certain about which career to pursue, as some have higher career uncertainty than others (Gutman & Schoon, 2012; Komarraju, Swanson, & Nadler, 2013; Welsh & Schmitt-Wilson, 2013). Given that career uncertainty is detrimental to career development and personal growth and usually has a negative impact on psychological and physical adjustment (Daniels, Stewart, Stupnisky, Perry, & LoVerso, 2011), it is important to understand why students have different levels of career uncertainty and to understand potential mechanisms behind the individual differences in career uncertainty. One important individual difference factor that can explain different levels of career uncertainty across students is self-esteem. Previous research findings consistently suggested that there is a significant and positive link between career indecision and lower self-esteem (Creed, Prideaux, & Patton, 2005; Germeijs & De Boeck, 2002; Santos, 2001; Shea, Ma, Yeh, Lee, & Pituc, 2009). Moreover, a meta-analytic study indicated that the largest effects on career decision self-efficacy is a self-concept variable, i.e., self-esteem, among several personal variables (Choi et al., 2012). In addition, self-esteem has been shown to discriminate certainty of career choice (Resnick, Fauble, & Osipow, 1970), vocational self-concept crystallization (Barrett & Tinsley, 1977a, 1977b), and career-choice anxiety (Chartrand, Robbins, Morrill, & Boggs, 1990).

Nevertheless, to our knowledge, the mechanisms for how self-esteem can shape career certainty have not been examined in previous studies. Consequently, the purpose of this study was to understand why higher self-esteem helps to increase career certainty, and we address this issue based on self-determination theory (Deci & Ryan, 2000).

We adopted the self-determination theory (Deci & Ryan, 2000) as the theoretical background because it stresses the role of self-determination in choosing goals. This model is relevant to the issue of career uncertainty, as Tien et al. (2005) found that problems

related to self-determination, such as unclear interests, ambiguous goal setting, and an inability to make a decision, were antecedents of career uncertainty. We proposed that students with high self-esteem would have higher efficacy in decision making and tend to choose a major and courses based on their interests and career goals, which contributes to higher career certainty. Therefore, self-determination theory provides a useful theoretical framework to use to understand the mechanisms behind career uncertainty.

We conducted our research with college students in Taiwan. Career uncertainty in college students is an important issue in Taiwan, as national surveys consistently show that a high proportion of students are uncertain about their careers. In a national survey of college juniors conducted by the Center for Higher Education Research in May 2004 in Taiwan, 54.5% of juniors reported that they did not know what to do after graduation (Peng, 2004). In another national survey of college juniors conducted by the same organization in October 2005, 60% of juniors reported that they did not know what to do after graduation (Peng, 2005). These findings reveal that career uncertainty is an important issue facing college students in Taiwan. Accordingly, examining career uncertainty among college students in Taiwan is relevant and important. Research of individual differences on career certainty-related issues has been supportive (Gutman & Schoon, 2012; Komarraju et al., 2013; Welsh & Schmitt-Wilson, 2013). Based on the individual differences perspective and the self-concordance mechanism, understanding the role of self-esteem in career uncertainty could provide an explanation why some students have higher career certainty than others. It can also have direct implications for career education for college students in Taiwan.

We proposed that students with high self-esteem would have greater efficacy in decision making, which would encourage them to choose a major for personal reasons, such as interests and ability, thereby increasing their course involvement, both of which relate to lower career uncertainty (see Figure 1). First, self-esteem can positively contribute to higher

efficacy in decision making because people with higher self-esteem have more positive attitudes and value themselves more (Tafarodi & Swann Jr., 2001) and thus tend to prioritize their interests. In addition, people with higher self-esteem are satisfied with being on an equal plane with others and are less likely to be concerned with social expectations and comparisons (Kernis & Paradise, 2002). For example, Anthony, Wood, and Holmes (2007) reported that individuals with high self-esteem were more likely to participate in social groups, regardless of whether their acceptance was guaranteed. This characteristic thus enables people with high self-esteem to be more confident when making decisions. Supporting this view, Chartrand et al. (1990) found that people with high self-esteem have a greater ability to make decisions. Therefore, as shown in Figure 1, we hypothesized that self-esteem was positively related to efficacy in decision making.

Second, according to self-determination theory (Deci & Ryan, 2000) and the self-concordance model (Sheldon & Elliot, 1998, 1999), self-determination motivation is reflected in goal selection. That is, people with higher levels of self-determination are more likely to choose goals that are consistent with their self-interests and intrinsic motivations, which are referred to as *self-concordant goals*. Accordingly, in this research, we argued that higher efficacy in decision making would encourage students to select their major for self-concordant reasons, such as ability and interests, which is referred to as *self-concordance in choosing a major* in our model. Hence, we hypothesized that efficacy in decision making would be positively related to self-concordance in choosing a major.

Moreover, given that we assumed that a self-concordance goal would then sustain and motivate students to devote greater effort to engaging in goal-related activities when approaching the goal (Sheldon & Elliot, 1998, 1999), we further proposed that self-concordance in choosing a major would motivate individuals to devote greater effort to learning, which would be reflected in their course involvement, such as previewing course

content before a class and actively participating in class activities. Research indicated that the relationship between interest–major congruence and academic achievement is positively correlated (Allen & Robbins, 2010; Tracey & Robbins, 2006). Our argument is consistent with findings from previous studies on education that self-determined motivation triggered self-determined behaviors and then led to better academic performance (Fortier, Vallerand, & Guaya, 1995; Guaya & Vallerand, 1997) and greater persistence (i.e., fewer dropout behaviors) in the academic program (Vallerand, Fortierb, & Guaya, 1997). Consequently, we hypothesized that self-concordance in choosing a major would be positively related to course involvement.

Finally, we proposed that self-concordance in choosing a major and course involvement would be related to lower career uncertainty because students who could choose their major according to their intrinsic interests and personal goals were more likely to strengthen their aptitude and interests, which would help them to develop a stronger sense of their future career. Moreover, active course involvement would also help to build a stronger sense of their future career because knowledge acquired from the course would enable the students to prepare themselves to pursue their anticipated career by having knowledge about the industry in which they were interested, and clarifying potential myths associated with anticipated careers. As a result, we hypothesized that self-concordance in choosing a major and course involvement would be negatively related to career uncertainty.

Overall, based on the individual differences perspective and self-determination theory (Deci & Ryan, 2000), we suggested that students with high self-esteem would have low career uncertainty because they were more likely to choose a major for self-concordant reasons. Therefore, they would foster a strong motivation to learn. We believed that both of these characteristics would help them to build a sense of a future career. Structural equation modeling was used to examine our research model.

Method

Participants

In this study, data from a national survey of university and college juniors in Taiwan were analyzed, and was drawn from the Taiwan Higher Education Database within the Survey Research Data Archive in Taiwan. A total of 30,272 students returned a questionnaire (return rate = 61.9%). Data from 7,418 students from 92 schools were analyzed because they provided completed data on the research variables used in this study. For this sample, there were 3,448 males (46.5%) and 3,970 females (53.5%).

Procedure

This national survey was conducted by the Center for Higher Education Research at National Tsing Hua University in Taiwan in May 2004, investigating university/college juniors' learning progress, aptitude tests, interests, lifestyle, and utilization of school facilities (Peng, 2004, 2005). Before the formal survey was conducted, a pretest was employed to detect potential measurement related problems (Peng, 2004, 2005). The population of the national survey of higher education is university and college juniors in Taiwan. Using a proportional stratified sampling technique, 48,899 juniors were selected from a total sample of 164,725 junior students at 140 universities and colleges. In principle, the sampling proportion is 25% of juniors in each school. Notably, because departments in universities/colleges are divided into 18 categories according to the Ministry of Education in Taiwan, the sampling proportion within each school is not according to the classification of departments, but the classification of categories instead. In addition, when the number of juniors is under the minimum requirements, i.e., 100 juniors per school and 30 juniors per category within a school, all students of the category or schools are surveyed. Students were asked to complete the questionnaire on the center's website.

Measures

Self-esteem. Six items were used to measure self-esteem. Five of them were from the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Items included “I feel that I’m a person of worth, at least on an equal plane with others,” “I feel that I have a number of good qualities,” “On the whole, I am satisfied with myself,” “All in all, I am not confident in myself,” “I feel I do not have much to be proud of,” and “At times, I think I am no good at all.” Participants were asked to rate these four items on a 4-point Likert-type scale with responses ranging from 1 (not at all) to 4 (completely true). The Cronbach’s alpha value for these items was 0.81. An average score was computed to indicate self-esteem.

Efficacy in decision making. Two items were used to measure efficacy in decision making. They were “It is not difficult to make decisions by myself” and “I have confidence in myself and am responsible for decisions I made.” Participants were asked to rate these items on a 4-point Likert-type scale with responses ranging from 1 (not at all) to 4 (completely true). The Cronbach’s alpha value for these items was 0.79. An average score was computed to indicate the level of efficacy in decision making.

Self-concordance in choosing a major. Three items were used to assess the self-concordance in choosing a major. Participants were asked to rate the degree to which they considered (1) interests, (2) academic ability, and (3) personal career potential when they selected a major on a 4-point Likert-type scale with responses ranging from 1 (not important at all) to 4 (very important). The Cronbach’s alpha value for these items was 0.76. The average score was computed as an overall index.

Course involvement. Four items were used to assess course involvement. Participants were asked to rate the degree to which they (1) previewed course content before a class, (2) actively participated in class activities (e.g., engaging in discussions and asking questions), (3) did other things that were irrelevant to the class (e.g., chatting) (a reverse-scored item), and (4) skipped a class (a reverse-scored item) on a 4-point Likert-type scale with responses

ranging from 1 (never) to 4 (frequently). The Cronbach's alpha value for these items was 0.60. The average score was computed as an overall index.

Career uncertainty. Three items were used to measure career uncertainty. They were "I am uncertain about my interests and ability," "I do not know what to do after graduation," and "I do not know if I chose a correct major." Participants were asked to rate these items on a 4-point Likert-type scale with responses ranging from 1 (not at all) to 4 (completely true). The Cronbach's alpha value for these items was 0.77. An average score was computed to indicate career uncertainty.

Results

Table 1 presents descriptive statistics for the research variables, including means, standard deviations, and correlations.

Before testing the hypotheses, the proposed measurement model was first examined. In this model, there were five latent constructs: self-esteem (indicated by six items), efficacy in decision making (indicated by two items), self-concordance in choosing a major (indicated by three items), course involvement (indicated by four items), and career uncertainty (indicated by three items). The first loading of each latent construct was set at 1 to fix the scale of the latent construct. Errors of positively and negatively worded items for self-esteem were correlated to account for the wording effect in assessing self-esteem, which has been found among Taiwan students (C.-H. Wu, 2008). Errors of other items were not allowed to be correlated, whereas latent factors were permitted to be correlated. Because our data were from students at 92 schools, we used the design-based approach (TYPE=COMPLEX in Mplus) to analyze the nested data by adjusting for parameter estimate standard errors (J.-Y. Wu & Kwok, 2012). The maximum likelihood robust (MLR) estimator was used in estimation using Mplus (Muthén & Muthén, 2007). We assessed the model fit by (apart from SB- χ^2/df) assessing the TLI and CFI (values > 0.90 are acceptable

and > 0.95 are excellent), RMSEA (values < 0.08 are acceptable and < 0.05 are excellent), and SRMR (values < 0.08 are acceptable) (see Bentler, 1990; Browne & Cudeck, 1993; Hoyle, 1995; Hu & Bentler, 1999).

The hypothesized measurement model had a good fit ($\chi^2 = 2002.26$, $df = 119$, CFI = .94, TLI = .92, RMSEA = .046, SRMR = .044). All of the estimates in the model were significant at $p < .001$. Standardized factor loadings were higher than .40. Except that self-esteem had moderate correlations with efficacy in decision making ($r = .62$) and career uncertainty ($r = -.61$), all factors had lower correlations to show the discriminant validity of the constructs ($r = -.18$ to .34).

The correlation between self-esteem and efficacy in decision making might suggest that measures of the constructs were not discriminant. In order to assess their discriminant validity, we tested an alternative model in which items for self-esteem and efficacy in decision making were influenced by the same factor, and other specifications were the same as those in the hypothesized measurement model. The fit of this alternative measurement model ($\chi^2 = 3281.48$, $df = 123$, CFI = .89, TLI = .87, RMSEA = .059, SRMR = .073) was worse than that of the hypothesized measurement model. Further, we tested an alternative model in which items for self-esteem and career uncertainty were influenced by the same factor and other specifications were the same as those in the hypothesized measurement model. Once again, the fit of this alternative measurement model ($\chi^2 = 3300.68$, $df = 123$, CFI = .89, TLI = .87, RMSEA = .059, SRMR = .071) was worse than that of the hypothesized measurement model. Thus, the hypothesized measurement model was retainable.

Based on the proposed measurement model, the hypothesized structural model was further tested. The model specifications for the structural part were consistent with the model shown in Figure 1. However, the hypothesized model did not have a good model fit ($\chi^2 =$

2984.76, $df = 124$, CFI = 0.90, TLI = 0.88, RMSEA = .056, SRMR = .086). It might have been that the proposed mechanism could not fully explain the relationship between self-esteem and career uncertainty. Therefore, we included a direct effect of self-esteem on career uncertainty, and the model fit improved ($\chi^2 = 2424.56$, $df = 123$, CFI = 0.92, TLI = 0.90, RMSEA = .050, SRMR = .058). The standardized estimates are presented in Figure 2. In this model, self-esteem positively predicted efficacy in decision making ($\beta = .56$, $p < .01$), which positively predicted self-concordance in choosing a major ($\beta = .26$, $p < .01$) and course involvement ($\beta = .29$, $p < .01$), both of which negatively predicted career uncertainty ($\beta = -.13$ and $-.13$, $p < .01$). Self-esteem also negatively predicted career uncertainty ($\beta = -.49$, $p < .01$).

We further examined indirect effects at different stages as shown in our model. An indirect effect test in Mplus based on a delta method (MacKinnon et al., 2002; Muthén & Muthén, 2012) and confidence intervals based on the Monte Carlo Method for Assessing Mediation (MCMAM) (Mackinnon et al., 2004) were used. We found that course involvement significantly mediated the effect of self-concordance in choosing a major on career uncertainty (indirect effect = $-.03$, $p < .01$; 95% CI = $-.05$ to $-.02$); self-concordance in choosing a major significantly mediated the effect of efficacy in decision making on career uncertainty (indirect effect = $-.04$, $p < .01$; 95% CI = $-.05$ to $-.02$); self-concordance in choosing a major significantly mediated the effect of efficacy in decision making on course involvement (indirect effect = $.05$, $p < .01$; 95% CI = $.03$ to $.07$); efficacy in decision making significantly mediated the effect of self-esteem on efficacy in decision making (indirect effect = $.27$, $p < .01$; 95% CI = $.22$ to $.32$). These findings support the hypothesized sequential mediation process.

Two alternative models were tested. First, it is possible that self-esteem is an outcome of self-concordant process as self-determination theory also suggests that achieving

self-concordant goals will lead to higher well-being indicated by higher self-esteem.

Accordingly, we examined a model specifying self-esteem as a final outcome of career uncertainty shaped by the self-concordant process. This alternative model is not better than the model specifying self-esteem as an antecedent in shaping the self-concordant process ($\chi^2 = 2969.32$, $df = 124$, CFI = 0.90, TLI = 0.88, RMSEA = .056, SRMR = .078).

Second, it is also possible that career uncertainty results in the phenomenon that students cannot choose a major based on self-concordant reasons. That is, career uncertainty might play an intermediate role between efficacy in decision making and self-concordance in choosing a major. In order to test this model, career uncertainty was predicted by efficacy in decision making and self-esteem, whereas efficacy in decision making was still predicted by self-esteem. Career uncertainty then predicted self-concordance in choosing a major, which predicted course involvement. Although this model had a good fit ($\chi^2 = 2368.83$, $df = 124$, CFI = 0.92, TLI = 0.91, RMSEA = .049, SRMR = .060), it shows that efficacy in decision making was positively related to career uncertainty, which is theoretically unexpected and is inconsistent with previous findings. This unexpected finding may be due to the suppression effect when having both efficacy in decision making and self-esteem to predict career uncertainty. We then removed the direct path from self-esteem to career uncertainty and examined the model again. The model is not acceptable ($\chi^2 = 3225.74$, $df = 125$, CFI = 0.89, TLI = 0.87, RMSEA = .058, SRMR = .085). These findings suggest that our hypothesized model was more plausible.

Discussion

In this study, we proposed a self-determination mechanism to explain why students with high self-esteem have lower career uncertainty than students with low self-esteem. National survey data from juniors at colleges and universities in Taiwan were analyzed to examine the model. Results supported the proposed model by showing that students with high

self-esteem had lower career uncertainty because they chose a major for self-concordant reasons and fostered a strong motivation to learn, both of which contributed to lower career uncertainty.

These findings have several implications. First, consistent with the findings of previous studies (Barrett & Tinsley, 1977a, 1977b; Chartrand et al., 1990; Creed et al., 2005; Germeijs & De Boeck, 2003; Resnick et al., 1970; Saunders, Peterson, Sampson, & Reardon, 2000), we found that self-esteem was negatively related to career uncertainty. Nevertheless, we provided an additional contribution to explain why self-esteem could contribute to career certainty. Based on self-determination theory (Deci & Ryan, 2000), this study highlights the importance of efficacy in decision making and self-concordance in choosing a major in promoting career certainty. Based on these findings, we suggest that encouraging students to explore their interests and make choices accordingly is important to reduce career uncertainty. Similarly, Tien et al. (2005) also reported that exploring one's interests, abilities, values, and beliefs is important for self-adjustment in dealing with career uncertainty.

Second, we found that there was a direct effect of self-esteem on career uncertainty with a post-hoc modification in structural equation modeling. This post-hoc finding, though is reasonable and consistent with previous findings as reviewed earlier, should be cross-validated. At the same time, this finding also suggests that there might be other mechanisms behind the relationship between self-esteem and career uncertainty. According to the sociometer theory (Leary & Baumeister, 2000, pp. 1–2), self-esteem is a “psychological monitor of something that is very important to people—namely social belongingness” and functions as a gauge or sociometer that subjectively monitors individuals' relational evaluation and propels their behaviors (Leafy & Downs, 1995). Holmes and Wood (2009, p. 250) indicated:

If the main function of self-esteem is to signal one's relational value, then dispositional self-esteem should matter—should determine one's feelings and behavior—when the situation calls into question one's interpersonal value. Such situations will reveal the different personalities of HSEs [high self-esteem people] and LSEs [low self-esteem people]. Specifically, their approach versus self-protective goals will guide their behavior.

In the present study, we stressed the role of self-concordance in choosing a major, but did not take seeking for social support into account, e.g., participating in career exploring/developing programs or career consulting services provided by school, which might additionally explain the relationship between self-esteem and career uncertainty (Shea et al., 2009). For example, individuals with high self-esteem tend to seek new relationships, focusing on self-enhancement, whereas individuals with low self-esteem tend to prevent rejection, emphasizing self-protection (Baumeister, Tice, & Hutton, 1989). Individuals with low self-esteem make risk-avoidance decisions; they join the group only when acceptance was guaranteed (Anthony et al., 2007). As Leary and Baumeister (2000) suggested, “people do not have a motive to maintain high self-esteem per se, but rather a system for monitoring and responding to threats to relational evaluation” (p. 34). In addition, self-esteem also helps an individual to access more social capital because people with higher self-esteem are more likely to be liked by others and obtain more support from others (Taylor, Lerner, Sherman, Sage, & McDowell, 2003), which is also a factor that facilitates career development (e.g., Schultheiss, Kress, Manzi, & Glasscock, 2001; Turner & Lapan, 2002). Accordingly, it is possible that students with high self-esteem, in addition to high self-concordance in choosing a major, are approach-oriented and take risks, which allows them to develop a strong sense of their career. Therefore, these two routes should be further examined in future studies.

Third, this study has implications for applying self-determination theory (Deci & Ryan, 2000) to the issue of career uncertainty in college students in Taiwan. We suggest that promoting a sense of self-determination is important for college students in Taiwan because they usually do not have enough opportunities to explore their career interests in the educational system and do not know how to develop a career plan. As indicated by Tien et al. (2005), the collectivism culture in Taiwan always directs students' attention toward achieving their parents' expectations and meeting social values constructed in the job market when they make a career plan. Hence, when managing their career development, students in Taiwan must consider many factors that are unrelated to their interests or aptitude. Therefore, introducing the perspective of self-determination to college students in Taiwan might encourage them to engage in more self-exploration and decrease their career uncertainty.

This study had several limitations. First, except for the self-esteem items, the measures in this study were constructed from items in an existing database. Therefore, the findings should be cross-validated using standard measures of the constructs. Second, this was a cross-sectional study. Therefore, a casual interpretation is not advised. Such limitation also prevents us to clearly delineate the link between self-esteem and the proposed self-concordant process. Self-esteem can be conceptualized as a personality attribute or as an indicator of well-being. These two conceptualizations lead to different models as we have examined. Our proposed model is to treat self-esteem as a personality attribute that leads an individual to perceive higher efficacy to select self-concordant goals, which is different from the model that after achieving self-concordant goals, an individual will have higher well-being as indicated by higher self-esteem. Although findings in alternative model testing support our proposed model, based on a cross-sectional survey it is still hard to certify whether self-esteem should be the antecedent or the outcome of a self-concordant process. It is also likely that self-esteem evokes a self-concordant process, which in turn shapes

self-esteem in a longitudinal process. Accordingly, a longitudinal study is required to examine the role of self-esteem in the self-concordant process.

Third, in this study, we specifically focused on learning-related behaviors, such as choosing a major and course involvement, but did not include other behaviors that could help to reduce career uncertainty, such as acquiring information about the job market, consulting with others who are already in the industry, and establishing a career plan (Claes & Ruiz-Quintanilla, 1998). These proactive career behaviors can help students to manage their career development and reduce career uncertainty as well. In sum, future studies that use standard measures of constructs are warranted that include longitudinal analysis and other mechanisms (e.g., competence and relatedness) and behavioral factors (e.g., proactive career behaviors).

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Table 1

Descriptive statistics of the research variables (n = 7,418)

Variables	<i>M</i>	<i>SD</i>	Correlations					
			1	2	3	4	5	
1. Sex (female)	1.54	0.50						
2. Self esteem	2.70	0.49	-.01 [†]					
3. Efficacy in decision making	2.93	0.62	-.03 [†]	.41				
4. Self-concordance in choosing a major	3.06	0.63	.10	.18	.20			
5. Course involvement	2.63	0.52	.11	.17	.11	.19		
6. Career uncertainty	2.52	0.71	.01 [†]	-.42	-.15	-.22	-.18	

Note. Except for values denoted by †, all correlations are significant at $p < .001$ because of the large sample size.

Figure Captions

Figure 1

The research model.

Figure 2

Results of the structural equation model with standardized estimates. All estimates were significant at $p < .01$.



