Advances in Social Science, Education and Humanities Research, volume 464
Proceedings of the 1st Progress in Social Science, Humanities and Education Research Symposium (PSSHERS 2019)

Career Decision-Making Self-Efficacy Among College Students

Ruseno Arjanggi[1*], Hartono[2], Made Dwi Adnjani[2], Hidayatus Sholihah[3]

[1] *Faculty of Psychology, Universitas Islam Sultan Agung, Semarang, Indonesia*
[2]*Faculty of Language and Communication, Universitas Islam Sultan Agung, Semarang, Indonesia*
[3]*Faculty of Islamic Study, Universitas Islam Sultan Agung, Semarang, Indonesia*
[*]*Corresponding author. Email: ruseno@unissula.ac.id*

ABSTRACT
Career decision making is considered an important skill in the life of an individual. It is a learnable skill which involves the ability to collect and analyze individual information. Self-efficacy in career decision making is someone's belief in the career decision he/she takes. The objective of this research was to understand the career decision making self-efficacy of college students. The participants were 313 students conveniently selected from 4 batches of students studying three programs, namely Language and Communication, Psychology and Islamic Studies at a private university. Data were collected using career decision making self-efficacy scale of 25 items. The item analysis revealed that 20 of those items had strong power discrimination index, therefore, they are valid and reliable to be used in the study. The study found that there was a difference in career decision making self-efficacy across gender. Male students had higher confidence in making career decision than female ones.

Keywords: *Career decision making self efficacy, college students, gender*

1. INTRODUCTION

Career decision-making self-efficacy (CDMSE) is very important and relevant for students in Indonesia because they will be faced with many work challenges due to the current economic and social stress in the country. Students with CDMSE will be able to respond positively to the environment because it is a strong predictor of their life satisfaction (Jiang et al. 2015). It is a career theory based on the perspective of a social cognitive theory, namely self-efficacy which in itself is an individual belief that mediates taking responsibility and success (Bolat and Odac 2016).

CDMSE is based on two psychological theories. One theory developed in the discipline of social psychology and personality (the theory of self-efficacy) and the other comes from vocational psychology (the theory of career maturity) (Miguel, Silva, and Prieto 2013). It is a key variable when an individual reaches the stage to make a career choice with reference to his or her beliefs (Jiang 2015). However, self-efficacy can affect the decision, emotion, level of effort, and individual perseverance over obstacles, and consequently, individual performance, because belief has a major contribution to the conduct of an action (Işık 2014).

CDMSE is defined as a belief in a person's ability to be involved in education, work planning and decision making (Taylor and Betz 1983). It is related to the lack of ability to choose the right career path when someone is in a confusing decision-making situation (Chiesa, Massei, and Guglielmi 2016).

It acts as a mediator between perceptions of selected academic majors, career expectations and the main affective commitment that are indirectly related to positive expectations of results (Conklin, Dahling, and Garcia 2013). It has the ability to influence the success of a career development process (Conklin et al. 2013). It was further explained that it is important not only to identify low self-efficacy decision making within clients but also to understand how to overcome it in career counseling (Conklin et al. 2013).

Evaluation of academic support services was found to be positively related to the level of career decision self-efficacy (Burns et al. 2013). This shows that it is important to be careful and evaluate effectively in selecting a career. Therefore, this study was aimed at exploring CDMSE profiles and conducting its preliminary test using scale adaptation for college students.

2. METHOD

2.1 Participants

The participants of this study were 313 students consisting of 93 male and 220 female students. The age range for the male was 18-28 years old and 17-23 years

old for female. Therefore, the mean age for male students was 20.5 years old with SD = 1.77. while for the female students, it was 19.6 years old with SD = 1.04. They were students from Departments of Psychology, Communication Science, and English Language Education of a private university in Semarang Central Java, Indonesia. All of them were Javanese.

Table 1. Range, Mean and SD of Age

Gender	Age range	Mean	SD
Male	18-28	20.5	1.77
Female	17-23	19.6	1.04

2.2 Instrument

Career decision making self-efficacy scale used in this study was compiled based on the behavioral domain that was relevant to the career decision making process. It was defined as behavior that shows five Career Award Competencies postulated in the career maturity model (Crites 1961, 1965). The domain includes (1) accurate self-assessment, (2) collecting job information, (3) selecting goals, (4) making plans for the future, and (5) problem-solving. The concept has become one of the constructions extensively researched since the items were compiled and introduced in research on developing career decision making self-efficacy scale (Taylor and Betz 1983). Previous research using the same scale in the English version obtained internal values of consistency above 0.9 (Bullock-Yowell, Andrews, and Buzzetta 2011; Burns et al. 2013; Peterson and delMas 1998). The Chinese version of the scale found internal consistency above 0.9 (Jiang 2015) in addition the Turkish version found internal consistency above 0.8 (Buyukgoze-Kavas 2014; Işık 2014). The one used in this study consisted of 25 items that were adapted in a double translated and expert panel verification to determine the right items according to the context of the research participants.

3. RESULTS AND DISCUSSION

The mean scores and standard deviations for the 25 CDMSE items are as presented in Table 2. The table shows that perceived difficulties of task ranged from 1.7348 (item number CDSE01) to 3.2045 (item number CDSE16). The most difficult item was sub-scale problem-solving. The 3 least difficult ones were sub-scale goal selection, occupational information, and self-appraisal.

Table 2. Mean and Standard Deviation of CDMSE

Item Number	Mean	Std. Deviation	Sub-scale
CDSE01	1,7348	1,09045	problem solving
CDSE03	1,7636	1,10724	problem solving
CDSE02	2,2620	0,96163	problem solving
CDSE10	2,3482	0,92515	planning
CDSE09	2,3866	0,96447	planning
CDSE12	2,5783	0,71237	self-appraisal
CDSE11	2,7284	0,84337	planning
CDSE14	2,7444	0,85025	planning
CDSE19	2,8051	0,67252	self-appraisal
CDSE20	2,8083	0,76481	goal selection
CDSE18	2,8211	0,78443	occupational information
CDSE08	2,8403	0,72504	occupational information
CDSE21	2,8658	0,67073	goal selection
CDSE22	2,8978	0,69965	self-appraisal
CDSE04	2,9393	0,97706	occupational information
CDSE24	2,9553	0,80737	occupational information

CDSE13	2,9808	0,65507	planning
CDSE17	2,9904	0,65283	goal selection
CDSE15	3,0096	0,76997	problem solving
CDSE06	3,0447	0,65382	goal selection
CDSE25	3,0479	0,63620	self-appraisal
CDSE05	3,0671	0,58723	problem solving
CDSE07	3,1565	0,62872	self-appraisal
CDSE23	3,1885	0,70683	occupational information
CDSE16	3,2045	0,61736	goal selection

This study found items in the problem-solving behavior component group on the CDMSE scale. There was only one item that had a good item discrimination index. Internal consistency of career decision self-efficacy scale obtained was $\alpha = 0.870$ and 20 items having item discrimination power index above 0.3 with power indexes ranging from 0.391-0.626. From the 25 items, there were 5 items that had a low item discrimination index with four in the problem-solving and one in the occupational information subscale. The results of the discrimination power item analysis are presented in Table 3.

Table 3. Discrimination Power Index Item and Cronbach's Alpha if Item Deleted

Item Number	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CDSE01	67.4345	76.964	.183	.847
CDSE02	66.9073	78.039	.158	.846
CDSE03	67.4058	76.473	.204	.846
CDSE05	66.1022	77.034	.414	.836
CDSE15	66.1597	77.558	.258	.840
CDSE04	66.2300	76.594	.240	.843
CDSE08	66.3291	76.382	.374	.836
CDSE18	66.3482	74.894	.452	.833
CDSE23	65.9808	74.730	.525	.831
CDSE24	66.2141	74.021	.502	.831
CDSE06	66.1246	75.533	.500	.833
CDSE16	65.9649	76.880	.405	.836
CDSE17	66.1789	75.724	.484	.833

CDSE20	66.3610	76.065	.375	.836
CDSE21	66.3035	75.661	.475	.833
CDSE07	66.0128	76.769	.407	.836
CDSE12	66.5911	75.851	.426	.835
CDSE19	66.3642	74.566	.571	.830
CDSE22	66.2716	75.301	.482	.833
CDSE25	66.1214	75.145	.553	.831
CDSE09	66.7827	74.933	.346	.838
CDSE10	66.8211	74.455	.397	.836
CDSE11	66.4409	74.895	.414	.835
CDSE13	66.1885	75.102	.539	.831
CDSE14	66.4249	74.014	.472	.832

Profile analysis was done by composing hypothetical norms based on the scale compiled. The norm category was arranged according to the hypothetical score of the scale (Azwar 2012). The hypothetical norm formulation used is low ($X \leq \mu-\sigma$), medium ($\mu-\sigma < X \leq \mu + \sigma$), and high ($X > \mu + \sigma$) for three categories (Azwar 2010). The maximum score of the scale was 80 gotten by multiplying the 20 items by the highest response score of 4, while the minimum score was 0 which was gotten through the multiplication of the number of items by the minimum score of response. Hypothetical SD (σ) of 13.33 was obtained by calculating the highest and lowest score divided by 6. The hypothetical mean (μ) of 40 was obtained by adding the minimum and maximum score then divided by 2. The results of the three categories of norms compiled, the frequency of the number of participants entering each category and percentage are presented in Table 4.

Table 4. Participant's categorization of the CDMSE scale

Norms	Categorization	Frequency	%
$X \leq 27$	Low	3	1
$27 < X \leq 53$	Average	58	18.5
$X < 53$	High	252	80.5

Based on the norms of the hypothetical category it was found that 3 participants (1%) were in a low category, 58 participants (18.5%) in the average category, and 252 participants (80.5%) in the high category. This means that the majority of respondents are in the category of having a high self-efficacy career decision making.

The results of the descriptive statistical analysis test obtained a mean score of 59.1075 with a standard deviation of 9.43106 for career decision-making self-efficacy variable on male students, 56.7636 with a standard deviation of 7.05093 for female students. The mean score for male students is above 53 hypothetical norms, which means that their CDMSE is high while the results for the female students show that they had confidence in career decision making.

The results of the independent sample T-test found that there was a difference in career decision self-efficacy scores between male and female students at a value of $t = 2.42$ with $p = 0.016$ ($p < 0.05$), with a 2.34 mean difference, SE 0.969 difference and effect size using Cohen's d of 0.299, which means that there is a significant difference between the two sample groups. Considering the mean score of CDMSE variable on male students that is higher than female's, it can be interpreted that male students have better confidence in career decision making than their female counterparts. These

findings are different from previous studies that did not find gender differences in career decision making self-efficacy (Betz and Luzzo 1996; Buyukgoze-Kavas 2014; Chung 2002; Isik 2013; Taylor and Betz 1983).

Descriptive statistical analysis results revealed that the variable mean score of CDMSE for the first-year students was 57.1486 with a standard deviation of 8.63576, second-year students 57,1091 with a standard deviation of 7.65344, third-year students 58.5263 with a standard deviation of 5.70318, and fourth-year students 60.0588 with a standard deviation of 6.58094. The results of the analysis of variance obtained F value of 0.995 with p=0.395 (p> 0.05) which means there is no significant difference among the four study periods, consequently, study period does not have any influence on CDMSE.

Ancova's analysis showed that the study period did not have any influence on gender covariables on the CDMSE variable. It was found that the F value in the corrected model was 1.911 with a p-value of 0.109 which indicates no significant difference. This means that the assumption of Ancova is not fulfilled, therefore, no further analysis interpretation is necessary.

4. CONCLUSIONS

The objective of this study was to explore CDMSE profiles of college students and test the differences between them based on gender and differences in each time of the study. The findings show that most of the students have high career decision-making self-efficacy (both male and female), there are variations based on gender and no significant difference based on time of the study. This study supports content validity for the Indonesian version of the CDMSE scale. Despite the needs for some improvements, it shows that this instrument is suitable for research on self-efficacy in career decision making for students. The findings of this study provide opportunities for future research on career decision-taking in Indonesia.

5. ACKNOWLEDGMENTS

The authors appreciate the Ministry of Research and Higher Education for funding the research.

REFERENCES

Azwar, Saifudin. 2010. *Penyusunan Skala Psikologi*. Yogyakarta: Rajawali Press.

Azwar, Saifudin. 2012. *Sikap Manusia: Teori Dan Pengukurnannya*. Yogyakarta: Pustaka Pelajar.

Betz, Nancy E. and Darrell Anthony Luzzo. 1996. "Career Assessment and the Career Decision-Making Self-Efficacy Scale." *Journal of Career Assessment* 4(4):413–28.

Bolat, Neslihan and Hatice Odac. 2016. "High School Final Year Students ' Career Decision-Making Self-Efficacy , Attachment Styles and Gender Role Orientations." *Current Psychology* 37(2):254–59.

Bullock-Yowell, Emily, Lindsay Andrews, and Mary E. Buzzetta. 2011. "Explaining Career Decision-Making Self-Efficacy: Personality, Cognitions, and Cultural Mistrust." *Career Development Quarterly* 59(5):400–411.

Burns, Gary N., Dale Jasinski, Steve Dunn, and Duncan Fletcher. 2013. "Academic Support Services and Career Decision-Making Self-Efficacy in Student Athletes." *Career Development Quarterly* 61(2):161–67.

Buyukgoze-Kavas, Aysenur. 2014. "A Psychometric Evaluation of the Career Decision Self-Efficacy Scale-Short Form With Turkish University Students." *Journal of Career Assessment* 22(2):386–97.

Chiesa, Rita, Fabio Massei, and Dina Guglielmi. 2016. "Career Decision-Making Self-Efficacy Change in Italian High School Students Boosting Career Exploration :" *Journal of Counseling & Development* 94(April):210–25.

Chung, Y. Barry. 2002. "Career Decision-Making Self-Efficacy and Career Commitment : Gender and Ethnic Differences Among College Students." *Journal of Career Development* 28(4):277–84.

Conklin, Amanda M., Jason J. Dahling, and Pablo A. Garcia. 2013. "Linking Affective Commitment, Career Self-Efficacy, and Outcome Expectations: A Test of Social Cognitive Career Theory." *Journal of Career Development* 40(1):68–83.

Crites, John. 1965. "Measurement of Vocational Maturity in Adolescence: I. Attitude Test of the Vocational Development Inventory." *Psychological Monographs: General Applied* 79(2).

Crites, John O. 1961. "A Model for the Measurement of Vocational Maturity." *Journal of Counseling Psychology* 8(3).

Isik, Erkan. 2013. "Effect of Interest Inventory Feedback on Career Decision Self-Efficacy among Undergraduate Students." *Procedia - Social and Behavioral Sciences* 84:1437–40.

Işık, Erkan. 2014. "Effects of a Brief Interest Inventory Intervention on Career Decision Self-Efficacy." *Australian Journal of Guidance and Counselling* 24(02):215–26.

Jiang, Zhou. 2015. "Core Self-Evaluation and Career Decision Self-Efficacy: A Mediation Model of Value Orientations." *Personality and Individual Differences* 86:450–54.

Jiang, Zhou, Xiaowen Hu, Zhongmin Wang, and Xuan Jiang. 2015. "Career Decision Self-Efficacy and Life Satisfaction in China: An Empirical Analysis." *Social Indicators Research* 132(1):137–54.

Miguel, José P., José T. Silva, and Gerardo Prieto. 2013. "Career Decision Self-Efficacy Scale - Short

Form: A Rasch Analysis of the Portuguese Version." *Journal of Vocational Behavior* 82(2):116–23.

Peterson, Shari L. and Robert C. delMas. 1998. "The Component Structure of Career Decision-Making Self-Efficacy for Underprepared College Students." *Journal of Career Development (Springer Science & Business Media B.V.)* 24(3):209–25.

Taylor, Karen M. and Nancy E. Betz. 1983. "Applications of Self-Efficacy Theory to the Understanding and Treatment of Career Indecision." *Journal of Vocational Behavior* 22(1):63–81.

APPENDIX

Tests of Between-Subjects Effects

Dependent Variable: CDSE

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	470.420[a]	4	117.605	1.911	.109	.024
Intercept	78539.270	1	78539.270	1275.894	.000	.806
Gender	284.505	1	284.505	4.622	.032	.015
Periode of_Studi	111.303	3	37.101	.603	.614	.006
Error	18959.331	308	61.556			
Total	1052849.000	313				
Corrected Total	19429.751	312				

a. R Squared = .024 (Adjusted R Squared = .012)