

Career decision making self-efficacy and decision making styles of higher education students in Greece

Despina Sidiropoulou-Dimakakou & Katerina Argyropoulou

Department of Psychology, University of Athens, Greece

The purpose of this study is to examine the relationship between career decision-making self-efficacy and decision-making styles in a group of higher education students. The present study aims to address two questions, namely (1) Is there any relation between career decision-making self-efficacy and decision-making styles? (2) Are there differences in career decision making between the higher education students in the sample?

The role of self-efficacy as a fundamental influence on career development has been stressed by empirical research spanning the last 20 years. The construct of self-efficacy elaborated by Bandura (1997) relates to judgments on the skills a person engages in order to successfully complete a task. In short, perceived efficacy is concerned not with the number of skills you have, but with what you believe you can do with what you have under a variety of circumstances. According to theory and research, self-efficacy makes a difference to how people feel, think and act. Bandura argues that self-efficacy has an important role in influencing the types of activities and environment in which people choose to participate. Hence, different people with similar skills, or the same person under different circumstances, may perform poorly, adequately or extraordinarily depending on fluctuations in their beliefs of personal efficacy.

Betz and Hackett (1986) encouraged investigations of the process of how career decisions are made from a self-efficacy perspective; and Betz, Klein & Taylor (1996) affiliated the concepts of career decision-making and self-efficacy to explore the effect of self-confidence on an individual's ability to successfully carrying out the activities required in career decision-making. According to the literature, the five career choice competencies that form the basic components of an efficacious career decision are: (1) goal selection, (2) occupational information, (3) problem solving, (4) planning, and (5) self-appraisal (Crites, 1981; Taylor & Betz, 1983). In short, a successful career choice does not only depend on the development of the relevant competencies, but also on the confidence of the individual in these skills.

The study of individual differences in career decision-making focuses on the manner in which decisions are approached. Any individual constitutes a single entity with their own features and their own developmental dynamic. However, despite their individuality, it is confirmed that the same types of personality, when approaching decisions, display in their behaviour certain common features, especially when their decisions are similar. The typological approach to career decision making identifies defined models of behaviour that individuals will demonstrate in making decisions (Arroba, 1978). These models comprise strategies or styles which indicate the cognitive and emotional dimensions of behaviour involved in trying to achieve the best possible outcomes from their choices (Slaney, 1988).

According to Harren (1979), individuals use three strategies or styles of decision making: the rational style, the intuitive style and the dependent style. The rational style involves an awareness of the effect of prior actions on subsequent ones such that the decider accepts responsibility for choice and is active, deliberate and logical. This particular decision-making style takes into account both our self-awareness as well as awareness of our environment. Our choices when making rational decisions usually fit better the demands and conditions of our life. The intuitive style involves a focus on emotional self-awareness as the basis for choice, little anticipation of the future and little information seeking or logical weighing of alternatives. Although nowadays intuition is held in higher esteem compared to the past, still it is wiser for individuals not to make decisions based on their emotional responses, provided they can gather all the necessary information. Finally, the dependent style is one in which the responsibility is projected outside of the self, such that the choice is based on the expectations or advice of others. However, if we assign the decision-making responsibility elsewhere, the responsibility for coping with the consequences of any decision still remain with us (for a review see Sidiropoulou-Dimakakou, 1993, pp. 23-33).

The literature indicates that self-efficacy influences career decision-making. According to research studies, career decision-making self-efficacy is correlated negatively with career indecision (Betz & Luzzo, 1996), influences the level of exploratory career behaviours (Blustein, 1989) and determines the range of commitment and motivation in career decision making (Giannakos, 1998). Nevertheless,

the study of career decision-making self-efficacy in strategies or styles of decision has not been examined sufficiently. To address this shortcoming, we considered it interesting to investigate the relationship between decision strategies and career decision-making self-efficacy.

Method

Participants

The sample for this study comprised 292 undergraduate students of the University of Athens. Out of these, 150 were women and 142 were men. Participants represented a variety of majors (Education 34.6%, Computer Science 18.5%, Science 17.1%, Medicine 12.3%, and Culture/History 17.5%). The average age was 22.57 years.

Instruments

Two instruments were used:

Career decision-making self – efficacy scale (CDMSE). This 50-item measure (Taylor and Betz, 1983) assesses self-efficacy percepts with regard to career decision-making. The CDMSE contains five 10-item subscales reflective of career choice competencies: goal selection, gathering occupational information, problem solving, planning for the future, and accurate self-appraisal. Respondents indicate, by using a 10-point scale ranging from *No Confidence* (0) to *Complete Confidence* (9), their level of confidence in their abilities to successfully complete the tasks. Scores for each subscale are obtained by totalling responses to the 10 items; a maximum score is 90. Totalling the subscales scores yields an overall CDMSE score; the maximum score is 450. Taylor and Betz (1983) reported coefficient α of .97 as an internal consistency estimate. Reliabilities (coefficient α) calculated for the five subscales revealed values of .87, .89, .86, .89, and .88 for goal setting, occupational information, problem solving, planning, and self-appraisal, respectively.

Assessment of career decision making (ACDM). This 30-item measure (Harren, 1979) assesses the degree to which individuals rely on each of three decision-making styles: Rational (R), Intuitive (I), and Dependent (D). Each style was measured by a separate 10-item scale considered relatively independent. Harren (1979) reported the test-retest reliabilities for these scales to be 0.85 for Rational 0.76 for Intuitive, and 0.85 for Dependent.

Analysis procedures and results

First, the following scores were computed for each subject: a) the score of each of the five subscales of CDMSE representing the five career choice competencies, b) an overall CDMSE score, c) the score of each of the three subscales representing the three decision-making styles of ACDM. Next, we computed the Pearson r correlation between the CDMSE scores (subscales and total) and the three decision-making styles of ACDM. ANOVA and t -test were performed to determine whether there were significant differences by social-demographic variables on the five career choice competencies, the overall CDMSE score, and the three decision-making styles.

A univariate analysis of variance (ANOVA) was used to determine whether significant differences existed among the five scientific fields on the basis of ACDM. The result was significant on 'Rational Style', $F(4, 287) = 2.39$, $p < .05$. Specifically, students who attend 'Education' demonstrated a higher mean of 'Rational style' ($\bar{X} = 7.83$) than students in 'Computer Science' ($\bar{X} = 6.98$) who, in turn, scored higher than those in 'Science' ($\bar{X} = 6.70$) (Scheffé's test).

A univariate analysis of variance (ANOVA) was used to determine whether significant differences existed among the five scientific fields on the basis of CDMSE. The result was significant on 'Problem Solving', $F(5, 286) = 2.67$, $p < .05$. Specifically, students who attend 'Science' demonstrated higher mean of 'Problem Solving' ($\bar{X} = 67.31$) than those in 'Education' ($\bar{X} = 66.07$), who, in turn, scored higher than those in 'Medicine' ($\bar{X} = 64.56$) (Scheffé's test).

T -test revealed age differences at the level of 'Goal Selection' and at the level of 'Planning for the Future'. Students up to 21 years had significantly higher scores on 'Goal Selection' [$\bar{X} = 71.57$]: $t(290) = 2.27$, $p < .05$] and on 'Planning for the Future' [$\bar{X} = 70.11$]: $t(290) = 1.98$, $p < .05$] than students above 22 years.

The correlations matrix between the CDMSE scores and the three decision-making styles of ACDM are displayed in table 1. Career Decision Making Self-Efficacy overall score is significantly correlated with the *rational* style ($r = .24$, $p < .01$) in a positive direction and with the *dependent* style ($r = -.30$, $p < .01$) in a negative direction.

Table 1
Representative Correlations of CDMSE with Career Decision-making styles questionnaire

CDMSE		Rational style	Intuitive style	Dependent style
Goal selection	Pearson r	.143*	.015	-.283**
	Sig.	.014	.804	.000
	N	292	292	292
Occupational information	Pearson r	.157**	-.064	-.229**
	Sig.	.007	.279	.000
	N	292	292	292
Problem solving	Pearson r	.190**	-.020	-.260**
	Sig.	.001	.731	.000
	N	292	292	292
Planning for the future	Pearson r	.328*	-.123*	-.298**
	Sig.	.000	.036	.000
	N	292	292	292
Accurate self-appraisal	Pearson r	.188**	-.088	-.257**
	Sig.	.001	.132	.000
	N	292	292	292
CMSE score	Pearson r	.238**	.067	-.298**
	Sig.	.000	.255	.000
	N	292	292	292

**Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

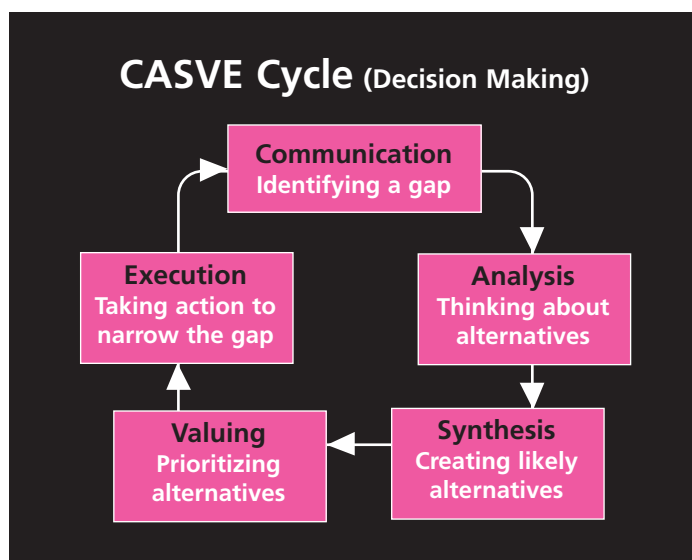
Discussion

The findings of this study suggest that the 'rational style' influences the career decision-making of undergraduate students in Greece. This result reaffirms the findings of recent research which shows that undergraduate students tend to use this style when they are approaching a career decision (Sidiropoulou-Dimakakou, Argyropoulou & Pavlopoulos, 2006). A possible explanation of our result is that the demands of the labour market oblige higher education students to use elements characterising rational decisions. The rational approach does not discredit personal emotions regarding the choice (intuition) or the opinions of experts and 'significant others' (dependence); on the contrary, it takes into consideration information from both internal and external sources, assesses the value of such information, and, if necessary, invests time on further exploration (Sidiropoulou-Dimakakou, 1993).

In practice, that stresses the need for career counsellors to recognise that students' career decision making is inextricably linked to additional psychosocial, personal and developmental beliefs and to encourage students to take

advantage of timely involvement in career decision making and career planning activities (Miller, 2001).

It was also of interest to find out about the differences among the scientific fields in relation to the 'problem solving' career choice competency. As Betz, Klein, and Taylor (1996) suggest, the five career choice competencies provide clients with a useful framework for understanding the knowledge and skill components as well as the stages of the career decision-making process. Thus, the reinforcement of the skills of career decision-making (i.e. problem solving) by career counsellors would help higher education students to avoid the pitfalls of poor decision-making. Particularly, in a recent article, the authors have applied the cognitive information processing approach to employment problem solving and decision making. At the risk of oversimplification, this approach includes several key concepts, which describe the processes by which problem solving and decision making can be facilitated. This set of processes is called the CASVE cycle (the Communications, Analysis, Synthesis, Valuing, Execution Cycle) (Sampson, Lenz, Reardon, & Peterson, 1999).



One of the main question of our research is the relationship between career decision-making self-efficacy and career decision-making styles. The findings of this study suggest a moderately strong relationship between the two variables. Students who are more confident in their ability to complete the tasks and behaviours required for effective decision-making (goal selection, occupational information, problem solving, planning for the future, and accurate self-appraisal) are more likely to use the rational style in their decisions. On the other hand, students who lack confidence in their ability to complete decision-making tasks tend to use the dependent style. Thus, stronger self-efficacy expectancies would be an antecedent of a 'good' or 'logical' decision. This finding is consistent with the findings of others studies, which assessed decision making and career development (e.g. Niles *et al.*, 1997; Salami, 2004) showing the utility of career decision-making self-efficacy in career choice and behaviour. In counselling settings, syntheses of research and specific research studies have shown that career counselling interventions were effective in advancing students' career decision making, career maturity and self clarity (Garis & Niles, 1990; Johnson & Smouse, 1993).

Implications for practitioners

Self-efficacy enhancing interventions could probably benefit almost all students in higher education because they help them to assume more responsibility for their career decisions, to engage more systematically in career exploration and planning activities and to increase their chances of experiencing satisfaction, stability, and success. Taking the four basic sources of information on self-efficacy (performance accomplishment, vicarious learning, anxiety management, and verbal persuasion and encouragement) career counsellors will be able to design interventions and workshops reinforcing personal decision-making competencies and skills (Bandura, 1997). In a truly comprehensive career guidance programme, provision will be made to achieve occupational and employment decision-making readiness by assisting students to:

- Understand the relationship between self-knowledge and career choice
- Establish short-term and long-term career goals
- Explore a full range of career and work possibilities
- Make reasoned and informed career choices based on accurate self-knowledge and accurate information about the world of work
- Conduct values clarification exercises as they relate to career planning and decision making
- Arrange panels composed of various majors to talk about their studies and aspects of making decisions
- Use electronic bulletin boards on the Internet to disseminate career information
- Write vocationally relevant autobiographies
- Engage in decision making activities
- Develop career portfolios (Herr, Cramer & Niles, 2004).

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For correspondence

Dr. Despina Sidiropoulou-Dimakakou
Associate Professor, Department of Psychology, Faculty of Philosophy, Pedagogy and Psychology, University of Athens
Panepistimiopoli, 157 84 Ilissia, Athens, Greece
Tel. 0030-2107277571
E-mail: dsidirop@psych.uoa.gr

Dr. Katerina Argyropoulou, Career Counselor
Department of Psychology, Faculty of Philosophy, Pedagogy and Psychology, University of Athens
E-mail: argirop@fnet.gr