



## ABSTRACT

According to official data (GPEARI, 2008), the major proportion of unemployed graduates in Portugal, are female (70.9%) and live in the depressed north region of the country (41.3%). The same report shows an increase of 54% in the attendance of college courses, over the last ten years. This is especially true, for master and PhD courses and for women.

In this context, this study aims to evaluate the effects of two forms of a Personal Career Management Seminar (PCMS, forms A and B; Taveira et al., 2006) designed to help graduates and PhD students' career exploration during the intermediate years of their programs. Treatment and comparison subgroups of graduation and PhD programs, from a north-western university, were administered a pre- and a post-test measure (CES, Stumpf, Colarelli & Hartman, 1983). Analyses of covariance of the difference between post-and pre-test measures were performed to test differences between those groups and gender, having as covariate the pre-test results.

**Keywords:** Self-career management, career development, career intervention.

## RESEARCH METHOD

### Participants

Sample	N	Sex		Age	
		Men (%)	Women (%)	Mean (SD)	Min-Max
Experimental Group – A	40	20 (50%)	20 (50%)	22.25 (2.24)	19-29
Experimental Group – B	40	20 (50%)	20 (50%)	27.85 (4.18)	22-39
Control Group – A	40	20 (50%)	20 (50%)	21.50 (2.73)	19-29
Control Group – B	20	7 (35%)	13 (65%)	28.50 (6.34)	23-46
<b>Total</b>	<b>140</b>	<b>67 (47.9%)</b>	<b>73 (52.1%)</b>	<b>24.57 (4.88)</b>	<b>19-46</b>

Table 1. *Socio-demographic data*

### Measures

*Career Exploration Survey* (CES; Stumpf, Colarelli, & Hartman, 1983; adapt. by Taveira, 1997). CES is an adapted version for Portugal of a self-administered scale composed by 54 items, organized into three major components of career exploration dimensions: (a) five beliefs about career exploration (employment outlook, certainty of career exploration outcomes, external search instrumentality, internal search instrumentality, and importance of preferred position), (b) four behavioral dimensions of exploration (extent of environment exploration, extent of self-exploration, intended-systematic exploration, amount of acquired information), (c) and three affective reactions to career exploration (satisfaction with information, exploration stress and decision stress).

### Procedure and Analyses

The Personal Career Management Seminar (PCMS, forms A and B, Taveira et al., 2006) is a specialized supportive program, developed by psychology professionals, to motivate students to invest more in self career management. PCMS-A creates opportunities for students to increase understanding about their life trajectory and work character, the ability of life-planning and decision-making, as well as, their knowledge about opportunities for advanced training and employment in the preferred business sector. It is aimed at all students of intermediate years of 1<sup>st</sup> and 2<sup>nd</sup> Bologna's cycles, comprising a total of 9 weekly sessions of 120 minutes each, in groups of 8 to 10 participants. PCMS-B invites participants to increase their self-knowledge, awareness about opportunities for advanced training and job creation and attainment, as well as, the ability of life-planning and decision-making, while maintaining a positive view about the future. It is for all students in the intermediate years of the 3<sup>rd</sup> Bologna's cycle, and consists of 6 weekly sessions of 120 minutes each, performed in small groups (4 to 7 participants). SPSS (Statistical Program for Social Sciences) for Windows (version 16.0) was used to make descriptive analyses for the socio-demographic characteristics of participants, as well as analyses of covariance of the difference between post-and pre-test measures of career exploration by group and gender, having as covariate the pre-test results.

## RESEARCH FINDINGS

Subscales	PCMS - A						PCMS- B					
	Experimental group			Control group			Experimental group		Control group			
	Men	Women	Mean	Men	Women	Mean	Men	Women	Men	Women	Mean	Difference
	T test	T test	Difference	T test	T test	Difference	T test	T test	T test	T test	Difference	(Men-Women)
	t (19)	t (10)	(Men-Women)	t (19)	t (19)	(Men-Women)	t (19)	t (19)	(Men-Women)	t (6)	t (12)	(Men-Women)
Employment Outlook	<b>3.97**</b>	.92	.900	<b>2.46*</b>	<b>2.57*</b>	.150	<b>2.36*</b>	<b>4.07**</b>	-.157	-.00	-.647	-.387
Certainty of Exploration Outcomes	1.06	<b>2.41*</b>	-.977	.089	1.76	-.145	<b>3.28**</b>	<b>2.21*</b>	.767	.638	-.446	1.28
External Search Instrumentality	.774	<b>2.54*</b>	-.275	.231	-.538	.241	.97	1.81	-.245	-.348	-.079	.046
Internal Search Instrumentality	.133	<b>3.68**</b>	-.113	-.372	-.607	.033	<b>6.98***</b>	<b>5.54***</b>	.395	1.07	1.8	-.109
Importance of Preferred Position	.281	-.425	-.213	<b>-2.19*</b>	.906	-.985	1.83	.00	1.06	.49	<b>3.59***</b>	-.958
Self-Exploration	<b>4.02***</b>	1.14	.659	1.59	1.79	1.19	<b>3.54**</b>	<b>5.17**</b>	-.137	-.362	-.457	-.098
Environment Exploration	<b>7.38**</b>	<b>4.88**</b>	1.09	1.06	1.72	-.948	1.12	<b>3.63***</b>	-.124	2.07	1.06	1.94
Intended-Systematic Exploration	<b>4.65***</b>	<b>2.57*</b>	.310	<b>2.44*</b>	1.75	-.002	1.28	.979	.263	.194	.365	-.275
Amount of Acquired Information	<b>8.87***</b>	<b>3.21**</b>	.942	<b>2.25*</b>	-.731	.339	<b>2.99**</b>	<b>3.36**</b>	.082	-.33	-.562	-.631
Satisfaction with Information	<b>6.8***</b>	<b>3.41**</b>	.519	<b>2.36*</b>	1.97	-.140	<b>4**</b>	1.69	-.991	.383	-.529	-.606
Exploration Stress	-.459	.124	-.134	.00	<b>2.71*</b>	<b>-2.18*</b>	<b>3.03**</b>	1.89	.524	.34	<b>2.29*</b>	-.1522
Decision Stress	-.139	<b>-2.38*</b>	-.190	.541	-.556	.255	.372	.017	.621	-.329	1.47	-2.62

Table 2. *Career exploration: frequencies, t test by intervention group and sex and differences between experimental and control groups considering sex*

### PCMS-A

In men's subgroup at the experimental group, the differences between post and pre-tests were statistically significant in the following six subscales: Employment Outlook (.00); Self-Exploration (.00); Environment Exploration (.00); Intended-Systematic Exploration (.00); Amount of Acquired Information (.00); and, Satisfaction with Information (.00). In women's subgroup of the experimental group, the difference in the proportion of responses between post and pre-tests was statistically significant in seven subscales: Certainty of Exploration Outcomes (.04); External Search Instrumentality (.03); Environment Exploration (.00); Intended-Systematic Exploration (.03); Amount of Acquired Information (.01); Satisfaction with Information (.01); and, Decision Stress (.04). In men's subgroup of the control group, the differences between post and pre-tests were statistically significant in the Employment Outlook (.02); Importance of Preferred Position (.04); Intended-Systematic Exploration (.03); Amount of Acquired Information (.04); and, Satisfaction with Information (.03) subscales. In women's control group, the difference in the proportion of responses was statistically significant only in the Employment Outlook (.02) and the Exploration Stress (.01) subscales. The mean difference analysis between men and women of the experimental group at post-test, having the results of the pre-test moment as co-variation variable, reveals no statistically significant difference in the evaluated career exploration dimensions. Regarding the control group, there is one statistically significant difference between men and women, at post-test, in the Exploration Stress subscale (.03).

### PCMS-B

For men at the experimental group, the difference in the proportion of responses between post and pre-tests was statistically significant in Employment Outlook (.03); Certainty of Exploration Outcomes (.00); Internal Search Instrumentality (.00); Self-Exploration (.00); Amount of Acquired Information (.00); Satisfaction with Information (.00); and, Exploration Stress (.01) subscales. For the women's subgroup, the difference in the proportion of responses was statistically significant in the following subscales: Employment Outlook (.00); Certainty of Exploration Outcomes (.04); Internal Search Instrumentality (.00); Self-Exploration (.00); Environment Exploration (.00); and Amount of Acquired Information (.00). In the control group, the differences between men's post and pre-tests have not proven to be statistically significant in any of the career subscales. In women's control subgroup, the differences between post and pre-tests were statistically significant in the Importance of Preferred Position (.00), and Exploration Stress (.04) subscales. The mean difference analysis between men and women at post-test, having the results of the pre-test moment as co-variation variable, reveals no statistically significant differences in both experimental and control groups, in any of the evaluated dimensions.

## DISCUSSION AND CONCLUSION

According to these results, students who participate in the PCMS, have a general improvement at the main career exploration scales evaluated. When compared to the control group, without intervention, these results are away more significant as the control group does not registers results that expressive. However, considering the main goal of this communication, the PCMS was designed to prevent specially problems at the school-work transition, taking into consideration the special needs of women. At this point, in spite of the Seminars being adjusted to the graduate and PhD students - it is an effective psychological intervention, promoting gains in some career exploration cognitive, behavioral and affective dimensions- the intervention is not fully sensitive to gender issues and it could benefit with that adjustment. It would be important, also, to pursue this line of research in order to explain which clients' conditions and intervention process variables contributed to these pattern of results.

The 11th European Congress of Psychology

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Oslo, Norway

July 7-10, 2009

### Support bibliography:

Lalande, V., Hiebert, B., Magnusson, K., Bezanson, L., & Borgen, B (2006). Measuring the impact of career services: current and desired practices. National Consultation on Career Development (NATCON).

Luzzo, D. A. (2000). *Career Counseling of College Students: an empirical guide to strategies that work*, American Psychological Association, Washington DC.

Whiston, S. C., & Sexton, T. L. (1998). A review of school counseling outcome research: implications for practice. *Journal of Counseling & Development*, 76, 412-426.

GPEARI, Gabinete de Planeamento, Estratégia, Avaliação e Relações Internacionais (2008). *Número de diplomados no ensino superior [1997-1998 a 2005-2006]*.

OCES (2004). *Observatório da Ciência e do Ensino Superior, Direção de Serviço de Estatísticas e Indicadores*, Setembro.

<sup>1</sup>FCT grant holder - SFRH/BD/36433/2007