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ABSTRACT

A study determined differences among the levels and types of career indecision within and between two cross-cultural groups of undergraduate students from two counseling centers. The groups were 88 University of Pittsburgh students and 79 Universidad del Pacifico, Peru, students. The Indecision Scale of the Career Decision Scale (CDS) was used to examine levels and types of career indecision. Cluster analysis was performed to determine groups with similarities in indecision. One-way analyses of variance found differences within levels of indecision. Two-way analyses of variance compared each of the cluster levels of the two groups. Pearson Product Moment Correlation Coefficients and t-tests were used to establish differences between age and sex, but none were found. Findings identified four defined clusters in the levels of indecision per group. Data from the Pittsburgh group showed a higher level of indecision per cluster than the group from Peru, suggesting that cross-cultural characteristics may influence the decision-making process for undergraduate students. (Appendixes contain 12 references and item-item reliability tables from the CDS for Pittsburgh and Peru.) (YLB)

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CAREER INDECISION: CROSS CULTURAL DIFFERENCES IN A CLUSTER ANALYSIS AMONG TWO GROUPS OF UNDERGRADUATE STUDENTS

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ED 415 355

Abstract

The study was designed to determine differences among the levels and types of career indecision within and between two cross-cultural groups of undergraduate students from two counseling centers. Subjects were undergraduate students from two cross-cultural groups. The age range was 16 to 25, and all of them had sought help at two university counseling centers.The US group was conformed by students from the University of Pittsburgh (Pitt). A total of 88 subjects participated in the study, 74% were females. The other group was from the Universidad del Pacifico, Peru. A total of 79 subjects were part of this group, 53% were males. Levels and types of career indecision were examined with the Indecision Scale of the Career Decision Scale (CDS). The data were analyzed by a cluster analysis to determine similarities in indecision. One way-analyses of variance found differences within levels of indecision. Two-way analyses of variance compared each of the cluster levels of the two cross-cultural groups. Findings indicated four defined clusters in the levels of indecision per cross-cultural group. The data from Pitt showed a higher level of indecision per cluster than the group from Peru, suggesting that cross-cultural characteristics may influence the decision making process for undergraduate students.

THEORETICAL FRAMEWORK

For a long time, researchers and counselors have been interested in the construct of career decision. During the last decade the interest has increased even more and has been the object of numerous research. The literature review gives us an idea of the evolutionary process of the concept of career indecision and its development, -from decision-indecision; indecision-indecisiveness; to a unidimensional -multidimensional construct. (Fuqua, Blum, & Hartman,1988a; Serling & Betz,1990; Schulenberg & Hostetler,1990)

Additionally, research for developing new techniques and their application of new strategies in career counseling have been supported by different theoretical approaches -development, family systems, and personality theories. Variables, such as anxiety, locus of control, self-esteem, and identity formation issues have been related to career indecision. Others, like career decision-making styles, career commitment, perceptions of problem solving, and vocational identity have also been found related to career indecision. (Fuqua et al., 1988a; Fuqua et al., 1988b; Hartman et al., 1983, Hartman, Fuqua, Blum & Hartman, 1985; Larson, Heppner, Ham & Dugan, 1988; Serling & Betz, 1990)

Overall, career indecision has generally been assessed among undergraduate and high school students of the US. Few studies have been done abroad, and scarce literature reports, if any, cross-cultural differences among levels and types of career indecision. Recently, research on cultural values and specific characteristics of Hispanics/ Latinos have been developed as a need to help them in

their career decisions. It seems that an important part of making career choices is deeply rooted in their family values and strong affiliation with their nuclear and extended families. Hispanic families tend to be both emotionally and financially quite strong and supportive. As a consequence, when a Hispanic/Latino student is faced with career indecision problems, may need and want to involve the family in his career decision. For them, seeking external help is not often well seen, since the family helps them in the majority of their decisions. They rely on their support for making career choices. A similar pattern occurs with Latinamerican college students.

The purpose of this study was twofold. First, to examine if the levels and types of career indecision within each group were significantly different in terms of undecidedness. Second, to establish if there were significant differences among the levels of indecision between the two cross-cultural groups of undergraduate students. The effort was made since authors like Barak & Friedkes (1981) and Fouad (1994) suggested that there is a need to explore whether other variables related to family issues, social networks, and traditional values might be influencing in the career choice process of undergraduate students.

METHODOLOGY

A. Subjects

The sample was composed of all undergraduate students from two cross-cultural groups (N=167). The age range was 16-25 and all subjects seek career help at two university counseling centers during a semester. Eighty-eight students were part of an American group from the University of Pittsburgh (Pitt). The mean age for this group was 19.61 (M= 19.61; DS= 1.44). Most of them were sophomores (47%), followed by freshman, juniors, and seniors. Seventy-nine students were part of the undergraduate group of students from the Universidad del Pacifico (Peru). Their mean age was 19.71 (M=19.71; SD=1.85). From a five-year program, in this group, most students were from the fourth year (33%), followed by first year, second year, third year and fifth year students.

B. Instruments

Levels and types of career indecision were examined with the Indecision Scale of the Career Decision Scale (CDS) (Osipow, Carney, Winer, Yanico, & Koschier, 1976). A demographic questionnaire asking for age, gender and year of study was used for both samples. Both instruments were translated to Spanish, the official language of Peru. An item-item reliability test was performed to evaluate the internal consistency of the Indecision Scale of the CDS scors of both samples. The alpha coefficient for the University of Pittsburgh was .73; and for the Universidad del Pacifico was .78.

TASKS

Two cross-cultural groups participated at different times for the study. The scores from the first group, Counseling and Student Development Center of the University of Pittsburgh (Pitt), were the pretest scores of the Career Decision Scale from a research conducted previously by Brusoski in 1990. The second group were approached at the Counseling Service of the Universidad del Pacifico, Peru. Subjects were evaluated during one semester and were in search of career counseling.

DATA ANALYSIS

Once the scores were obtained from the demographic questionnaire and the Indecision Scale of the CDS, they were entered on a computer coding sheet for data analysis. The K-Means Clustering Program on BMDP was used to perform the cluster analysis as to determine groups with similiarities in indecision. One-way analysis of variance followed as to find differences within the levels of indecision. Additionally, two-way analysis of variance was performed in comparing each of the cluster levels between the two cross-cultural groups. Finally, Pearson Product Moment Correlation Coefficients and t-tests were used to establish differences between age and sex, respectively, however, none of them were found.

RESULTS

1. Means and standard deviations

The mean scores of the Indecision Scale of the CDS for the sample from Pitt indicate a higher level of undecidedness (M=38.78; SD=6.87) than the sample from Peru (M=35.06; SD=35.63). Means and standard deviations are reported in Table 1.

Table 1

Means and Standard Deviations Indecision Scale Scores of the CDS

Group	n	M	SD	Range
Pitt	88	38.78	6.87	17.00-59.00
Peru	79	35.06	6.43	22.00-50.00

* Mean scores over 34 points reveal undecidedness.

Results indicate that there are four defined groups or clusters in the levels of indecision per each cross-cultural group. Clusters were ranked according to types of indecision, from less undecided to indecisive students. Table 2 describes the means and standard deviations of each Cluster per group.

Table 2

Means and Standard Deviations of : Pitt and Peru

Ranked Clusters of Indecision

	Pitt (n=88)			**Peru** (n=79)		
	n	**M**	**SD**	**n**	**M**	**SD**
Cluster 1	24	31.91	6.50	26	28.90	3.98
Cluster 2	12	37.09	4.98	22	33.05	3.21
Cluster 3	20	40.42	3.90	21	40.33	3.74
Cluster 4	32	43.53	4.31	10	41.35	3.07

One-way analysis of variances was performed within each cluster to see if there were differences of indecision. Findings for the Pitt sample, as indicated on Table 3, revealed that not all the clusters were the same on indecision. (F=25.49;p<.001).

Table 3

Anova for Cluster Means - Pitt

Source	Sum of Squares	DF	Mean Square	F	p-value
Cluster	1935.46	3	645.15	25.49	0.00***
Error	2075.34	82	25.31		

***p<.001

Results of the One-way analysis of variance for the sample from Peru, as indicated on Table 4, revealed that not all the clusters were the same on indecision. (F=44.97;p<.001).

Table 4

Anova for Cluster Means - Pitt

Source	Sum of Squares	DF	Mean Square	F	p-value
Cluster	1785.12	3	595.04	44.97	0.00***
Error	780.62	59	13.23		

***p<.001

Additional findings revealed that there were significant differences among the levels of indecision between the two groups. The group from Pitt showed a higher level of indecision on each of the ranked clusters than the group from Peru (F=7.91;p<.01). Similarly, significant differences (F=49.62;p<.000) were found between each of the clusters on indecision for both Pitt and Peru samples, as shown in Table 5.

Table 5

Two-Way Anova Summary Table for CDS Clusters of Pitt and Peru

Source	Sum of Squares	DF	Mean Square	F	p-value
Country (1)	160.19	1	160.19	7.91	0.0056**
Clusters (2)	3015.38	3	1005.12	49.62	0.000***
Interaction (3)	129.54	3	43.18	2.13	0.0989ns
Error	2855.96	141	20.25		

**p<.01
***p<.001

(1) Comparing the grand mean on indecision for Peru to grand mean o indecision at Pitt.
(2) Comparing means of clusters ranked 1, 2, 3,4 combining Pitt and Peru.
(3) Difference between clusters of Pitt and Peru.

FIGURE 1

Cluster Analysis Matrix
Pitt

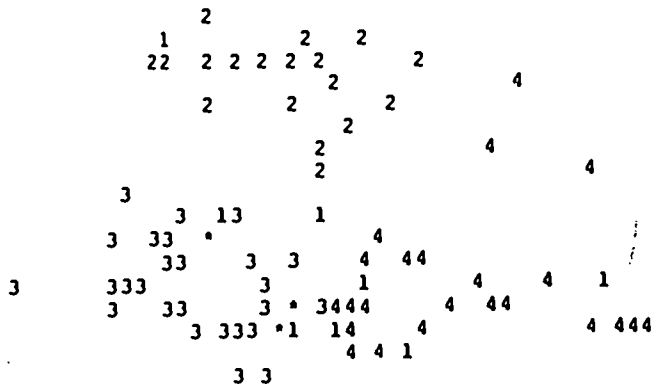


FIGURE 2

Cluster Analysis Matrix
Peru

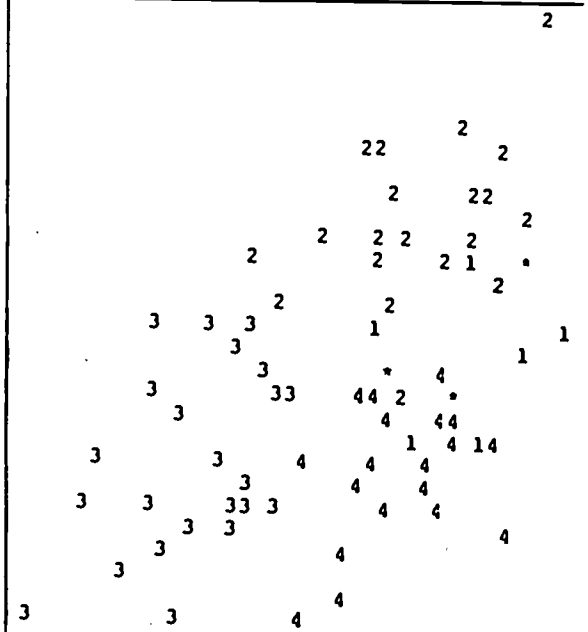
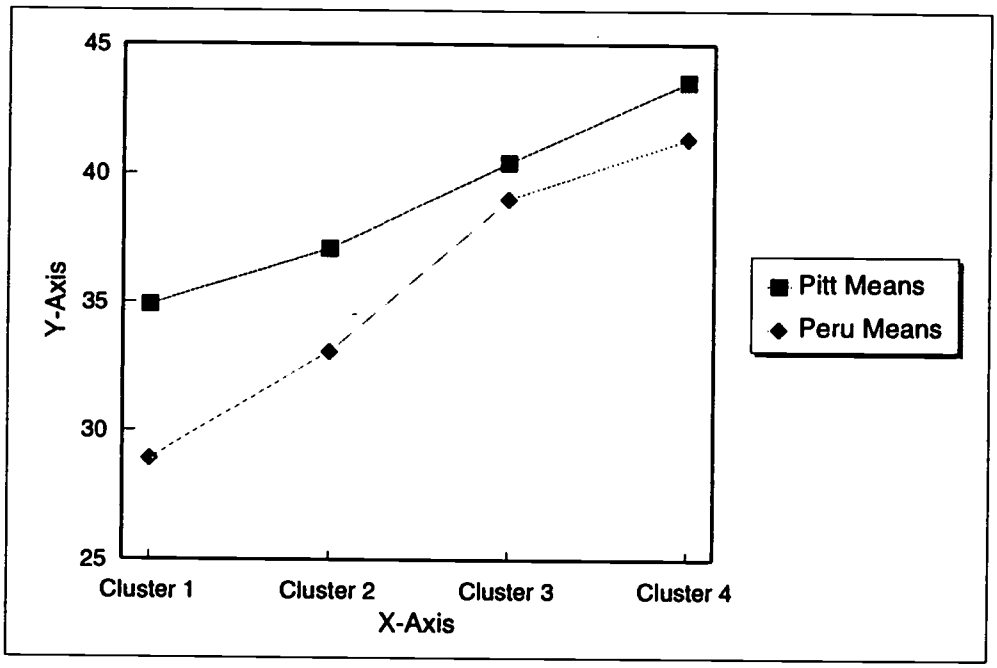


FIGURE 3

TWO-WAY ANOVA
GRAPH OF RANKED CLUSTER MEANS



	RANKED CLUSTERS - PITT/PERU	
	Pitt Means	Peru Means
Cluster 1	34.91	28.90
Cluster 2	37.09	33.05
Cluster 3	40.42	40.33
Cluster 4	43.53	41.35

CONCLUSIONS

Four clusters per each cross-cultural group have been found by a cluster analysis, which reveals levels of career indecision as measured by the Career Decision Scale, and makes possible the differentiation among types of students. These findings support the use of the CDS as an important instrument for career assessment for both American and a cross-cultural group of undergraduate students from Latin America (Peru).

The levels of career indecision among each cross-cultural group reveal differences between the groups. Levels of indecision are higher for the American sample, which may be related to cultural traditions, family values, and specific characteristics of the subjects per sample. As a result these may be influencing the decision making process of their career choice.

The study suggests that cross-cultural characteristics may be influencing the decision making process for undergraduate students in their career choice. Hence, career counselors should take them into consideration when providing career counseling to groups or individuals from different cultural groups.

Limitations in the study have been identified, in terms of the characteristics of the subjects, that participated in the study (from two different universities, with own characteristics) and recommendations to expand the research in the future with subjects from other universities of different cross-cultural groups and taking into consideration their family and cultural backgrounds have been made.

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Appendix A

Item-item Reliability Table
Indecision Scale (CDS) - Pitt

	CDS3	CDS4	CDS5	CDS6	CDS7	CDS8	CDS9	CDS10	CDS11	CDS12	CDS13	CDS14	CDS15	CDS16	CDS17	CDS18
CDS3	1.0000															
CDS4	0.0715	1.0000														
CDS5	0.0928	-0.1470	1.0000													
CDS6	0.2028	0.1557	0.1297	1.0000												
CDS7	0.0745	0.1062	0.2315*	0.0534	1.0000											
CDS8	0.1014	0.1374	0.2874**	0.0856	0.3739**	1.0000										
CDS9	0.3568**	0.2484*	0.0630	0.0996	0.1095	0.2338*	1.0000									
CDS10	0.1735	0.1060	0.4083**	-0.0607	0.1857	0.5259**	0.1819	1.0000								
CDS11	0.1646	0.0239	0.2905**	0.0326	0.2221*	0.5062**	0.1939	0.5150**	1.0000							
CDS12	0.3098**	0.0633	-0.0409	0.0713	-0.0514	-0.1050	0.0893	-0.0471	0.903	1.0000						
CDS13	-0.0236	0.3062**	0.4306**	0.1814	0.3306**	0.3921**	0.1421	0.4316**	0.3688**	-0.1099	1.000					
CDS14	0.1183	0.0783	0.4828**	0.0463	0.3276**	0.3085**	0.1475	0.4629**	0.3667**	0.0167	0.7070**	1.0000				
CDS15	-0.1204	0.4527**	-0.0811	-0.0084	-0.1586	-0.1732	0.0628	-0.0400	-0.0309	0.0589	0.0092	-0.1916	1.0000			
CDS16	0.2580*	0.1564	-0.3394**	0.0883	-0.1487	0.0494	0.2703*	-0.3036**	0.0171	0.3319**	-0.2179*	-0.2097*	0.2023	1.0000		
CDS17	0.0792	0.4489**	0.2811**	0.1248	0.1694	0.2625*	0.2172*	0.4672**	0.3513**	0.0210	0.5478*	0.4753**	0.2401*	-0.0835	1.0000	
CDS18	0.3331**	0.1357	-0.2702*	0.2094	-0.1393	0.0118	0.1436	-0.1234	0.0711	0.4450**	-0.1153	-0.1159	0.1373	0.4467**	0.1575	1.0000

* .05 level
**.01 level

alpha =.7306

Appendix B

Item-item Reliability Table
Indecision Scale (CDS) - Peru

	CDS3	CDS4	CDS5	CDS6	CDS7	CDS8	CDS9	CDS10	CDS11	CDS12	CDS13	CDS14	CDS15	CDS16	CDS17	CDS18
CDS3	1.0000															
CDS4	0.1953	1.0000														
CDS5	0.0421	0.5872**	1.0000													
CDS6	0.3218**	0.2612*	0.2457*	1.0000												
CDS7	0.1105	0.2518*	0.2234	0.1267	1.0000											
CDS8	0.2040	0.0574	0.0869	0.3436**	0.4317	1.0000										
CDS9	0.1462	0.2124	0.1563	0.3257**	0.2256	0.2902*	1.0000									
CDS10	-0.0200	0.3010**	0.3171*	0.2236	0.3072	0.3175**	0.3168**	1.0000								
CDS11	0.1253	0.3042**	0.0699	0.1410	0.2032**	0.2934**	0.3422**	0.3454**	1.0000							
CDS12	0.4423**	0.0470	0.0904	0.2620*	0.0954	0.4189**	0.2764*	0.1882	0.2339*	1.0000						
CDS13	0.0000	0.2054	0.1869	0.1217	0.2349*	0.3482**	0.4316**	0.4709**	0.3893**	0.2704*	1.0000					
CDS14	0.056	0.1537	0.1982	0.2497*	0.2313*	0.4840**	0.4568**	0.4079**	0.3573**	0.3304**	0.5369	1.0000				
CDS15	0.1469	0.2181	0.0838	0.1242	0.2103	0.1902	0.0283	0.015	0.1533	0.1649	-0.005	-0.0109	1.0000			
CDS16	0.1798	-0.0007	-0.0593	0.0000	0.1953	0.4919**	0.3055**	0.1125	0.1835	0.3737**	0.2268	0.4085**	0.0789	1.0000		
CDS17	0.1326	0.0280	-0.1197	0.0705	0.3421**	0.4790**	0.2543*	0.3296**	0.2596*	0.2833*	0.3435**	0.3175**	0.1085	0.5621**	1.0000	
CDS18	0.0721	0.0846	-0.0178	0.1072	0.2618*	0.2606*	0.2554*	0.2152	0.2557*	0.3312**	0.2388*	0.2800*	0.0713	0.3645**	0.5216**	1.0000

* .05 level
** .01 level

alpha=.7804

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