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A gender study of self-efficacy perceived in Socio-cultural environment in Mexican university students in the health area

Alejandro Chávez Guerrero¹, Jesús Enrique Peinado Pérez¹, Juan Francisco Aguirre Chávez¹,
Oswaldo Ceballos Gurrola², Guadalupe Javier Rivero Carrasco^{1,*}

¹Faculty of Physical Culture Sciences, Autonomous University of Chihuahua, México

²Faculty of Sport Organization, Autonomous University of Nuevo León, México

Email address:

jrivero@uach.mx (G. J. R. Carrasco)

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Abstract: The aim of the present study was to compare the profiles of perceived self-efficacy in the sociocultural sphere between men and women, Mexican university students of health sciences. A total sample of 524 participants (202 women, 322 men) aged 17-20 years ($M = 18.20$; $SD = 0.72$) participated in this study. A quantitative approach with a descriptive and transversal survey design was applied. The results of the one-way multivariate analysis of variance, followed by the one-way univariate analyses of variance, showed that women reported significant higher punctuations than men regarding the perceived self-efficacy in promotion of the culture and cultural identity ($p < .001$). Therefore, gender is an important variable when design any kind of intervention for improving the perceived self-efficacy of students in sociocultural sphere. Future research should apply these findings within other cultures.

Keywords: Student's Beliefs, Gender Differences, Higher Education, Academic Performance, Students Characteristics

1. Introduction

Self-efficacy can be defined as the different judgments individuals make of their own capacities from which they will organize and execute their own acts enabling them to achieve the desired performance [1]; or as the beliefs a person has about his own capacities to organize and execute required ways for action in expected situations or based in levels of performance [2]. Therefore it is not enough to "be able to" but it is precise to conceive a "self-capable of". A self-capable of using personal skills and abilities in different circumstances, even emotional reactions experimented in difficult situations [2-4].

A clear evidence of the importance of self-efficacy in the academic field is that it reveals why people with the same skill and knowledge level present different behaviors and results or why people act dissonant with their abilities [5, 6]. This explains why an adequate academic performance also depends of perceived self-efficacy to manage academic demands successfully. Therefore, self-efficacy beliefs in the same self-capacity are essential to dominate academic

activities because students that trust in their own capacities are more motivates to reach their goals [7,8]. Indeed people who doubt of their own capacities can believe that things are even more difficult than they really are; this belief creates stress, depression and narrow vision to solve problems [7,8].

It has been shown that low level of self-efficacy can be responsible not only for the decrease of school performance and interest to study but also of misbehavior in young people [9]. From here, the importance of strengthening with "Education" the development of the academic competence in the students, helping them to build skills that allow them believe in their own capacities [10, 11].

This work is a descriptive study, which compares profiles of perceived self-efficacy in a sociocultural environment of university men and women in the health area, trying to provide evidence and data that contributes to educational intervention within an educational perspective of attention to diversity inside the classroom.

2. Method

2.1. Participants and Design

A sample of 524 university students, 202 women and 322 men, aged 17-20 years ($M = 18.20$; $SD = 0.72$) participated in the study. The sample was constituted by all the freshmen university students from each degree in health sciences offered by the Autonomous University of Chihuahua (Mexico). A convenience sampling was used in order to try to cover representation of all the degrees. Regarding the design of the study, a quantitative approach with a descriptive and transversal survey design was used [12]. The independent variable was gender (women and men) and the dependent variables were the mean scores in the four scenarios in both the promotion of the culture and cultural identity.

2.2. Instrument

The self-efficacy in promotion of the culture and cultural identity was measured by the Self-efficacy in the Sociocultural Sphere Scale [13]. This questionnaire consists of a nine-item scale with two subscales: promotion of the culture (six items) and cultural identity (three items). According to previous studies [14,15] due to the fact that in the Mexican academic context, a scale from 0 to 10 commonly assesses students, in the present study a

Likert-type scale from 0 to 10 was chosen. For each domain (item) of the promotion of the culture and cultural identity (subscales), the participants were asked about how capable they feel, how much interest they have, and if they would make an effort to change how capable they will be to... Therefore, all the participants responded to each of the nine items (Table 1) of the questionnaire in the three different scenarios: (a) Scenario of perceived ability, responding in the context "how capable I feel to... to manage in each of the domains of the competences above mentioned"; (b) Scenario of interest in being able, responding in the context "how much interest I have in being able to...to manage in each of the domains of the competences above mentioned"; and (c) Scenario of change to be able to, responding into the context "if I would make an effort to change, how much capable I will be able to...to manage in each of the domains of the competences above mentioned".

The internal consistency reliability of the promotion of the culture factor was very high: perceived self-efficacy $\alpha = .902$ (.888-.914), desired self-efficacy $\alpha = .909$ (.896-.921) and reachable self-efficacy $\alpha = .912$ (.900-.923) and the internal consistency reliability of the cultural identity factor was acceptable: perceived self-efficacy $\alpha = .694$ (.646-.737), desired self-efficacy $\alpha = .702$ (.655-.744) and reachable self-efficacy $\alpha = .701$ (.654-.743).

Table 1. Items of the Self-Efficacy in Sociocultural Scale grouped by factors

Factor	Item	
Promotion of the culture	1. Participate actively in creational processes, conservation and cultural diffusion	
	5. Analyze the phenomena of globalization and sustainable development from different perspectives	
	6. Generate an interaction with the environment, fostering the community level	
	7. Participate in proposals that contribute to the development, and the social and cultural improvement	
	8. Interact with different social groups fostering the quality of life	
	9. Act like promoter of the quality of life	
	Cultural Identity	2. Act with respect and tolerance
		3. Demonstrate values before different costumes and differences and toward the multicultural
		4. Identify myself with the culture of my state and country

When calculating the scores for the both dimensions promotion of the culture and cultural identity, four different values were calculated: (1) Perceived *self-efficacy*, obtained from the average scores in the scenario of perceived ability; (2) *Desired self-efficacy*, calculated from the average scores in the scenario of interest of being able; (3) *Reachable self-efficacy*, obtained from the mean scores in the scenario of being able; and (4) *Possibility of improvement in the perceived self-efficacy*, calculated from the mean difference between reachable self-efficacy and perceived self-efficacy. A higher score indicates greater self-efficacy, whereas a lower score represents lesser self-determination.

2.3. Procedure

All freshmen university students from each degree in health sciences offered by the Autonomous University of Chihuahua in the semester January-June of 2012 were

invited to participate in this present study. These university students were fully informed about all the features of the project. Then, all the students that had agreed to participate were asked to sign a written informed consent. After the students' approvals were obtained, participants completed the above-mentioned questionnaire by means of the instrument module administrator of the Scales Editor Version 2.0 [16].

Participants completed the questionnaire in the computer rooms of their faculties during a session. At the beginning of the session the researchers gave a general introduction about the importance of the research and how to access the questionnaire through the software. When the participants were in the editor, the instructions about how to fill out the questionnaire correctly appeared before the instrument. Additionally, the participants were advised to ask for help if confused concerning either the instructions or the clarity of a particular item. Completion of the entire questionnaire

took approximately 20 minutes. At the end of the session their participation was welcomed. Afterward, when all the participants completed the questionnaire, the data was collected by means of the results generator module of the Scales Editor Version 2.0 [16].

2.4. Data Analysis

Descriptive statistics (means and standard deviations) for all the variables were calculated. Subsequently, after verifying that the data met the assumptions of parametric statistical analyses, a one-way multivariate analysis of variance (MANOVA), followed by the one-way univariate analysis of variance (ANOVA), were used to examine the differences between the men and women in both the reported self-efficacy in promotion of the culture and cultural identity scores. Moreover, the effect size was estimated using the eta-squared (η^2). The internal consistency reliability of the each variable was estimated using the Cronbach coefficient alphas and the 95% confidence intervals (CI). All statistical analyses were performed using the SPSS version 20.0 for Windows (IBM® SPSS® Statistics 20).The statistical significance level was set at $p < .05$.

3. Results

3.1. Promotion of the Culture Factor

Table 2 shows the mean values and standard deviations

Table 2. Results of MANOVA for the gender differences in the six variables of self-efficacy for promotion of the culture

	Men(n = 322)	Women(n = 202)	F	p	η^2
			10.972	< .001	.060
Perceived self-efficacy	7.28 (1.49)	7.95 (1.18)	28.527	< .001	.052
Desired self-efficacy	8.08 (1.54)	8.72 (1.10)	26.524	< .001	.048
Reachable self-efficacy	8.59 (1.35)	9.15 (0.84)	27.904	< .001	.051
Possibility for improving perceived self-efficacy	1.30 (1.00)	1.20 (0.94)	1.371	.242	.003

Table 3. Results of MANOVA for the gender differences in the six variables of self-efficacy for cultural identity

	Men(n = 322)	Women(n = 202)	F	p	η^2
			3.145	< .05	.018
Perceived self-efficacy	8.45 (1.13)	8.68 (1.00)	5.953	< .05	.011
Desired self-efficacy	8.99 (1.05)	9.26 (0.87)	9.267*	< .05	.017
Reachable self-efficacy	9.38 (0.77)	9.54 (0.61)	6.134	< .05	.012
Possibility for improving perceived self-efficacy	0.94 (0.81)	0.86 (0.74)	1.253	.263	.002

Note. Descriptive values are reported as mean (standard deviation)

4. Discussion and Conclusions

The purpose of the present study was to compare the profiles of perceived self-efficacy in promotion of the culture (consisting of participate actively in creational processes, conservation and cultural diffusion; analyze the phenomena of globalization and sustainable development from different perspectives; generate an interaction with the environment, fostering the community level; participate in

of the self-efficacy in promotion of the culture, as well as the results of the MANOVA and the follow-up univariate ANOVAs. The MANOVA results indicated overall statistical significant differences between genders in the self-efficacy in promotion of the culture scores (Wilks' $\lambda = .940$; $p = < .001$; $\eta^2 = .060$). Subsequently, the follow-up ANOVAs showed that the women reported statistically significant greater perceived, desired, and reachable self-efficacy in promotion of the culture than the men ($F(1,522) = 28.527$, $p < .001$; $F(1,522) = 26.524$, $p < .001$; and $F(1,522) = 27.904$, $p < .001$, respectively). However, in the possibility for improving self-efficacy statistically significant differences were not found ($p > .05$).

3.2. Cultural Identity Factor

Table 3 shows the mean values and standard deviations of the self-efficacy in cultural identity, as well as the results of the MANOVA and the follow-up univariate ANOVAs. The MANOVA results indicated overall statistical significant differences between genders in the self-efficacy in cultural identity scores (Wilks' $\lambda = .982$; $p < .05$; $\eta^2 = .018$). Subsequently, the follow-up ANOVAs showed that the women reported statistically significant better punctuations in perceived, desired and reachable self-efficacy in cultural identity than the men ($F(1,522) = 5.953$, $p < .05$; $F(1,522) = 9.267$, $p < .05$; and $F(1,522) = 6.134$, $p < .05$, respectively).

proposals that contribute to the development, and the social and cultural improvement; interact with different social groups fostering the quality of life; and act like promoter of the quality of life); and in cultural identity (consisting of act with respect and tolerance; demonstrate values before different costumes and differences and toward the multicultural; as well as identify themselves with the culture of the state and country) between undergraduate men and women. The results showed that women reported higher

levels of self-efficacy than men in the two factor analyzed (promotion of the culture and cultural identity what can be concluded that women show greater security and desire to succeed in the sociocultural field showing the men; conclusion that in general agreement with the results of studies on gender differences in college students [17] and high school students [18], where it was also found that women reported higher levels of self-efficacy than men. Differences according to the theory of self-efficacy Bandura [1] can be explained because the process of socialization results in men and women have a different perception about the tasks that are most appropriate for each gender activities giving rise to different expectations of self-efficacy.

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