EDUHEM 2018

VIII International conference on intercultural education and International conference on transcultural health: THE VALUE OF EDUCATION AND HEALTH FOR A GLOBAL, TRANSCULTURAL WORLD

INFLUENCE OF SOCIODEMOGRAPHIC VARIABLES ON THE DEVELOPMENT OF ACADEMIC PERFORMANCE

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Abstract

Through the present longitudinal study, we intend to analyze the inluence of sociodemographic variables on the development of academic performance during the completion of degree studies. In the research, 264 students (58.2% men, 41.8% women) enrolled in the Physiotherapy Degree of the University of Vigo (Spain) in the academic years from 2010/2011 to 2014/2015 have voluntarily participated. Academic performance has been calculated through the average mark and the performance, attempt and success rates. Although the fact that there is more than 50% of the sample with rates values of 100, this does not allow its inferential analysis to be possible, reason why they are discarded. The following sociodemographic variables have been contemplated: Gender, Age, Residence during the year, Students' combination of studies and work and Students' other obligations in addition to the study. The results only indicate the positive influence of combining studies and work on the average mark. Thus, working during the degree is indicative for a greater increase in the average mark compared to those who do not work. Although, in the passage from 1st to 2nd year, those who do not work register a more marked increase of the average mark, and in 3rd year those that work, increase it much more than the previous ones, responsible effect of said results.

Keywords: Academic performance, higher education, sociodemographic variables, university students.

1. Introduction

Given the period of educational change in Spanish Higher Education, in form of adaptation to the new EHEA system, which is promoting an important movement of pedagogical renewal by launching new methodologies, it is of interest to investigate the academic performance (AP) of students in the new context of EHEA, due to the fact fully assumed by university officials and society in general, that academic performance is an essential and fundamental factor for the assessment of educational quality in higher education (Tomás-Miquel, Expósito-Langa, & Sempere-Castelló, 2014). Academic performance is a complex concept and, therefore, it is not consensual. In general, personal, social and institutional determinants of performance are recognized (Martínez et al., 2010).

2. Problem Statement

Academic performance is defined as the average mark or qualification obtained during the university term (Tejedor, 1998). It is expressed in a quantitative and a qualitative qualification, a mark that, if consistent and valid, will reflect a certain learning and achievement of pre-established objectives (Pita and Corengia, 2005) that depend not only on intellectual aptitudes, but on a series of interrelated factors, both internal and external to the student.

Sociodemographic factors influence the development of academic performance

The study of learning processes of the student is important too, as well as to relate them to their personal characteristics. This has been reflected on the "The National Unions of Students in Europe" (ESIB) and the "European University Association" (EUA) on higher education, taking into account the social dimension (National Unions of Students in Europe, 2002).

3. Research Questions

Does academic performance get modified according to the sociodemographic characteristics of the sample?

Sociodemographic variables such as working or having other social obligations, does not correspond with obtaining a lower academic performance, but as they argue, there are more students who recognize that working and studying at the same time positively affects their performance. In addition, the fact of having more free time does not necessarily correspond with longer time devoted to study, since students prefer to do other activities in their free time such as going for a walk (which was the preferred one), watching television, doing exercise or maybe reading something that was not a study book (Armenta, Pacheco, & Pineda, 2008).

On the other hand, students who must support their families financially and who must pay for their studies have a lower academic performance; especially because the time dedicated to work or to their obligations significantly reduces their time dedicated to study (Brito-Jiménez and Palacio-Sañudo, 2016).

4. Purpose of the Study

For academic performance studies to be useful, it is important to identify the factors that intervene in the performance associated with the success or failure of the students; that is, the levels of influence between the variables to be considered to determine causal factors and mediations that determine the relationships between the different categories of personal, social and institutional variables. These variables, in addition to offering information of a structural and objective nature, take into account the student's perception of factors associated with academic performance and its possible impact on academic results (Garbanzo, 2007).

It is intended to know if the academic performance develops according to the sociodemographic characteristics of the students

Multiple investigations relate sociodemographic variables with academic performance through cross-sectional researches. However, through the present longitudinal research, it is intended to have a more exhaustive knowledge about the evolution of academic performance, taking into account the sociodemographic characteristics of the students.

5. Research Methods

5.1. Participants

The study sample consists of 264 students enrolled in the Degree of Physiotherapy of the University of Vigo (the only degree in health sciences of the University of Vigo), between the academic years of 2010-2011 and 2014-2015, who wanted voluntarily be part of the research, and being previously informed in what the investigation consisted to them, including a 66.33% of the 398 possible students.

5.2. Measuring instruments

A questionnaire has been used for the collection of sociodemographic data. It is a questionnaire with simple questions which answers are positive or negative in most of the cases. . The following sociodemographic variables have been contemplated: *Gender*, *Age*, *Residence during the year*, *Students' combination of studies and work* and *Students' other obligations in addition to the study*.

The academic performance has been calculated through the average mark and the performance, attempt and success rates. Although the fact that there is more than 50% of the sample with rates values of 100, this does not allow its inferential analysis to be possible, reason why they are discarded.

The data entered into a database with the students' academic records were explicitly authorized through an informed consent in order to use it since the responses of the questionnaire were not anonymous.

5.3. Data analyse

The computer application SPSS-22 was used for the statistical analysis (IBM Corp. launched 2013. IBM SPSS Statistics v 22.0 for Windows, Armonk, NY, USA).

The statistical procedure of repeated measures Anova MR was used for the analysis of the variance of repeated measures in an intragroup factor in order to compare the average between the courses.

6. Findings

6.1. There is a slight influence of the sociodemographic factors on academic performance

When proving the possible effect of these factors on the differences between the consecutive courses (Table 01), nothing was found but a statistical significance.

Table 01. Averages differences: 2 factors ANOVA, 1 intragroup + 1 intergroup. Effect of SOCIODEMOGRAPHIC factors in the variation of average marks between consecutive academic years, segmented by GENDER

Changes	Sociodemographic intergroup factor	WOMEN				MEN		
		F	p-value	Effect size: R^2		F	p-value	Effect size: R^2
From 1st to 2nd year	Age	1.48	.173 NS	---		0.81	.647 NS	---
	Residence during the year	1.97	.166 NS	---		0.06	.804 NS	---
	Combining work and study	0.39	.533 NS	---		1.78	.188 NS	---
	Other obligations	1.21	.276 NS	---		0.01	.943 NS	---
From 2nd to 3rd year	Age	1.04	.327 NS	---		0.86	.566 NS	---
	Residence during the year	0.25	.622 NS	---		1.40	.245 NS	---
	Combining work and study	6.18	.016 *	.114		1.13	.295 NS	---
	Other obligations	2.44	.124 NS	---		0.71	.406 NS	---
From 3rd to 4th year	Age	1.43	.241 NS	---		0.35	.900 NS	---
	Residence during the year	2.07	.162 NS	---		0.53	.474 NS	---
	Combining work and study	0.18	.674 NS	---		0.22	.640 NS	---
	Other obligations	0.00	.978 NS	---		2.73	.113 NS	---

Note: N.S. = Not significant (P>.05) * = Significant to 5% (P<.05)

6.2. Combining studies and work conditions academic performance

It is the factor of combining studies with work on average marks of academic performance of women, in the change occurred from 2nd to 3rd year (p <.05 and with moderate effect size). Our data (Figure 1) allow us to admit that while in 2nd year the average marks are similar, being higher the ones of those that do not combine work and studies (7.65 vs 7.36), the increase in 3rd year in both is different, being much higher in the cases of those who do combine work with studies to the point that now their average grade is noticeably higher (8.60 vs 8.15).
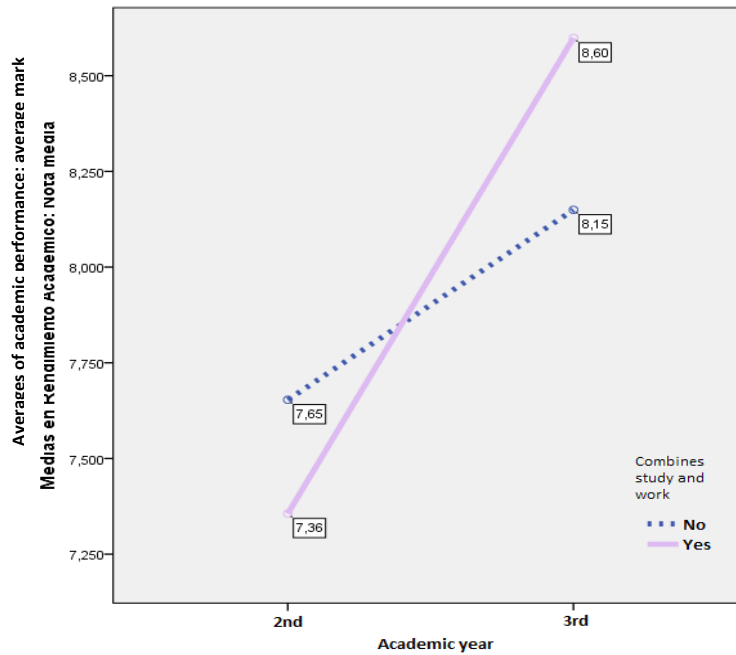
Figure 01. *Averages diagram.* Academic performance: Average mark. Gender: Women. Effect of the factor: Combining work and studies in the change between 3rd and 2nd year

7. Conclusion

Sociodemographic factors influence on academic performance

When proving the possible effect of sociodemographic factors on the differences in performance between consecutive courses, nothing has been found other than the positive influence on the average mark of combining studies and work. Thus, working during the degree is an indicative of a greater increase in the average mark compared to those who do not work. Although, in the passage from 1st to 2nd year, those who do not work register a greater increase of the average mark and in 3rd year those that do work, increase it much more than the previous ones, responsible effect of said results.

Soto-González, Da Cuña-Carrera, Lantarón-Caeiro, & Labajos-Manzanares (2015) discover that students who combine studies with work have a lower performance and success rate. These students pass less and take longer to finish their studies, although there are researches like the present one in which it is argued that work can have positive effects on academic performance, especially towards the completion of the degree, since it favours the transfer of knowledge related to the topics of study. Even when it is not related to the degree, this enables discipline and reinforces the sense of responsibility in academic performance (Holland and Andre, 1987), but on the other hand, there are other studies such as Caballero's (2006) in which differences in terms of academic performance cannot be appreciated between the students who work and those who do not.

Regarding the effect of the other sociodemographic variables on academic performance development, less significant results have been obtained than Soto-González et al. (2015) which indicate that there are numerous variables that affect academic performance, but only the *Residence during the course*, the *Academic year* and the *Way of access* the studies influence on the average mark.

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