

Academic performance and educational outcomes in the Degree of Physiotherapy at POLISAL, UNAN-Managua

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ABSTRACT

The objective of this study was to determine the relationship between the academic performance and the educational outcomes of the students doing Physiotherapy at POLISAL (Polytechnic Institute of Health), UNAN-Managua, from 2013 to 2015. It was an analytic, retro-prospective, transversal, quantitative and qualitative study; the target population for this study was of 43 students who officially started up in 2013. A survey was applied; a document review guide and a focus group were conducted with the students. The analysis of the data was made through contingency tables, for all those non-parametric variables a test of χ^2 (Chi2) were applied. Furthermore, the Kaplan-Meier test was applied to for the operational variable of relation between two variables in the study, in addition to this, there was a univariate analysis of variance. The results demonstrated the prevalence of the female sex with 70% between 20 and 21 years old, 80% comes from cities like Managua, Carazo, Granada, Masaya. Also, 43% live and receive financial support from their parents, 83.3% qualified for their particular majors being their first option. The teachers' performance was rated very good and excellent. The results of the Kaplan Meier technique showed that 53.5% achieved terminal efficiency during their three years of study. The analysis of univariate variance determined that there is a cause-effect relationship between academic performance and educational outcomes, corroborating that as the semester progresses, subjects are more complex.

INTRODUCTION

The study of academic performance and the educational outcomes is not only relevant from the academic point of view. In any society it is necessary to know the results of academic performance studies for the design of policies that promote a more equitable and efficient education. This not only stimulates growth and development, but also allows for greater social mobility. Also, the analysis could be useful for educational institutions when deciding on the admission of students.

Traditionally, studies on academic performance have focused on examining the average effect of decisive factors, without considering that the influence could vary when analyzing different types of student with different academic performance. Students with low probabilities of meeting the minimum academic requirements demanded by the university and the factors that condition their performance, would allow the education policy to achieve a correct targeting.

The purpose of each university is to train students and achieve their academic success, the latter being defined as the ability of the student to respond to the stimuli, objectives and educational purposes previously established.

Likewise, the centers of higher education in Nicaragua face a great challenge, to improve their academic quality and, at the same time, to meet the demands of social contexts and the global economic crisis, which also affects our country. Universidad Nacional Autónoma de Nicaragua UNAN-MANAGUA is not indifferent to this problem, there is great concern to improve the processes at the academic level and to maximize the use of the resources available.

The current study was conducted at the POLISAL (Polytechnic Institute of Health) UNAN-MANAGUA with the theme, Academic performance and the educational outcomes of the students of the Physiotherapy course POLISAL, UNAN-MANAGUA, from 2013 to 2015, regular shift.

As a proposal to improve the educational outcomes of the students in Physiotherapy, an action plan was designed. This plan will be in charge of the leading teachers, teachers of subjects, class presidents, direction of department and student assistants, the same will be implemented during the I and II semester of 2017.

The main objective of the study is to determine the relationship between the academic performance and the educational outcomes of the students at POLISAL (Physiotherapy of the Polytechnic Institute of Health) from 2013 to 2015. And as specific objectives, to identify the socio-demographic characteristics of Physiotherapy students, to describe the factors associated to the academic performance, to establish the relation between academic performance and educational outcomes and to propose alternatives that allow the increase of the academic performance of Physiotherapy students.

MATERIAL AND METHOD

It is an analytical, retro-prospective, transversal and qualitative-quantitative study, according to Hernández, Fernández and Baptista (2010). The method of analysis is interpretative and contextual. According to the time of occurrence of the facts, the study is retrospective; according to the period and sequence of the study, is transversal (Canales, Alvarado and Pineda, 1996).

The area of study was at POLISAL "Luis Felipe Moncada", a center attached to Universidad Nacional Autónoma de Nicaragua, Managua. The unit of analysis was created by the students of Physiotherapy in the regular shift of the curriculum made in 2013. The universe of the study was the 43 students who joined this major in 2013.

The instruments of data collection were a survey guide for students who attended third year, a guide for documentary revision designed according to an objective which was to obtain the grades of the 43 students who started this major in 2013. This allowed us to know the academic performance of every student per year and subject. Also a focus group guide to 7 students who

failed subjects and students who approved. From the basis of the data obtained, a corresponding database was designed, using the SPSS statistical software, version 22 for Windows and Office Excel 2013. Once the control of quality of the data registered was carried out, the pertinent statistical data were analyzed. According to the nature of each of the variables (quantitative or qualitative) and guided by the commitment that was defined in each one of the specific objectives, a descriptive analysis corresponding to the nominal, ordinal and numerical variables was made, among them, the frequency analysis and descriptive statistics on a case-by-case basis. In addition, the study of univariate bar graphs for categorical variables was done on the same Cartesian plane, univariate bars for dichotomous variables, describing the response of multiple factors on the same Cartesian plane, in a clear manner and synthetic, and the response of discrete numerical variables. In addition, the relevant contingency analysis was performed for all non-parametric variables; the χ^2 test (Chi2) and the Kaplan-Meier test were also used for the operational variable of the relationship between two variables in study. Also, the specific inferential study was done according to the instruction that was defined in the specific objectives, such as the Analysis of Univariate Variance -ANDEVA or Fisher's F-Test. Previously, a graphic diagnosis was made on the normality of the residues, Levene's test for the homogeneity of variance on the residues and a test for the independence of the residues.

ANALYSIS AND DISCUSSION OF RESULTS

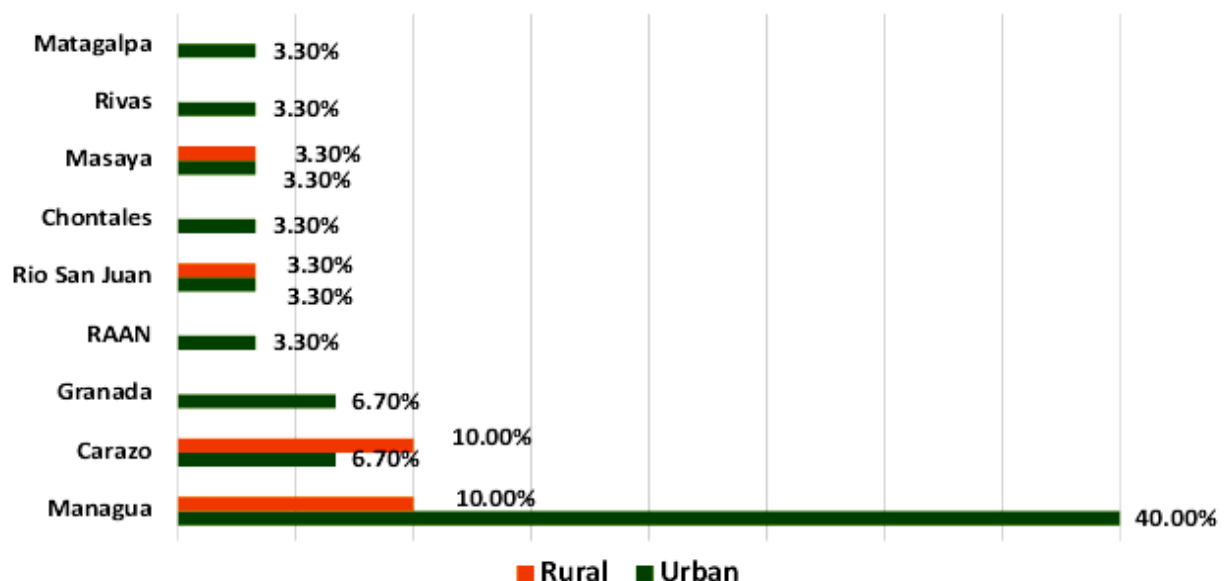


Figure 1. Provenance of students and places of living. Source: Survey to students

The program of the Physiotherapy major is taught at POLISAL, UNAN-Managua. It is the only higher study center that provides this academic training throughout the country and this is one of the reasons why there are students from all parts of the country.

80% of them come from Managua, Carazo, Masaya and Granada, because these places are the closest to the capital and easily accessible geographically speaking, which justifies the greater student presence in this major.

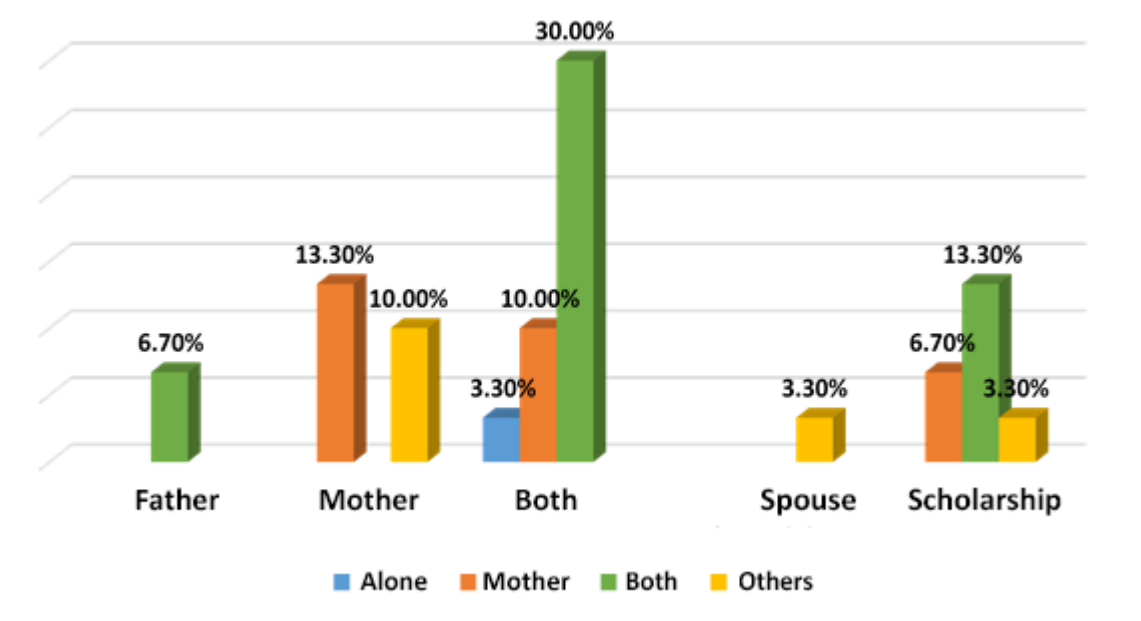


Figure 2. Economic support according to the people they live with. Source: Survey to students

50% of the students come from functional homes where their family as a social group fulfills the three basic functions: the economic, biological and educational, cultural and spiritual, that is, the family is able to satisfy the basic material and spiritual needs of its members, acting as a support system. 23.30% finance their studies through the scholarship provided by UNAN-Managua.

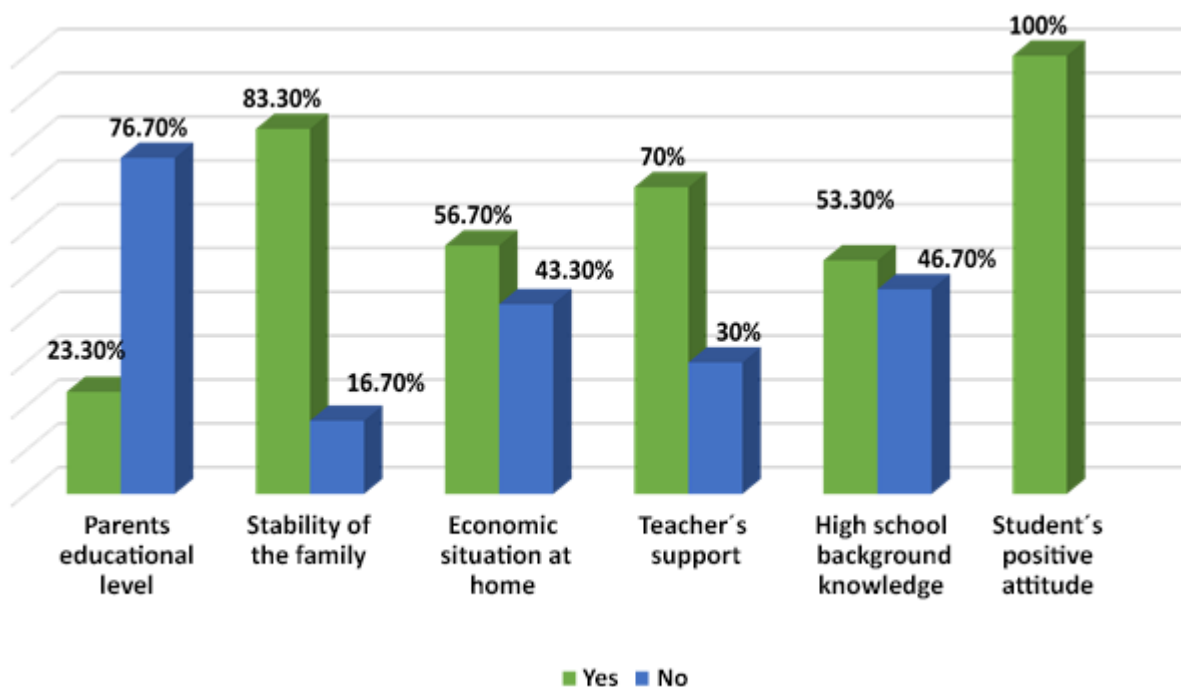


Figure 3. Personal elements in regards to the academic performance. Source: Survey to students

According to the survey, among the personal factors studied, it was found that the positive attitude of the student stands out 100% as a fundamental element to achieve a good academic performance, followed by family stability in which the values promoted enhance and transform people with

sensitivity and solidarity. This is also considered of great importance for the development of the teaching-learning process. The opinions of the students during the development of the focus group reinforce this information. In the same way, it enhances the role of the teacher as facilitator of their learning and with the vision of developing intellectual autonomy, creativity, reflection, critical thinking and ethics in the students.

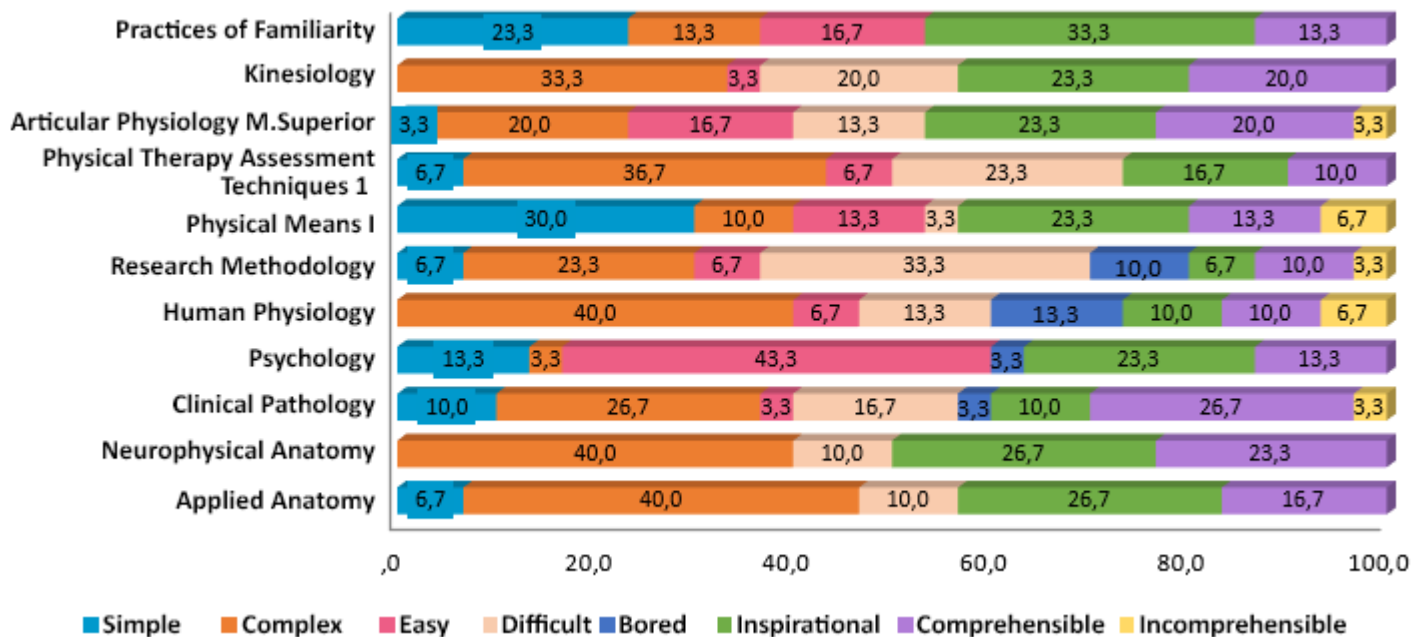


Figure 4. Categorization of students based on the complexity of subjects in 2nd year. Source: Survey to students

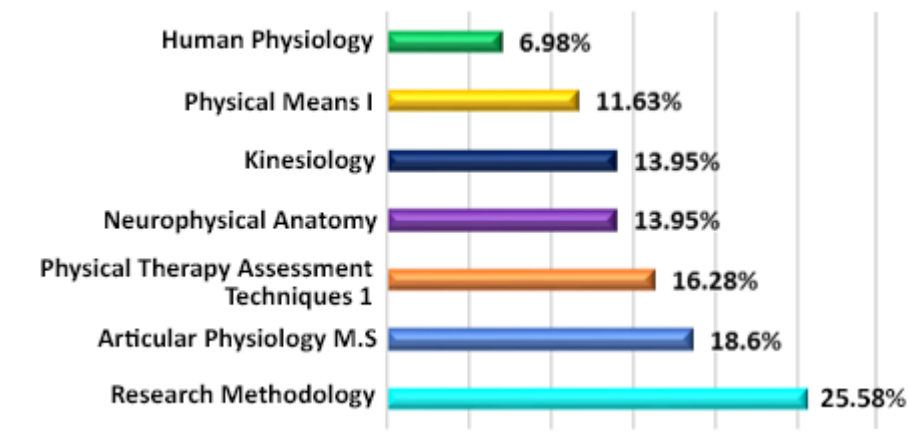


Figure 5. Source: POLISAL Academic Secretariat Records

In terms of subjects taught in the 2nd year, according to students' opinion in the survey and results of grades, the most complex and difficult were Research Methodology, subject of the General training area, subjects that contribute to the integrative development of the student. Among the subjects of basic training we have Applied Anatomy and Neuro-physical Anatomy, these represent the solid basis for the mastery of the subjects directly related to this career. In the focus group the students reported that these subjects were so heavy that many of their classmates failed. They consider that they have been "victims of an experiment" of the new plan. They also point out, Physical Therapy Assessment Techniques I that corresponds to the subjects of vocational training, is intimately related to the professional profile of the career. Vocational subjects provide the specific knowledge, skills, abilities and attitudes of the profession.

When comparing the students' opinion with the results of their grades, the relationship between what was said by the students and the subjects in which they failed is evident.

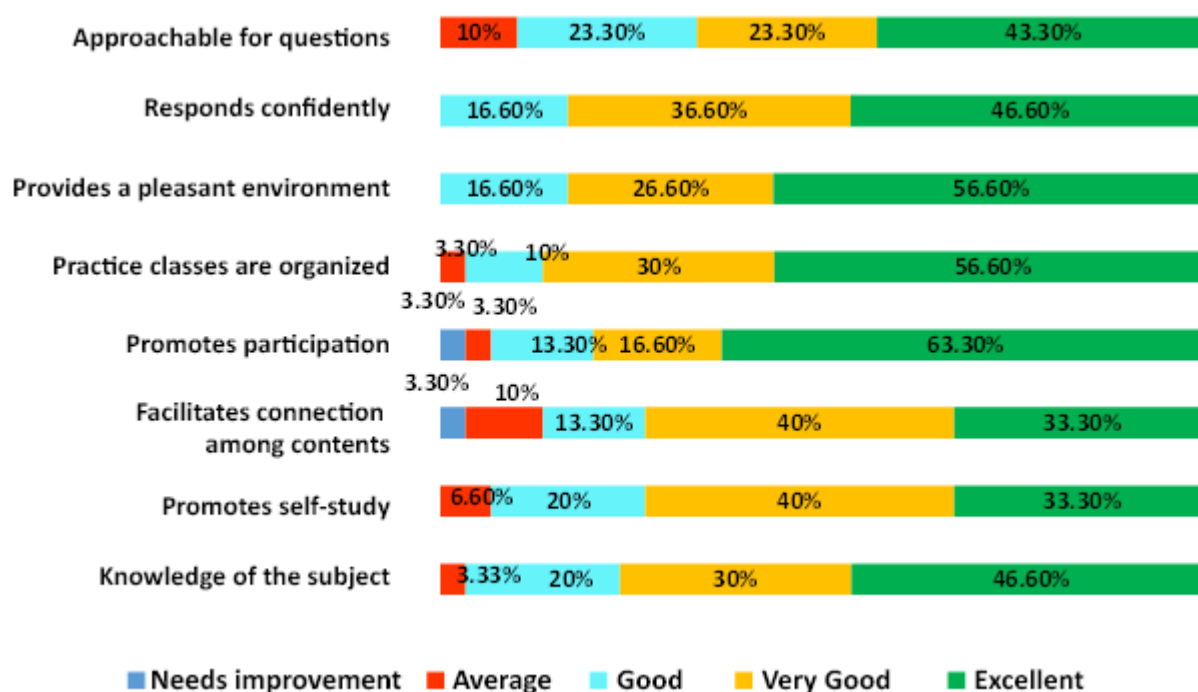


Figure 6. Student's evaluation on the teachers' performance. Source: Survey to students

During the development of the teaching-learning process, the teaching performance was appreciated by students as excellent and very good, emphasizing that teachers promote participation, communication, teamwork and attitudes of responsibility, fostering a pleasant academic environment during the different academic activities.

They also assure that teaching methodologies and the use of technologies contribute to the improvement of learning, helping to develop the skills of each student.

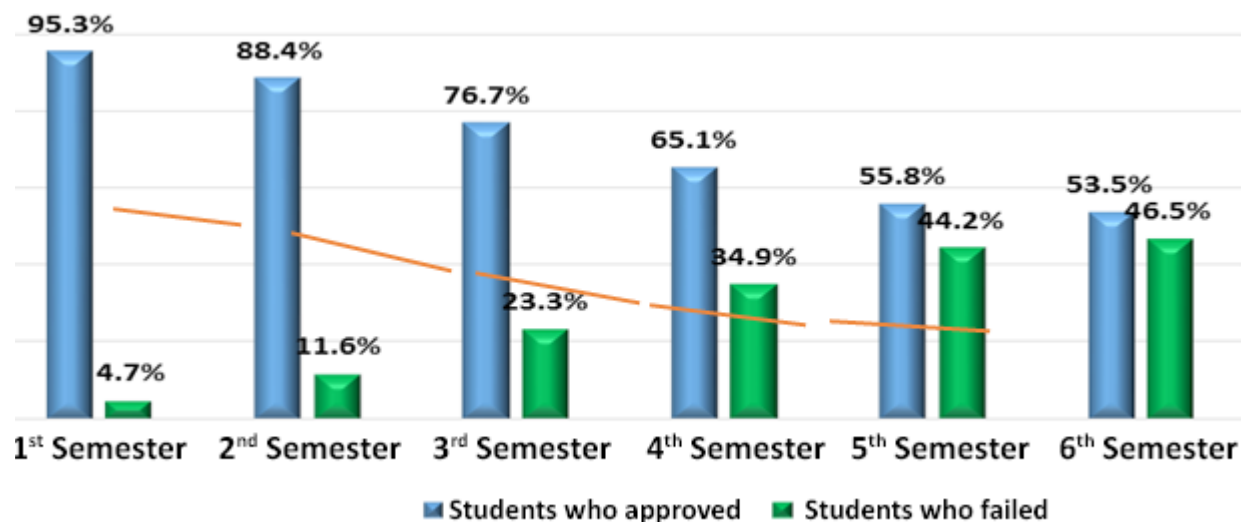


Figure 7. Relationship between academic performance and educational outcomes. Source: POLISAL Academic Secretariat Records

At the end of the sixth semester of 2013 curriculum it was found that 53.5% of the students who studied Physiotherapy managed to have a successful educational outcomes.

CONCLUSION

As for the descriptive analysis of the sociodemographic variables, it was found that 80% of the students who started physiotherapy in 2013, come from places like Managua, Carazo, Masaya and Granada, inhabit the urban sector, with a prevalence of females between the ages of 20 and 21 years. The costs of university studies are mostly supported by parents.

Multiple factors intervene in academic performance. Of greater importance they qualified the personal ones such as having classified in their first choice, to have positive attitude, to have family stability and support of the teacher. These factors have contributed positively to the teaching-learning process. On the other hand, students stated that the performance of teachers is rated as a very good one and excellent.

At the end of the sixth semester, only twenty-three students had a successful educational outcomes, until the sixth semester 53.5% of the original group.

The Kaplan-Meier analysis technique was used to calculate the survival function of the 43 students, with the result that 53.5% of the students achieved a successful educational outcomes, from I to VI semester.

A proposal will be made for an action plan to be developed in the two semesters of 2017 to contribute to better academic performance.

REFERENCES

- Alvarez, J. (1999). Psicología de la educación. *Revista electronica de Motivación y Emoción*, p.15.
- Artunduaga Murillo, M. (2008). *Variables que influyen en el rendimiento académico en la universidad*. Madrid, España.
- BrizioPuerto, L. (2013). *Actores socioeconómicos que afectan a la educación*. Honduras.
- Capote, E. & Martínez Molina, M. (1995). *Inteligencia, personalidad y rendimiento académico*. Universidad de Salamanca.
- Covadonga, M. (2001). Factores familiares vinculados al rendimiento académico. *Complutense de educación*, 90.
- Covarruvias, S. d. (1984). *Tesoro de la Lengua Castellana*. Madrid: Turner.
- Denzin, N. (1970). Introducción teórica a los métodos sociológicos. *Aldine*.
- Domínguez Pérez, D., Sandoval Caraveo, M. & Cruz Cruz, F. (2013). Problemas relacionados con la eficiencia terminal desde la perspectiva de estudiantes universitarios. *Revista iberoamericana en educación (REICE)*.
- Erazo, O. (2012). El rendimiento académico, un fenómeno de múltiples relaciones y complejidades. *Vanguardia Psicológica*, 144, y 173.
- Espíndola, E. & León, A. (2002). Deserción escolar en América Latina tema prioritario para la agenda regional. *Iberoamericana de educación*, 39-62.
- Fullana Noell, J. (1996). La Investigación sobre las variables relevantes para la prevención del fracaso escolar. *Revista de investigación educativa*, 63-90.
- Garbanzo Vargas, M. G. (2013). Factores asociados al rendimiento en estudiantes universitarios desde el nivel socioeconómico. *Educare*, 57-85.
- Gómez Salinas, M. E. (2008). Factores socioeconómicos y pedagógicos que inciden en el rendimiento académico en estudiantes de la carrera de ciencias sociales Matagalpa.
- González Ibáñez, C. & Santos Ramos, M. (2014). *Orientación vocacional necesidad básica para la elección de una carrera universitaria*. Veracruz México: Facultad de Pedagogía.
- Hernando, Á. & Oliva, A. (2001). Variables familiares y rendimiento académico en la adolescencia. *Complutense de educación*, Madrid España.
- López Suárez, A. & Albitzer Rodríguez, A. (2008). Eficiencia terminal en la educación superior, la necesidad de un nuevo paradigma. *Revista de la educación superior*.
- Madrid, D., Gallego, J. A. & Rodríguez, J. (1994). *Motivación, rendimiento y personalidad en el aula*. Granada: Greta.
- Murillo, J. & Román, M. (2008). Aprendizaje en América Latina a partir de las evaluaciones nacionales. *Iberoamericana de evaluación educativa*, 9-10.
- Pérez Sánchez, C. N. & Betancort Montesinos, M. (2013). Influencia de la familia en el rendimiento académico. *Internacional de sociología*, 173-176.
- Piura, L. J. (2012). *Metodología de la investigación científica*. Managua.
- Rabines, A. (2002). *Factores de riesgo en una población de adolescentes escolarizados*. Perú.

- Sabán Fernández, S. (2013). Relación entre estilos educativos familiares y la inclusión en programas diversificados curricular. *Apuntes de Psicología*, 328.
- Salanova Sarias, M., Martínez, M. & Bresó Esteve, E. (2005). Bienestar psicológico en estudiantes universitarios. *Anales de psicología*, 173.
- Sánchez García, M. (2002). *Factores socioeconómicos que condicionan el logro educativo*. Comisión económica para América Latina y el Caribe.
- Skaalvik, S. & Melgren, E. (2004). Referencia para el autoconcepto académico. *Revista electrónica de Motivación y Emoción*, 9-25.
- Velarde, H., Gordillo, G. & Arroyo, C. (2008). *Factores influyentes en el rendimiento académico de estudiantes de I año de medicina*. Recuperado el 16 de Junio de 2015.