Resilience and Support Networks for University Students with Disabilities: A Correlational Study

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Abstract

Resilience is a phenomenon that can be studied in catastrophic situations but also in everyday matters such as disability, this being an alternative way of working in the environment that requires the adaptation of the social networks that contain and support people with this condition. The research was conducted at the Technical University of Manabí applied to the population of students with disabilities. The paper presents an analysis of support networks and their relationship with student resilience. The results related to the application of the Saavedra-Villalta test are shown, which allowed to correlate the level of resilience of the sample studied with the support networks. An analysis linked to the interpretation of the Pearson correlation coefficient is presented. The result obtained is presented by applying semi-structured interviews to a sample of 48 disabled students.

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1. Introduction

In recent years the number of university students and university students with disabilities has been increasing steadily and a series of policies aimed at favoring inclusive education have been adopted [1]; [2]. This data is relevant since for people with disabilities higher education is an opportunity, an experience of empowerment and improvement of their quality of life [3], [4]. Also, at present, different works justify the convenience of including people with disabilities in higher education, since they contribute to build a better university [5].

However, we must bear in mind that only a small part of people with disabilities have university studies, in addition to that people with disabilities, in many cases have to face difficult paths, marked by an obstacle course. Access to the university is exacerbated by the barriers that have been experienced in compulsory education and baccalaureate and students usually end up in a complicated access to the labor market. These university students, as they explain [6], [7], [8] face a series of barriers to learn and participate in the university institution. Sometimes

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their experiences differ from a typical college experience because of the additional obstacles and strategies they have to implement.

In the main barriers we can mention the attitudinal, structural and organizational [4]. The majority of current studies coincide in identifying more obstacles than aids in the university trajectories of students with disabilities. Among the aids can be identified: family support [9]; friendships and peer support networks [8]; help from teachers through their knowledge and friendship [10]; support for services for students with disabilities [9]; or supports related to their own personal strategies that they implement to face the difficulties in their university day-to-day life [2].

Therefore, both risk factors and protective factors have been present in the itineraries of these students, which have acted as mechanisms that weaken or strengthen them [11], [12]. Regarding the protective factors that are the object of the study, it is worth noting that they allude to the personal, family and social characteristics that surround people, making them the support and strengths that operate in the lives of individuals to protect themselves from changes and risks. in the life. When analyzing the person from this perspective, it is not possible to focus exclusively on the individual analysis of the person, but to expand the vision and also look for the social and community variables that are in continuous relation with them.

In many cases, the family and social networks that surround people with disabilities are a reference to explain their academic careers. In fact, faced with the different experiences that occur throughout life, people need to start some processes of adaptation and resolution, also requiring the help of external resources or sources of support.

Another type of network that can be found are the so-called organized social support networks. These consist of certain organizations or companies for which they work (many have organized systems of employee support) or institutions in which they study (for example, universities usually have services for students with disabilities), volunteer organizations that support people with disabilities.

On the other hand, within the framework of higher education, inclusive education and universal learning design are considered as essential for a quality education for all students. Several authors [13], [14] [15], [16] agree that inclusive education seeks to increase the practices that lead to inclusion and eliminate the barriers that generate exclusion, in a framework supported by the principles of justice and equity. In this sense, universities should move in this direction to contribute to the students' experiences being inclusive, since as the results of different investigations show, it is necessary to incorporate the principles of this educational model in higher education. Other authors [17] maintain that quality universities are also inclusive.

Article 26 of the Constitution of the Republic of Ecuador states that: "education is a right of people throughout their lives and an inescapable and inexcusable duty of the State. It constitutes a priority area of public policy and state investment, guarantee of equality and social inclusion and an essential condition for good living. People, families and society have the right and responsibility to participate in the educational process. " Later in article 48, literal 1 of the Constitution of the Republic of Ecuador states that: "The State shall adopt measures in favor of persons with disabilities that ensure: Social inclusion, through coordinated state and private plans and programs, which encourage their political, social, cultural, educational and economic participation "[18].

Independently of assessing whether a university environment is inclusive or not, higher education has been demonstrated as a very powerful tool so that these university students and university students can reinvent themselves and revalidate an identity that may have been deteriorated in other educational stages. It could even be said that many students with disabilities are resilient people, since they have had to face adverse situations and overcome the barriers found [19], [20].

The family, social and academic support networks of students with disabilities is the central theme of the study, so the support networks present in their lives are analyzed, both inside and outside the university, in terms of knowing who they are, what and how they do to help them in their training trajectories.

The aim of the article is to analyze the relationship between the general level of resilience and the level of support networks in university students with disabilities at the Technical University of Manabí.

2. Research Methods

A descriptive design research was applied to the university students with disabilities of the Universidad Técnica de Manabí, addressing all the typologies existing in this center of higher studies; The research was carried out by a team of professors and students from the School of Clinical Psychology of that institution. The total population of people with disabilities is n = 88, and the sample selected is 68, distributed among 39 men and 29 women, aged

between 17 and 51 years, with the interval 17-21 being the most frequent; the subjects studied were chosen by means of non-probabilistic sampling, casual or accidental subtype [21] and with a margin of error of 5%; the unit of inclusion, social equity and gender was in charge of the call for university students with disabilities and the data of those who attended the first and second call were used. The Saavedra-Villalta Resilience Scale was applied to this sample. As a complement, a semi-structured interview was applied to 48 students belonging to the indicated sample.

The semi-structured interview included 8 open questions aimed at investigating self-concept, self-image, self-esteem, emotional expression, emotional ties, special educational needs, life project and support networks. From this interview only the information of question 3 was used (In which situation do you ask for help to make a decision and which ones can not, can you exemplify them?), Question 5 (With whom or who have you developed an affective bond and why?), question 6 (What do you think about the educational system in relation to people with disabilities and how do you feel about it?) and question 7 (What should be done to improve university education?) for the contribution made to the study of the category support networks. The application of the interview form was made with the help of sign language interpreters, with interviewees with hearing impairment; with the support of their mothers, especially in cases of visual impairment; with adaptations of the questions in cases of intellectual disability and without any need for technical assistance in cases of physical and psychological disability.

The Saavedra-Villalta Resilience Scale is a psychometric instrument developed in 2008 by Eugenio Saavedra and Marco Villalta for Chilean youth and adults. The Scale allows to establish a level of resilience in a general way, in addition to knowing the specific factors that make it up and being able to work on them [22]. The test consists of 60 items divided into 12 factors and based on the combination of Grotberg's verbalizations model (I am, I am, I have, I can) and the Saavedra model that considers 4 areas of depth: Resilient Response, Vision of the problem, Vision of oneself and basic conditions. Each item has 5 alternatives that range from strongly agreeing = 5 to strongly disagreeing = 1; this instrument was chosen for its validity (Pearson coefficient $r = 0.76$) and its reliability (Cronbach's alpha = 0.96) and its suitability for evaluating this category in the young adult and adult population (age range of the sample) .

The results of the application of the scale in question were visually represented through a scatter plot, a type of graph that illustrates the relationship between two variables that participate in a study. The Pearson correlation coefficient was applied, which is defined as an index that can be used to measure the degree of relationship of two variables as long as both are quantitative.

The semi-structured interview information, by the number of answers and its qualitative nature, was tabulated and simplified by means of the categorization of the answers, a procedure that consists in the identification of regularities, outstanding topics, recurring events and patterns of ideas in the data coming from the places, events or people selected for the study [23]. This procedure facilitates the qualitative analysis and allows an approximation to the studied phenomenon.

3. Results and Analysis

Currently, the School of Clinical Psychology of the Technical University of Manabí carries out several researches about the population of students with disabilities who attend this center of higher studies [24], [25], [26]. Such research aims to establish psychoeducational strategies to promote resilience in university students with disabilities and make use of psychometric instruments to evaluate it and, based on that, elaborate proposals.

The application of the Saavedra-Villalta test allowed to verify the following results of interest for the correlational study (with column X the general level of Resilience and column Y the score in the support networks factor of each of the individuals in the simple). Table 1 shows the average results obtained in the application of the instrument to the sample of students studied.

Table 1
Average result of the application of the Resiliencia scale Saavedra-Villalta

| Frequencies | Average | |
	General level of Resilience (X)	support networks factor (Y)
68	260,14	21,74

According to the results related to the application of the Saavedra-Villalta Resilience scale, it can be seen that the highest frequencies occur in the medium and high levels of General Resilience and the support networks factor, as confirmed in the graphs of figures 1 and 2, showing the general level of resilience and support networks respectively.
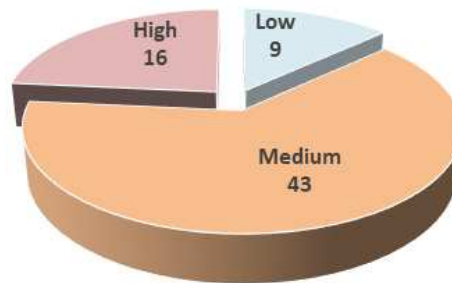

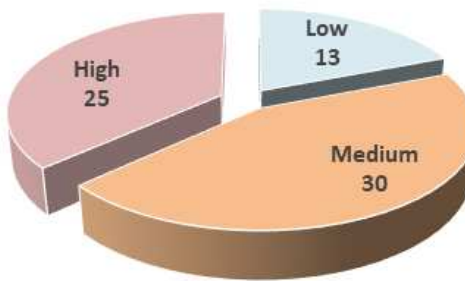Figure 1. General level of Resilience in the sample studied

Figure 2. Factor Support Networks in the sample studied

Figure 3 shows the dispersion graph that reflects the relationship between general resilience and support networks
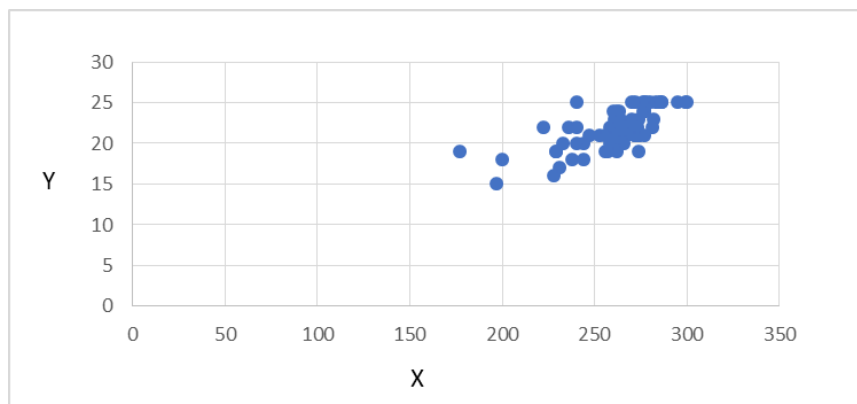
Figure 3. Variables General Resilience and Support Networks

Resilience Cedeño, M. L. G., Meza, A. K. T., & Mejía, R. G. C. (2018). Resilience and Support Networks for University Students with Disabilities. International Research Journal of Management, IT and Social Sciences, 5(2), 164-174. https://sloap.org/journals/index.php/irjmis/article/view/67,

It is necessary to clarify that in human phenomena, heavily loaded with random components, it is not usually possible to establish exact functional relationships (Pearson's linear correlation coefficient, s.f.). This implies that, unlike the case of the physical sciences, in the human sciences there are other factors that influence in addition to the categories in play; therefore, the correlation is not exact but must be considered significant for the purposes of the study. In order to take it to a mathematical expression, the development of Pearson's correlation coefficient gave the following result.

$$\bar{\chi} = \frac{\Sigma\chi}{N} = 17690/68 = 260.15$$

$$\bar{Y} = \frac{\Sigma\gamma}{N} = 1477/68 = 21.72$$

$$S_x = \sqrt{\frac{\Sigma\chi2}{N} - (\bar{\chi})^2} = \sqrt{\frac{4637560}{68} - 260.15^2} = \sqrt{68199,41 - 67678,02} = \sqrt{521,39} = 22,83$$

$$S_\gamma = \sqrt{\frac{\Sigma\gamma2}{N} - (\bar{\gamma})^2} = \sqrt{\frac{32493}{68} - 21,72^2} = \sqrt{477,84 - 471,76} = \sqrt{6,08} = 2,47$$

$$r_{x\gamma} = \frac{\frac{\Sigma\chi\gamma}{N} - \bar{\chi}\,\bar{\gamma}}{S_x S_\gamma} = \frac{\frac{386894}{68} - 260.15*21.72}{22,83*2,47} = \frac{5689,62 - 5650,458}{56,3901} = \frac{39,162}{56,3901} = 0,69//$$

Submitting the acquired result (r_xγ=0,69) interpretation through the corresponding scale shown in table 2 concludes that it is a moderate positive correlation

Table 2
Scale for the interpretation of the Pearson correlation coefficient

Value	Meaning
-1	Large and perfect negative correlation
-0,9 a -0,99	Very high negative correlation
-0,7 a -0,89	High negative correlation
-0,4 a -0,69	Moderate negative correlation
-0,2 a -0,39	Low negative correlation
-0,01 a -0,19	Very low negative correlation
0	Null correlation
0,01 a 0,19	Very low positive correlation
0,2 a 0,39	Low positive correlation
0,4 a 0,69	Moderate positive correlation
0,7 a 0,89	High positive correlation
0,9 a 0,99	Very high positive correlation
1	Positive and large positive correlation

The categorization of responses from the semi-structured interview generated the following results:
Question 3: In what situation do you ask for help in making decisions and in what situations? can exemplify them.

Table 3
Results of the survey (question 3)

Categories	Frequency
Academics	18
Communication	4
Relatives	2
He does not need it	8
Help from the Mother	2
Professional future	2
preferences	2
Disease	5
Ignorance, despair or disorientation	5
Request Criteria	3
Insecurity and Distrust	2
Emotional	3
Problems that you do not feel able to solve	6
Financial assistance	5
Transportation	2
Difficulty acting on your own	1

Question 5: With whom or who have you developed a link and why?.

Table 4
Results of the survey (question 5)

Categories	Frequency
friends	18
Father	12
Companions who are on the lookout	2
Mother	29
Couple	6
Pastoral Group	1
Brothers	11
Grandparents	1
Extended family	3
Daughters	4
Pet	1

Question 6: What do you think about the education system in relation to people who have a disability and how do you feel about it? Give your personal opinion.

Resilience Cedeño, M. L. G., Meza, A. K. T., & Mejía, R. G. C. (2018). Resilience and Support Networks for University Students with Disabilities. International Research Journal of Management, IT and Social Sciences, 5(2), 164-174. https://sloap.org/journals/index.php/irjmis/article/view/67,

Table 5
Results of the survey (question 6)

Categories	Frequency
Positive Criterion	14
Little adaptation to the needs	1
Not very strict	1
Problems with teachers	4
Support for inclusion	13
Help from the interpreter	1
Problems with infrastructure	1
Support from university entities	
o Help from the inclusion department of the UTM	2
o I do not support certain dependencies	1
Need for care for people with disabilities	1
Lack of inclusion in the university	4
Qualified for work with people with disabilities	1
We made a big step, but there's still a long way to go	1
Currently treated apathetically	1
Affectionate and respectful treatment	1
Priority to people with disabilities	1

Question 7: What should be done to improve university education?

Table 6
Results of the survey (question 7)

Categories	Frequency
Implement interpreters	9
Any	3
Teaching Support	
o Support for inclusion	3
o Specialization in types of disability	4
o Improvement in the methodology	14
Missing help	2
The virtual classrooms	1
The infrastructure	7
Instruments in the classroom	1
Adapt services and technology to different disabilities	2
Train students for inclusion	3
More practices in the subjects	1
Greater monitoring of needs	2

Analysis

The coefficient obtained through the Pearson correlation formula, interpreted through the respective scale, defines the correlation as positive moderate ($r\_x\gamma = 0.69$); this means that there is a directly proportional relationship, in which the larger the support networks variable, the greater the resilience variable in the population studied; However, this relationship is not decisive but significant.

Support networks are not causal factors of resilience, but they contribute due to the positive effect of the perception of support and support on the part of the belonging group. This result corroborates the importance of strengthening the system of networks that contain and support people with disabilities who attend the Technical University of Manabí.

However, the social and behavioral sciences require a qualitative approach and the results of the semi-structured interview are taxed in that approach. The categorical results of question 3 In what situation do you ask for help in making decisions and in what situations? can exemplify them reveal that a higher frequency requests help in academic situations, this being a considerable indicator on where to target the intervention and implementation of psychosocial strategies.

The categorical results of question 5 With whom or who have you developed a link and why? They show that the higher frequencies of response have strong links with their mothers, friends, parents and siblings. This is an indicator of who can be essential agents in the process of achieving academic and social goals; besides pointing out the route of a future investigation that investigates separately the role of the family and the role of friends in the resilience of students with disabilities at the Technical University of Manabí.

The categorical results of question 6 What do you think about the educational system in relation to people who have a disability and how do you feel about it? Give your personal opinion show that the highest frequencies positively conceive the attempts to include the education system and support for inclusion in the University where they study.

The results of question 7, What should be done to improve university education?) Where the higher frequencies request an improvement in the methodology, the implementation of interpreters and certain changes in the infrastructure. This calls for the creation of teacher networks that support the construction of inclusive methodologies, networks of interpreters that facilitate interaction between the various university sectors and networks that improve infrastructure for displacement and the full use of services

4. Conclusion

The work made it possible to verify by means of the survey a sample of 68 students of the Technical University of Manabí who present disabilities, that the support networks and resilience categories have a moderate positive correlation and are directly proportional, indicating that the higher the variable networks of support, the greater the resilience variable, which should mean that, nevertheless, this relationship is not decisive but significant.

It was possible to verify that the perception of support and support that the social networks favor, are causal factors of resilience, from this derives the importance of strengthening the university network systems that offer support to university students with disabilities.

In general, the creation of academic support networks is recommended, both at the student and teacher level, in order to generate and implement methodologies that guarantee the learning of all, which will result in resilience in university students with disabilities.

The results obtained are not intended to be generalizable to other academic entities; the research aims to constitute a starting point for further studies. The limitations in the qualitative component of the study, specifically the sample size of the semi-structured interview, locate the results at the trend level, so it is suggested, in case of replication, to standardize the samples of the quantitative component and the qualitative component

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