



Teaching Resilience to People with Visual Disabilities



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Article history:

Received: 4 November 2017

Revised: 21 December 2017

Approved: 29 December 2017

Published: 1 January 2018

Keywords:

Resilience;

Fifth Keyword;

Visual Disability;

Resilience Manual;

Psychological Intervention;

Abstract

The objective of the research is to develop resilience in people with visual disabilities at the Technical University of Manabí. The work offers a conceptual analysis on visual disability in students. It deals with what is related to the conceptual understanding of resilience, where several authors who have studied the subject are analyzed. The resilient capacity of students with visual impairment and the importance of psychological support is analyzed. The importance of the intervention in resilience is exposed, where the content of the Manual of Intervention in Resilience of Eugenio Saavedra 2011 is analyzed. The results of the measurement of resilience are shown in the students of the Technical University of Manabí who suffer from a visual disability and the situation that could be verified after applying the work of training in resilience to said personnel. Finally, the conclusions of the work are exposed, where the relevance of the study is demonstrated and a group of recommendations is made based on the importance of the results obtained in the research.

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1. Introduction

The view is one of the most important senses that the brain uses to obtain information from the knowable world, however, although we see with the eyes, it is in the brain where a series of processes from the neurofunctional point of view are involved, integrated with the information coming from the other senses provide the ability to encode, decode, interpret, understand, elaborate and retain meanings, this is known as information processing (Luna, 2015).

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The eye constitutes one of the most important organs for the human being, because 80% of the information that the person receives is by means of the sight and represents the indispensable sense for the development in the daily life, therefore, the person with visual disability requires a timely, affordable and quality rehabilitation, to integrate into society and to have greater opportunities to get ahead with the support of family, society and the state (Retamozo, Pachao, & Flor, 2015).

Visual perception intervenes in almost all the actions that are executed; Its efficiency helps the person in the learning process to read, write, use spelling, perform mathematical operations and develop the other skills necessary to succeed in school tasks. The faster information is discriminated and its integration, the greater the ability to process and interpret information. Visual perception is constructed from the synchrony of the visual areas in the brain with other sensory, motor and limbic areas to associate an image with a word, an idea, transform it and retain it in memory (Luna, 2015).

Analyzing the above, it can be affirmed that the sense of vision is necessary for the normal development of the mental processes of perception, cognition, and intelligence. When the sense of vision is lacking, the processing of the person will be less rapid and efficient.

On the other hand, regardless of the policies put in place to protect people with special capacity, these constitute one of the most vulnerable populations due to their situation of exclusion, isolation, and lack of access to opportunities for their personal development, as well as their integration social and economic in conditions of equity. Thus, the visual disability is submerged in this reality and the people who suffer it are often subject to discrimination and indifference because in society there is ignorance and omission of the rights that protect them, considering themselves a vulnerable population and being limited to live with dignity (Retamozo et al., 2015).

2. Research Methods

The inductive method was applied, which allowed the logical reasoning of the concepts related to the essences of resilience, to expose the importance of their estimation in human beings who are disadvantaged in life due to visual impairment. The above was applied to reveal the essence of the scientific problem and the definition of the conclusions of the work, which have been used to define the convenience of promoting and implementing motivating programs for the strengthening of psychological skills, through the realization of resilience studies. and the application of training activities of resilience to people who are at a disadvantage to life. Resilience tests SV-RES (Saavedra & Villalta, 2008) were applied to a group of 27 university students with visual impairment, who allowed to estimate their resilience before performing 5 psychological profile training activities and after completing these, with results that demonstrate the importance of them.

The study is quantitative, descriptive-comparative, of primary data sources, transactional in the collection of information, micro-sociological in its sample coverage. The fields of study are psychology and higher education. The sample is intentional, looking for the necessary attributes for the study. Composed of 27 individuals of both sexes and ages between 18 and 27 years old, all enrolled in different careers of the Technical University of Manabí. The instrument used is the SV-RES scale (Chile) of the authors (Saavedra & Villalta, 2008), which consists of 60 items, divided into 12 specific resilience factors.

3. Results and Analysis

3.1 Understand the concept of resilience

Resilience is understood as the human capacity of individuals or groups of these, to overcome great difficulties and grow from them. The diversity of obstacles that can interfere in the path of a subject can range from permanent and structural situations, such as poverty, to specific and personal situations such as suffering from a visual weakness (E. Saavedra, Salas, Cornejo, & Morales, 2015). In this way, it is very likely that examples of resilient capacity can be located in each of the human beings. Apparently, the situations of people who succeed, after overcoming the obstacles, are present in different cultures and different countries.

The development of resilience is usually discontinuous or go through certain fluctuations. In the same way that it will be a capacity that goes beyond the resistance, but it implies projecting from the difficulty, sometimes even transforming a negative situation into something positive that facilitates growth. Nor is it an absolute condition, whether one has it or not. It is always dynamic and in constant construction, which develops in the interaction with others and the environment surrounding the subjects (E. Saavedra et al., 2015).

Resilience should not be seen as a simple intervention technique that helps to repair a damaged, but rather it is a different global perspective that seeks from the problem, generate resources to reconstruct and reinvent life from an adverse situation (E. Saavedra et al., 2015).

Social work and resilience are, therefore, two interconnected and complementary realities. The concept and models of resilience do not constitute a panacea or a simplifying recipe for the complex processes of social intervention, but they can be an approach that, in a transversal sense, guides the interventions of social workers. Resilience is emerging as a research line with great potential for development in the future for its application to the social field, in general, and in social work in particular (Alcívar, Álava, Romero, Tarazona, & Mero, 2017), (Espín & Tarazona, 2016).

3.2 Visual impairment in students

The visual disability is of sensory type since it affects one of the senses; the sense of vision. Blindness, low vision or visual impairment refer to conditions characterized by a total or very serious limitation of visual function. That is, they are people who see absolutely nothing or, at best, even wearing glasses or using other optical aids, they see much less than usual and make a great effort (González, 2011).

There are different degrees of vision and different types of visual difficulties, among which can be mentioned those that are related to the loss or reduction of visual acuity, referred to the distance with which it is possible to discriminate objects and figures; those that are related to the loss or decrease of the visual field, referred to the contour that includes the vision and finally, those related to the decrease or absence of both (Pérez, 2015).

Due to the educational repercussions that these conditions imply, it is important to know that in student activity it is possible to find students who, despite having visual difficulties, will be able to distinguish shapes and colors, supported by the different optical aids (lenses, magnifying glasses, telescopes), and also students who will not be able to see anything, requiring other adaptations and technical aids that allow them to access visual information mainly through the senses of touch and hearing (Pérez, 2015).

Students who are visually impaired may, at some point in their lives, need extraordinary or complementary supports to advance in the learning outlined in the curriculum, that is, they may present special educational needs. The support resources that these students require can vary according to their particular needs and consist of specific didactic materials, technological elements, technical aids, and adaptation of the spaces and furniture of the classroom, as well as teaching professionals and non-teaching support during their educational process (Pérez, 2015).

The supports that each student requires arise from the relationship between the characteristics and individual needs and the factors of the school and socio-family context that favor or hinder their educational process. An important part of these contextual elements represent barriers that need to be removed, among them, some are associated with the competencies of teachers for the educational attention of students with visual disabilities. It should be noted that it is not possible to establish a specific or unique profile for the development of people with visual impairment, due to the heterogeneity, determined by the various degrees of visual impairment and the different moments of appearance of the same and family, social experiences or educational that they have had to live (García, 2016).

3.3 Resilient support for students with visual impairment

The Universidad Técnica de Manabí was created on October 29, 1952, located on Avenida José María Urbina, in the city of Portoviejo, province of Manabí, Ecuador. At present, it stands out as a public institution with three substantive functions: Research, the Academy and Linking with society; intervening with quality in all public and private spheres and sectors through the support of students, teachers and authorities.

The institution of higher education manzanita has full powers to organize within the provisions of the Constitution of the Republic of Ecuador, the Organic Law of Higher Education, its Regulations, other related laws, the Organic Statute of the Technical University of Manabí and regulations issued to structure the organization of the institution. Currently, it is accredited within the Higher Education System of Ecuador, being placed in category B, according to the Resolution of the Council of Evaluation, Accreditation and Quality Assurance of Higher Education (CEAACES), issued on May 9, 2016, based on the request for recategorization and respective evaluation process

From the teaching and research point of view, it is organized in 10 faculties and 33 university courses are taught, covering a broad field of science and engineering. Since its foundation it has been projected as an inclusive higher education center facing Manabi society, distinguishing itself by putting into practice a strategy to fight against

social exclusion, facing this process multidimensionally from the economic and politico-legal aspects (income, access to the labor market and assets, fundamental rights), and symbolic and subjective factors associated with specific actions that undermine the identity of the person (rejection, indifference, invisibility).

Currently, the enrollment of the Technical University of Manabí includes 88 students who have the special ability; of them, 27 students with visual impairment; 17 are males and 10 are females. The distribution by careers is the following: 9 correspond to engineering careers, 13 in the social sciences and humanities, 4 in medical sciences and 1 in veterinary medicine

3.4 The intervention in resilience

The study focused on investigating how the students of the Technical University of Manabí who are visually impaired, manage to manage resilience in the face of the adversities of their lives, especially where they have the disadvantage that implies the disability they present.

During the realization of the works, 5 training activities of Resilience Intervention of Eugenio Saavedra (Saavedra, Arevalo, Gajardo, Riveros, & Toledo, 2011) were applied.

On November 1, 2017, on the premises of the Technical University of Manabí, work began under the direction of a teacher from the institution of higher education and the participation of students in the career of Clinical Psychology. During the works the SV-RES Resilience test was applied to the participants, then three blocks of resilience represented in three categories were explained: I have, I am, I can. Subsequently, 5 training activities on resilience were carried out, where the topics related to: Identity and Autonomy were analyzed; valuation chain; satisfaction and pragmatism; models and goals to follow

3.5 Results of the measurement of resilience

In Table 1 shows the results of the resilience measurement before and after the workshops.

Table 1. Results of the measurement of resilience

Level of resilience	Before		After	
	Frequency	Percentile	Frequency	Percentile
High	3	9.37	22	78.12
Medium	10	34.37	5	15.6
Low	14	46.87	0	0
TOTAL	27		27	

Analysis of the first take of the resilience test of Saavedra

The analysis of the results of the Saavedra test applied in the first instance, to the 27 students with a visual disability, allowed to verify the following results: 3 students presented a high level of resilience; 10 students presented an average level of resilience; 14 students presented a low resilience score.

According to the qualification and following the parameters of the Saavedra test, it can be concluded that most of the visually impaired students were within a low level of resilience. The analysis of the 12 dimensions that confirm this test, allowed to verify the situation according to three scales: high, average and low, where the following results could be verified:

- 1) The identity dimension demonstrated a low and average score;
- 2) The autonomy dimension experienced an average score;
- 3) Most students reported average score in the satisfaction dimension;
- 4) In terms of pragmatism, most students scored on an average score;
- 5) In relation to link the result is also average;
- 6) The dimension of networks qualifies as average;
- 7) In terms of models, the result is low;
- 8) The goal dimension yielded a low result;
- 9) In the dimension of affectivity the highest results are high and low for a part of the students surveyed;
- 10) The self-efficacy dimension the result is average;
- 11) The learning dimension experienced an average result;
- 12) The generativity dimension was average.

In a general way, it can be seen that most of the dimensions experienced average and low results, allowing to identify and concentrate the work efforts in the most critical aspects and enhance them, figure 1 shows the graphic relationship of the results of the study in the first test taking.

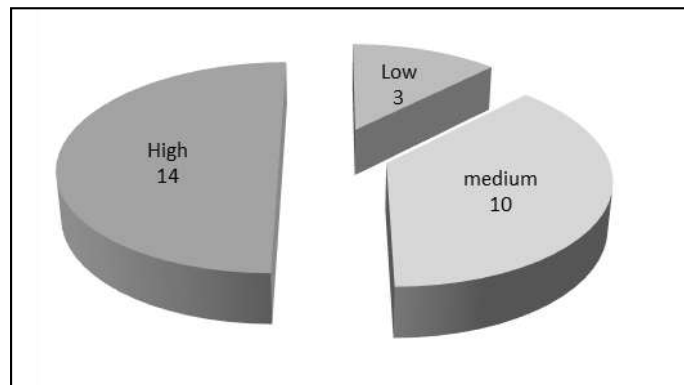


Figure 1. Results of the study in the first test taking

3.6 Analysis of the second take of the resilience test of Saavedra

The analysis of the results of the Saavedra test applied in the second instance in the month of December of 2017, to the 27 students with visual disability, allowed to verify the following results: 22 students who presented a high level of resilience; 5 students who presented an average level of resilience; • Students with a low resilience score were not identified.

According to the qualification and following the parameters of the Saavedra test, it can be concluded that most of the students were within a high level of resilience. The analysis by the 12 dimensions that confirm this test, allowed to verify the situation according to three scales: high, average and low, where the following results could be verified:

- 1) In the identity dimension, 23 students were identified with a high score and 4 students with a high grade;
- 2) In the autonomy dimension, 22 visually impaired students experienced a high score and 5 with an average score, demonstrating a general tendency of high score;
- 3) 23 students rated with a high level and 4 an average level in the satisfaction dimension, with a general trend of the high score;
- 4) In terms of pragmatism, 24 students scored with a high score and 3 with an average score, also experiencing a high score trend;
- 5) In relation to link 20 students obtained a high level and 7 classified with an average score;
- 6) In the dimension of networks, it qualifies in a general way with a high score, with 22 students who classified with a high level and 5 with an average score;
- 7) In terms of models, 19 students obtained a high level, while 8 an average level, with a general tendency of high score;
- 8) The goal dimension yielded a high score, with 20 students who qualified with a high score and 7 with a low score;
- 9) In the dimension of affectivity 18 students classified with a high score and 9 with an average level;
- 10) The self-efficacy dimension 19 students show a high level, while 8 classify with an average level;
- 11) In the learning dimension, it experienced a high result with 22 students who classified with a high level and 5 with an average level;
- 12) In the generativity dimension, he scored high, with 23 students with a high level and 4 with an average score.
- 13) In the identity dimension, 23 students were identified with a high score and 4 students with a high grade;
- 14) In the autonomy dimension, 22 visually impaired students experienced a high score and 5 with an average score, demonstrating a general tendency of high score;
- 15) 23 students rated with a high level and 4 an average level in the satisfaction dimension, with a general trend of the high score;
- 16) In terms of pragmatism, 24 students scored with a high score and 3 with an average score, also experiencing a high score trend;

- 17) In relation to link 20 students obtained a high level and 7 classified with an average score;
- 18) In the dimension of networks, it qualifies in a general way with a high score, with 22 students who classified with a high level and 5 with an average score;
- 19) In terms of models, 19 students obtained a high level, while 8 an average level, with a general tendency of high score;
- 20) The goal dimension yielded a high score, with 20 students who qualified with a high score and 7 with a low score;
- 21) In the dimension of affectivity 18 students classified with a high score and 9 with an average level;
- 22) The self-efficacy dimension 19 students show a high level, while 8 classify with an average level;
- 23) In the learning dimension, it experienced a high result with 22 students who classified with a high level and 5 with an average level;
- 24) In the generativity dimension, he scored high, with 23 students with a high level and 4 with an average score.

In general, it can be observed that most of the dimensions experienced a high score, demonstrating the effectiveness of the 5 resilience training activities applied to the students of the Technical University of Manabi who have a visual impairment. Figure 2 shows the graphic relationship of the results of the study in the second test taking.

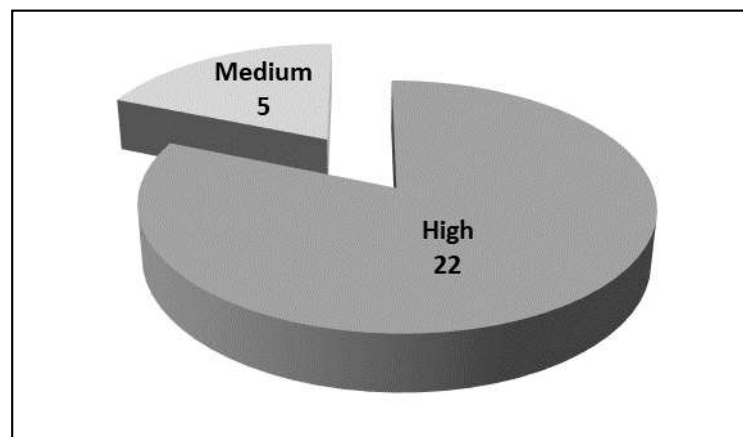


Figura 2. Resultados del estudio en la segunda toma del test

Considering the importance of the study and measurement of resilience and the proven positive effect that derives from the application of the workshops based on the Manual of Intervention in Resilience of [Eugenio Saavedra, 2011](#), to reach and consolidate an adequate level of resilience in the University students suffering from visual impairment, it is recommended that the Technical University of Manabí continue the deepening of the studies and measurement of resilience, as well as the application of training activities of resilience, for which other measurement instruments can be studied.

Considering the proven impact derived from the study carried out, it is advisable to propose to the management of the Technical University of Manabí that the studies carried out be similar to the one carried out in the research, with the rest of the students with disabilities.

4. Conclusion

The investigation made it possible to determine that the instrument SV-RES 2008, developed by the Saavedra and Villalta researchers, which consists of 60 items, divided into 12 specific factors of resilience, is relevant to perform the measurement of resilience in university students who are in disadvantage to life due to suffering from a visual disability.

It was possible to verify through the results of the psychological tests SV-RES 2008 developed by the researchers Saavedra and Villalta, that the content of the training activities based on the Handbook of Intervention in Resilience of Eugenio Saavedra 2011 applied to university students with visual impairment, allowed to raise the categories: I have, I am, I can, proving that the level of resilience of the affected people had risen substantially,

with a reinforcement of the protective factors: positive self-esteem; confidence, optimism and a sense of hope; autonomy and sense of belonging; sociability; emotional capacity; positive imitation skills; empathy; positive mood; motivation to overcome difficulties and; competition. It was possible to verify that all this managed to elevate and strengthen the student environment, resulting in more understanding and warm.

It was shown that in the Universidad Técnica de Manabí a climate prevails that favors the development of an inclusive environment, propitiating the strengthening of student resilience, characterized by the existence of a group of professors and researchers trained for the development of work and motivated to achieve better results in teaching and research work of the institution.




Acknowledgements

The authors would like to thank Prof. Dr. Abdel-Badeh M Salem and Prof. Dr. Farzam Farzan for their valuable time and advice.

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