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Academic resilience: a transcultural perspective

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Abstract

Resilience, defined as the ability to overcome the difficulties encountered in achieving personal, professional or academic goals, is a topic of recent interest within the field of social sciences; more specifically in Psychology and Positive Psychopedagogy.

From the transcultural study of Grotberg in 1999, held in twenty places distributed in twenty countries, to transcultural research conducted by the International Association for the Evaluation of Educational Achievement (IEA) in its TIMSS 2011 study, knowledge about children resilience has been incorporating relevant data and factors related to both students and its context in the exploratory phase, which is this line of research.

Transcultural research about resilience have also been responsible for changing the preventive institutional approach to promotion models, committed to optimizing strengths and resilience factors of subjects at risk.

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1. Antecedents

Since the early seventies of the twentieth century, it has been developed a huge line of research about individuals that are able to develop skills despite having been raised in adverse conditions. The essential characteristic of these studies is the interest in a competence called resilience (Coronado-Hijón & Paneque, 2015).

Resilience research was originated within the field of child psychology, in the middle of the decade of 1970's, towards children living in contexts which development conditions were extremely adverse.

The term resilience began to be used from the developmental psychology field in order to explain how some children were able and competent to overcome adversities and developed as healthy people with positive adaptation

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profiles. From this research scope it shifted quickly to applied fields of Psychology and Positive Psychopedagogy focusing on learning skills of resilience as a new paradigm facing the approach of vulnerability and risk, as it prioritizes focus on strengths, rather than the deficit or difficulty (Coronado-Hijón, 2016).

Rutter (1979) was one of the first researchers who felt uncomfortable with that trend or incomplete approach of studies which only focused on the negative development outcomes. In 1979, it was noted the importance of knowing the factors that act as protectors of situations of adversity, but knowledge of the protective mechanisms of this resilient dynamics was also considered even more important.

On her behalf, Werner (1989) emphasizes the importance of resilience from the possibilities that its knowledge can produce in order to design interventions which main objective is the optimization of personal balance between vulnerability and resilience. In this way the author, rather than reducing exposure to risk, exhort to increase or strengthen protective factors such as personal supporting and affection sources, interpersonal communication and problem solving skills.

In the initial stages of theoretical evolution of the construct of resilience the interest was focused on the individual factors that acted as protectors against risk and vulnerability. In a second stage studies took more interest in the role of contextual interaction dynamics with individuals and their situational environment. This evolution illuminates a transactional ecological perspective of resilience (Morelato, 2011), where the interest is no longer in factors but in the dynamic mechanisms and the notion of both risk and protective factor acquires an ambiguous and changing nature depending on the context configuration. Since this approach, resilience is considered as a dynamic, bidirectional and transactional developmental process (Coronado-Hijón & Paneque, 2015).

The forefathers of this dynamic notion of resilience were Michael Rutter (1993) and Edith Grotberg (1995).

Michael Rutter (1993) coined the term protective mechanisms within a dynamic model where the individual has an active role and reacts to the environment and where resilient capacity is known as a global and transactional response that allows individuals to emerge stronger from adversity.

According to Edith Grotberg (1995) resilience is a result of the interaction between resilient factors belonging to three different levels: social support (I have), skills (I can) and inner strength (I am).

This extension of the construct understood as a process enhances the field of educational psychology and educational intervention for the development of resilient competence.

From the definition of resilience as "the human capacity to face, overcome and be strengthened or transformed by experiences of adversity," by Edith Grotberg (1995), it has been making further refinements and contextualization. Regarding to the contextualization of resilience within the specific area of learning, we understand academic resilience as the ability to bounce back and successfully overcome the risk factors of learning difficulties.

The following analysis will focus on the most important cultural studies in this area, as well as outstanding proposals and educational intervention programs.

2. Evidence Sources

A milestone in the field of children resilience researching is the longitudinal study of Emmy Werner and Ruth Smith (1982). In this longitudinal study 698 children born in 1955 in unfavorable conditions on the island of Kauai (Hawaii) were analyzed. From the original amount, 201 children who were at the age of two years old, had a large number of biological and psychosocial indicators of risk. Despite this, 72 individuals were able to overcome adversity and developed themselves as socially competent adults. These 72 subjects were named the "resilient".

The International Resilience Project conducted by Edith Grotberg (1999), was a transcultural study which took place in twenty places distributed in twenty countries. According to the results, the author identified the role of human development in the ability to be resilient, understood as a dynamic and interrelated process. She also identified resilient factors and organized them into four categories of strengths: internal developed (I am), external support received (I have) and social and conflict resolution abilities acquired (I can).

Cultural differences observed in the international project of resilience indicated that all countries have a common set of resilient factors in order to promote the resilience of their children. Among the cultural differences observed they emphasized the followings: the strategy parental socialization scale according to the control or autonomy that children were given, the relationship between punishment type and its justifications, the age at which children are supposed to solve their own problems, the amount of support and love that children receive under adversity conditions.

Based on this study it was proposed the contextualization of resilience promotion in the life cycle of subjects following the stages of development described by Erik Erikson: basic confidence development (first year of life); autonomy development (2 to 3 years old); initiative (4 to 6 years old); achievement and productivity sense (7 to 12 years old); identity development (13 to 19 years old). Consequently Edith Grotberg (1995) designed the first proposal and education strategy of resilience in children, based manner, with the edition of “A guide to promoting resilience in children: strengthening the human spirit”.

The following transcultural study of relevance is the TIMSS 2011, led by the International Study Center at Boston College (USA), coordinated by the consortium of institutions responsible for the design, management, and research, formed by the IEA Secretariat (Amsterdam), the IEA Data Processing and Research Center (Hamburg, Germany), the National Foundation for Educational Research (England), Statistics Canada and the Educational Testing Service (USA). The main merit of this study is the first operative and measurable definition proposed of the construct of resilience in addition to its broad transcultural spectrum.

In the "Trends in Mathematics and Science Study" (TIMSS), (Mullis, Martin, Foy, & Arora, 2012), participated 261000 students from 63 countries. The population studied was conformed in representative samples of students in their 4th and 8th degrees of basic education from the participant countries.

Based on the concept that academically resilient students are the ones that have academic success despite their unfavorable circumstances, this study identifies them as those who obtain an equal or higher score to International Reference Average TIMSS 2011 in mathematics (475). The choice of this international indicator of school success is justified by its standardization in all education systems and for allowing a descriptive reference in terms of specific skills and abilities.

The results showed a wide variation in the percentage of students academically resilient from the 8th grade of the 28 education systems studied which belong to different countries and geographical areas and which have different levels of economic development. This variability, started from 4 percent in Ghana to 55 percent in Japan, placing Spain at a rate of 6.5%, position located in the spectrum of the OECD average.

The International Association for the Evaluation of Educational Achievement (IEA), independent international consortium headquartered in Amsterdam, produced a report coordinated by Erberber, Stephens, Mamedova, Ferguson, & Kroeger (2015), using data from the mathematical performance of students from the International Study of Trends in Mathematics and Science Study (TIMSS) 2011, (Mullis et al., 2012) in its 8th grade, in order to identify the academically resilient students subgroup in each education system and the factors which help within academic resilience.

As a relevant general transcultural conclusion we can emphasize the largest proportion of academically resilient students come from educational systems with better performance. This general conclusion suggests that risk students can obtain significant benefits from educational settings that support high overall performance.

According to relevant factors it was identified those which showed a higher correlation between them and academic resilience and they were classified in two categories: those which are related to the students and those which are related to the education center.

According to factors related to students, their high educational expectations were shown as the strongest and most consistent indicator of academic resilience, followed by their assessment of mathematics and their attitudes towards learning.

Factors related to the education center showed less statistical consistency to predict academic resilience than student factors. However, they also showed correlation with it. Three of them positively correlated with academic resilience in many educational systems:

- (1) Teachers confidence in the adequacy of the student response to mathematical tasks, according to students answers to questionnaires;
- (2) The emphasis showed by the school on academic success, as declared by the directors (and high expectations showed by teachers regarding the performance of their students, effective teachers, motivated students towards and parental support);
- (3) A lower percentage of economically disadvantaged students in the center, as reported by principal's questionnaires.

Another relevant transcultural study is the well-known PISA 2012, which focused on mathematics, areas of secondary assessment in reading, science and problem solving, providing similar TIMSS data on 15 years old student performance.

In this study, 510.000 subjects aged between 15.3 and years 16'2 years old carried out the assessment, representing a population of approximately 28 million students who were 15 years old and came from different schools of the 65 participating countries, of which 34 they are currently OECD members and 31 are partner countries, representing over than 80% of the world economy. The results were correlated with context variables measured by family questionnaires.

The factor most correlated with the risk of school failure was the family socioeconomic status. That decisive factor was estimated at PISA by a rate of social, cultural and economic status (ESCS by its acronym in English language), set by the parent's education and occupation level, as well as an indicator of cultural goods at home.

According to the information provided in that report (OECD, 2013), differences in the ESCS rate explained about 15% of the observed variance in math scores among OECD countries.

For PISA 2012, students who were located in the lowest quartile of country ESCS variable but still obtained results internationally appreciated within the upper quartile, were considered resilient students.

3. Prevention and promotion of resilience

Traditionally the approaches of adversities which people face have been presented from a preventive focus belonging to the epidemiological model of public health. Currently transcultural researches about resilience have change the perspective of the issue sponsoring a promotion model which encourage the optimization of strengths and resilience factors towards students at risk.

According to Grotberg, (2001), differences between these two different models have been a source of conflict, especially in national and international organizations as interest in social budgets and decisions about resources have been taking more importance within current societies developing a range of challenges and its resolutions.

The current interest about understanding resilience as a process means to Grotberg (2001) a practical sequence which is developed and adapted within this paper trying to be described in the most contextualized way and has the next steps:

- (1). Promoting resilient factors involves addressing the process of resilience.
- (2) Resilient behavior is shaped by the dynamic interplay of selected resilience - "I have", "I am", "I can" – in order to face difficulties found. Different phases must be sequenced according to certain choices or decisions:
 - a- Identification of difficulty.
 - b- Select the level and kind of appropriate response:

For children, in a limited exposure to learning difficulties it is easier to build a resilient academic response whilst a long period of school failure can be traumatic. This aspect claims is necessary to develop both early detection and evaluation of learning difficulties.

A planned response is necessary for the dimensioning of risk and, consequently, the educational response.
- (3). Evaluation Criteria results of resilience.
 - Learning from experience.

What has been learned and what else needs to be learned? Every experience involves a percentage of success and failure. The former have to increase the grounding with which face similar tasks, and failures must be analyzed to determine the need of educational support.

What factors and behaviors of resilience need more attention?
 - Estimate the impact on others.

Providing education to the diversity of needs and difficulties must not be at the expense of other students. This orientation, "should be based essentially on quality education that fosters a real inclusive educational differentiation, achieved through cooperative work, collective action, promoting working groups in the classroom, among others," as indicated by a transcultural organization as the European Agency for Development in Special Needs Education (2011, p.16).
 - Recognizing an increase in positive attitudes towards learning.

The *explanatory style* is one of the variables most studied in the field of academic resilience (Seligman, Reivich, Jaycox, Gillham, & Kidman, 2005). Students with a *resilient explanatory style*, tend to explain the learning difficulties with external, temporary and specific attributions, while those who show a *pessimistic explanatory style* carry out mostly internal, permanent and global attributions of failures and errors in learning.

4. Conclusions

Research about resilience emerged in the field of child psychology during the late twentieth century, studying children living in unfavorable environments for their development. This line of research in the exploratory phase has been contextualized for academic resilience in recent cross-cultural research, which have been extracted relevant factors, both subjects and contexts.

Although the results have shown the group of resilient factors that best fit the set of educational systems is necessary that educational systems politicians encourage studies to identify more specifically what factors are predictive in their respective systems and what educational policies are more suited to their specific contexts. These new lines of research are justified from recent proposals, such as the holistic model of resilience.

From this holistic view of the educational response in order to promote academic resilience it is necessary to include Emotional Education in the curriculum of formal education as well as disciplinary content as interdisciplinary content, where academic resilience development will have a full educational justification.

References

- Coronado-Hijón, A. (2016). Orientación y atención a la diversidad en las transiciones educativas interculturales. En *La Educación sí importa en el siglo XXI*. (pp.257-269). Madrid: Editorial Síntesis,
- Coronado-Hijón, A. & Paneque, M. (2015). Resiliencia al fracaso escolar y desventaja sociocultural: un reto para la orientación y la tutoría. En Jiménez, S. y Silva, C. (Coord.) *Trauma, contexto y exclusión: promocionando resiliencia*. Granada: Grupo Editorial Universitario (GEU).
- Erberber, E., Stephens, M., Mamedova, S., Ferguson, S., & Kroeger, T. (2015). Socioeconomically Disadvantaged Students Who Are Academically Successful: Examining Academic Resilience Cross-Nationally. Policy Brief No. 5. *International Association for the Evaluation of Educational Achievement*. http://www.iea.nl/policy_briefs.html
- European Agency for Development in Special Needs Education (2011). Mapping the implementation of policy for inclusive education (MIPIE): An Exploration of Challenges and Opportunities for Developing Indicators. Brussels: Serge Ebersold
- Grotberg, E. (1995). *The Internacional Resilience Project: Promoting Resilience in Children*. Wisconsin: Universidad de Wisconsin.
- Grotberg, E. (1995). *A guide to promoting resilience in children: strengthening the human spirit*. La Haya, Holanda: The Internacional Resilience Project., Bernard Van Leer Foundation.
- Grotberg, E. (2001). Nuevas tendencias en resiliencia. En A. Melillo y E. N. Suárez Ojeda (comp.), *Resiliencia: Descubriendo las propias fortalezas* (pp. 19-30). Buenos Aires: Paidós.
- Morelato, G. (2011). Resiliencia en el maltrato infantil: aportes para la comprensión de factores desde un modelo ecológico. *Revista de Psicología (PUCP)*, 29(2), 203-224.
- Mullis, I.V.S., Martin, M.O., Foy, P. & Arora, A. (2012). *TIMSS 2011 international results in mathematics*. Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College.
- OECD (2013). *PISA 2012 Results: What Students Know and Can Do*. 4 vols. Paris: OECD.
- Rutter, M. (1979). Protective factors in children's responses to stress and disadvantage. *Annals of the Academy of Medicine, Singapore*, 8(3), 324.
- Rutter, M. (1993). Resilience: Some conceptual considerations. *Journal of Adolescent Health*, 14 (8), pp. 626-631.
- Seligman, M. E., Reivich, K., Jaycox, L., Gillham, J., & Kidman, A. D. (1995). *The optimistic child*. New York: Houghton Mifflin.
- Werner, E. (1989). High-risk children in young adulthood: a longitudinal study from birth to 32 years. *American Journal of Orthopsychiatry*, vol. 59, n.1, pp. 72-81.
- Werner, E. (1992). Protective factors and individual resilience. In S. Meisels & J. Shonkoff (eds.) *Handbook of early childhood intervention*, (pp. 115-133). New York: Cambridge University Press.
- Werner, E. & Smith, R. (1982). *Vulnerable but Invincible: A longitudinal Study of resilient Children and Youth*. Nueva York: McGrawHill Book.