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Resilience: physiological assembly and phychosocial factors

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Abstract

The phenomenon of resilience, apart from cultural and socio-psychological factors, has a physiological basis and a medical condition that clearly explains it.
The alterations of the nervous system and the endocrine system that are manifested in the physiological response to a stressful situation condition the individual as a whole, allowing him to create an extremely effective and superior response as a result of positive reinforcement experienced during resilience.

Keywords: resilience, education, physiology, psychology and sociology.

1. Introduction and research objectives

From the current medical model, it has been stated that all human behavior and actions have a physiological basis and a mental condition.

In the case of resilience as a study case, we can see changes that involve different organs and body systems: in the first place behavioral change to avoid stressful situations, later the activation of the sympathetic nervous system (hormonal release of noradrenaline and adrenaline, primarily) and finally, as happens with all processes, control by the central nervous system.

These neuro-endocrine, hormonal and enzymatic modifications have a holistic effect, enabling humans to

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develop an effective and extraordinary response to a stressful situation that can be overcome, creating in the human organism a "rebound effect" by which the end result will be a positive reinforcement of the response.

So, the resilience phenomenon outside cultural and socio-psychological factors, has a physiological basis and a medical condition that clearly explains it.

The main goals we want to achieve with this work are:

- To study the interaction in the phenomenon of resilience of physiological, psychological and sociological metastructure.
- Analyze the impact of each metastructure studied in the phenomenon of resilience.
- Synthesize the key factors affecting the phenomenon of resilience within each metastructure.

2. Methodology

This investigation started with the aim of exploring the difficulties of study and the way of selecting and perfecting resources and procedures to identify the promising concepts of assembly in resilience, among physiological, psychological and social factors, and its percentage-based aid in the study subjects.

The main work method was exploratory investigation. The factors analyzed have been a triangulation of physiological, psychological and social paradigms in the object of study, functional, transversal and interdisciplinary analysis of the different sciences affected in the phenomenon of resilience.

3. Development and discussion of the topic

When faced by a threat, the whole body enters a state of alert and prepares to "fight or flight", as a response to a given situation, redirecting all its energy resources. We will structure this analysis in three metastructures: physiological, psychological and social.

3.1. Physiological metastructure

In this section we will study the main physiological systems implicated in body response to an adverse situation, as well as specific reactions from different systems and organs.

3.1.1 Nervous and endocrine systems

Response is generated and controlled by two essential systems in the body, from whose interaction all voluntary and involuntary body reactions are born, that is, the nervous system and the endocrine system.

3.1.1.1 Nervous system

The nervous system can be classified from an anatomic point of view in the central nervous system which includes brain, cerebellum and brain stem, and spinal cord, and the peripheral nervous system which is formed by 12 pairs of cranial nerves, and 31 pairs of spinal nerves (Snell, 2010).

However we will focus on a less geographical but more functional classification, dividing the nervous system according to the role carried out by different neural structures, without taking into account the anatomical area in which they occur. In short, the somatic nervous systems and the autonomous or vegetative nervous system which includes the parasympathetic and sympathetic nervous systems, these latter systems essential to an adaptive response.

The somatic nervous system or life-relating nervous system is formed by a group of neurons which regulate voluntary or conscious functions in the body, while the autonomous nervous system, also known as vegetative or visceral, is formed by a group of neurons that regulate involuntary or unconscious functions. As we have already stated, the vegetative system is formed by the parasympathetic system which is a system which operates in repose, and the sympathetic system which operates the response to escape or flee.

It is therefore this last system, the sympathetic system, which prepares us for action, and its function is