

## EDITORIAL

**REVISTA ACTA COLOMBIANA DE PSICOLOGÍA**JUDITH SALVADOR CRUZ\*

Research in the field of psychology should clarify and explain the various objects of study, trying to explain the different approaches, processes, as well as cognitive and emotional functions that occur along the ontogenetic development, in order to generate, as far as possible, strategies to cope with different suffering conditions: psychological, social, neurological, psychiatric, medical etc. It is under this perspective that this issue includes 14 articles, seven of which are focused on the area of neuroscience and the remaining seven in other areas of psychology.

The Neurosciences include a set of methods for the study of the nervous system. Through them it is possible to conduct research on the biological foundations of mental activity and behavior as well as their deviations from normality based on disease processes. Today, the field of Cognitive Neuroscience offers the opportunity to integrate knowledge from various sources to better understand the processes that underlie consciousness and higher nervous activity. These should be oriented to the ecological validity of the psychological processes and functions within a framework not only “biopsychosocial” but “neuropsychosocial”.

In this issue of the Journal *Acta Colombiana de Psicología* a special section is devoted to contribute to the dissemination of research related to the area of Psychophysiology, Neuropsychology and Psychobiology in any of their fields of intervention (clinical, educational and basic) in which findings of interest related to the role of the Psychophysiological, Neuropsychologist and Psychobiologist in the fields mentioned above support the intervention on the client's problems (qualitative and quantitative analysis, rehabilitation, standards). Therefore, the first section consists of seven papers that contribute to this research network.

The article entitled “Hemodynamic responses to acoustically modified syllables in premature and full term newborn infants acquired by near infrared spectroscopy” is important for neuroscience because it shows the use of a brain imaging technique more versatile for the study of brain function of infants and children. This technique is known as optical

topography or near-infrared spectroscopy (NIRS). Exploring the functions of the brain in preterm infants and infants with hypoxia can significantly advance our understanding of how these early traumas impact cognitive development.

Although we are daily exposed to situations of acute stress, few studies have assessed these effects. This is why it is important to know the answers and mechanisms involved when coping with stress. In the article “Acute effects of restraint, shock and training in the elevated T-maze on noradrenaline and serotonin systems of the prefrontal cortex” the above mentioned mechanisms, the effects of acute exposure to different stressors and changes in concentration of noradrenaline and serotonin in the prefrontal cortex were assessed.

The Neuroscience approach to study ADHD, has tried to make a contribution to discern between the behavioral neuropsychiatric and neuropsychological aspects of this disorder, in order to break the debate about the overdiagnosis and suitable intervention for children with ADHD. Regarding this issue, the article “Identification of symptoms of attention deficit disorder with hyperactivity by parents and teachers” epidemiologically helps to understand the way the disorder is perceived by family and teachers for its proper diagnosis and management on the part of mental health professionals.

Another aspect of the neuroscientific approach focuses on early diagnosis of cognitive impairment in diseases and/or brain injuries. Lacunar infarcts are among 11% and 25% of all strokes, pointing to a public health problem that should be widely studied for its high rate of incidence. In this regard, the article “Neuropsychological impairment in patients with lacunar infarction” presents the findings of a neuropsychological analysis about this condition, showing that it can cause a cognitive impairment that may progress to a dementia process.

Furthermore, advances in the field of functional neurosurgery oriented to the treatment of serious and disabling psychiatric/psychological symptoms support

---

\* The National Network of Psychophysiology, Neuropsychology and Psychobiology Mexican Psychology Research System (SMIP, for its Spanish acronym). [salvadj1@gmail.com](mailto:salvadj1@gmail.com)

the professional dyad of neuropsychologist-neurosurgeon to achieve an effective and efficient treatment and thus improve the quality of patients' life, through increasing their level of functioning in daily life, one of the main goals of these advanced procedures. Since resistant psychiatric disorders have disabling symptoms that do not decrease over the years despite psychotherapy and adjustments and changes in medication, among other conventional therapeutic measures, the paper entitled "Changes in the functional profile of patients with resistant psychiatric disorders subjected to stereotactic functional neurosurgery", discusses the possibilities of the stereotactic functional neurosurgery as a therapeutic option for these severe cases.

The paper entitled "Effects of the activation of cannabinoid CB1 receptors in the nucleus accumbens on feeding behavior," explains another angle of neuroscience, proposing that the main findings on the involvement of neurotransmitter systems in the regulation of normal and abnormal ingestive behavior have shown that cognitive processes underlying feeding behavior are closely related to specific physiological and neurochemical mechanisms. Thus, the elucidation of neurochemical mechanisms such as endocannabinoids will potentially contribute both to the understanding of the factors that generate and maintain obesity, and to the improvement of pharmacological therapies, which together with psychological treatments aim at decreasing the prevalence of overweight and obesity in our population.

To finalize the neuroscientific approach, the paper referred to as "Two epistemological perspectives in the scientific study and clinical evaluation of executive functions" examines two epistemological perspectives, one "analytical" and the other "synthetic", also known as "romantic science". A review of how these prospects have translated into clinical practice in neuropsychology, and current events that try to bridge the gap between the two views is provided. It is recommended that researchers and practitioners pay attention to this issue as a guiding principle in their study and clinical applications.

As mentioned earlier, in addition to the seven papers of this special issue, other seven articles which belong to

the areas of developmental psychology, health psychology, educational psychology and psychometrics are published.

Another way of studying psychology focuses on child development in a range that goes from the normal to the pathological process, in which the article called "The analysis of the functioning of working memory in children with learning disorders" analyzes a view that supports early intervention to avoid future problems of calculation and reading as expressed by the authors of the article cited above.

On the other hand, progress in the field of psychology is also evident when treatments can be used to improve coping skills for dealing with various diseases, as mentioned earlier. That is the case of the articles: "New technological developments applied to psychological treatment" and "Quality of life and coping strategies in the treatment of cancer patients."

Regarding the school approach, the article entitled "Assessment of different levels of reading comprehension in Mexican psychology students" discusses the educational implications when there are problems in this area.

Another aspect of interest to the psychologist is the creation and analysis of various measuring instruments, as in the case of the article "Analysis of the factor structure of the STAI-T in a sample of Brazilian athletes." Also included in this category is the article entitled "Parents' perception about child rearing", a research that presents a new scale to counteract the lack of tests and/or valid and reliable instruments for the Spanish speaking population.

This editorial of Volume 17, number 2 of the Journal *Acta Colombiana de Psicología*, closes emphasizing the importance of memory processes for humans. That is why the article: "Prospective memory performance in older people, adults and youth" presents the differences in prospective memory in different age groups regarding comprehension and verbal fluency, suggesting the importance of developing these skills.

Finally I thank the Editor, Dr. Ravelo the opportunity to work together and be the editor of this special issue. I also take this opportunity to acknowledge the contribution of Dr. María Antonia Padilla Vargas, Coordinator of the Mexican Psychology Research System.