European Journal of Humanities and Educational Advancements (EJHEA)
Available Online at: https://www.scholarzest.com
Vol. 2 No. 10, October 2021
ISSN: 2660-5589

SUBJECT AND TASKS OF DEVELOPMENTAL PHYSIOLOGY AND PSYCHOPHYSIOLOGY

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Article history:

Received: 26th August 2021
Accepted: 24th September 2021
Published: 30th October 2021

Abstract:

Age physiology is a section of human and animal physiology that studies the regularities of the formation and development of physiological functions of the body during ontogenesis - from fertilization of the egg to the end of life. This area of knowledge considers problems related to biological laws and mechanisms of growth and development, the characteristics of the functioning of the organism, its systems, organs and tissues at different age stages. Age physiology is the science of the characteristics of life the organism, the functions of its individual systems, the processes occurring in them and the mechanisms of their regulation.

Keywords: Developmental physiology and psychophysiology, biological significance, age-related physiology, age-related aspects of human development.

Physiology studies the patterns of interaction of living organisms with the environment, their behavior under various conditions. Definition Physiology is the science of the vital activity of organisms, their individual systems, organs and tissues and the regulation of physiological functions.

Function is a specific activity of an organ or system. The physiological system is a collection of organs and tissues united by a common function. A functional system is a union of anatomically different, in a certain way interacting elements of the body; represents a complex of selectively extracted body components, interactions and relationships of which are focused on obtaining a useful adaptive result. Definitions Psychophysiology is the science of physiological mechanisms of mental processes and states.

Age-related psychophysiology is the science of the physiological mechanisms of mental processes and states, taking into account the age characteristics of the individual, which studies the maturation process in ontogenesis of the cerebral mechanisms of mental activity. The life cycle of an organism - the period from conception to death - is called the period of individual development, or ontogenesis. Traditionally, age physiology and psychophysiology are subdivided depending on studied age period - on the physiology and psychophysiology of a child, adolescent, etc. Problems of mature stages of development are the subject of study of normal physiology and psychophysiology and gerontology. Dysontogenic is a violation of the individual development of an organism in prenatal and early postnatal ontogenesis. Dysontogenic is studied by clinical psychophysiology and pathophysiology.

The study of the structure and functioning of the human body is an interdisciplinary problem covering a wide range of scientific disciplines, among which anatomy, physiology, psychophysiology and psychology occupy the leading place. Definitions Anatomy is the science of the shape and structure of individual organs, systems and the body as a whole. Psychology is the science of the laws governing the development and functioning of the psyche.

The body is a complex, hierarchically organized system of organs and structures that provide vital activity of a living being and its interaction with the environment. The methodology for studying the human body is based on an integrative approach that allows us to consider it as a whole, inextricably linked with the external environment and modifying this environment depending on the psychophysiological attitudes, social and cultural characteristics of a person. The study of the age-related aspects of human development is closely intertwined with the natural sciences and humanities.: biology, psychology, philosophy, ethics, pedagogy and sociology and their sections.

The problems of odontogenesis are widely studied in clinical psychophysiology and evidence-based medicine. Developmental physiology and psychophysiology are part of a broader system of knowledge - developmental biology and anthropology.

Like any field of scientific knowledge, age physiology and psychophysiology are aimed at solving fundamental theoretical problems associated with the study of age aspects of development; and tasks of an applied nature, allowing to solve practical issues of training, correction, development of new approaches, etc. The main tasks of age-related psychophysiology are the study of age-related characteristics of the cerebral organization of mental processes and the mechanisms underlying them; study the dynamics of the formation and development of the human psyche, taking into account innate determinants and the influence of society and education.

The subject of study of age-related psychophysiology is the laws of ontogenetic development; processes of brain maturation — patterns of structural maturation of the brain in ontogenesis, heterochrony of development; psychophysiology of a newborn child; psychophysiology of childhood, preschool age, primary school age; psychophysiological characteristics of adolescence- psychophysiological aspects of growing up; psychophysiology of middle, elderly and senile age.

Prenatal psychophysiology is sometimes singled out as an independent discipline as a direction of developmental psychophysiology, which examines intrauterine development, the interaction of physiological and mental processes at the moment of birth and the first months of postnatal life (during the first year of life), taking into account the interaction of the child with his parents.

Theoretical tasks age physiology is the definition of the main periods of development of physiological functions, the study of age-related changes in the functioning of the body, biological maturation, age norms and age periodization. Practical tasks are associated with the development of approaches to the study and correction of development at different stages of human life.

Two scientific disciplines - age-related physiology and age-related psychophysiology, in terms of the main tasks are not only closely intertwined, but also complement each other. Biological maturation implies such a level of morpho functional (subject of study of age physiology), psychological, personal, social (subject of study of age-related psychophysiology) development of an individual, which allows not only to reproduce viable offspring, but also to ensure its full development.

Growth processes are characterized mainly by a quantitative increase in the biomass of an organism due to an increase in the number of cells and their sizes, which leads to the appearance of quantitative differences in the structures and functions of the developing organism. Development implies qualitative transformations due to the morphological and functional specialization of cells, tissues and organs. The growth processes provide for the formation of organs - organogenesis.

Differentiation of cellular elements underlies another process - morphogenesis. The processes of organogenesis and morphogenesis underlie the structural and functional maturation of the organism. Maturation criteria are morphological and functional indicators. The morphological criteria for the maturation of the central nervous system (CNS) include the size of nerve cells, the number and length of their processes, the thickness of the cortex layer, the size of individual brain structures, etc. Functional criteria are indicators of the electrical activity of the brain, determined but electroencephalogram (EEG): features of the frequency-amplitude spectrum of the EEG; the presence of stable rhythmic activity; EEG features in different areas of the brain; localization of brain rhythms; features of the spatio-temporal organization of brain biopotentials, etc. The functional criteria for the maturation of the organism include indicators of age-related dynamics of reflex activity (reflex criteria for maturation), motor activity (locomotor criteria for maturation). According to the concept the system genesis of P.K.Anokhin, developed within the framework of his theory of functional systems, at the heart of individual development is the fundamental principle - the heterochrony of development. System genesis is the selective maturation of functional systems and their individual parts in the process of ontogenesis.

Different maturation periods take place for different components of the functional system (intersystem heterochrony) and different functional systems (intersystem heterochrony). Therefore, each age stage has its own unique psychophysiological structure that determines the psychological capabilities of age. Growth and development can proceed at an accelerated and slower pace.

The process of accelerating the digging and physiological development of children and adolescents in comparison with previous generations in anthropology is called acceleration. Retardation is a slowdown in the rate of development, manifested in one or different spheres of life. Considering the age aspect of development, three interrelated areas should be distinguished - physical, cognitive and social development.

1. Physical development - changing the size, proportions, appearance of the body and the functioning of various body systems; brain development; perceptual and motor abilities; physical health.

2. Cognitive development- development of thought processes and intellectual abilities, including attention, memory, learning and everyday knowledge, problem solving, imagination, creativity and the unique ability of a person to reflect the world in language.

3. Emotional and social development - the development of emotional communication, self-awareness, the ability to manage feelings, knowledge about other people, interpersonal skills, friendship, intimate relationships, moral judgments and moral behavior. These areas do not exist separately, they are interconnected, forming an integrated, holistic formation, in which each area affects others and is itself subject to the influence of others. The biological significance of such a combination is to create conditions for the full growth and development of the organism.

LIST OF REFERENCES:

1. Beknazarov B.O. Plant physiology. T.: "Aloqachi", 2009, 536 pages.
2. K.Sadikov. Physiology of anatomy of young children and hygiene.T.2004
3. S. Solixo'jayeva. Hygiene of children and adolescents. - T.: 1991.
4. K. Sodiqov. Physiology and hygiene of students. - T.: (Teacher, 1992)
5. CT.Z.Qodirov. Human physiology. -T .: Ibn Sino, 1996.
6. M. N. Ismailov Hygiene of children and adolescents. 1994.

7. A.E. Eshonkulov.Sh.M.Ahmedov.Human anatomy and hygiene. 2010.
8. Akhmedov et al. Anatomy physiology VA pathology. Economics and finance. 2013
9. ."THE ROLE OF ASEPTICS AND ANTSEPTICS IN DENTISTRY" International Journal of Researsh. Impact factor: 5.7. Volume IX, Issue YII, India. July/2020. Page 250 Djalgasbaeva M
10. Бекимбетова Айнагул Амангелдиевна Путь науки Международный научный журнал №4 (74), 2020 Профессиональная компетентность педагога дошкольного образовательного учреждение http://scienceway.ru
11. Бекимбетова Айнагул Амангелдиевна TEST Engineering & Menegement. May-June 2020 Preschool Education And Modern Approach Towards https://www.testmagzine.biz/index.php/testmagzine/article/view/13275