
The Brain Work Process: A Multidisciplinary Analysis of Neuroplasticity, Cognition, and Human Thought

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Abstract

Objective: This study aims to provide a comprehensive understanding of how the human brain functions in cognitive processes such as thinking, reasoning, and decision-making. **Theoretical framework:** The research is grounded in a theoretical framework that integrates neuroscience and cognitive psychology, focusing on brain structure, neural networks, and the dynamics of neuroplasticity. **Literature review:** The literature review explores the interconnectivity between various parts of the brain, such as the cerebrum, cerebellum, brainstem, hippocampus, and amygdala, and their roles in memory, emotion, perception, and high-order cognitive tasks. **Methods:** Employing a qualitative method through library research, this study synthesizes data from academic books, journal articles, dissertations, and digital resources. A descriptive-analytical approach was used to organize and interpret findings across themes, including memory processing, brain development, thinking stages, and influencing factors such as emotion, nutrition, and environmental conditions. **Results:** The findings reveal that brain function and cognitive thinking are deeply interconnected. The brain processes information through electrical and chemical signals, stores it in short- or long-term memory, and enables the execution of thought processes through structured phases: perception, attention, understanding, reasoning, decision-making, and evaluation. Neuroplasticity plays a critical role in allowing the brain to adapt and learn continuously throughout life. **Implications:** The study implies that optimizing brain health directly enhances thinking capabilities, which is essential for personal growth, learning, adaptability, and innovation. Practical implications span across education, healthcare, and mental performance strategies. This research contributes to bridging the scientific gap between biological brain function and human thought processes, offering valuable insights for designing brain-friendly environments, promoting lifelong learning, and fostering mental well-being in the digital age. **Novelty:** The novelty of this study lies in its multidisciplinary integration of neuroanatomy, behavioral science, and cognitive analysis, presented in a holistic and applicable manner.

Keywords: brain function, cognitive process, neuroplasticity, thinking stages, mental performance.

INTRODUCTION

Research on the human brain has come a long way over the past few decades, but it still leaves a significant number of research gaps, particularly in understanding the brain's work process in a holistic and integrative way. Although neuroscience, cognitive psychology, and neuroimaging technologies have provided important insights into neuronal activity, perception, memory, and decision-making, many complex aspects of the brain's work processes remain a scientific puzzle. Some of these are how the brain dynamically integrates various sensory information, how neuroplasticity mechanisms work in the context of long-term learning, as well as how brain networks interact in both conscious and subconscious states [1].

One of the striking research gaps is the limitation of inter-disciplinary integration in comprehensively mapping brain function. For example, neuroscience approaches often focus on biological and structural aspects, while cognitive psychology emphasizes more on behavioral and mental aspects. The lack of a holistic approach leads to a fragmented understanding. In addition, research on the human brain is severely limited by ethics, real-time data access, and the complexity of the brain's individuality [2].

The brain, which serves as the control center of the entire central nervous system, regulates various important functions that support daily life. It covers basic physiological functions such as breathing and heart rate, to more complex activities such as thinking, learning, remembering, imagining, and creating. The brain is a vital organ that allows us to interact with the world around us and do everything, from the simplest to the most complex [3].

With the advancement of science, especially in the fields of neuroscience and cognitive psychology, our understanding of how the brain functions and how thought processes take place is increasing. Discoveries continue to provide insights into the complexity of the brain and how its various parts work together to generate awareness, emotions, and actions [4].

The theme of "brain work process" is very important to be explored more deeply because it has wide implications for various areas of human life. In the world of education, understanding how the brain learns can help design more effective and personalized teaching methods. In the health field, in-depth knowledge of the brain's work processes can improve diagnosis and therapy for neurological and mental disorders such as Alzheimer's, depression, or autism. In the world of technology, brain research is the basis for the development of artificial intelligence (AI) that increasingly mimics the way the human cognitive system works [5].

In addition, the importance of this research is also increasingly relevant in the digital era, which requires humans to multitask and adapt to abundant information. How the brain manages focus, stress, and adaptation to changing digital environments is still not fully understood. By researching the brain's work processes, we can create mental strategies and a healthier and more productive work environment [6]. Therefore, closing the research gap on the brain's work process is not only relevant from an academic perspective but also crucial for the sustainable development of science, education, health, and technology. A collaborative and multidisciplinary approach is indispensable to understanding the complexity of the brain in its entirety and bringing real impact to modern human life. This in-depth understanding of how the brain works and this thought process helps us to maximize our potential, improve our learning abilities, and increase productivity. Therefore, this paper will discuss in detail and thoroughly how the human brain works as well as the thought processes that occur in daily life, from the basic structure to the intricate mechanisms involved in it [7].

Implications and Novelty of Research on Brain Work Processes. Research on the brain's work process has very wide implications, both in the scientific, social, and technological realms. A key implication in the field of science is the occurrence of a paradigm shift from a

linear approach to a more systemic and integrative understanding of how the brain works. By broadening insights into synaptic processes, neural networks, and patterns of brain activity under a variety of conditions, scientists can devise new frameworks to explain the interactions between biological structures and cognitive function. This is crucial in supporting the advancement of neuroscience, cognitive psychology, and neuroscience-based education [8].

In the field of health, a deeper understanding of the brain's work processes has direct implications for improving the diagnosis and treatment of various neurological and psychological disorders. For example, disorders such as Alzheimer's, schizophrenia, anxiety disorders, or ADHD can be treated more effectively if the brain mechanisms underlying these symptoms can be mapped more precisely. Neuromodulation-based therapy, neurofeedback training, and more specific drug development are highly dependent on the results of this study [9].

Socially, this research also contributes to improving the quality of life. For example, in the world of education, an understanding of how the brain processes information, stores memories, and solves problems can be used to design curricula and learning methods that are more suited to students' cognitive needs. In the world of work, it can be applied to design a work environment that is brain-friendly, reduces stress, and increases productivity [10].

The novelty of this research lies in its approach that tries to combine mapping brain activity with real-time behavioral and social contexts using the latest technologies such as fMRI, EEG, and machine learning. This research not only stops at the identification of active brain areas, but also analyzes the dynamics of relationships between brain regions as individuals perform complex activities. Thus, this research paves the way to understanding the brain as an adaptive system that works contextually, flexibly, and not static. This is what distinguishes it from previous studies that tend to be fragmented and focus on specific aspects separately [11].

Based on the background that has been described, this paper aims to answer some fundamental questions related to the work process of the brain and its relation to human thinking ability. The main problems to be studied include five important aspects. First, how the human brain works in general and the main parts involved in its function. Second, how the thought process takes place in detail and the stages that make it up [12]. Third, the relationship between the brain's work process and the thinking process in daily life will be discussed, including how the two affect each other. Fourth, this paper will review the factors that affect the effectiveness of brain work and thinking ability, both from biological, psychological, and environmental aspects. Finally, various strategic efforts to improve and maintain brain health and thought processes will be examined to support productivity and quality of human life.

LITERATURE REVIEW

Research on the working processes of the brain continues to develop in various disciplines, especially neuroscience and cognitive psychology. Although much has been discovered about brain structure and neuronal activity, there are still many complex aspects of brain work that are not fully understood. The human brain is made up of important parts that work synergistically together. The brain regulates high-level cognitive function, the cerebellum regulates the coordination of movements, the brainstem controls vital functions, while the hippocampus and amygdala are involved in memory and emotions [13].

The brain's working mechanism involves a series of processes from the reception of stimuli by the five senses, data processing, to response retrieval. The information received will be processed and stored in the form of short-term or long-term memory, depending on the focus, emotion, and repetition factors [14]. The brain's ability to adapt to new experiences is called neuroplasticity, which allows the brain to continue to develop and learn throughout life. As we age, the brain undergoes significant changes. In childhood, synapse growth

occurs very quickly and is influenced by environmental stimulation. As adults, the myelination process increases, accelerating communication between neurons. Although the structure of the brain is relatively stable in adulthood, neuroplasticity still allows the process of learning and self-adjustment to continue [15].

The thought process is a mental activity that involves perception, attention, understanding, reasoning, decision-making, and evaluation. Each stage of thinking is governed by different parts of the brain, especially the prefrontal cortex, which plays a role in decision-making and emotional control. Factors that support the thinking process include good nutrition, adequate sleep, a positive environment, and cognitive exercise. On the other hand, stress, lack of sleep, emotional disturbances, and consumption of harmful substances can interfere with brain function. The relationship between brain work and thinking is very close and reciprocal. A healthy brain allows optimal thinking, while thinking activities also stimulate brain development. A continuous learning process will strengthen neuronal connections and improve thinking skills [16].

The literature shows that to understand the work of the brain and the thought process in its entirety, a multidisciplinary approach is needed. This knowledge has far-reaching implications, not only in education and health, but also in the development of technology and the overall quality of human life.

Table 1. Literature Review: Brain Function and Thinking Process

No.	Title of the Article	Focus of Study	Key Findings	Relevance to Brain Function & Thinking
1	Brain Plasticity and Cognitive Development	Neuroplasticity and learning	The brain adapts through experience and forms new neural connections	Highlights the brain's ability to learn and adapt over time
2	The Role of the Prefrontal Cortex in Decision-Making	Executive function and cognition	The prefrontal cortex regulates planning, impulse control, and reasoning	Central in analyzing thinking stages and cognitive control
3	Memory Systems in the Human Brain	Short- and long-term memory processes	The hippocampus is key in converting experiences into long-term memory	Supports understanding of how memory affects thought
4	Neural Mechanisms of Attention and Focus	Selective attention and brain pathways	Attention involves dynamic interactions between brain networks	Explains how the brain filters and processes important stimuli
5	Emotional Influence on Thought and Action	Role of emotion in cognitive behavior	The amygdala shapes decisions through emotional memory and response	Demonstrates the link between emotion and rational thinking
6	Cognitive Load and Mental Performance	Brain workload and multitasking	High cognitive load reduces efficiency and focus	Useful for designing effective learning and work environments
7	Enhancing Cognitive Function through Brain Training	Cognitive enhancement techniques	Brain training improves memory, problem-solving, and attention	Shows potential for improving brain health and thinking skills

METHODOLOGY

This research uses a qualitative approach with the type of library research as the main method. This approach was chosen to delve deeply into various theories, concepts, and scientific findings related to the working processes of the human brain and thinking from the perspective of neuroscience and cognitive psychology [17]. With a qualitative approach, the researcher seeks to understand the phenomenon in a comprehensive, analytical, and interpretive manner through theoretical and conceptual data sources. The main data sources in this study come from scientific books, national and international journal articles, seminar proceedings, dissertations, and reliable digital sources relevant to the topic. All data used were selected purposively, namely based on the relevance, depth of discussion, and novelty of the information possessed in explaining the structure and function of the brain, thinking mechanisms, and their relevance in human life [18].

The data collection steps began with the identification of issues and problems related to brain work, followed by a search of the literature that discussed the theme. The data is then classified into several main themes such as brain structure, function of brain parts, thought processes, neuroplasticity, memory, and factors that affect the effectiveness of thinking [19]. This process is carried out by reading critically, noting important points, and compiling systematic summaries from various sources. Furthermore, the data analysis technique was carried out with a descriptive-analytical approach. The researcher analyzed the content of the literature in depth, then presented the findings in the form of a scientific narrative that describes the relationship between brain structure and cognitive function, as well as the interaction between brain parts in the thought process. The analysis also includes comparisons between sources to strengthen the interpretation and validity of the data [20].

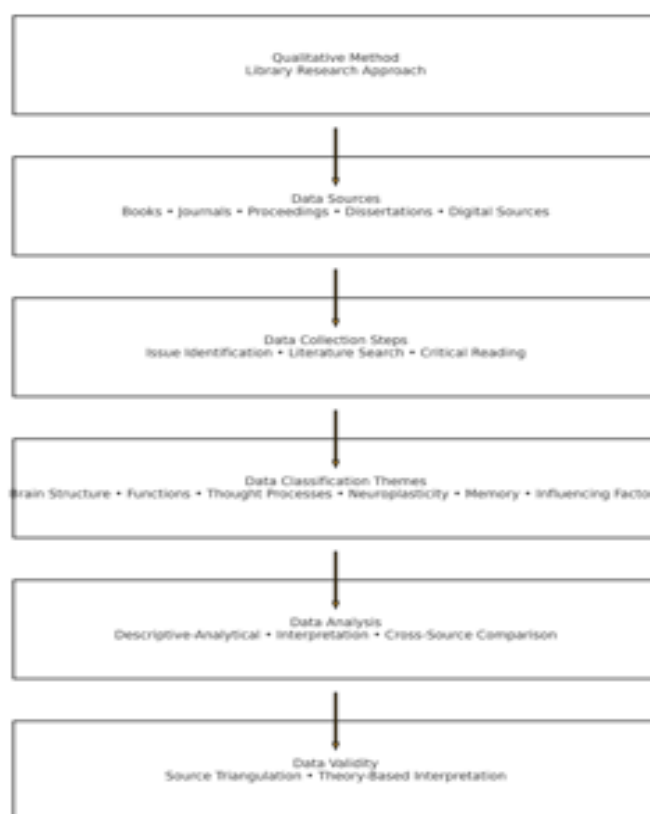


Figure 1. Research Methodology Framework

The validity of the data is maintained through source triangulation, which involves comparing information from various references to ensure consistency and validity of the

content [21]. In addition, researchers also avoid interpretive bias by referring to the basic theories of neuroscience and psychology that have been recognized. With this method, it is hoped that the research will be able to provide a complete and comprehensive picture of how the brain works and human thought processes. This literature approach also makes it possible to bridge scientific findings across disciplines and present them in the form of conceptual studies that are easy to understand and useful for the development of education, health, and the improvement of quality of life in general [22].

RESULTS AND DISCUSSION

Human Brain Working Process

The Structure of The Human Brain and Its Functions

The human brain is a very complex organ and consists of several main parts that each have a specific role but interact dynamically and synergistically with each other.

1. The largest part of the brain is the cerebral cortex, which makes up about 85% of the total volume of the brain and is divided into two opposite but complementary hemispheres. The left hemisphere is usually superior in terms of logic, analysis, language use, and numbers. On the other hand, the right hemisphere is superior in creativity, art, intuition, spatial perception, as well as the processing of emotions and imagination [23].

Each hemisphere has an outer layer known as the cerebral cortex, which functions in high-level cognitive activities such as thinking, remembering, understanding, controlling movement, and regulating emotions. Within them are various regions that regulate certain functions, such as Broca's and Wernicke's areas related to language, as well as motor and sensory areas [24].

2. The cerebellum is located in the back and lower part of the brain, and has a role in coordinating body movements, maintaining balance, and regulating posture and smooth movement. Cerebro also processes sensory information from the body to produce smooth and accurate movements [25].
3. The brainstem regulates very important basic functions such as breathing, heart rate, blood pressure, sleep, and consciousness levels. The brainstem also serves as the main pathway for the transmission of signals between the brain and the spinal cord [26].
4. The hippocampus has an important role in long-term memory creation and navigation in space. The hippocampus enables us to remember events and knowledge gained from the surrounding environment [27].
5. The amygdala is involved in the processing of emotions, especially fear and aggression. This part also influences decisions related to emotions [28].

All of these parts of the brain do not function in isolation, but collaborate in a complex way and depend on each other to carry out important tasks in human life.

Brain Mechanism of Work

Brain function processes involve a network of nerve cells that are interconnected and interact electrically and chemically at the synapse. This network allows for the emergence of a very complex set of processes, which include:

1. **Stimulus Reception:** The brain receives information from the environment through senses such as eyes, ears, skin, and smell. This information is converted into electrical signals that are sent to the brain through nerve fibers.

2. **Data Processing:** Nerve cells in the brain send electrical signals through axons and dendrites to process received information. In this phase, the brain analyzes, interprets, and incorporates information from various sources.
3. **Encoding and Storage:** Information that is considered important will be further processed and stored in short-term as well as long-term memory. This process involves a synapse change known as neuroplasticity, which allows the brain to learn and adjust to new experiences.
4. **Pick-up and Response:** The brain sends response signals to the body through motor nerve cells to respond to stimuli, such as moving, speaking, or performing other actions as needed [\[29\]](#).

Information Transfer and Storage Process

Information storage is of two main types:

1. **Short-Term Memory:** stores data for a short time, which can range from a few seconds to minutes, and has capacity limitations. For example, this can be seen when remembering a phone number that has just been heard.
2. **Long-Term Memory:** stores information for a very long time, even up to years, with a very wide capacity, and can be accessed at any time when needed [\[30\]](#).

The process of switching memory from short-term to long-term is influenced by various factors such as focus, feeling, and repetition. This process involves the hippocampus and other parts of the limbic system.

The Role of Neuroplasticity in Brain Work

Neuroplasticity refers to the brain's ability to adapt and change throughout a person's life. This ability allows the brain to heal itself after an injury as well as to improve learning and memory skills.

With increased experience and knowledge, the connections between neurons will undergo modifications that strengthen the communication pathways between these cells. This network will continue to grow and adapt to the needs and challenges faced by individuals [\[31\]](#).

For example, when a person learns a new language or a new skill, the number and strength of adaptive synapses increase, making them better and more efficient.

The Process of Brain Development from Childhood to Adulthood

The development of the human brain begins in the womb and occurs gradually until a person reaches adulthood. In childhood and adolescence, the process of nerve cell formation and synapses occurs very quickly [\[32\]](#).

In this phase, the brain is highly responsive to external stimuli, so a positive experience can improve the quality of brain growth to the maximum. However, if the environment is not supportive, such as a lack of stimulation or the presence of traumatic experiences, brain development can be disrupted and impact various aspects of life in the future.

As we age, myelination occurs, which is the formation of myelin sheaths that surround neuronal axons that aiming to improve the efficiency of electrical impulse transmission. Myelin plays a role in accelerating communication between neurons, so that brain performance becomes more optimal and stable [\[33\]](#).

Upon reaching adulthood, brain function has stabilized, but the process of neuroplasticity continues, allowing for adjustment as well as lifelong learning. Adult brains can change their structure and function based on experience and needs.

Human Thought Process

Definition and Importance of Thought Process

Thinking is a very crucial and fundamental mental activity for humans. This activity allows us to understand the surrounding environment, do logical reasoning, plan strategies, solve problems, and create innovations [34].

Without a thought process, humans will not be able to adapt to changes that occur in the environment, cannot learn from the experiences they face, and will not be able to develop their potential optimally. Effective thinking skills will determine a person's success in various areas of life, whether related to education, career, or social interaction.

In addition, the thought process also plays an important role in the formation of a person's character and personality. Through this process, individuals can evaluate, make decisions, and behave wisely based on the moral and ethical values that exist in society.

Stages of the Thinking Process

The thought process involves several main stages that are interconnected and complement each other [35]:

1. **Perception:** This is the first step in thinking, where the individual recognizes and interprets stimuli from their surroundings, be they visual, sound, or other sensory stimuli. Perception serves as the foundation for starting the thinking process because, without proper perception, the next steps will be hampered.
2. **Attention:** Focus on specific stimuli that are considered important and relevant to a specific purpose. Mindfulness helps individuals to direct their mental energy to things that are considered important, both consciously and unconsciously.
3. **Understanding:** associating new stimuli with existing experiences and knowledge, to gain complete and comprehensive meaning. This process involves the interpretation and analysis of the data obtained.
4. **Reasoning:** constructing logical relationships and analyzing the data that has been obtained. Reasoning can be deductive, from generalization to specification, or inductive, from specific data to generalization.
5. **Decision Making:** choosing the best option from a variety of options based on the analysis and considerations made. This stage is crucial to determining the next step.
6. **Evaluation:** assessing the results of the thought process and the decision that has been taken. If the results are unsatisfactory or not as expected, this phase becomes the basis for making improvements and corrections.

The Role of the Brain in Thinking

The most active part of the brain when thinking is the prefrontal cortex, which functions to make decisions, plan, control impulses, and regulate emotions. In addition, the hippocampus has a role in memory processing and pattern recognition, while the amygdala affects emotional aspects that can strengthen or hinder thought processes. The parietal cortex and occipital cortex are also involved in visual and spatial perception, while the temporal cortex functions in sound and language processing [36].

Supporting and Inhibiting Thinking Factors

Factors that help the thinking process include [37]:

1. A supportive atmosphere and free from outside distractions

2. Adequate rest and good sleep, which favors memory consolidation and refreshment of the mind
3. Complete and balanced nutritional intake, including omega-3s, vitamins, and minerals
4. Regular mental exercises such as reading, writing, solving puzzles, and playing strategy games

While the inhibiting factors consist of [\[38\]](#):

1. Excessive stress and prolonged anxiety
2. Lack of sleep, fatigue, and excessive mental load
3. Consumption of alcohol, drugs, and other addictive substances that damage the brain
4. Emotional disorders such as depression, anxiety, and psychological trauma
5. Unsupportive, stressful, and disruptive environments

Techniques and Strategies to Improve Thinking Skills

Various methods and approaches can be applied to improve the quality and number of human thought processes, including [\[39\]](#):

1. Critical and analytical thinking: getting used to constantly questioning, comparing, and assessing every piece of information received.
2. Creativity and innovation: hone your imagination and dare to try new things through various activities such as art, writing, and experimentation.
3. Mind mapping and brainstorming: visual methods and group discussions to develop new ideas and expand perspectives.
4. Focus and concentration exercises: through meditation, mindfulness exercises, and avoiding distractions while studying or working.
5. Actively read and learn: continuously improve insights, deepen understanding, and discover new knowledge from a variety of sources.
6. Leverage educational technology: such as interactive and innovative learning applications, simulations, and online platforms.

The Relationship Between Brain Work and Thinking

The brain's work processes and ways of thinking are very strongly intertwined. As a center for processing information, the brain enables thinking can take place efficiently and effectively. On the other hand, the ability to think well will utilize brain functions to process, store, and remember information to the maximum [\[40\]](#).

The balance between these two processes is very important so that humans can face various challenges in life, both in intellectual, emotional, and social aspects. When the brain functions optimally and thinks healthily, individuals will be able to make informed decisions, innovate, and adapt to changes in the surrounding environment [\[41\]](#).

In addition, lifelong experiences and learning will enrich the neural network in the brain, so that the thinking process will become faster, sharper, and more creative. In other words, a continuous learning process will create a brain that is always active and dynamic. Therefore, improving brain health and thinking ability must be done simultaneously through various ways, both from the biological, psychological, and social sides. Maintaining this balance will have a major impact on improving the quality of life and overall human productivity.

Table 2. Summary of Research Results and Discussion

Theme	Summary of Key Findings
Brain Structure and Functions	The brain consists of interconnected parts—cerebrum, cerebellum, brainstem, hippocampus, and amygdala—which work synergistically. The cerebrum dominates higher cognition, the cerebellum manages coordination, and the hippocampus and amygdala regulate memory and emotion.
Brain Work Mechanism	Cognitive processes occur through electrical–chemical signaling, beginning with sensory input, continuing to neural processing, and ending in encoding and action. Neuroplasticity enables learning, memory strengthening, and adaptation throughout life.
Memory Processes	Memory operates through short-term and long-term systems. The shift from short-term to long-term memory depends on focus, emotion, and repetition, with the hippocampus central to consolidation.
Thinking Stages	Thinking involves sequential phases: perception, attention, understanding, reasoning, decision-making, and evaluation. The prefrontal cortex is crucial for executive control, while other areas support perception, language, and emotion.
Influencing Factors	Nutrition, sleep, environment, emotional stability, and cognitive training enhance thinking. Stress, fatigue, substance misuse, and negative emotions hinder brain performance.
Interrelation of Brain and Thought	Brain function and thinking are mutually reinforcing. Optimal neural health enhances reasoning and creativity, while active thinking strengthens synaptic networks and cognitive capacity.

In-Depth Analysis

The human brain is a very complex and dynamic system, where various parts of the brain work in an integrated manner to support physical, cognitive, and emotional activities. Analysis of how the brain works shows that functions such as thinking, remembering, feeling, and acting are inseparable from the coordination between brain structures such as the cerebral cortex, cerebellum, brainstem, hippocampus, and amygdala. Each part has a specific role, but overall, they work in a system that is interconnected through neural networks and electrical and chemical signals [42].

The cerebral cortex, specifically the prefrontal part, plays a major role in high-level thinking processes such as analysis, planning, and decision-making. This suggests that human thinking ability is largely determined by the work efficiency of these parts of the brain, which can be influenced by internal (such as neurological health, nutrition, emotions) and external (environment, education, stress) factors. Neuroplasticity is one of the key concepts in the analysis of brain work. The brain can adapt and change with experience, which allows the learning process to continue throughout life. This means that the quality of human thinking can be improved through practice, new experiences, and the development of good cognitive habits. The strengthening of synapses, the formation of new neural pathways, and the reorganization of brain structures allow a person to become sharper in thinking and faster in making decisions.

The analysis also shows that the thinking process consists of several stages, namely perception, attention, understanding, reasoning, decision-making, and evaluation. Each of these stages requires cross-sectional cooperation and involves complex biological and psychological processes. For example, good attention allows the brain to focus cognitive energy optimally, while stable emotions can reinforce or inhibit decision-making.

In addition, inhibitory factors such as chronic stress, lack of sleep, or consumption of harmful substances have been shown to impair brain function and decrease thinking ability. Therefore, maintaining brain health is an important condition for maintaining cognitive performance. Overall, this analysis confirms that brain work and thought processes are two inseparable entities. Both reinforce each other in producing human awareness, intelligence, and behavior. Understanding these dynamics is very important to optimize one's potential, both in education, work, and daily life.

CONCLUSION

The brain's work function and thinking activities are two aspects that are closely related to each other and play a vital role in human life. The brain, as the control center of the nervous system, works in a complex way through its main parts, such as the cerebrum, cerebellum, brainstem, hippocampus, and amygdala. Each of these parts not only performs its functions independently, but is also integrated in receiving, processing, storing information, and responding to the environment adaptively. In this process, thinking activities arise as a result of brain mechanisms that involve the stages of perception, understanding, reasoning, decision-making, and evaluation. Each of these stages is not only mechanical but also influenced by internal factors such as emotions, body health, and lifestyle, as well as external factors such as the social environment, education, and psychological stress. Sharp, reflective, and creative thinking skills can only be achieved if brain function is in optimal condition. Therefore, maintaining and developing brain health is a must for anyone who wants to achieve productivity and a better quality of life. A healthy brain supports strong cognitive function, allowing a person to learn faster, adapt to change, and create innovative solutions to life's challenges. Seeing the importance of the role of the brain and thinking in life success, various strategic efforts are needed to improve and maintain its health. Some suggestions can be used as practical guidelines. First, implement a healthy lifestyle through the consumption of nutritious food and regular exercise. Second, actively train the brain with intellectual activities such as reading, learning new things, and playing strategy games. Third, manage stress and emotions through meditation, relaxation, and the development of emotional intelligence. Fourth, avoid negative habits such as alcohol and drug use that can permanently damage brain function. Finally, it is important to raise public awareness through education about the importance of maintaining brain health and thinking as the key to a more meaningful and successful life. By maintaining a balance between brain function and thought processes, humans can develop their potential to the fullest, behave more wisely, and contribute positively to society and the world.

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Author Contribution

All authors jointly contributed to the conception, design, and refinement of the study. The first author led the theoretical exploration, while the second author supported analytical synthesis and manuscript structuring. Both authors collaborated in reviewing literature, interpreting findings, and ensuring the academic coherence of the final paper. Each author approved the manuscript's final version.

Conflicts of Interest

The authors declare no conflicts of interest related to this research, authorship, or publication. The study was conducted independently, without financial or institutional

pressures influencing its outcomes. All interpretations and conclusions presented herein reflect the authors' scholarly judgment and objective analysis of the brain work process.

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