

Why do teens act impulsively? A psychoneuropsychiatry review of decision making

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Article Info	ABSTRACT
<p>Article history: Received May 13, 2026 Revised June 02, 2026 Accepted June 23, 2026</p> <hr/> <p>Corresponding Author: Firza Padila Salsabila Al-Khatib Faculty of Medicine and Health Sciences, University of Mataram, Indonesia Email: firzapadila02@gmail.com</p>	<p>Adolescence is a crucial transitional phase characterized by the "Adolescent Health Paradox," a condition where adolescents are at their peak physical vitality yet experience increased morbidity and mortality rates due to high-risk behaviors. From a psychoneuropsychiatric perspective, this is caused by an imbalance in brain maturation between the limbic system and the prefrontal cortex. This literature review aims to provide a comprehensive understanding of the dynamics of adolescent brain development and its relationship with impulsive behavior and decision-making mechanisms. This study utilizes a literature review method by examining scientific articles from the Google Scholar, PubMed, and NCBI databases, as well as references from official institutions such as the WHO and the Ministry of Health of the Republic of Indonesia, primarily focusing on publications from the last ten years. The review indicates that adolescent impulsivity is a multidimensional construct involving "impulsive action" and "impulsive choice". Based on the Dual Systems Model, the limbic system (reward and emotion) develops more rapidly than the prefrontal cortex (executive control), leading adolescents to be more reactive and struggle with delaying gratification. Internal factors such as emotion regulation and resilience, as well as external factors like parental attachment and peer influence, significantly affect impulsivity levels. The clinical implications of this condition include an increased risk of mental disorders such as ADHD, Substance Use Disorder, and self-harm. Impulsive behavior in adolescents is a logical consequence of incomplete neurodevelopmental processes. Intensive guidance from parents and a supportive school environment are necessary to help adolescents develop self-control and healthy decision-making skills.</p> <p>Keywords: Adolescents, Impulsivity, Neurodevelopment, Decision-making, Psychoneuropsychiatry</p> <p>This article is licensed under a Creative Commons Attribution 4.0 International License.</p> <div style="text-align: center;"></div>

1. INTRODUCTION

Adolescence is defined as the age group between 10 and 18 years old. Adolescence is a crucial transitional developmental window (Ministry of Health of the Republic of Indonesia, 2018). This period is characterized by neurobiological and physical maturation, leading to increased psychological, cognitive, emotional awareness, and social interaction. Neuroimaging-based studies have indicated that the maturation process of brain regions does not occur uniformly. This imbalance is explained in the Dual Systems Model, which states that adolescents tend to exhibit reckless behavior even though they are cognitively able to understand the consequences. This phenomenon contributes to the Adolescent Health Paradox, a condition in which adolescents are biologically at the peak of vitality, characterized by

optimal organ function, immune system, and physical endurance, but epidemiologically, there is an increase in morbidity and mortality rates (Sadock et al., 2017).

This paradox is not caused by a failure of internal biological systems, but rather by behavioral factors and regulatory dysfunction. Death and morbidity in adolescents are largely preventable, stemming from high-risk behaviors such as traffic accidents, substance abuse, violence, mental health issues, and suicide. Psychoneuropsychiatrically, this phenomenon is explained by an imbalance in brain maturation. The limbic system, which drives sensation-seeking and reward-seeking, develops more rapidly than the prefrontal cortex, which functions as executive control and risk assessment. Although adolescents have resilient bodies, their cognitive navigation systems are vulnerable to impulsivity, making this healthy period one of the most dangerous phases of life (Sadock et al., 2017).

Provides a comprehensive understanding of the psychoneuropsychiatric dynamics of adolescents, particularly the relationship between brain development and impulsive behavior and decision-making.

1. Explain the definition, characteristics, and psychological development of adolescents.
2. To describe draft impulsivity in psychoneuropsychiatric perspective.
3. Examining adolescent brain development (neurodevelopment) and its relationship to behavior.
4. Explain mechanism neurological Which involved indecision making in adolescents.
5. Identifying factors Which influence behaviorimpulsive, both internal and external.
6. Discusses the clinical and psychiatric implications of adolescent impulsive behavior.

The references in this study were obtained through a search of scientific articles from various databases, namely Google Scholar, PubMed, and NCBI. The selected articles were publications relevant to the topic of impulsivity in adolescents from a psychoneuropsychiatric perspective, using the following four keywords: impulsivity, adolescents, adolescent impulsivity, and psychoneuropsychiatry. References were also obtained from official institutions such as the World Health Organization (WHO) and the Ministry of Health of the Republic of Indonesia that discuss adolescent health. Based on the search results, a number of articles and books were obtained, which were then further selected according to the established inclusion and exclusion criteria. The inclusion criteria included articles that were relevant to the research topic, available in full text form, and had good methodological quality, while the exclusion criteria.

This review included articles that were irrelevant, duplicated, or had limited data. In addition to journal articles, this study also utilized a literature synthesis entitled "Adolescent Neurodevelopment and Implications for the Criminal Justice System" (2023) as a supplementary reference to strengthen its theoretical foundation. In the selection process, sources from the last 10 years were prioritized, while still considering their relevance and contribution to the literature review. All selected sources were analyzed and synthesized to gain a comprehensive understanding of impulsivity in adolescents.

2. LITERATURE REVIEW

Definition and Characteristics of Adolescents

Adolescence is a transitional developmental phase between childhood and adulthood, typically occurring between the ages of 10 and 19 years. This period is crucial in establishing the foundation for lifelong health (WHO, 2025). Adolescents experience significant changes, encompassing biological, psychological, and social aspects, that impact their overall development. Biologically, adolescence is characterized by hormonal changes and brain development (WHO Health Organization, 2020). Psychologically, adolescents experience cognitive and emotional development (WHO, 2020). Furthermore, adolescents begin to learn how to manage their emotions and build more complex interpersonal relationships (WHO, 2020).

Adolescence is marked by changes in roles, responsibilities, and relationships with the environment. These changes are influenced by the different social values and norms of each culture (WHO Health Organization, 2020). Adolescents also begin to form behavioral patterns that can have both short-and long-term impacts. Adolescence is a transitional phase, making risky behavior more likely to emerge because the brain and self-control are still developing. Although this period is often considered relatively healthy, adolescents remain vulnerable to various health problems (WHO, 2025).

The Concept of Impulsivity in Psychoneuropsychiatry

Impulsivity is a psychological construct that describes an individual's tendency to act quickly without carefully considering the potential consequences (Mitchell & Potenza, 2014). Scientifically, impulsivity is understood as a multidimensional concept, meaning that it cannot be explained through a single behavioral aspect. This suggests that impulsivity encompasses various manifestations depending on cognitive and control mechanisms.

self involved in a situation (Fraser Mustard Institute for Human Development, 2023).

One of the main dimensions of impulsivity is impulsive action, which refers to an individual's inability to inhibit inappropriate or premature responses. Individuals with high levels of impulsive action tend to exhibit spontaneous, reflexive, and poorly controlled behaviors, such as interrupting conversations, reacting emotionally without consideration, or acting prematurely. This dimension is closely related to the inhibitory control function in the cognitive system, namely, the ability to restrain or regulate behavioral responses (Cho et al., 2018).

Another dimension is impulsive choice, which is related to the decision-making process. Individuals who exhibit impulsive choices tend to choose smaller, immediately available benefits over larger, delayed benefits. This phenomenon reflects a low ability to delay gratification and a tendency to ignore the long-term consequences. Thus, impulsive action and impulsive choice are two distinct yet complementary aspects in explaining the complexity of impulsivity in human behavior (Cho et al., 2018).

In addition to examining its underlying mechanisms, impulsivity can also be understood based on its

manifestations, namely cognitive, emotional, and behavioral aspects. This approach provides a more concrete picture of how impulsivity emerges in daily life.

Cognitive impulsivity is an individual's tendency to process information quickly without adequate consideration, as well as impaired planning and attentional control. Individuals with this characteristic tend to exhibit hasty, less reflective thinking patterns and difficulty evaluating the consequences of their actions (Fraser Mustard Institute for Human Development, 2023).

Emotional impulsivity refers to an individual's tendency to act spontaneously in response to intense emotional states, whether positive or negative. In this state, behavior is often driven by strong affective drives, thus reducing the role of rational considerations in decision-making. Individuals with high emotional impulsivity generally have difficulty managing and controlling their emotions, particularly when faced with situations that cause significant emotional stress or arousal (Carvalho et al., 2023).

Behavioral impulsivity is an individual's tendency to act immediately without adequate control or inhibition of the resulting response. This dimension reflects a weak ability to inhibit behavior, so individuals tend to act spontaneously without considering norms or potential consequences. In everyday life, behavioral impulsivity is often seen in the form of hasty, poorly planned actions that potentially pose risks to oneself and the environment (Carvalho et al., 2023).

Overall, impulsivity is a complex construct with multiple, interrelated dimensions. The approach that distinguishes between impulsive actions and impulsive choices emphasizes the psychological mechanisms underlying behavior, while cognitive, emotional, and behavioral classifications describe the concrete forms of impulsivity in everyday life. Thus, combining these two approaches provides a more comprehensive understanding of impulsivity as a psychological phenomenon involving the interaction between mental processes and behavioral expression.

Adolescent Brain Development (Neurodevelopment)

Neurodevelopment during adolescence is a complex process involving dynamic changes in various brain systems at varying rates. During this phase, brain structure and function are reorganized through synaptic pruning and increased myelination, which play a role in increasing the efficiency of nerve transmission. Basic cognitive abilities, such as logical reasoning, begin to develop and become relatively mature by mid-adolescence, but cognitive control systems are not yet fully developed. This is due to the slower maturation of the prefrontal cortex (PFC). The prefrontal cortex plays a role in executive functions such as planning, decision-making, and impulse control. This cortex is one of the last parts of the brain to mature, even as late as the third decade of life (Fraser Mustard Institute for Human Development, 2023). In addition to the prefrontal cortex, the limbic system undergoes changes and develops during adolescence. This system develops earlier than the prefrontal cortex and plays a role in emotional processing, motivation, and reward response. Its activity also increases significantly during this period. Structures such as the amygdala and ventral striatum show increased sensitivity to emotional stimuli and to rewards. This causes adolescents to be more responsive to stimuli. As a result, adolescents tend to seek experiences that provide pleasure or sensation. This imbalance between the more rapidly developing limbic system and the more slowly developing prefrontal cortex leads to the dominance of the socio-emotional system over the cognitive control system in the brain. As a result, adolescents often exhibit more impulsive behavior, are more reactive to emotions, and tend to make decisions based on momentary impulses without considering long-term consequences (Fraser Mustard Institute for Human Development, 2023).

This phenomenon is explained in the dual systems model, or maturational imbalance model. This model states that typical adolescent behaviors, such as increased risk-taking and sensation-seeking, result from a developmental imbalance between the reward and self-control systems. In this model, reward system activity increases sharply during adolescence and peaks in the late adolescence. Self-regulation skills develop gradually, reaching full maturity only in young adulthood. Thus, adolescent neurodevelopment is characterized by a functional imbalance between reward and self-control systems. The drive to seek rewards is strong, whereas the ability to control them is not yet optimal. This condition underlies adolescents' tendency to act impulsively, emotionally, and take greater risks in decision-making (Fraser Mustard Institute for Human Development, 2023).

Brain development in adolescents is also marked by increased brain plasticity, that is, the brain's ability to change and adapt to experience. Adolescence is a highly sensitive period for brain plasticity. This process begins at puberty and increases throughout adolescence. Toward the end of adolescence, the level of plasticity begins to decline. This high level of plasticity provides adolescents with significant opportunities to learn and develop new skills that support their growth. This condition can increase vulnerability to impulsive or risky decision-making because the nervous system that supports rational thinking is still developing (Fraser Mustard Institute for Human Development, 2023).

During adolescence, neural connections are reorganized through synaptic pruning. This process involves eliminating unused synapses and strengthening relevant connections, resulting in more efficient neural networks capable of supporting brain function in adulthood. During adolescence, connectivity between brain regions is continually refined, contributing to improved cognitive abilities, including more mature reasoning and decision-making. Small changes in synaptic connections persist into adulthood. However, during adolescence, these changes become more rapid and extensive (Fraser Mustard Institute for Human Development, 2023).

Adolescent brain development is also influenced by changes in neurotransmitter activity, particularly dopamine. Dopamine is a key chemical involved in mood regulation, motivation, pleasure, and reward processing. During adolescence, the dopamine system undergoes significant remodeling. Early in the phase, dopamine levels increase, particularly in the prefrontal cortex. Levels tend to stabilize or decline as adulthood approaches. Dopamine plays a role in supporting brain plasticity during adolescence. It increases the drive to explore new experiences and makes adolescents

more responsive to the rewards. Consequently, reward-seeking and sensation-seeking behaviors increase. This mechanism is crucial in helping adolescents transition to independence in adulthood (Fraser Mustard Institute for Human Development, 2023).

Neurobiology of Decision Making

Decision-making is one of the most researched aspects in the field of neuropsychiatry. The decision-making process Decision-making is a complex cognitive process that involves considering various possible options based on potential outcomes, risks, and the required effort (Moghadam et al., 2019; Herd et al., 2021). Neurobiologically, the decision-making process is not centralized or occurs in a single area but rather results from a dynamic interaction between the reflective cortical and impulsive subcortical systems (Herd et al., 2021).

Decision-making is governed by the cognitive control system. This system functions as a decision proposer and predictor of all possible outcomes. This system is dominated by the cortical areas, particularly the prefrontal cortex (PFC) and anterior cingulate cortex (ACC). Before proposing a decision and evaluating risks, more basic input is required, namely the desired goal and the physical situation or state. The cortex then proposes a decision and evaluates the risks, which are then sent to the basal ganglia. The basal ganglia function as executors to carry out the previously proposed decision. The reward system then compares the results of the execution with the predicted risk.

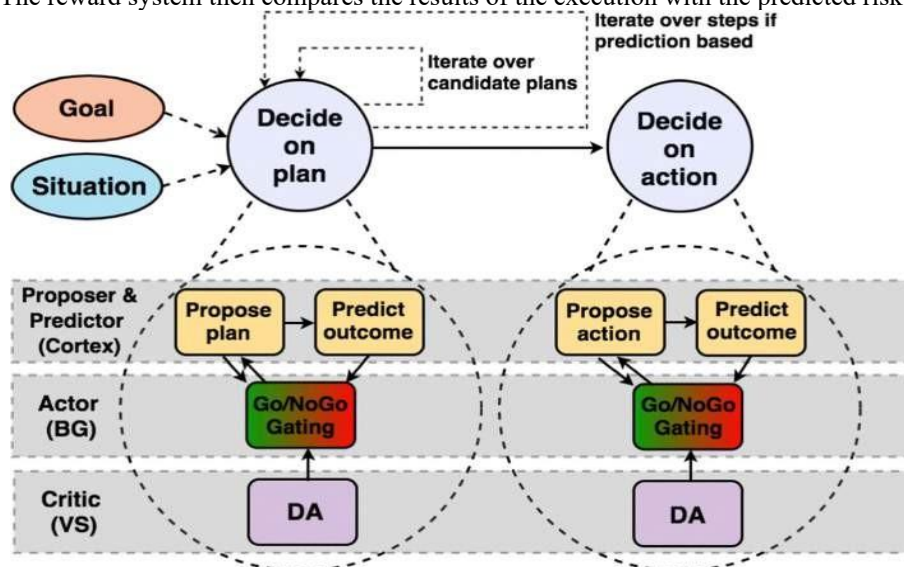


Figure 2.1. Human Decision-Making Mechanisms (Herd et al., 2021).

Complementing the cognitive control functions of the PFC and ACC is the mesolimbic system, better known as the reward system. The reward system consists of various brain structures that mediate the physiological and cognitive processes of reward. Reward is a natural brain process in which the brain associates and compares various types of stimuli (substances, situations, events, or activities) with predicted outcomes (expectations) (Weinstein, 2023). In this process, the reward system requires the coordinated release of heterogeneous neurotransmitters. From

the number of brain neurotransmitters involved in the reward system, dopamine

Dopamine is a primary neurotransmitter. Dopamine plays a crucial role in mediating the reward value of food, drinks, social interactions, and substance abuse. This sustained reward leads to behavioral adjustments, ultimately leading individuals to seek these stimuli (Lewis et al., 2021).

Dopaminergic pathway The reward system is formed by midbrain dopamine neuron projections from the ventral tegmental area (VTA) to the striatum, amygdala, hippocampus, and many other structures of the mesolimbic system (Weinstein, 2023; Lewis et al., 2021). When a rewarding stimulus is experienced, the mesolimbic dopaminergic system is activated, causing dopamine to be released into the target nucleus. The ventral striatum, particularly the nucleus accumbens (NAcc), is the primary structure involved in the reward system. The dorsal striatum plays a role in action selection and decision-making, thus controlling individual behavior to obtain rewards. Therefore, both the dorsal and ventral regions play a collaborative role in mediating rewards (Lewis et al., 2021).

In the context of adolescence, decision-making mechanisms involve a complex mix of cognitive, emotional, and social factors that are closely related to the state of brain development. During adolescence, the mesolimbic system, or reward system, matures earlier than the prefrontal cortex. Therefore, adolescent decision-making is dominated by the reward system rather than the cognitive control system (The Dual-Systems Model). The presence of peers can strengthen the perceived reward value, encouraging adolescents to make decisions that can provide immediate and instant rewards, even though they are short-term, compared to delayed rewards, even though they are long-term (Delay Discounting) (Cerniglia & Di Pomponio, 2024; Rojas & Higuera, 2025). The search for recognition in the social environment and the fear of being ostracized by the environment can suppress the impulse control of the developing cognitive system, which further strengthens the dominance of the reward system in adolescent decision-making (Cerniglia & Di Pomponio, 2024).

Factors Influencing Impulsivity in Adolescents

Internal Factors

1) Emotional Regulation

Emotional regulation is an individual's ability to recognize, manage, and express emotions adaptively. In adolescents, this ability is still developing, so it is often suboptimal. Inability to manage emotions, especially negative emotions such as anger, frustration, or anxiety, can increase the tendency for impulsive behavior. Adolescents who struggle with emotional regulation tend to react quickly without considering the consequences of their actions (Carvalho et al., 2023).

Furthermore, poor emotional regulation is associated with the emergence of intense and uncontrolled affective responses, which lead individuals to engage in impulsive behavior as an outlet. This suggests that emotional regulation plays a crucial role in controlling impulsive urges, suggesting that the better the ability to regulate emotions, the lower the level of impulsivity among adolescents (Carvalho et al., 2023).

2) Resilience

Resilience refers to an individual's ability to survive and adapt in the face of stress or difficult situations. Adolescents with high levels of resilience tend to have better self-control and are able to manage impulsive urges more effectively. This is because resilient individuals can view problems more rationally and are less easily swayed by momentary impulses (Carvalho et al., 2023).

Conversely, low resilience can increase impulsivity, especially when individuals experience stress or emotional distress. In such situations, adolescents tend to make quick decisions without careful consideration as a response to the situation at hand. Therefore, resilience plays a protective role in suppressing the emergence of impulsive behavior.

3) Coping Strategies

Coping strategies are ways in which individuals deal with stress or pressure. Adaptive coping strategies, such as problem-focused coping and seeking social support, can help adolescents manage their emotions and reduce impulsivity. Conversely, maladaptive coping strategies, such as avoidance or uncontrolled emotional outbursts, can actually increase impulsive behavior (Carvalho et al., 2023).

The use of ineffective coping strategies often leads to individuals failing to manage the stress they experience, leading to spontaneous and poorly controlled behavior. Therefore, coping strategies play a crucial role in determining how adolescents respond to stressful situations and the extent to which they can control their impulsivity.

4) Decision Making Style

Decision-making styles are also a significant factor influencing impulsivity in adolescent. Adolescents who tend to make quick decisions without considering long-term risks and consequences have higher impulsivity levels. This is related to the development of cognitive functions, particularly executive functions, which are not yet fully mature during adolescence (Green et al., 2023).

Furthermore, the tendency to choose instant gratification over long-term benefits reinforces impulsive behavior. This decision-making pattern reflects a low ability to delay gratification, which is a key indicator of impulsivity.

External Factors

5) Relationship with parents (parental attachment)

Parental attachment is an environmental factor that significantly influences impulsivity in adolescents. A warm, supportive, and trusting relationship between parents and children plays a crucial role in helping adolescents develop self-control and strong emotional regulation skills. Conversely, relationships that are less harmonious or characterized by conflict tend to increase the risk of impulsive behavior (Carvalho et al., 2023). A secure attachment also provides a sense of emotional security, enabling adolescents to better cope with stress without overreacting or reacting impulsively. Therefore, the quality of the parent-adolescent relationship is a crucial factor in developing more controlled, adaptive, and emotionally mature behavior.

6) Relationships with Peers (Peer Attachment)

Relationships with peers are one of the environmental factors that influence adolescent impulsivity. In this developmental phase, social interactions with peer groups become increasingly dominant. Closeness to positive peers can serve as a protective factor, providing emotional support, a sense of belonging, and opportunities to develop more adaptive behavior. Conversely, low-quality relationships, such as conflict or peer rejection, can increase impulsivity among adolescents. Research shows that when adolescents experience peer rejection, impulsivity levels tend to increase compared to normal conditions (Fosco et al., 2025).

Furthermore, peer pressure and the desire for social acceptance can also drive adolescents to make quick decisions without considering long-term consequences. Unhealthy interpersonal relationships, such as conflict or low satisfaction with social relationships, contribute to increased impulsivity in response to social pressure. These findings confirm that peer relationship dynamics not only act as a protective factor but can also be a risk factor, triggering fluctuations in impulsivity in adolescents throughout their daily lives (Fosco et al., 2025).

7) School and Social Environment

School and social environments also play crucial roles in shaping adolescent behavior. Positive relationships with teachers and a supportive school environment can help adolescents develop self-control and adaptive behavior. Conversely, a less supportive environment can increase the risk of impulsive behavior. Furthermore, broader social conditions, such as community and social norms, influence adolescent behavior. A conducive environment and social support can be protective factors, while a negative environment can reinforce impulsive tendencies (Carvalho et al., 2023).

3. METHOD

This research is a literature review study designed to explore the phenomenon of impulsivity in adolescents through a psychoneuropsychiatric approach. A systematic literature search was conducted through three main electronic databases, namely Google Scholar, PubMed, and NCBI, employing four primary keywords: *impulsivity*, *adolescents*, *adolescent impulsivity*, and *psychoneuropsychiatry*. To enrich the scope of the discussion, the researchers also accessed official publications from international and national institutions, such as the World Health Organization (WHO) and the Ministry of Health of the Republic of Indonesia, to obtain relevant epidemiological data and policies related to adolescent health. Furthermore, to strengthen the theoretical foundation regarding brain development, this study also integrated an additional literature synthesis entitled "*Adolescent Neurodevelopment and Implications for the Criminal Justice System*" published in 2023.

4. RESULTS AND DISCUSSION

Clinical and Psychiatric Implications

Impulsivity-related disorders

Impulsivity is a significant risk factor for various mental disorders, particularly those related to behavioral and emotional control. Individuals with high levels of impulsivity typically struggle to control their impulses, making it easier to act without considering the long-term consequences. Various studies have also shown that impulsivity is linked to mental health problems, such as risky behavior, emotional disorders, and a tendency to engage in self-harming behaviors (Bonsaksen et al., 2023).

Impulsivity tends to be more pronounced during adolescence because brain development is not yet fully matured. The part of the brain responsible for self-control and decision-making, the prefrontal cortex, is still developing in adolescents. Meanwhile, the part of the brain that regulates emotions (the limbic system) develops rapidly. This imbalance makes adolescents more prone to emotional impulses than careful thought, making them more prone to impulsive behavior and risky decisions (Green et al., 2023).

ADHD

In Attention Deficit Hyperactivity Disorder (ADHD), impulsivity is one of the main symptoms, along with inattention and hyperactive behavior. Impulsivity in ADHD means that a person has difficulty restraining themselves from doing something inappropriate and tends to act quickly without thinking first. Various studies have shown that impulsive behavior often occurs in individuals with ADHD and is an important part of establishing a diagnosis of the disorder (Yacoub et al., 2025). Simply put, impulsivity in ADHD is related to disorders in the part of the brain called the prefrontal cortex, which regulates executive function. This function includes the ability to restrain oneself, control behavior, and make decisions. Research shows that in individuals with ADHD, This part of the brain and the network connected to it (fronto-striatal) do not function optimally in patients with schizophrenia. As a result, they have more difficulty controlling their urges or desires, and they tend to act spontaneously without considering the consequences first.(Ramos-Galarza et al., 2024). Impulsivity in ADHD can be seen in everyday behavior.

Individuals with ADHD often struggle with self-control, such as answering questions before they are finished, being impatient while waiting their turn, and acting without considering the consequences. Furthermore, they often act impulsively without thinking due to a lack of self-control. This suggests that impulsivity is not just an additional symptom but a core component of ADHD that can impact a person's social life and academic performance (Zhang et al., 2025).

Impulsivity in ADHD is a core symptom resulting from impaired executive function in the prefrontal cortex and manifests as uncontrolled behavior, such as the inability to delay responses and act without consideration. Therefore, impulsivity is not the cause of ADHD but rather a part of the disorder's pathological mechanism.

Substance use disorder

Impulsivity in adolescents is one factor that can increase the desire to try addictive substances, such as alcohol and drugs. Adolescents with high impulsivity typically have low self-control and a strong urge to try new things without considering the risks. Consequently, they are more likely to initiate substance use at an early age, which can later develop into a substance use disorder (Green et al., 2023).

The link between impulsivity and substance use disorders (SUDs) is explained from a brain perspective. In impulsive adolescents, the brain's reward system is more sensitive to pleasurable stimuli. This makes them more driven to seek immediate pleasure and gratification. Furthermore, the part of the brain responsible for self-control, the prefrontal cortex, is not fully developed. As a result, teenagers find it difficult to resist the urge to seek instant gratification, and short-term gratification-seeking behavior appears more frequently (Plaisance, 2024).

Based on various studies, impulsivity can be understood as a predisposing factor contributing to addiction development. Impulsive individuals are more likely to experience difficulty stopping substance use after trying, due to weak inhibitory control and strong reward drives. Thus, impulsivity plays a role not only in the initial stages of substance use but also in maintaining addictive behavior. This suggests that impulsivity is a significant risk factor in the onset and development of substance use disorders (Hildebrandt et al., 2024).

Thus, impulsivity in adolescents acts as a major risk factor for the development of substance use disorders through the mechanism of increased sensitivity of the reward system and the tendency to seek instant gratification, thereby increasing the vulnerability to addictive behavior.

Self-harm

Impulsivity in adolescents is closely related to the tendency to act without careful consideration, especially when

experiencing intense emotions, such as anger, sadness, or stress. In these situations, individuals tend to exhibit rash behavior or spontaneous actions in response to emotional distress. Research shows that impulsivity, particularly emotional impulsivity, drives individuals to act quickly without considering the long-term consequences (Cortese et al., 2025).

Manifestations of impulsivity in adolescents can be seen in various forms of risky behavior, such as self-harm, risky sexual behavior, and aggressive acts. In cases of self-harm, impulsivity makes it easier for individuals to shift from thoughts to actions, especially when facing emotional stress. Studies show that impulsivity is significantly associated with self-harm behavior, with impulsive individuals more likely to act spontaneously to relieve negative emotions. In addition, impulsivity is associated with a tendency to engage in other risky behaviors due to low self-control (Lockwood et al., 2017).

Based on various research findings, impulsivity can be understood as a triggering factor in the emergence of dangerous behavior in adolescents. Impulsivity plays a role in bridging the gap between impulses or thoughts and actual actions, thereby increasing the likelihood of individuals engaging in maladaptive behaviors, such as self-harm. In theoretical models, impulsivity is also a factor that accelerates the transition from ideation (the desire to harm oneself) to actual action. This suggests that impulsivity is not only a risk factor but also plays a direct role in dangerous behavior (Lockwood et al., 2017).

5. CONCLUSION

Adolescence is a transitional developmental phase marked by biological, psychological, and neurobiological changes. Asynchronous brain maturation, particularly between the rapidly developing limbic system and the still-immature prefrontal cortex, makes adolescents more vulnerable to impulsive behaviors and risky decision-making. This condition contributes to increased morbidity and mortality, even though adolescents are at the peak of their physical vitality. Impulsivity is influenced by various internal and external factors and has important clinical implications for disorders such as ADHD, substance use disorders, and self-harm.

Suggestion

Based on this discussion, the author recommends that adolescents receive more intensive support in developing emotional regulation, self-control, and healthy decision-making skills. Parents are expected to build warm, open, and supportive relationships so that adolescents feel safe in communicating and are less easily driven to impulsive behaviors. Schools also need to play an active role in creating a positive, safe, and supportive environment for adolescent psychosocial development.

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