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INSECURE PEOPLE AND THE ABSENCE OF EMPATHY: A CONCEPTUAL ANALYSIS BASED ON AUTISM, EMPATHY AND THE NEED FOR VALIDATION IN INSECURE INDIVIDUALS

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Abstract: This text explores the relationship between insecurity and empathy, using analogies to illustrate the theme. The hypothetical case of a doctor who romanticizes his unconditional availability to patients is analyzed as an example of behavior motivated by insecurity masquerading as empathy. In practice, his motivation lies in the need to feel useful and valued, characterizing an egocentric search for validation that distorts true empathy. It is argued that genuine empathy is more common in secure individuals, whose empathic responses are not hindered by adjacent emotional needs. As a complement, autism is used as an analogy, highlighting the absence of cognitive empathy in individuals on the autistic spectrum and suggesting that the brain regions related to empathy and insecurity do not operate synergistically. This study proposes that authentic empathy is intrinsically linked to emotional security and the absence of egocentric interference.
Keywords: empathy, insecurity, autism, egocentric validation, pro-social behavior, neuroscience.

INTRODUCTION

Empathy, defined as the ability to understand and share other people's emotional states, is widely recognized as one of the pillars of human interactions and social cohesion. However, its manifestation is intrinsically linked to neurobiological and psychological factors, including emotional security and the regulation of adaptive or maladaptive behavioral patterns. Insecurity, on the other hand, is an emotional state that can distort empathy, leading to egocentric responses of varying degrees and compensatory mechanisms such as the search for validation and exacerbated perfectionism.

The literature points to an intricate relationship between the brain subregions and neurotransmitters associated with empathy and insecurity. While areas such as the medial prefrontal cortex and anterior insula play critical roles in empathy, the reward system, including the nucleus accumbens and orbitofrontal cortex, is often activated in contexts of insecurity and egocentrism. These neural patterns suggest that insecurity not only reduces empathic capacity, but also reorganizes the prioritization of cognitive and emotional resources, favoring self-centered behaviors.

In this study, we will analyze the relationship between true empathy and insecurity, investigating how the latter can compromise empathic manifestation and how emotional security facilitates more authentic and consistent empathic responses. Additionally, the analogy with autism will be employed to illustrate how brain subregions and neurotransmitters related to empathy can function independently or in conflict, depending on psychological and biological conditions. The aim of this analysis is to deepen the understanding of the mechanisms that link empathy, insecurity and their behavioral consequences, providing a robust neuroscientific and psychological foundation for future therapeutic and interventional approaches.

DEVELOPMENT

EMPATHY: CONCEPTUALIZATION AND NEUROBIOLOGICAL MECHANISMS:

Empathy can be defined as the ability to understand and react emotionally to the mental or affective state of another person, and is categorized as cognitive, emotional and compassionate. These subtypes have different neurobiological foundations:

1. **Cognitive empathy**: This refers to the ability to adopt another person's perspective. Functional neuroimaging studies indicate that areas such as the dorsomedial prefrontal cortex and the superior temporal gyrus are involved in this process (Shamay-Tsoory, 2011).

Imagine a doctor explaining the diagnosis of a serious illness to a patient. The doctor, while not intrinsically sharing the patient's emotions, seeks to rationally understand how this information might be received and what impact it will have on the individual's life. They use communication strategies and a personalized approach to convey the diagnosis in a way that minimizes suffering.

For example, the doctor could say: *"I know that receiving this news can be a big shock and that you must be thinking about how it will affect your routine and your family. I want to assure you that I understand these concerns and that we're here to work together on a plan that's best for you.»*

In this case, the doctor demonstrates cognitive empathy by anticipating concerns and adjusting their response based on what they know about the patient's circumstances. They don't need to feel the patient's emotions, but make a deliberate effort to understand and address the emotional and practical needs of the situation.

2. **Emotional Empathy**: This is related to the ability to experience emotions similar to those observed in others, with strong activation of the anterior insula and anterior cingulate cortex (Fan et al., 2011).

Imagine a doctor informing a patient of the diagnosis of a serious illness. In this case, the doctor not only rationally understands the impact of the news (as in cognitive empathy), but also deeply feels the patient's pain and anguish, reacting in an emotionally connected way.

For example, on seeing the patient cry, the doctor could show emotional empathy by saying, with a broken voice and watery eyes: *"I understand how difficult this must be for you. Seeing your reaction touches me deeply, and I want you to know that I'm here not just as a doctor, but as someone who cares about what you're feeling right now."*

In this case, the doctor genuinely reflects the patient's emotion, not just by intellectually understanding the suffering, but by experiencing a shared emotional resonance. This behavior creates an authentic emotional connection, characteristic of emotional empathy.

3. **Compassionate Empathy**: Integrates cognitive and emotional perception, often associated with activity in the ventromedial prefrontal cortex and limbic networks such as the amygdala (Decety & Jackson, 2004).

These processes depend on complex interactions between neuronal networks, hormonal modulation (e.g., oxytocin) and social learning.

Imagine a doctor informing a patient of the diagnosis of a serious illness. In this case, as well as understanding the impact (cognitive empathy) and emotionally sharing it with the patient (emotional empathy), the doctor is driven by a genuine motivation to help, transforming their understanding and feelings into practical action.

For example, upon seeing the patient's suffering, the doctor could say: *"I'm sorry for this news and I can see how difficult this is for you. I want you to know that you are not alone. We're going to work together to ensure the best possible treatment and take care of all your concerns, whether it's about your health, your family or anything else that's important to you.»* He would then commit to seeking out the best resources available and creating a care plan that included not only medical treatment, but also emotional and social support.

In this case, the doctor demonstrates compassionate empathy by not only understanding and feeling the patient's suffering, but also acting proactively to alleviate that suffering, promoting a practical and supportive response. This is the essence of compassionate empathy: transforming understanding and emotion into actions that benefit others.

In short, the difference between cognitive, emotional and compassionate empathy is the ability to understand and process the suffering of others. In cognitive empathy, there is a rational understanding of the other's emotions; in emotional empathy, one experiences the emotions felt by the other; and in compassionate empathy, in addition to understanding and feeling, there is a motivation to act for the other's benefit.

Insecurity and the Need for Validation: Insecure individuals have psychological traits marked by a constant search for external validation, often associated with low self-esteem and fear of rejection. Longitudinal studies suggest that adverse childhood experiences, such as neglect or emotional abuse, can shape neural circuits related to fear and reward, leading to patterns of interpersonal dependence (Bowlby, 1988; Gilbert, 2005).

Neuropsychological aspects: The need for validation often activates the brain's reward system, particularly the nucleus accumbens and the orbitofrontal cortex, reinforcing approval-seeking behaviors (Pfeifer & Berkman, 2018). These mechanisms can mask deep-seated insecurities, creating a dysfunctional cycle of emotional dependency.

FUNDAMENTAL DIFFERENCES WITH EMPATHY:

- **Motivation**: Empathy is a process centered on the other, while the search for validation is egocentric, focused on meeting personal emotional needs.
- **Neurobiological focus**: While empathy involves complex social circuits, the need for validation tends to depend predominantly on reward and stress systems.

The distinction between empathy and insecurity-related behaviors has significant implications in the context of interpersonal relationships and mental health. Therapeutic interventions, such as cognitive-behavioral therapy and the promotion of thought transference practices, can help modulate patterns of dependent validation, strengthening emotional self-regulation mechanisms (Kabat-Zinn, 2003).

In the field of social neuroscience, future research should explore how genetic variations in genes related to dopamine (e.g., DRD4) and oxytocin (e.g., OXTR) influence these dynamics. In addition, longitudinal studies with diverse populations can elucidate the cultural and social determinants of these distinctions.

Empathy and the search for validation are distinct phenomena with unique neurobiological and psychological bases. Understanding these differences is essential for personalized interventions in clinical and educational contexts, promoting more balanced and satisfying social relationships.

FUNDAMENTAL DIFFERENCES BETWEEN EMPATHY AND NEED FOR ACHIEVEMENT: A SCIENTIFIC APPROACH

The distinction between empathy and the need for conquest lies in fundamental aspects such as motivation, focus and results in social interactions. These elements can be understood in three main dimensions:

1. **Motivation**
   - **Empathy** is characterized by intrinsic motivation, guided by genuine interest in the emotional state and well-being of others. Studies show that empathy activa-

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tes social circuits related to cognition and emotion, such as the medial prefrontal cortex and the anterior insula, which support understanding and emotional resonance with others (Decety & Jackson, 2004).

- On the other hand, the **need for achievement** is driven by the search for external validation and self-affirmation. This behavior reflects an extrinsic and often compensatory process linked to the reward system, including activation of the nucleus accumbens in response to social recognition (Pfeifer & Berkman, 2018).

2. Focus

- Empathy focuses on the other person. It is a pro-social skill that contributes to the formation of healthy emotional connections, based on mutual understanding and reciprocity.
- In contrast, the need to conquer is self-referential, directed at how others can meet the insecurities and internal demands of those seeking validation. This behavior can be understood as an emotional protection mechanism, often related to the fear of rejection or the search for status.

3. **Results**

- Empathy tends to strengthen interpersonal relationships, promoting mutual support, trust and social cohesion. It is a critical factor for healthy and adaptive interactions, essential for care contexts such as medicine, education and psychotherapy (Batson et al., 1997).
- The need to conquer, however, can lead to relationships marked by emotional imbalances, dependency and, in extreme cases, interpersonal manipulation. These patterns can result in emotional distress for both the individual and those around them, as indicated in studies on narcissistic personality traits (Morf & Rhodewalt, 2001).

Empathy is a social skill of central importance to human functioning, facilitating authentic connections and stable relationships. In contrast, the need for achievement, often associated with insecurity, constitutes a compensatory adaptive strategy to deal with gaps in self-esteem and internal validation. Differentiating these characteristics is essential for clinical and educational interventions aimed at promoting more balanced and healthy interactions, as well as the development of emotional intelligence.

AUTISM, EMPATHY AND

Individuals on the autism spectrum show a wide variability in their emotional and social characteristics, including their relationship with empathy and insecurity. Studies indicate that autistic people often exhibit deficits in cognitive empathy, i.e. the ability to adopt another person's perspective, partly due to alterations in the functioning of brain areas such as the medial prefrontal cortex and the temporoparietal junction (Baron-Cohen et al., 2001). However, there is evidence that emotional empathy is not necessarily absent, and many autistic individuals show intense emotional reactions to the suffering of others, although they may have difficulty expressing them in a socially understood way (Bird & Viding, 2014). In the context of conditional empathy, which combines emotional and cognitive components for pro-social actions, the results are heterogeneous, depending on the level of support and the environment in which the individual is inserted. As for insecurity, it cannot be generalized that autistic individuals are insecure, but recurring challenges related to social rejection and lack of understanding can increase social anxiety and insecurities in specific contexts (Lai et al., 2014). Thus, empathy and insecurity in people with autism are influenced by biological and contextual factors. The deficit in social interaction inherent in the autistic spectrum inevitably generates an intrinsic insecurity in individuals.

DECIPHERING THE CONCEPT

Below, we analyze by topic the main behaviors resulting from the concept of this study:

1 - Egocentrism in Insecure People as a Maneuvering Mechanism and Need for Reward

Insecure individuals often resort to egocentrism as an adaptive strategy to deal with emotional gaps. This maneuver aims to make up for the lack of internal validation by seeking external approval, which activates the brain's reward system, particularly the ventral striatum and orbitofrontal cortex (Pfeifer & Berkman, 2018). This behavior reduces the need to confront underlying insecurity, diverting mental energy from pro-social processes, such as genuine empathy, to self-affirmation.

2 - The Need to Draw Attention as a Mechanism for Maneuvering Insecurity and the Need for Reward

The desire to attract attention can be understood as an extension of egocentrism, functioning as a mechanism to mask insecurity. Studies show that this behavior is associated with the activation of dopaminergic circuits, especially in areas related to reward processing, such as the nucleus accumbens (Martins et al., 2019). However, this need can inhibit brain subregions associated with empathy, such as the insula and the medial prefrontal cortex, since focusing on one's own self-worth compromises the emotional processing of others.

3 - Need to Feel Accepted, Important, as a Mechanism to Maneuver Insecurity and Need for Reward

Insecurity often drives the search for social acceptance, which activates brain mechanisms aimed at self-reference and validation. Regions such as the medial prefrontal cortex and orbitofrontal cortex show increased activity during situations in which insecure individuals seek recognition (Rilling et al., 2008). These activation patterns reduce emotional sensitivity to external stimuli, impairing empathy and favoring behaviors more focused on self-affirmation than interpersonal understanding.

4 - Dopamine as a Central Neurotransmitter in Insecure People

Dopamine plays a dual role in insecure people. Although its activity increases in situations that provide immediate social rewards, such as the approval of others, its basal deficiency is associated with low intrinsic motivation and an increase in anxious behaviors (Pizzagalli, 2014). This dopaminergic imbalance reinforces external validation-seeking cycles, while inhibiting empathy-related circuits, impairing balanced social interactions.

5 - Confusing Empathy with Egocentrism as an Escape Valve

Insecure individuals often confuse egocentric behaviors with empathy due to a self-deception strategy that protects them from internal judgments. This confusion is mediated by psychological defense mechanisms and the activation of the ventromedial prefrontal cortex, which prioritizes self-reference (Schnell et al., 2011). The tendency to reinterpret self-sufficient behaviors as empathetic is an escape valve that minimizes the emotional impact of perceived insecurity, but weakens the role of authentic empathy.

6 - Brain Subregions and Empathy Neurotransmitters Inhibited by the Need to Draw Attention

The need to attract attention and obtain external validation directly inhibits the functioning of brain subregions associated with empathy. For example, exaggerated activation of the reward system (nucleus accumbens) in insecure individuals can reduce functional connectivity between the medial prefrontal cortex and the insula, critical areas for emotional processing (Lamm et al., 2007). The link

between this pattern and traits such as vanity and egocentrism reinforces the hypothesis of that these characteristics serve as compensatory mechanisms to overcome the sadness generated by insecurity.

AUTISM ANALOGIES TO STRENGTHEN THE ARGUMENT

Individuals with autism often show deficits in cognitive empathy, but often preserve or even intensify emotional empathy, depending on the context (Bird & Viding, 2014). This dichotomy is useful as an analogy, as it demonstrates that brain subregions can operate independently. In the case of insecure people, the hyperactivation of the reward system (associated with egocentrism) cancels out the functionality of regions linked to empathy, as observed in narcissistic traits, which also share insecurity mechanisms (Morf & Rhodewalt, 2001).

7 - Secure People and the Greater Propensity to Empathize

Emotionally secure individuals are more likely to exercise empathy due to the absence of compensatory mechanisms associated with insecurity, such as the search for validation and egocentrism. This behavior is supported by neurobiological and psychological evidence which indicates that emotional security facilitates the full activation of brain circuits responsible for understanding and responding to the needs of others, without egocentric interference.

NEUROBIOLOGICAL BASIS OF EMPATHY IN SAFE PEOPLE

Emotionally secure people exhibit greater activation of brain subregions associated with empathy, such as the medial prefrontal cortex (mPFC), the anterior insula and the anterior cingulate cortex (ACC), without the interruption caused by hyperactive patterns of the reward system or the amygdala, commonly observed in insecure individuals (Fan et al., 2011). Balanced activation of these areas allows for more authentic pro-social responses, since there is no need to direct cognitive resources towards dealing with feelings of rejection or low self-esteem.

NEUROTRANSMITTERS INVOLVED

Oxytocin: Studies show that oxytocin, a hormone related to trust and positive social interactions, is more effective in secure individuals, promoting greater sensitivity to the emotions of others and compassionate behavior (Feldman, 2012).

Dopamine: Unlike insecure people, where dopamine is predominantly used to reinforce egocentric behaviors, in secure people it facilitates the feeling of reward associated with altruistic and empathetic acts (Zaki & Mitchell, 2013).

Serotonin: Contributes to emotional regulation in secure individuals, reducing impulsivity and allowing greater consideration for the emotions and perspectives of others (Crockett et al., 2010).

ABSENCE OF COGNITIVE COMPETITION

Insecure individuals often devote significant cognitive resources to mitigating internal anxieties, which reduces their ability to respond to other people's emotions. Insecure people, on the other hand, have greater cognitive and emotional availability to process the mental states of others, allowing them to exercise cognitive and emotional empathy effectively.

EMPIRICAL EVIDENCE

Research indicates that secure people are more likely to perform altruistic and pro-social behaviors, particularly in situations that require compassionate empathy. These behaviors are directly linked to the strengthening of functional connectivity between the medial

prefrontal cortex and the anterior insula, a characteristic that is rarely observed in insecure individuals (Lamm et al., 2007).

Emotional security is an essential factor for the full exercise of empathy, as it allows for the integrated and unimpeded functioning of brain subregions and neurotransmitters related to emotional perception and response. Secure individuals are more likely to engage in meaningful and compassionate social interactions, as they do not face the neurological and psychological blockages caused by insecurity.

8 - Adaptive and Maladaptive Perfectionism: Relationship with Empathy

SUMMARY OF CONCEPTS

Perfectionism can be divided into two main categories: adaptive and maladaptive. Adaptive perfectionism refers to high standards of performance and personal goals, accompanied by functional strategies and self-compassion in the face of failure. It is often associated with positive characteristics such as resilience and emotional self-regulation. Maladaptive perfectionism, on the other hand, involves unrealistic expectations, severe self-criticism and excessive worry about mistakes, often leading to anxiety, depression and compromised mental health (Stoeber & Otto, 2006).

ADAPTIVE PERFECTIONISM AND EMPATHY

People with adaptive perfectionism tend to exhibit greater empathy because their goals and behaviors are aligned with a sense of intrinsic and pro-social purpose. This group shows greater activation of brain regions associated with emotional processing and social connection, such as the medial prefrontal cortex (mPFC) and the anterior insula, which support both cognitive and emotional empathy (Decety & Jackson, 2004).

- **Activated Brain Subregions**:
  - **Medial Prefrontal Cortex (mPFC)**: Facilitates perspective-taking and understanding of other people's mental states.
  - **Anterior Insula**: Responsible for perceiving emotions in oneself and in others.
  - **Anterior Cingulate Cortex (ACC)**: Participates in emotional regulation, allowing balanced responses in social interactions.
- **Neurotransmitters Involved Corroborating the Above in Safe People**:
  - **Oxytocin**: Promotes emotional sensitivity and pro-social behavior. It is more active in individuals with adaptive perfectionism due to greater interpersonal trust.
  - **Serotonin**: Regulates mood and allows for a more stable emotional response, characteristic of individuals with high levels of self-compassion.
  - **Dopamine**: Facilitates the intrinsic reward associated with achieving goals without harming empathy.

Maladaptive Perfectionism and Empathy

Individuals with maladaptive perfectionism have a lower empathic capacity, due to the hyperactivation of regions related to self-centeredness and exacerbated internal criticism. The constant quest to avoid mistakes interferes with the ability to understand or connect emotionally with others.

- **Activated Brain Subregions**:
  - **Amygdala**: Hyperactive in contexts of self-criticism, impairing the processing of positive social stimuli.
  - **Orbitofrontal Cortex (OFC)**: Focused on external validation, diverting cognitive resources away from pro-social processes.

- **Hippocampus**: Intensifies negative memories associated with past failures, reinforcing defensive behaviors.

- **Inhibited neurotransmitters**:
  - **Oxytocin**: Decreased due to interpersonal distrust and social isolation caused by extreme focus on mistakes.
  - **Serotonin**: Deficiencies in emotional regulation lead to greater irritability and a lower capacity for emotional resonance.
  - **Dopamine**: The search for external validation intensifies dependence on immediate rewards, reducing altruistic perception.

EMPIRICAL EVIDENCE AND COMPARISONS

Neuroscientific research suggests that adaptive perfectionism, by promoting emotional balance and intrinsic motivation, facilitates greater functional connectivity between pro-social regions of the brain, such as the mPFC and the insula (Stoeber, 2018). On the other hand, maladaptive perfectionism is associated with dysfunctional patterns of activation, such as increased activity in the amygdala and reduced connectivity in the limbic circuit, impairing empathy (Smith et al., 2020).

Adaptive perfectionism allows for greater empathy due to the balance between high goals and emotional self-regulation, supported by brain networks and neurotransmitters that promote pro-social connections. In contrast, maladaptive perfectionism, due to hyperactivity in brain regions related to fear and criticism, reduces the capacity for emotional connection, impairing empathy and favoring defensive behaviors.

DISCUSSION

COMPARISON OF BRAIN SUBREGIONS AND NEUROTRANSMITTERS RELATED TO EMPATHY AND INSECURITY

Empathy and insecurity, despite appearing to be distinct psychological aspects, have specific neurological roots, involving different brain subregions and neurotransmitters. This comparison details the areas and neurochemical systems involved, highlighting the mechanisms that connect or differentiate these two behavioral dimensions.

Brain Subregions Related to Empathy

Empathy, in its different forms (cognitive, emotional and compassionate), depends on different brain networks:

1. **Cognitive empathy**:
   - **Main regions**:
     - **Dorsomedial Prefrontal Cortex (dmPFC)**: Essential for perspective-taking and understanding other people's mental states.
     - **Temporoparietal junction (TPJ)**: Important for differentiating between self and other states.
   - **Neurotransmitters**:
     - Glutamate: Facilitates synaptic activity in regions associated with theory of mind.
     - Dopamine: Strengthens the capacity for social learning and predicting intentions.

2. **Emotional empathy**:
   - **Main regions**:
     - **Amygdala**: Active in response to intense emotional stimuli.
     - **Anterior Insula**: Crucial for feeling emotions related to the pain and discomfort of others.
     - **Anterior Cingulate Cortex (ACC)**: Processes the emotional component of shared pain.

- **Neurotransmitters**:
  - Oxytocin: Promotes emotional connection and sensitivity to the needs of others.
  - Serotonin: Regulates emotional responses to pain or suffering.

2. **Compassionate empathy**:
- **Main regions**:
  - **Ventromedial Prefrontal Cortex (vmPFC)**: Related to pro-social motivation and helping behavior.
  - **Ventral striatum**: Associated with reward for altruistic behavior.
- **Neurotransmitters**:
  - Oxytocin: Stimulates compassionate behavior.
  - Endorphin: Reinforces altruistic actions with feelings of reward.

BRAIN SUBREGIONS RELATED TO INSECURITY

Emotional insecurity is associated with neural networks linked to fear, social evaluation and emotional self-regulation:

1. **Main regions**:
- **Amygdala**: Hyperactivated in situations of perceived threat, intensifying social anxiety.
- **Ventrolateral Prefrontal Cortex (vlPFC)**: Involved in impulse control and emotional regulation, often unbalanced in insecure states.
- **Hippocampus**: Contributes to negative emotional memory, reinforcing patterns of insecurity.
- **Orbitofrontal Cortex (OFC)**: Processes social reward and expectations related to validation.

2. **Neurotransmitters**:
- **Cortisol**: Released in stressful situations, exacerbating insecurity responses.
- **Noradrenaline**: Intensifies vigilance in threatening social contexts.
- **Dopamine**: Can reinforce validation-seeking behaviors in insecure contexts.

EGOCENTRISM AND SUBSEQUENT RELATED PATTERNS

Egocentrism, often associated with insecurity, emerges when the need for self-affirmation overrides pro-social responses:

1. **Main regions**:
- **Medial Prefrontal Cortex (mPFC)**: Activated in processes of self-reference and overvaluation of oneself.
- **Ventral striatum**: Reinforces reward-seeking behaviors associated with social approval.
- **Amygdala**: Continues to play a role, amplifying emotional responses based on fear of rejection.

2. **Neurotransmitters**:
- **Dopamine**: Potentiates the positive reinforcement of egocentric behaviors.
- **Serotonin**: Its poor regulation can contribute to low self-esteem and egocentric attitudes as compensation.
- **Oxytocin**: Although it promotes social connections, it can be distorted in unsafe contexts, reinforcing interactions motivated by emotional dependence.

GENERAL COMPARISON: CONNECTIONS AND DIVERGENCES

Aspect	Empathy	Insecurity and self-centeredness
Brain regions	dmPFC, TPJ, insula, ACC, vmPFC, amygdala	Amygdala, vlPFC, OFC, hippocampus, mPFC, ventral striatum
Neurotransmitters	Oxytocin, serotonin, endorphin, dopamine, glutamate	Cortisol, noradrenaline, dopamine, serotonin
Main function	Making it easier to understand and respond to other people's emotions	Reinforcing patterns of emotional validation and compensation
Behavioral pattern	Pro-social, altruistic	Egocentric, dependent on external approval

CONCLUSION

While the neural networks and neurotransmitters associated with empathy support pro-social and altruistic behaviors, insecurity is related to reward and threat circuits that can distort emotional self-regulation, culminating in egocentrism. This neurobiological distinction emphasizes the importance of investigating interventions that promote self-reflection and emotional security in order to improve empathic response and reduce dysfunctional behaviors.

FINAL CONSIDERATIONS

Based on the research, it is clear that the deficit in social interaction, often observed in individuals on the autistic spectrum, contributes significantly to the intrinsic insecurity of these individuals. I used the example of autistic people to understand the relationship between empathy and insecurity, based on neurobiology. This article demonstrates that emotional security is a determining factor for the full exercise of empathy, while insecurity acts as a destabilizing element, reorganizing cognitive and emotional resources in a way that favours egocentric and defensive behaviours.

Scientific literature reinforces the relationship between specific sub-regions and the neurotransmitters associated with empathy and insecurity. Areas such as the medial prefrontal cortex and the anterior insula play central roles in empathy, enabling the processing of other people's emotions and social connection. In contrast, the reward system, involving the nucleus accumbens and the orbitofrontal cortex, is hyperactivated in insecure individuals, redirecting the focus towards external validation and compromising emotional sensitivity to external stimuli. These patterns inhibit functional connectivity between specific pro-social regions, impairing the exercise of empathy and favoring self-centered behaviors.

Insecure individuals, in an attempt to compensate for the lack of internal validation, resort to egocentrism as a compensatory strategy. This behavior, supported by neurobiological alterations, reduces the activity of brain sub-regions such as the medial prefrontal cortex and the insula, impacting improvements in emotional and cognitive empathy. Dopamine, in particular, plays a dual role, since its release during immediate social rewards reinforces validation-seeking patterns, while its basal deficiency is associated with low intrinsic motivation and greater vulnerability to anxious behaviors.

The analogy with autism in this context is enlightening, since autistic individuals often show deficits in cognitive empathy, but can preserve or intensify emotional empathy depending on the environment and the support they receive. This dichotomy demonstrates that sub-regions related to empathy can operate independently, and that contextual and emotional conditions are determining factors for the functionality of these circuits.

Emotionally secure individuals, in turn, are more prone to empathy, supported by an absence of compensatory mechanisms related to insecurity. These people have greater activation of brain networks responsible for pro-social perception and response, facilitated by neurotransmitters such as oxytocin, dopamine and serotonin. Adaptive perfectionism is another factor that contributes to empathy by balancing the pursuit of high standards with emotional self-regulation, while maladaptive perfectionism, marked by hyperactivity in regions related to fear and criticism, impairs emotional connection and reinforces defensive behaviors.

Therefore, understanding the neurobiological and psychological bases of empathy and insecurity offers a solid perspective for clinical and social practitioners. Promoting emotional security and psychological balance may be the key to stimulating authentic empathic behaviors, minimizing the negative impacts of insecurity and its behavioral consequences.

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