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Neuropedagogical Aspects of Emotional Contact Between Parents and Children as a Factor in Family Psychosocial Well-Being

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Abstract: *The emotional bond between parents and children is fundamental to healthy child development. This article examines how the bond between parents and children influences a child's emotional stability and social skills. It explores the factors that promote strong emotional connections and the potential consequences when these connections are weak. The discussion highlights the important role of attachment in a child's personality development. The authors analyse how parenting style, family circumstances, and the emotional state of parents can either support or weaken secure emotional relationships. They also analyse the neuropeducational aspects of emotional contact and how they influence brain development. Finally, the article emphasises that regular and consistent emotional contact is crucial for a child's emotional, cognitive, and neurodevelopmental growth.*

Keywords: *emotional bond; child development; emotional dysregulation; emotional support; social skills; developmental consequences.*

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1. Introduction

The emotional connection between parents and children is one of the most important factors shaping a family's psychological well-being. Emotional interaction forms the basis of healthy and trusting relationships within the family and strongly influences a child's personality development, emotional stability, and social adjustment. Parents' openness to a child's emotional needs, their ability to provide emotional support, and their understanding of the child's feelings create a safe environment for growth. This environment fosters self-esteem, a sense of security, and confidence.

Emotional relationships have been widely studied in psychology. However, their neuropedagogical aspects remain largely unexplored. In particular, little attention has been paid to how emotional interactions influence a child's brain development. This highlights the need for an interdisciplinary approach based on developmental psychology, neuroscience, and pedagogy.

Emotional intelligence is currently understood as the ability to recognise, understand, and regulate both one's own emotions and those of others. Within this framework, intrapersonal and interpersonal emotional intelligence are commonly distinguished. The capacity to reflect on and reason about emotions has a wide range of consequences, most notably in human behaviour. For this reason, the study of the prerequisites for emotional intelligence development is of considerable interest. These prerequisites are generally divided into biological and social factors.

2. Theoretical Framework

Emotions serve several important and closely connected functions, including evaluative, organisational, regulatory, predictive, and communicative. From a functional perspective, emotions can be seen as processes that regulate mental activity. Disturbances in the emotional sphere therefore affect overall psychological functioning and can influence a child's development at different stages of ontogenesis.

The issue of emotional development in preschoolers is relevant both for advancing psychological theory and for its practical use in child psychology. The levels of emotional distress are steadily increasing, which, in turn, affects the emotional well-being of children. Many approaches to addressing emotional disorders in childhood focus on the psychological climate within the family. They also consider the child's relationship with close adults, the broader social environment, and biological predispositions and external factors.

Emotional reactions in early childhood are characterised by instability, lability, intensity and limited controllability. Subsequently, their emotional sphere becomes more complex through socialisation, which influences both emotional content and expression. The range of emotional responses gradually expands, and emotional processes merge with cognitive development. In general, the preschool period is marked by various emotions and feelings and relatively greater stability.

Children with a secure emotional attachment are better prepared to handle stress, which reduces the risk of anxiety, depression and aggression (Roman et al., 2025). Taken together, these factors contribute to long-lasting family relationships and closeness. Such ties also create the basis for a child's personality development. They influence all the main areas, from the formation of trust in the world to gaining social skills. When children perceive love and understanding, they strive to investigate their environment (Akmal, 2024; Kumar & Anchal, 2025).

Emotions perform not only an expressive function but also play a regulatory role in mental activity. During the preschool years, the emotional sphere is characterised by emotional lability and intensity. At this stage, emotional and cognitive processes become closely interconnected. A child who feels securely attached demonstrates greater cognitive engagement, as energy that might otherwise be devoted to fear and anxiety is redirected towards exploring the environment.

When analysing family upbringing, democratic parenting plays an important role, as it combines emotional support with clearly established boundaries. In contrast, a permissive parenting style, although characterised by warmth and affection, may leave the child without sufficient behavioural guidance, potentially leading to social disorientation. Particular attention should also be

paid to the emotional well-being of parents. Chronic stress, depression, and persistent fears experienced by adults may affect the child, undermining their sense of security and contributing to aggressive behaviour or social withdrawal.

Besides, children observe interactions between parents to acquire effective communication patterns and ways of emotional expression. They learn to cooperate, compromise and resolve conflicts through joint activities and play. In doing so, children begin to verbalise their emotions, which is essential for developing emotional intelligence.

Accordingly, family upbringing and parents' attitudes play a crucial role in the child's socialisation. An equally important factor is a child's upbringing within a complete family. Children raised in two-parent families demonstrate more favourable emotional and personal growth than those from single-parent households (Chavda & Nisarga, 2023). Thus, the presence of both a mother and a father can be considered a prerequisite for healthy development. Nevertheless, unfavourable domestic conditions can negatively affect a child's progress.

It is also vital to analyse the most common styles of parenting. Parents who adopt a democratic style combine love and respect for the child with clear expectations and reasonable demands. They encourage independence and allow children to participate in decision-making. Children raised in a democratic parenting context tend to adapt more successfully to social settings and build stable interpersonal relationships.

In the context of a permissive (indulgent) style, parents typically fulfil their child's requests while setting few rules or boundaries. As a result, children feel insecure and behave inappropriately in different situations. Although such children may be surrounded by a caring atmosphere, they often struggle to meet social requirements.

Thus, a democratic parenting style is grounded in mutual respect, trust, and emotional support. It is most conducive to the formation of a strong emotional bond between parents and children. In contrast, a permissive style may lead to negative outcomes in a child's emotional development and social relationships.

The emotional state of parents is one of the most significant factors influencing parent–child relationships. If parents struggle with anxiety, stress, or depression, this necessarily has an effect on their interaction with the child. Parents under constant stress are prone to increased irritability and decreased patience, leading to numerous conflicts (Krugers et al., 2017; Jin et al., 2023; Fan & Kang, 2025).

The personal family situation also determines emotional connections between parents and children. Divorce marks a particularly challenging period for the entire family. In this case, children tend to experience fear, anxiety, anger and may even blame themselves for their parents' separation.

These aspects underscore the central role that parents play in a child's social development. They serve as the primary models of social behaviour and explain the rules of social interaction. In particular, parents create opportunities for a child's socialisation with peers and other adults. They establish boundaries and promote self-control and responsibility. At the same time, parental emotional support contributes significantly to a child's self-confidence in social situations, enabling the child to express their thoughts and emotions. As a result, parents facilitate their child's social development through example, discipline, and communication.

A lack of positive emotional experiences and persistent feelings of loneliness may contribute to depressive symptoms among children. The symptoms may include disinterest in once-enjoyed activities, constant tiredness, crying spells, and social isolation. Furthermore, such children tend to attract attention through aggressive behaviour.

Insufficient positive feedback from parents can result in low self-esteem. Children with low self-esteem often doubt their abilities, feel inadequate, and struggle to achieve success. Limited experience of emotional closeness with parents may also impair interpersonal communication. Such children may appear shy, distrustful, and face difficulties expressing their emotions. Siegel and Bryson (2020) believe that prolonged emotional distress may even lead to psychosomatic disorders.

Therefore, limited emotional contact with parents during childhood may have long-term consequences for personality development and interpersonal relationships in adulthood.

3. Research Methodology

From the perspective of neuropedagogy, the primary caregiver is the main source of external stimulation for brain development. Owing to the plasticity of the child's brain, neural structures are continuously shaped and reorganised through experience (Siegel, 2012).

Neurochemical mechanisms

Positive interactions stimulate the release of dopamine, reinforcing socially appropriate patterns of behaviour and supporting memory formation. In contrast, a lack of emotional warmth may lead to chronically elevated cortisol levels, suppressing immune function and slowing the development of the hippocampus (Kandel et al., 2021).

Sensitive periods of development

The period between 7 months and 3 years of age is considered particularly important, as it is during this stage that a basic sense of trust in the world is established. Prolonged separation from the primary caregiver during this period may become a significant neurotic factor.

Neural synchronisation

During play or direct eye contact, the brain rhythms of the caregiver and child may synchronise, creating a shared functional system. This phenomenon plays an important role in learning processes and the acquisition of social norms.

Emotional connections between generations form the foundation of mental stability within the family. They act as an affective experience, as well as a major factor in the child's intellectual development and adaptability. Essential components of a healthy family environment include understanding, empathy, and support from close adults. In view of neurocognitive factors, strong emotional attachment to parents elicits specific reactions in the central nervous system. The hippocampus and prefrontal cortex undergo intensive maturation when the child's basic needs for security have been met. It follows that these areas are closely related to cognitive processes, self-control, and social flexibility (see Table 1).

Table 1. Neurodevelopmental stages of early childhood and key neuropedagogical tasks for parents

Age period	Key developmental stage	Neuropedagogical task for parents	Main risk factor (neurotic factor)
0–6 months	Formation of basic biological rhythms and recognition of familiar voices and faces	Providing physical contact and responding promptly to crying in order to establish a sense of trust and security	Maternal emotional coldness, expressed through a lack of response to the child's signals and needs
7–18 months	Peak stage of attachment formation and the emergence of fear of unfamiliar people	Ensuring the stable presence of a familiar caregiver and minimising stressful experiences	Separation from the primary caregiver. During this period, placement in nursery care or prolonged transfer to other relatives may be especially traumatic
1.5–3 years	Beginning of speech development and the first manifestations of independence and autonomy	Engaging in joint play activities and verbalising the child's emotions (e.g., "You are feeling angry now")	Overprotective parenting that limits the development of brain regions associated with autonomy and self-regulation
3–6 years	Socialisation, development of imagination, and integration of emotional and cognitive processes	Active listening, encouragement of initiative, and explanation of social norms and rules	Dissonance between family upbringing practices and the expectations of nursery school/kindergarten or school environments
Any age	Formation of neural synchronisation ("brain-to-brain" interaction)	Maintaining eye contact and expressing sincere positive emotions during communication	Chronic parental stress, which may disrupt the brain's capacity for synchronisation and emotional attunement

Source: The authors' own conception

4. The Role of Parental Resources in Emotional Attachment and Child Cognitive Development: A Neurobiological Perspective

According to Keller and Bard (2017), the plasticity of the child's brain depends on the quality of external stimuli. In this system, the parental figure acts as the main source of stimuli. Emotional stability and openness in adults help establish the basic codes of trust and security in the child's neural circuits. During the early stages, these neural patterns form the basis for effective social integration and constructive relationships in adulthood.

As a result of its exceptional plasticity, the child's brain has the capacity to adapt and change in response to the accumulated experience. Neural connections are stimulated by positive emotional interaction, leading to improved cognitive function, emotional intelligence, and social skills. Once a child experiences love and encouragement, their brain releases dopamine, often referred to as the "pleasure hormone". In turn, this promotes positive interactions that are stored in the child's memory and motivates further communication. In contrast, insufficient emotional engagement increases cortisol levels and negatively affects the brain, immune system, and other organs.

The initial manifestations of attachment can be observed as early as the middle of the first year. Anxiety emerges during the temporary absence of the mother, most clearly around eight months, and also in response to the presence of strangers. Still, anxiety concerning strangers generally decreases during a child's second year, often appearing as shyness or embarrassment. At the same time, anxiety related to separation from their mother endures for a longer time (up to 2.5 years for girls and up to 3.5 years for boys). By the age of three, children tend to feel more secure in their mother's company, even as their desire to engage with their father and other children increases.

Overprotective mothers involuntarily foster excessive attachment in their children. This results in a pronounced dependence on the mother and her emotional state. Such mothers often experience a fear of loneliness and may overcompensate through excessive care. As a result, children may learn that they feel safe only in the mother's presence. This impedes the natural development of communication with other adults and peers, as well as promotes infantilism and insecurity.

At the opposite extreme, some parents provide insufficient emotional care. Children may be placed in nurseries or entrusted to the care of grandparents or other relatives. If the child is older than six months, adaptation to nursery care may be generally less distressing, as attachment to the mother is not yet fully established. Nevertheless, prolonged separation from the family can impair development. Essential verbal, physical and emotional support is primarily available within the home. From approximately seven months, nursery attendance may become a psychologically traumatic factor. At this stage, the child experiences separation from the mother to whom they are attached. The greatest risk of developing anxiety-related difficulties occurs between seven months and 1.5–2 years. During this period, separation anxiety coincides with the fear of strangers and unfamiliar adults. Thus, at least until three years of age, disruption of emotional contact with the mother can disrupt attachment and constitute a neurotic factor in a child's mental development.

A significant obstacle to emotional bonding and attachment is the mother's lack of emotional sensitivity. This is often observed with the second child of the same sex as the first. Having invested considerable emotional and physical resources in the firstborn, the mother may provide less attention to the second child. This situation is typically intensified by physical exhaustion and an increased workload.

Importantly, parents should be able to articulate their own emotions in a safe and supportive manner. In this regard, they establish the foundation for healthy relationships through an honest emotional climate within the family. Another important aspect of effective communication is active listening, which enables children to feel acknowledged and valued. In cases of learning difficulties, open communication between parents and children ensures timely identification of effective solutions (see Table 2).

Table 2. The influence of emotional contact on the child's psychological development

Factor	Psychological-neurobiological mechanism	Developmental outcome
Emotional closeness with parents	Activation of parasympathetic regulation; maturation of prefrontal cortex and hippocampus	Cognitive stability; self-regulation
Quality of emotional stimuli	Brain plasticity; consolidation of trust schemas	Emotional security; social adaptation
Deficit of emotional contact	Chronic activation of stress response (cortisol)	Risk of internalising disorders; developmental delays
Parental emotional competence	Modelling of emotion regulation; neural synchronisation	Development of emotional intelligence
Supportive communication	Active listening; validation of feelings	Trust; psychological resilience

Source: The authors' own conception

It is important to create an atmosphere of trust and mutual understanding between parents and teachers (Yang et al., 2025). Parents should be regularly provided with information about their child's progress in learning, as well as challenges they face. Both parties are responsible for the child's education and upbringing, and each should be ready to respect the other's views.

Home schooling is an increasingly common alternative to traditional education. It places significant responsibility for a child's learning on parents. However, it is essential to create a well-organised learning environment for this approach to be effective.

The neural activity of a mother and her child can interact, forming a distinctive interconnected network. During their interactions, neural waves in their brains become synchronised. The strength of this connection depends on the mother's emotional state: when she expresses more positive emotions, her brain synchronises more effectively with her child's. This enhanced synchrony supports the child's learning and overall development.

5. Results and Discussion

By examining the properties and structure of interpersonal neural connections, one may observe how information circulates within each brain and how two brains interact as a network. Mothers and children usually spend a great deal of time together in a positive emotional state. In these moments, their brains appear to be closely connected. Constructive interactions, especially with frequent eye contact, enhance the ability of the mother's and child's brains to function as a single system. A positive mood supports effective information exchange.

The analysis demonstrates that the quality of emotional contact is closely related to the child's cognitive development and academic success. Children whose mothers experience depression often show reduced receptivity, meaning a diminished ability to perceive and process information. Limited eye contact and less expressive speech from adults provide fewer stimuli for the development of speech, reasoning, and other cognitive functions.

Positive emotions expand the child's cognitive horizons and support active engagement with the surrounding environment. Trust between parents and children creates conditions for active listening, which helps identify and address learning difficulties in a timely and non-pressurised way. Equally important is cooperation between the family and the educational institution. Parents and teachers act in partnership and build their interaction on respect for the child's personality, emotional needs, and individual developmental characteristics.

A strong neural connection between mother and child may enhance the child's receptivity and learning capacity. At this stage of life, a child's brain is highly adaptable, and these changes are shaped by experience. Positive emotional interactions allow parents to communicate more effectively with their children and support the development of their cognitive abilities.

Children of depressed mothers may have reduced learning abilities due to diminished neural connections. Mothers who are consistently in a negative emotional state interact less with their child. They exhibit less expressive speech, reduced eye contact, and weaker responsiveness when the child attempts to gain their attention.

One's emotions directly change how the brain exchanges information with others. Positive emotions help one communicate more effectively, while depression can severely impair the individual's ability to connect with their child. Social cues that normally support bonding become less available to the child, who then misses the optimal emotional support needed for healthy development.

Emotional closeness is a continuous process that requires conscious effort. The authors of this article suggest the following tools for strengthening the connection:

- *Validation of feelings*: Recognising the child's emotions as important, even when they are negative.
- *Joint activity*: Using play as a natural context for interaction and neural synchronisation.
- *Emotional competence of parents*: Developing adults' own psychological well-being as a prerequisite for child health.

Understanding the neurobiological foundations of parenting enables parents to move from intuitive responses to the conscious shaping of their children's healthy development. Emotional connections are not only a source of psychological comfort. They are also an investment in the intellectual and social capital of the next generation.

Emotional communication between parents and children is crucial in early life, yet little is known about its neural basis. This article suggests that a child's relationship with their mother affects the emotional quality of their social interactions. As a social species, humans naturally share their emotional states with others. Emotions influence the neural connections between two people. The strength of this effect is closely associated with the level of trust between individuals. It can apply to various relationships, including romantic partners, close friends, and siblings.

6. Conclusion

Understanding the importance of emotional connections between parents and children represents only the initial stage. This article provides practical recommendations for parents and other adults who engage with children. It also emphasises the tools that can strengthen this bond. They involve active listening, empathy, joint activities, and self-expression techniques.

In particular, emotional bonding is defined as a continuous process that requires effort and commitment from both sides. When parents invest time and energy in building strong emotional connections, they enable their children to grow into confident, resilient, and goal-oriented individuals.

Therefore, such emotional ties serve as the foundation for an individual's entire life. This article suggests that this concept relies on emotional and neurobiological aspects. By nurturing such relationships, parents simultaneously support the well-being of their children and contribute to the health of society.

Statement on the Use of Artificial Intelligence

The authors recognise that artificial intelligence (ChatGPT, OpenAI) was used to improve language clarity and facilitate online research. The authors alone conducted the final analysis, interpreted the results, and drew all scientific conclusions.

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