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Traditional Art Activities as a Neuroscience-Based Counseling Approach to Foster Emotional Development in Early Childhood

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This study aims to analyze the use of traditional art activities as an art-based counseling approach from a neuroscience perspective to support emotional development in early childhood. The research employed a qualitative approach using a systematic literature review method by examining relevant scientific articles, books, and research reports on art-based counseling, neuroscience, and early childhood emotional development. The findings indicate that traditional art activities function as an effective non-verbal medium that enables children to express, understand, and regulate their emotions through symbolic and creative processes. From a neuroscience perspective, creative art activities stimulate the interaction between the limbic system and the prefrontal cortex, which plays a significant role in emotional processing and regulation. Furthermore, integrating traditional art into counseling practices enhances children's engagement and strengthens cultural identity by combining emotional, cognitive, and cultural aspects in a holistic learning experience. This study concludes that traditional art-based counseling grounded in neuroscience is an innovative and contextual approach to fostering emotional development in early childhood. The findings have important implications for developing creative, culturally responsive, and scientifically grounded counseling strategies in early childhood education.

Keywords: early_childhood; emotional_development; neuroscience-based_counseling; traditional art activities

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INTRODUCTION

Early childhood is a highly important stage in human development because this period is characterized by rapid growth in various aspects, including cognitive, social, and emotional development (Imron, 2023). Developmental experts argue that experiences acquired during the early years of life greatly influence the formation of brain structures and functions related to learning abilities, social behavior, and emotional regulation (Immordino-Yang et al., 2018). Therefore, appropriate stimulation during early childhood is essential to optimally support children's emotional and social development.

One of the developmental aspects that plays an important role during early childhood is emotional development (Krisnaningsih et al., 2024). Children's ability to recognize, understand, and manage emotions serves as the foundation for the development of social skills and the ability to adapt to their environment (Syahrul & Nurhafizah, 2021). Children who possess good emotional regulation skills tend to build positive social relationships, demonstrate empathy, and show better readiness for learning (Denham et al., 2020). However, early childhood children often experience difficulties in expressing their feelings verbally because their language abilities are still developing. This condition causes children to require alternative media to express their emotional experiences more freely and naturally.

One approach considered effective in helping children express emotions is through art activities (Nada salwa et al., 2022). Art activities provide children with opportunities to express their feelings through colors, shapes, symbols, and creative processes without having to rely entirely on verbal language abilities (Saputra, Basri, & Aryesha, n.d.). Through art activities, children can channel their emotions while simultaneously developing creativity and social skills (Halim et al., 2023). Research shows that artistic expression can help improve children's emotional well-being and reduce the stress and anxiety they experience (Basri et al.,

2023). In addition, art activities can also help children develop self-expression skills and improve social interaction with their surrounding environment (Saputra, Basri, Kharizmi, et al., n.d.).

In the context of guidance and counseling, the use of art media is known as an *art-based counseling* or *art therapy* approach. This approach utilizes various creative activities such as drawing, painting, and creating artworks as a means of helping individuals express emotional and psychological experiences that are difficult to communicate verbally. (Rizki et al., 2024). For early childhood children, this approach is highly relevant because the creative processes involved in art activities can create a safe and enjoyable environment for children to express their feelings (Oelfy et al., 2018).

From a neuroscience perspective, art activities are closely related to brain processes involved in emotional regulation (Sai'in et al., 2023). Creative activities are known to engage various areas of the brain associated with emotional processing, imagination, and sensory integration (Sofyan et al., 2024). This process can help strengthen the connectivity between the limbic system, which plays a role in emotional processing, and the prefrontal cortex, which functions in emotional regulation and decision-making (Immordino-Yang, 2025). Therefore, art activities not only serve as media for creative expression but also possess a scientific foundation in supporting children's emotional development through brain functioning mechanisms.

In addition to modern or general art, traditional art activities also have great potential to be utilized in the context of early childhood education and counseling (Rahmasari et al., 2023). Traditional art activities such as making handicrafts, drawing cultural motifs, or engaging in other local art practices can serve as media that not only develop children's creativity but also introduce cultural values to younger generations (Basri et al., n.d.). The integration of traditional art into learning and counseling activities can create

more meaningful learning experiences because it simultaneously involves emotional, cognitive, and cultural aspects (A. Saputra et al., 2025).

Several previous studies have shown that *art therapy* provides benefits in improving children's emotional and psychological well-being. Research by (Zhou et al., 2025) demonstrated that art-based interventions are capable of improving emotional regulation and reducing symptoms of stress and anxiety among children and adolescents. Other studies have also found that art activities can help children express emotions that are difficult to communicate verbally while simultaneously enhancing their social skills (H. Saputra et al., 2019). Nevertheless, most of these studies still focus primarily on the use of art in general as a medium for therapy or learning.

Based on the review of previous studies, there remains a research gap that requires further investigation. Most studies have primarily emphasized the benefits of art in enhancing children's creativity or emotional well-being; however, only a limited number of studies have specifically examined the integration of traditional art activities with neuroscience-based counseling approaches in the context of early childhood emotional development. In other words, the relationship between traditional art activities, counseling approaches, and neuroscience perspectives in supporting children's emotional development has not yet been comprehensively explored.

In response to this gap, the present study seeks to examine the use of traditional art activities as a neuroscience-based counseling approach to support emotional development in early childhood. The novelty of this study lies in the integration of traditional art activities, art-based counseling approaches, and neuroscience perspectives in understanding the processes underlying children's emotional development. Therefore, this study not only expands the discourse on *art-based counseling* but also provides a new perspective on the utilization of traditional art as a counseling

strategy grounded in scientific understanding of children's brain development.

In line with this objective, the study aims to analyze how traditional art activities can be utilized as a neuroscience-based counseling approach in supporting emotional development during early childhood. The findings of this study are expected to contribute to the development of more innovative and contextual guidance and counseling approaches in early childhood education.

METHODS

This study employed a qualitative approach using a literature review method to analyze the utilization of traditional art activities as a neuroscience-based counseling approach in supporting emotional development in early childhood. The research data were obtained from various scientific sources, including journal articles, academic books, and research reports relevant to the topic of the study.

The literature search was conducted through academic databases such as Google Scholar, Scopus, and ScienceDirect using the keywords *art therapy*, *art-based counseling*, *traditional art activities*, *neuroscience and emotional development*, and *traditional art in early childhood education*. The selected literature consisted of publications from 2015 to 2025, available in full-text form, and related to early childhood emotional development, neuroscience, and traditional art activities.

The data were analyzed using content analysis techniques to identify and synthesize the major themes related to the relationship between traditional art activities, art-based counseling, neuroscience perspectives, and emotional development in early childhood. The results of the analysis were then used to develop a conceptual understanding of the utilization of traditional art activities as a neuroscience-based counseling approach in early childhood education.

RESULTS AND DISCUSSION

Based on the results of the literature review conducted on various relevant scientific sources, it was found that art activities play an important role in supporting emotional development in early childhood (R. J. Saputra, Basri, & Aryesha, n.d.). The analysis of the literature indicates that art activities not only function as creative learning activities but can also be utilized as counseling media to help children express and manage their emotions (Fitri et al., 2024). Furthermore, from a neuroscience perspective, creative activities in art are closely related to brain processes involved in emotional regulation and children's social development (R. J. Saputra, Basri, Kharizmi, et al., n.d.). The synthesis of previous studies is presented in Table 1.

Table 1. Synthesis of Previous Studies

Author(s)	Research Focus	Main Findings
Malchiodi (2020)	Art therapy in the context of child psychology	Art therapy helps children express emotions and improve psychological well-being.
Denham et al. (2020)	Development of children's emotional competence	Emotional regulation is an important factor in children's social and academic development.
Kohli et al. (2025)	Artistic expression and children's emotional well-being	Art activities enhance self-expression and reduce stress in children.
Zhou et al. (2025)	The effectiveness of art therapy for children and adolescents	Art therapy has been proven to improve emotional regulation and

Author(s)	Research Focus	Main Findings
Fernando et al. (2025)	Art therapy in early childhood education	Art activities improve children's ability to express emotions.

Based on the table above, it can be concluded that various studies have demonstrated the benefits of art activities in supporting children's emotional development. However, most previous studies have primarily focused on the use of art in general as a medium for therapy or learning. Consequently, studies examining the utilization of traditional art activities within a neuroscience-based counseling approach remain relatively limited.

The results of the literature review indicate that art activities, particularly traditional art, play a strategic role in supporting emotional development in early childhood through mechanisms of symbolic expression, neurological stimulation, and the reinforcement of cultural contexts. These findings directly address the focus of this study, namely how traditional art activities can be utilized as a neuroscience-based counseling approach to support children's emotional development.

Conceptually, traditional art activities function as effective non-verbal communication media for early childhood children. During the early stages of development, children's verbal abilities are still limited, causing them to experience difficulties in expressing emotions directly. Under such conditions, art activities provide symbolic spaces that enable children to express emotional experiences through colors, shapes, movements, and cultural symbols. In line with (Putri & Pamungkas, 2023) creative processes in art can help children reduce emotional pressure and improve psychological well-being. However, this study demonstrates that traditional art possesses more complex dimensions compared to general art activities

because it contains cultural elements closely connected to children's social experiences (Hartono et al., 2022). In other words, the effectiveness of traditional art lies not only in its creative activities but also in the emotional attachment and cultural identity embedded within it.

From a neuroscience perspective, children's involvement in traditional art activities is closely associated with the concept of *neuroplasticity*, namely the brain's ability to form and strengthen neural connections in response to experiences and environmental stimulation (Sai'in et al., 2023). During early childhood, the brain is in a developmental phase that is highly sensitive to emotional and sensory experiences. Repeated engagement in traditional art activities can strengthen neural pathways related to creativity, attention, emotional regulation, and social interaction (Basri & Triyanto, 2017). These findings reinforce the argument of (Rosmiani et al., 2025) that meaningful emotional experiences play a significant role in shaping the development of children's brain functions. Nevertheless, this study provides a new emphasis by suggesting that contextual and culturally based emotional experiences possess stronger neurological stimulation potential compared to abstract and universal learning experiences.

Art activities are also associated with the release of dopamine, a neurotransmitter involved in the brain's reward system, motivation, and emotional responses. When children engage in enjoyable art activities, the brain produces dopamine, which generates feelings of comfort, safety, and happiness. This condition is highly important in early childhood counseling processes because positive emotions can increase children's engagement in learning activities and help reduce anxiety.

(Nasution et al., 2023) explained that artistic activities are capable of activating the brain's reward system, thereby enhancing intrinsic motivation and individuals' emotional well-being. In the context of this study,

traditional art has the potential to generate deeper emotional responses because such activities not only provide aesthetic experiences but also create a sense of cultural closeness and familiar social experiences for children. This finding indicates that cultural factors play an important role in strengthening positive emotional responses during the creative process.

Furthermore, traditional art activities also involve *sensory integration* processes, namely the brain's ability to receive, organize, and interpret various sensory stimuli simultaneously. Activities such as creating traditional handicrafts, playing traditional musical instruments, or drawing cultural motifs involve visual, auditory, kinesthetic, and tactile coordination at the same time.

These processes help children develop sensorimotor coordination, attention focus, and the ability to understand and respond adaptively to their environment. According to (Lubis et al., 2025), optimal sensory integration is closely related to the development of emotional regulation and children's social behavior. Therefore, traditional art activities not only function as media for emotional expression but also serve as neurological stimulation that supports the integrated development of children's sensory and cognitive functions.

Furthermore, traditional art activities are associated with the formation of *emotional regulation pathways*, namely neurological pathways involved in emotional management (Sukadari, 2020). Creative activities are known to strengthen the relationship between the limbic system, which functions as the center of emotional processing, and the prefrontal cortex, which is responsible for self-control, decision-making, and behavioral regulation. When children engage in creative processes, they learn to recognize emotions, manage frustration, control impulses, and express feelings more adaptively.

These experiences help children gradually develop emotional regulation skills through enjoyable and safe experiences. In this

context, traditional art possesses particular advantages because the creative processes involved are often collaborative and include social interaction. As a result, children not only learn to manage their personal emotions but also develop an understanding of others' emotions.

Compared to previous studies, most research has still positioned art merely as a medium for therapy or creativity development without explaining the underlying neurological mechanisms. For example (Zhou et al., 2025), emphasized the effectiveness of *art therapy* in reducing stress and anxiety but provided limited explanation regarding how such processes occur within children's brain systems. Meanwhile, Kohli et al. (2025) focused more on artistic expression as a means of improving emotional well-being without considering the influence of cultural context on the effectiveness of art interventions. Therefore, this study offers a new perspective by demonstrating that the effectiveness of traditional art in supporting children's emotional development is influenced not only by creative processes but also by neurological involvement, sensory experiences, and the cultural closeness experienced by children during these activities.

The findings of this study also indicate that children's emotional development is the result of a complex interaction between biological, psychological, and socio-cultural factors. This emphasizes that counseling approaches focusing solely on psychological aspects are insufficient to comprehensively explain children's emotional development. In the context of early childhood education, the integration of traditional art and neuroscience provides a more holistic approach because it connects emotional experiences, brain stimulation, and children's cultural environments within a meaningful learning process.

Nevertheless, this study has limitations because it is based on a literature review and therefore has not been able to demonstrate the empirical effectiveness of this approach in

practice. Most of the reviewed studies also originated from different cultural contexts, indicating that the implementation of traditional art in early childhood counseling still requires further investigation according to local cultural characteristics. Therefore, future research is recommended to conduct empirical studies on the influence of traditional art activities on children's emotional regulation using neuroscience approaches, such as behavioral observation, emotional response measurement, or brain activity analysis. In this way, the relationship between traditional art activities and children's emotional development can be explained in a deeper and more scientific manner.

CONCLUSION

Based on the results of the literature review, it can be concluded that traditional art activities make a significant contribution to supporting emotional development in early childhood. Through creative processes, children are provided with opportunities to express emotions, experiences, and feelings symbolically, thereby helping them better understand and manage their emotions. For early childhood children whose verbal abilities are still developing, art activities can serve as effective non-verbal communication media because they create a learning and counseling environment that is safer, more comfortable, and more enjoyable.

From a neuroscience perspective, children's involvement in traditional art activities is associated with various neurological processes that support emotional development. Creative activities can stimulate the functioning of the limbic system and the prefrontal cortex, both of which play important roles in emotional processing and regulation. In addition, artistic activities are also related to *neuroplasticity* processes, sensory integration, the formation of emotional regulation pathways, and the release of dopamine, which influences children's motivation and emotional responses. These findings indicate that

traditional art possesses not only educational and cultural functions but also contributes to the development of brain functions and children's emotional well-being.

The findings of this study also reveal that traditional art holds added value because it contains cultural elements closely connected to children's social lives. Children's involvement in culturally based art activities can strengthen emotional experiences, enhance self-confidence, and support the formation of social and cultural identity from an early age. Therefore, the effectiveness of traditional art in supporting children's emotional development is influenced not only by creative processes but also by sensory experiences, neurological involvement, and the cultural context accompanying such activities.

Overall, this study confirms that traditional art activities can be utilized as an innovative and holistic neuroscience-based counseling approach in early childhood education. The integration of art, culture, and neuroscience provides opportunities for the development of more contextual, creative, and scientifically grounded guidance and counseling approaches to support emotional development and psychological well-being in early childhood.

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