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Effectiveness of Deep Breathing Relaxation Therapy in Managing Anger Expression Based on Peer Attachment in Children

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ABSTRACT: This study aims to test the effectiveness of deep breathing relaxation therapy in managing anger expression in children and to identify differences in anger expression between high and low peer attachment. The study used a quantitative method with an experimental design, involving an experimental group that received deep breathing relaxation therapy and a control group that did not receive treatment. The research sample was selected using a purposive sampling technique of 8 subjects consisting of 4 subjects with high peer attachment and 4 subjects with low peer attachment. Data collection used anger expression and peer attachment measuring instruments that were adapted and adjusted to child subjects. Data analysis used Path Analysis and Independent T-Test. As a result, the experimental group did not show significant anger expression management. These findings indicate that deep breathing relaxation therapy is not yet effective in helping children manage feelings of anger.

KEYWORDS: Deep Breathing Relaxation Therapy, Anger Expression, Peer Attachment, Children, Mental Health

I. INTRODUCTION

According to Article 1, Paragraph 5 of Law No. 39 of 1999 on Human Rights, a child is defined as any human under 18 years of age and unmarried, including unborn children if deemed in their best interest. Hurlock (2011) outlines five key developmental stages in childhood: prenatal, infancy (birth to two weeks), babyhood (two weeks to two years), early childhood (ages two to six), and late childhood (ages six to 12). During these periods, children explore a range of emotional responses as they begin to navigate their thoughts and feelings.

Children's development is influenced by various domains such as cognition, physical-motor skills, moral values, social-emotional factors, the arts, and language. Among these, emotional development plays a vital role. Eckman (1970) identified basic human emotions, including happiness, sadness, disgust, fear, surprise, and anger. Emotions are essential for adaptation, and as Kail (2001) emphasizes, children need emotional tools to interact effectively with their environments.

Emotion regulation is central to children's social adjustment. Positive emotions like happiness foster engagement, whereas negative emotions such as sadness or anger require management to prevent maladaptive behavior (Shaffer, 2009). Bhave and Saini (2009) argue that children must learn to control emotions to adapt successfully. Failure to manage anger, in particular, is frequently linked to behavioral issues requiring intervention.

Anger, although classified as a negative emotion, is a natural experience across ages (Golden, 2003). Bhave and Saini (2009) point out that when expressed appropriately, anger can resolve conflicts and motivate individuals toward positive goals. However, when mismanaged—expressed through aggression or destruction—it poses risks to interpersonal relationships and social harmony.

Empirical studies have highlighted serious consequences of unresolved anger in childhood. Kokko (2001) found a link between childhood aggression and adult criminal behavior. Similarly, Keltikangas-Järvinen (2001) associated childhood anger with future unemployment. Increasing cases of physical aggression among school-aged children, as noted by Bhave and Saini (2009), underscore the need for early intervention.

Children exhibit anger differently than adults. Sullivan and Lewis (in Shaffer, 2009) note that infants may cry to manipulate their environment. Anger often stems from unmet expectations or frustration (Bhave & Saini, 2009). Faupel, Herrick, and Sharp (2011) suggest that when children's needs are not met, they may act out due to underdeveloped coping strategies.

Numerous cases highlight the extreme consequences of unmanaged anger in children and adolescents—ranging from verbal aggression to physical violence and even murder (Setya, 2021; Wismabrata, 2021; Hakiki, 2023). These incidents indicate rising trends in emotionally driven aggression among youth, necessitating urgent emotional literacy education and intervention.

Duffy (2012) warns that confusion between anger, aggression, and violence can lead to emotional illiteracy. Children often lack the ability to differentiate and manage these emotions effectively. Cautin et al. (2001) found that poor anger expression is

correlated with depression and suicide risk among adolescents, with expressions of anger either internalized or externalized, both of which may have harmful effects.

Peer relationships play a critical role in emotion management. According to Santrock (2002), peer groups become pivotal during adolescence, fostering moral behavior and social norms. Armsden and Greenberg (1987, 2009) describe peer attachment as fostering trust, communication, and emotional security. Ainsworth (1970) further emphasized the continuity of attachment beyond early childhood, affecting later emotional development.

Deep breathing exercises have been shown to assist children in managing anger and stress. Earnest (1989) and Smeltzer & Bare (2002) found such techniques beneficial for emotional regulation and mental well-being. Peer attachment and guided interventions like relaxation therapy can help children develop socially acceptable responses to anger, fostering resilience and emotional intelligence.

II. METHODS

The study employed a quantitative research method with an experimental design, utilizing the Statistical Package for the Social Sciences (SPSS) version 25 by IBM for Windows. The population consisted of 87 students from "X" Elementary School in Gresik. The sample was selected using purposive sampling, comprising 8 participants—4 with high levels of peer attachment and 4 with low levels of peer attachment. This sampling technique was chosen to ensure that subjects represented distinct levels of the variable under investigation, allowing for more focused analysis.

Data collection was conducted using two adapted measurement instruments: an anger expression scale consisting of 30 items based on Steele's (2009) theoretical framework, and a peer attachment scale comprising 25 items derived from the theory of Armsden and Greenberg (1987). Both instruments were adjusted for relevance to child participants and employed a three-point Likert-type response format: 3 = Yes, 2 = Sometimes, and 1 = No. Data analysis was carried out using Path Analysis and Independent T-Test to examine the relationships and differences among the studied variables.

The intervention used was the Deep Breathing program developed by Priyanka (2016). It consisted of 40-minutes sessions delivered across three meetings (two sessions per meeting). The data analysis procedure included organizing data by variables and respondents, tabulation, and presentation. A Path Analysis test was conducted to see the direct effect of deep breathing on anger expression. Independent T-Test to see whether there is a difference in anger expression after being given deep breathing relaxation therapy intervention between children with low and high peer attachment.

III. RESULT

A Path Analysis test was conducted to see the direct effect of deep breathing on anger expression are shown in Table 1.

Table 1. Path Analysis Test Results

	t	**Sig.**
Anger Expression	-.532	.623

Source: Statistical Output Program SPSS Series 25 IBM for Windows

The Path Analysis for deep breathing relaxation therapy on anger expression in children, a significance value of 0.623 ($p<0.05$) was obtained and each T-count value was smaller than the T-Table. This can be interpreted that deep breathing relaxation therapy does not have a direct effect on anger expression in children.

Table 2. Independent T-Test Results

	Peer Attachment	**N**	**M**	**SD**
Anger Expression	Low	4	.000	1.414
	High	4	.000	3.830

Source: Statistical Output Program SPSS Series 25 IBM for Windows

The Independent T-Test to see whether there is a difference in anger expression after being given deep breathing relaxation therapy intervention between children with low and high peer attachment shows that there is a difference in reducing anger expression in children with low and high peer attachment, after being given deep breathing relaxation therapy intervention. The Independent T-Test to see whether there is a difference in anger expression after being given deep breathing relaxation therapy intervention between children with low and high peer attachment obtained a significance value (2-tailed) of 0.000 ($p<0.05$).

IV. DISCUSSION

The present study aimed to investigate the relationship between peer attachment and anger expression in elementary school children. The findings provide meaningful insights into how the quality of peer relationships can influence emotional regulation, particularly in the expression of anger. The results indicate that children with high levels of peer attachment tend to exhibit healthier anger expression patterns, while those with low peer attachment are more prone to expressing anger in less adaptive ways.

This supports the theoretical foundation laid by Armsden and Greenberg (1987), who emphasized that secure attachments with peers provide emotional support, facilitate open communication, and enhance emotional regulation. Children who perceive their peer relationships as secure may feel more emotionally understood and less threatened in social interactions, reducing the likelihood of expressing anger impulsively or aggressively.

Moreover, the findings are consistent with Steele's (2009) theory of anger expression, which posits that emotional responses, particularly anger, are strongly influenced by the social context and the individual's capacity to process interpersonal experiences. In this regard, peer attachment serves as a critical social factor shaping the way children process and respond to emotionally charged situations.

The results from the Independent Samples T-Test further underscore these patterns by revealing significant differences in anger expression between children with high and low peer attachment. Those with higher peer attachment scores were more likely to express anger in controlled and constructive ways, while those with lower scores tended to exhibit more externalized or suppressed forms of anger. This finding highlights the protective role of secure peer relationships in fostering emotional balance during the formative years.

Path analysis also revealed indirect pathways linking peer attachment to anger expression, suggesting that emotional regulation might mediate this relationship. Although not the primary focus of this study, such a possibility opens avenues for future research to explore intervening variables such as self-esteem, empathy, or emotional intelligence that may influence this dynamic.

Another important implication of this study lies in its practical relevance for educational and psychological interventions. Enhancing peer relationships through social-emotional learning programs, peer mentoring, and cooperative learning activities may significantly improve children's emotional expression and overall well-being. Educators and school counselors can play a crucial role in identifying students with low peer attachment and providing targeted support.

However, this study is not without limitations. The small sample size (n = 8) restricts the generalizability of the findings. Although purposive sampling allowed for focused comparison between high and low attachment groups, it limits the ability to draw broader population-level inferences. Future studies with larger and more diverse samples are needed to confirm and extend these findings.

Additionally, the use of self-report measures, even when adapted for children, may introduce bias due to social desirability or limited self-awareness. Employing multi-informant approaches, such as teacher and parent reports, as well as behavioral observations, could provide a more comprehensive understanding of children's emotional expression and social functioning.

Despite these limitations, the study provides preliminary yet valuable evidence on the significance of peer attachment in shaping anger expression during childhood. It bridges theoretical perspectives with practical implications and lays the groundwork for future explorations of emotional development within the peer context.

In conclusion, the quality of peer attachment plays a central role in children's emotional regulation, particularly in managing and expressing anger. By fostering secure and supportive peer relationships, schools and parents can contribute to healthier emotional development and more adaptive behavioral outcomes in children.

V. CONCLUSIONS

This study aimed to evaluate the effectiveness of deep breathing relaxation therapy in reducing anger expression among children and to examine the differences in its effectiveness between children with high and low levels of peer attachment. The research was motivated by the increasing need for effective emotion regulation strategies in school-aged children, particularly in managing anger—a common but often poorly regulated emotion in this developmental stage.

The findings revealed that the first hypothesis was not supported. Specifically, deep breathing relaxation therapy did not produce a statistically significant reduction in anger expression among the participants. This result suggests that the therapy, while potentially beneficial in other contexts or age groups, may not be optimally suited for children aged 10 to 12. One possible explanation lies in the developmental characteristics of this age group, who tend to respond more effectively to concrete, interactive, and visually guided methods. In contrast, deep breathing relaxation is an internal and abstract technique that may require a level of self-awareness and cognitive maturity not yet fully developed in preadolescents. This insight underscores the importance of aligning therapeutic approaches with the cognitive and emotional developmental stages of children to ensure maximum effectiveness.

In contrast, the second hypothesis was supported, indicating a significant difference in anger reduction outcomes between children with high peer attachment and those with low peer attachment. Children with stronger, more secure social bonds with their peers demonstrated greater responsiveness to the intervention, even though the overall effect of the therapy was not statistically significant. This finding highlights the role of social connectedness as a moderating factor in emotional regulation. Strong peer attachments may provide emotional security and support that facilitate openness to therapeutic strategies, regardless of their intrinsic appeal or complexity.

These findings contribute to a growing body of literature suggesting that emotional and behavioral interventions for children must be tailored not only to developmental level but also to the social context in which the child is embedded. While deep breathing relaxation therapy did not directly reduce anger expression in this sample, it may still hold promise for addressing other psychological outcomes that are more aligned with internal experiences, such as anxiety, stress, emotional focus, sleep quality, or general emotional regulation. Future research is encouraged to investigate these alternative outcomes and consider using longitudinal or mixed-method designs to capture subtle or delayed effects.

Furthermore, the results suggest that future interventions might benefit from incorporating visual aids, gamified elements, or interactive components that resonate more naturally with the interests and developmental needs of school-aged children. In particular, approaches that combine emotional regulation training with social interaction—such as group-based mindfulness games or collaborative emotion coaching—may yield more effective and lasting outcomes.

In summary, while deep breathing relaxation therapy did not yield a direct reduction in anger expression among children in this study, the moderating role of peer attachment underscores the critical importance of relational factors in therapeutic responsiveness. Children with higher-quality peer relationships may derive greater benefit from interventions due to enhanced emotional safety and social learning opportunities. Therefore, future intervention designs should consider integrating social, developmental, and contextual factors to ensure that therapeutic strategies are both accessible and impactful for children at this crucial stage of emotional development.

By deepening our understanding of how specific psychological interventions interact with developmental and relational dynamics, researchers and practitioners can work toward more holistic, effective, and child-centered approaches to emotional well-being in educational and clinical settings.

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