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Concentration Obstacles and High Mobility Behavior in a Senior Kindergarten Student: A Case Study

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ABSTRACT

This study aims to provide an in-depth analysis of inattentive behavior and high mobility in a Kindergarten B child during classroom learning activities. The study was conducted using a qualitative case study approach at TK Strada Budi Luhur from November 10 to December 2, 2025. Data were collected through naturalistic classroom observations, in-depth interviews with teachers and family members, and supporting documentation. The findings indicate that the child exhibited a very short attention span and frequent walking behavior, particularly during activities requiring sustained concentration and fine motor skills. The walking behavior functioned as a response to task difficulty, boredom, and sensory needs. Family environmental factors, especially parental emotional conditions and limited home stimulation, also influenced the child's self-regulation. Simple classroom strategies such as seating adjustments and structured sensory breaks were effective in reducing high mobility behavior. This study contributes practical and theoretical insights for early childhood educators in addressing attention difficulties through contextual and responsive interventions.

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1. INTRODUCTION

Attention to concentration barriers and high mobility behavior in early childhood is critical, as the prevalence of attention and hyperactivity-related problems remains significant across many countries and has led to increased demand for educational and health services. International reviews and meta-analyses indicate that attention-deficit and hyperactivity-related behaviors are reported cross-nationally and carry substantial educational implications. Difficulties in attention regulation and excessive mobility during the preschool period are associated with lower academic achievement and a higher risk of socio-emotional problems later in life. Consequently, the burden on educational and healthcare systems may increase when early detection and support services are unavailable or inaccessible.

In many contexts, underdiagnosis and unequal access to diagnostic and intervention services persist, particularly in low- and middle-income regions. International organizations and policy reports emphasize the importance of inclusive early childhood education and early detection mechanisms to minimize long-term developmental impacts. Children who frequently stand up or walk around the classroom not only experience disrupted learning themselves but may also interfere with peer concentration and classroom dynamics. Global evidence linking off-task behavior to learning outcomes reinforces the need for contextual research that produces culturally relevant and practical solutions.

From a theoretical perspective, attention difficulties and high mobility behavior can be explained through executive function (EF) and self-regulation frameworks, which emphasize the roles of attentional control, working memory, and inhibitory control in goal-directed behavior. Developmental neuroscience highlights the preschool and early school years as a sensitive period for rapid executive function development. Weaknesses in working memory or inhibitory control may manifest as difficulty sustaining attention or as off-task behaviors such as leaving one's seat or walking around the classroom.

Self-regulation models emphasize the interaction between biological factors (e.g., neurodevelopmental vulnerability), parenting practices, and classroom environments in shaping children's attention regulation. These frameworks support the use of executive function measures, structured observations, and multi-informant reports (teachers, parents, caregivers) to comprehensively assess children's behavior. Recent intervention reviews indicate that programs targeting executive function and behavioral regulation can enhance engagement and learning outcomes in preschool-aged children. Importantly, EF-based approaches offer non-pharmacological interventions feasible for school settings, including structured attention exercises, classroom environment adaptations, and teacher training.

This case study is particularly important because the child's behavior reflects not merely general activity but patterned responses influenced by classroom environmental conditions. The child did not walk randomly but consistently moved toward specific locations such as windows, doors, or the teacher's desk, suggesting an orienting response to specific stimuli. The child's extremely short

attention span (1–3 minutes) indicates a mismatch between task demands and the child's self-regulatory capacity. Interestingly, the child maintained attention longer during movement-based or musical activities, suggesting a strong kinesthetic learning preference. These behavioral patterns provide rich micro-level data on the relationship between activity type and child engagement, offering valuable insights for responsive early childhood pedagogy.

2. LITERATURE REVIEW

2.1 Early Childhood Education Context

Early childhood education emphasizes developmentally appropriate, child-centered learning that supports cognitive, social, emotional, and physical development. Classroom environments, family involvement, and teaching strategies play a critical role in shaping children's learning behavior.

2.2 Review of International Qualitative Studies

International qualitative studies have increasingly emphasized that attention difficulties and high mobility behavior in early childhood are context-dependent rather than purely behavioral problems. Classroom-based qualitative research shows that children's off-task behaviors, such as leaving their seats or frequent movement, often emerge in response to task demands that exceed their self-regulatory capacity and are influenced by classroom structure and teacher interactions. Studies have also found that movement and sensory-seeking behaviors can function as adaptive strategies that help children regulate attention, particularly when learning activities are highly sedentary or cognitively demanding.

In addition, qualitative research highlights the influence of family context on children's attention regulation. Caregiver emotional availability, daily routines, and home stimulation have been shown to shape the development of executive function and self-regulation, which are reflected in classroom behavior. Despite these insights, existing studies often examine attention difficulties or high mobility separately and provide limited perspectives from non-Western contexts. This gap underscores the need for in-depth qualitative case studies that integrate classroom dynamics and family factors, as undertaken in the present study.

3.2 Conceptual or Theoretical Framework

This study is grounded in executive function and self-regulation frameworks, which explain how children's ability to control attention, inhibit impulsive responses, and manage working memory supports engagement in learning activities. In early childhood, these regulatory capacities are still developing and are highly influenced by classroom demands, sensory stimulation, and emotional support from adults. When task requirements exceed a child's regulatory capacity, behaviors such as frequent movement or leaving one's seat may emerge as adaptive responses rather than intentional misbehavior. By using this framework, the study interprets high mobility behavior as a functional indicator of regulatory challenges shaped by the interaction between individual developmental readiness, instructional practices, and family context.

3. METHODOLOGY

3.1 Research Design

This study adopted a qualitative case study design to explore attention difficulties and high mobility behavior in an early childhood classroom context. The case study approach was chosen because it allows for an in-depth and contextualized examination of a specific phenomenon within its real-life setting. This design is particularly suitable for capturing children's learning behaviors, as well as teachers' and caregivers' perceptions and interpretations, in a natural classroom environment. By focusing on a single case, the study was able to gain a detailed understanding of how attention difficulties and movement behavior emerge and function during daily kindergarten learning activities.

3.2 Participants and Research Context

The research was conducted in a Kindergarten B classroom at TK Strada Budi Luhur. The primary participant was one kindergarten child who consistently demonstrated attention difficulties and frequent walking behavior during learning activities. Supporting participants included the classroom teacher and family members who were closely involved in the child's daily learning and care. Participants were selected using purposive sampling to ensure their relevance to the research focus. The kindergarten context provided a structured learning environment that required sustained attention and fine motor engagement, making it suitable for examining the phenomenon under study.

3.3 Data Collection Methods

Qualitative data were collected through naturalistic classroom observations, in-depth semi-structured interviews, and document analysis. Classroom observations focused on the child's attention span, frequency of movement, and behavior during different learning activities. Interviews were conducted with the teacher and family members to gain insights into their perspectives on the child's behavior and learning experiences. Document analysis included teacher notes and behavioral records that supported observational and interview data. Data collection was carried out over a two-week period, allowing for a rich and contextual understanding of the child's learning behavior.

3.4 Data Analysis Techniques

The data were analyzed using thematic analysis. The analysis process involved data familiarization, initial coding, categorization, and the development of themes that represented patterns across the data. Data from observations, interviews, and documents were triangulated to enhance credibility and ensure consistency of findings. Trustworthiness was further supported through member checking with the teacher to confirm the accuracy of interpretations and conclusions.

3.5 Ethical Considerations

Ethical considerations were carefully addressed throughout the study. Informed consent was obtained from all participants prior to data collection. Participation was voluntary, and participants were informed of their right to withdraw at any time without consequences. Confidentiality and

anonymity were ensured by using pseudonyms and securely storing all research data. The study was conducted in accordance with ethical standards for qualitative research in early childhood education.

4. FINDINGS

The findings revealed clear patterns of attention difficulties during classroom learning activities. The child demonstrated a very limited attention span, particularly during activities that required sustained sitting and concentration, such as worksheet completion and fine motor tasks. The child frequently shifted focus away from the assigned task, showed difficulty following multi-step instructions, and required repeated prompts from the teacher to re-engage in learning activities.

High mobility behavior emerged consistently as a prominent feature of the child's classroom behavior. The child often left their seat, walked around the classroom, or approached peers during learning time without a clear instructional purpose. This behavior occurred most frequently when tasks were perceived as challenging or monotonous, suggesting that movement functioned as a response to task difficulty and reduced engagement rather than intentional disruption.

The findings also indicated that fine motor challenges contributed to the child's attention difficulties and mobility behavior. Tasks involving writing, cutting, or drawing appeared to trigger frustration, leading the child to disengage and move around the classroom. Social interactions with peers were generally passive, with the child observing others rather than actively participating, which further reflected limited engagement during structured activities.

Family context emerged as a significant influencing factor in the child's learning behavior. Information from interviews indicated that emotional conditions within the home environment and limited structured learning stimulation affected the child's self-regulation. Inconsistent routines and reduced opportunities for guided activities at home were reflected in the child's difficulty sustaining attention and regulating movement in the classroom.

5. DISCUSSION

The findings of this study indicate that attention difficulties in early childhood are closely related to the developmental stage of executive function and self-regulation. The child's limited attention span during structured learning activities reflects immature inhibitory control and working memory, which are still developing in early childhood. This finding supports executive function theory, which emphasizes that young children require appropriate scaffolding and flexible instructional approaches to maintain engagement in cognitively demanding tasks.

High mobility behavior observed in the classroom can be understood as an adaptive response rather than intentional misbehavior. Frequent walking and leaving one's seat appeared to function as a strategy for coping with task difficulty, boredom, and sensory needs. This interpretation is consistent with international qualitative studies suggesting that movement allows children to regulate arousal and attention, particularly in learning environments that emphasize prolonged sitting and fine motor engagement.

The association between fine motor challenges and increased mobility behavior further highlights the role of task demands in shaping children's learning behavior. When tasks exceeded the child's motor and cognitive readiness, disengagement and movement increased. This finding aligns with previous research showing that frustration and cognitive overload often lead children to seek alternative forms of regulation, including physical movement or withdrawal from tasks.

Family context also played a critical role in shaping the child's self-regulation and classroom behavior. Emotional conditions at home and limited structured learning routines influenced the child's ability to sustain attention and regulate movement at school. This finding reinforces ecological perspectives that emphasize the interconnectedness of home and school environments in early childhood development and underscores the importance of collaboration between educators and families in supporting children with attention difficulties.

6. CONCLUSION

This study concludes that attention difficulties and high mobility behavior in early childhood learning are not isolated behavioral issues but are the result of complex interactions among developing executive function, task demands, sensory regulation needs, and family environmental factors. The findings demonstrate that frequent movement and difficulty sustaining attention often function as adaptive responses to learning tasks that exceed a child's developmental readiness, particularly during activities requiring prolonged sitting and fine motor control. Understanding these behaviors as meaningful indicators of self-regulatory challenges allowseducators to move beyond disciplinary approaches and adopt more responsive, child-centered strategies. The study emphasizes the importance of instructional flexibility, movement-integrated learning, and supportive classroom environments, as well as consistent collaboration between schools and families to strengthen children's self-regulation. By offering an in-depth qualitative case analysis, this research contributes to the growing body of early childhood education literature and provides practical implications for supporting children with attention difficulties in inclusive kindergarten settings.

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