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Breakfast Habits of Early Childhood Education Students: A Community-Based Poll Among PAUD Practitioners on WhatsApp

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ABSTRAK

Irregular breakfast habits in early childhood can negatively impact physical growth and cognitive development. This study aimed to examine breakfast patterns among early childhood education (PAUD) students based on educators' direct observations. A descriptive cross-sectional design was applied, involving 234 PAUD practitioners in West Java through a WhatsApp group. Data were collected using a single closed-ended question and analyzed using descriptive statistics. A total of 117 valid responses were obtained. Of these, 59.0% reported that almost all children had breakfast daily, 38.5% noted that most children had breakfast but not every day, and 2.6% observed that many children arrived without breakfast or had only a drink. None of the participants reported a lack of observation. These findings indicate that while regular breakfast habits are common, inconsistency remains among a notable proportion of children. The results provide a foundation for health promotion initiatives, such as nutrition literacy and breakfast awareness campaigns, within PAUD settings.

INTRODUCTION

Breakfast is an important aspect of a healthy diet for children, especially at an early age which is the golden age for brain growth and development (Cusick & Georgieff, 2016). Several studies have shown that breakfast has a positive impact on children's cognitive abilities, concentration, and learning behavior (Adolphus, Lawton, & Dye, 2015; Hoyland, Dye, & Lawton, 2009). Children who are accustomed to eating breakfast tend to have better academic performance and emotional stability than children who skip breakfast. However, the reality in the field shows that there are still many early childhood children who do not have good breakfast habits.

According to data from the 2018 Riskesdas, around 26.1% of school-age children in Indonesia do not eat breakfast, and the main reasons are time constraints, not having time, or not being used to it. The SEAMEO RECFON and Badan Litbangkes (2022) states that only 47% of children aged 5–12 years consume breakfast with adequate nutritional quality, and around 24% only consume drinks or snacks in the morning. Meanwhile, findings from SEANUTS II in 2022 announced nationally in 2023 showed that only 32% of children aged 2–12 years in Indonesia had a nutritionally adequate breakfast pattern (Hikmatiar, 2024).

This data is reinforced by a study by Suraya et al., (2019) which stated that around 70% of Indonesian children go to school without breakfast or only drink water. This reflects not only limited access to food in the morning, but also low family awareness of the importance of breakfast as a foundation for children's activities and learning.

Early childhood is highly dependent on the role of parents and caregivers in forming eating habits, including breakfast routines (Savage, Fisher, & Birch, 2007). In this case, early childhood education units (PAUD) play a strategic role as institutions that not only foster children's academic and social aspects, but also as direct observers of children's daily conditions, including their breakfast status before studying (Burger, 2015). Unfortunately, scientific studies that specifically evaluate breakfast habits in early childhood education in Indonesia are still limited.

Community health nurses and PAUD practitioners have a strategic position in providing a direct picture of the eating habits and nutritional intake of early childhood children (Sihombing, Ferdinan, 2024). This study was designed to explore the breakfast practices of PAUD children through direct monitoring by educators, collected through the WhatsApp digital communication platform. Community-based studies of this kind are still rare, especially those involving educators as the main data source in observing children's breakfast habits in the early childhood education environment. Through this approach, it is hoped that accurate and relevant contextual information will be obtained, so that it can strengthen the foundation for various educational programs and sustainable community-based nutrition interventions.

Despite existing research highlighting the importance of breakfast, most studies concentrate on older children, leaving a significant gap in understanding breakfast behavior among young children within early education contexts. This study addresses that gap and aims to expand the academic discourse by integrating early education and public health perspectives.

Therefore, the research question is: "What are the breakfast habits of early childhood children based on the observations of PAUD educators in a WhatsApp group?" The objective is to describe the breakfast consumption patterns observed by educators and to generate baseline data to support the development of contextual, community-based nutrition interventions for early childhood.

METHODOLOGY

This study employed a descriptive cross-sectional design aimed at obtaining a snapshot of breakfast habits among early childhood students based on the observations of PAUD (early childhood education) practitioners. The study population consisted of 234 PAUD educators who were members of a WhatsApp community group representing various regions in West Java, Indonesia. The survey was conducted from 5 to 10 July 2025.

Sampling was carried out using a total sampling technique, in which all group members who were willing to participate and actively responded to the poll were included. A total of 117 respondents submitted valid responses. Data collection was conducted through a single-item closed-ended question distributed via the WhatsApp group. The question was: "In the last 1 week, have the majority of children in your PAUD come with breakfast?" with four answer options:

Yes, almost all children have breakfast every day;
Most children have breakfast, but not every day;

*Many children come without breakfast or only drink;
I am not sure or have never observed.*

The data were analyzed using descriptive quantitative methods, calculating the frequency and percentage of each response category to illustrate the distribution of breakfast habits as perceived by PAUD educators.

Although the instrument consisted of a single-item question, this approach is supported in exploratory or preliminary studies where the construct being measured is concrete, easily observable, and unambiguous (Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser, 2012). In this case, educators were asked to report observable behavior in their daily routines with children, thus minimizing ambiguity and reducing the need for multiple indicators.

Regarding instrument validity, the question was reviewed by two public health experts and one early childhood education expert to ensure face and content validity, confirming that the item was appropriate and relevant to the study objectives. Reliability testing was not conducted due to the single-item nature of the instrument; however, this is acceptable in early-stage or rapid assessments when the item measures a specific, non-abstract behavior (Diamantopoulos et al., 2012). Future research is encouraged to develop and validate multi-item tools for a more comprehensive assessment.

RESULTS AND DISCUSSION

A. Results

The polling results (table 1) collected from 116 respondents who were part of 234 PAUD activists showed that 68 people (58.6%) stated that almost all children in their PAUD had breakfast every day. As many as 45 respondents (38.8%) stated that most children had breakfast, but not every day. Meanwhile, 3 respondents (2.6%) stated that many children came to PAUD without breakfast or only consumed soft drinks. No respondents chose the option "I'm not sure/I've never observed it".

Table 1. Distribution of Breakfast Habits Among PAUD Students Based on Responses from a WhatsApp Group Poll (n = 117)

Answer Category	Frequency (n)	Percentage (%)
Almost all children have breakfast every day	69	59.0%
Most children have breakfast but not every day	45	38.5%
Many children do not have breakfast or only drink	3	2.6%
Not sure/did not observe	0	0.0%

Source: Primary data from WhatsApp group polls, 2025

RESULTS AND DISCUSSION

The results indicate that the majority of PAUD children follow a regular breakfast routine. However, the presence of children with irregular or absent breakfast habits reveals a gap in early childhood nutrition. Such inconsistency may contribute to reduced concentration, memory, and overall learning performance. Hoyland et al. (2009) stated that children who do not eat breakfast tend to have low concentration, high irritability, and decreased academic performance. The long-term effects of

breakfast irregularity are also associated with gaps in learning outcomes and psychosocial development (Liu, Raine, Venables, & Mednick, 2004).

The findings of this study are consistent with the 2018 Riskesdas data which shows that around 26.1% of Indonesian children do not eat breakfast. Likewise, the SEANUTS II report noted that only 32% of children aged 2–12 years had breakfast that met adequate nutritional requirements (SEAMEO RECFON & Badan Litbangkes, 2022). This means that suboptimal breakfast patterns have become a national issue that occurs across age levels, including in PAUD children.

The use of the WhatsApp digital community in this study opens up new opportunities for collecting observational data from PAUD practitioners quickly and relevantly. Through this approach, educators can identify field conditions more responsively, so that the results can support health promotion strategies that directly touch the daily realities of students. This approach not only strengthens nutritional literacy efforts in PAUD environments but also fosters cross-sector collaboration in shaping healthy eating behaviors from an early age. In the context of community-based health promotion, this approach is in line with the principles of empowerment and active participation of the community (Sihombing, 2023).

The social ecology approach highlights that early childhood eating habits are shaped by the interaction of multiple factors, including family environment, cultural norms, and school policies (McLeroy, Bibeau, Steckler, & Glanz, 1988). Given this context, PAUD as the first educational institution has a strategic role in forming a healthy lifestyle, including breakfast. PAUD educators who interact directly every morning can act as observers and intervention agents.

This study did not explore the causal factors behind breakfast irregularities and did not include a qualitative approach. Further studies with mixed methods are recommended to explore family motivation and local socio-cultural contexts. However, these results can be used as an initial basis for educational interventions in PAUD through nutritional literacy programs and healthy breakfast campaigns. The use of the quick polling method via the WhatsApp platform has proven to be able to collect observational data from practitioners efficiently and contextually.

The study found that most PAUD children already have a habit of eating breakfast every day, but around 40% still show inconsistent patterns. These results indicate the need to strengthen nutritional education and parental involvement in ensuring that children get breakfast before doing activities. PAUD educators and community health nurses can be involved in intervention programs that encourage changes in healthy eating behavior from an early age.

The predominance of regular breakfast consumption (59%) among PAUD students, as reported by educators, aligns with findings from other Indonesian contexts. For example, a study in Badung Regency found that 77.9% of primary school children regularly ate breakfast, reflecting higher adherence to breakfast routines in structured school environments (Resiyanthi & Suniyadewi, 2019). Similarly, Seran and Bailaen, (2023) reported that children aged 5–6 years who consistently consumed breakfast demonstrated greater activeness, including increased participation, independence, and creativity in classroom activities. However, the lower consistency observed in the current study where 38.5% of children had irregular breakfast habits may be influenced by underlying factors such as socioeconomic status, lack of parental supervision in the morning, and logistical barriers. The findings align with Løvik Brandvik, Meshkovska, Schultz, & Garnweidner-Holme (2024), who reported that implementing nutrition

education interventions in kindergarten settings often encounters obstacles such as insufficient staff training, limited time, lack of tailored resources, and inadequate integration into daily routines

The very low percentage of respondents who reported uncertainty or non-observation suggests a high level of attentiveness among educators in monitoring student behavior. This contrasts with findings from international studies that highlight breakfast as a strong predictor of wellbeing. For instance, research published in *Frontiers in Nutrition* demonstrated a positive association between regular breakfast consumption and subjective wellbeing, cognitive performance, and emotional stability among children and adolescents (Lundqvist, Vogel, & Levin, 2019). Although the present study did not directly measure psychosocial outcomes, the consistency patterns observed suggest that irregular breakfast habits may have implications for children's attention, mood, and overall academic readiness. Therefore, future interventions should integrate both structural solutions (such as school breakfast programs) and behavioral strategies (such as routine-setting and parental involvement) to foster sustainable breakfast habits in early childhood education settings.

CONCLUSION

This study found that while most early childhood (PAUD) students have developed regular breakfast habits, approximately 40% still display inconsistent eating patterns. These findings underscore the need to strengthen nutrition education both in PAUD environments and at home. Enhancing parental involvement and supporting consistent morning routines are essential to ensure that children receive adequate nutrition before engaging in learning activities.

To address the observed breakfast inconsistencies, concrete recommendations include the integration of nutrition literacy modules into the PAUD curriculum, regular monitoring by educators regarding students' morning eating habits, and the development of collaborative programs involving schools, families, and community health nurses. Health promotion initiatives such as nutrition literacy and breakfast awareness campaigns should be embedded within PAUD settings to increase awareness and encourage behavioral improvements. Policymakers are also encouraged to implement structured breakfast promotion strategies tailored to early childhood contexts, especially in socio-economically disadvantaged areas. Through these efforts, PAUD institutions can play a strategic role in fostering sustainable healthy eating behaviors that support children's cognitive, emotional, and physical development.

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