



The Relationship Between Maternal Work Duration, Caregiver Involvement, and Picky Eating Behavior Among Toddlers Aged 1-3 Years in Bekasi City

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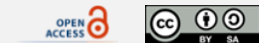
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Abstract

Picky eating behavior is a common nutritional challenge among toddlers, characterized by a strong preference for specific foods and the rejection of novel items. This study aimed to examine the relationship between maternal work duration and caregiver involvement with picky eating behavior among toddlers aged 1–3 years in Bekasi City. Employing a quantitative cross-sectional design, data were collected via online questionnaires from 174 mothers selected through convenience sampling. Data were analyzed using the Chi-square test with a 95% confidence level ($\alpha = 0.05$). The results indicated a high prevalence of picky eating (71.8%), with slightly higher proportions observed among children of mothers who worked long hours and across all caregiver involvement categories. However, statistical analysis revealed no significant relationship between maternal work duration ($p=0.255$) or caregiver involvement ($p=0.179$) and picky eating behavior. These findings suggest that picky eating is a complex, multifactorial issue not solely dictated by maternal employment hours or basic caregiver involvement metrics. In conclusion, fostering healthy eating habits requires comprehensive strategies involving both parents and caregivers. Community health practitioners must prioritize promoting responsive feeding practices and positive mealtime environments rather than merely focusing on maternal work schedules.

Keywords

Maternal work duration, Caregiver involvement, Picky eating, Toddlers

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1. BACKGROUND

Picky eating is a common eating behavior observed in young children, particularly those aged 1–3 years (toddlers). It is characterized by a tendency to prefer certain foods, reject new foods (food neophobia), and consume a

limited variety of foods (Fitriani et al., 2024). During the toddler years, children begin to develop greater independence, including the ability to choose the foods they wish to eat. As a result, picky eating behavior frequently emerges during this stage of development (Fertycia et al.,

2022). When persistent, picky eating can lead to inadequate nutrient intake and negatively affect the overall quality of a child's diet.

Globally, eating behavior problems among children remain a significant concern in efforts to improve the nutritional status of young children. According to data from UNICEF and the World Health Organization (2025), approximately 150.2 million children under five years of age worldwide experience stunting, while 42.8 million suffer from wasting. These figures indicate that ensuring adequate nutrition for children remains a major public health challenge, including issues related to eating behaviors in early childhood. A study by Qori'ah et al. (2023) found that the prevalence of picky eating among children aged 1–3 years reached 20%, and some children experienced mild to moderate malnutrition. These findings suggest that picky eating behavior may affect both dietary quality and child growth.

A variety of internal and external factors influence picky eating behavior. Internal factors include early feeding experiences, taste preferences, emotional development, and the child's health status. External factors include feeding practices, the family environment, parental involvement, and caregiver involvement in

the feeding process (Fitriani et al., 2024). Children aged 1–3 years tend to adopt eating habits practiced within their immediate environment. Therefore, caregiving practices play an important role in shaping their eating behaviors.

Social conditions in urban areas may also influence child-rearing practices. Bekasi City, as one of Indonesia's urban regions, has a relatively large working-age population, including a substantial number of working mothers. The demanding work schedules of mothers may limit the amount of time they can spend directly assisting their children during mealtimes. Long working hours may reduce mothers' involvement in meal preparation, mealtime supervision, and monitoring the variety of foods their children consume. A study by Yuanita et al. (2021) found a relationship between maternal employment status and the occurrence of picky eating among preschool children. Children of working mothers were found to be at a higher risk of developing picky eating behavior than children whose mothers were not employed.

Time constraints faced by working mothers often lead families to rely on caregivers or babysitters to assist with children's daily activities, including feeding. Caregiver involvement is an important factor in the development of

children's eating habits because caregivers interact directly with children during mealtimes. Caregivers who are less involved in feeding practices may increase the likelihood of picky eating in children. Previous studies have primarily focused on the relationships among parenting practices, maternal employment status, and picky eating behavior (Fitriani et al., 2024; Idhayanti et al., 2022). Similarly, Yuanita et al. (2021) reported a significant association between maternal employment status and picky eating among preschool-aged children. However, studies specifically examining the relationship between maternal work duration, caregiver involvement, and picky eating behavior among toddlers remain limited, particularly in Bekasi City.

Given this gap in the literature, the novelty of the present study lies in its examination of the intersection of maternal work duration and caregiver involvement as key contributors to the feeding process in families with working mothers. Therefore, this study aims to examine the relationship between maternal work duration and caregiver involvement with picky eating behavior among toddlers aged 1–3 years in Bekasi City, hypothesizing that longer maternal work duration and lower caregiver involvement are associated with a higher prevalence of picky eating behavior.

2. METHODS

This study employed a quantitative, cross-sectional design to examine the relationships among maternal work duration, caregiver involvement, and picky eating behavior among children aged 1–3 years (toddlers) in Bekasi City. The study was conducted in Bekasi City, West Java Province, from April to May 2026. The research process consisted of several stages, including preparation, data collection, data processing, data analysis, and report writing.

Primary data were collected directly from respondents through an online questionnaire administered using Google Forms. The study population consisted of mothers with children aged 1–3 years who met the inclusion criteria. The sampling process employed convenience sampling. Respondents were selected based on the researchers' accessibility to individuals who met the study criteria. This study received ethical approval from the Research Ethics Committee of Universitas 'Aisyiyah Yogyakarta under ethical clearance number 5456/KEP-UNISA/V/2026.

The independent variables in this study were maternal work duration and caregiver involvement, while the dependent variable was picky eating behavior. Maternal work duration was

classified into two categories: normal working hours (6–8 hours per day) and long working hours (>8 hours per day). The research instruments included a respondent characteristics questionnaire, a maternal work duration questionnaire, a caregiver involvement questionnaire, and a picky eating behavior questionnaire. The picky eating behavior questionnaire was adapted from the Child Eating Behavior Questionnaire (CEBQ). Specifically, the "Food Fussiness" and "Food Responsiveness" subscales were utilized to operationalize and define picky eating behavior. To ensure validity for the local context, the adaptation was validated through forward-backward translation and a pilot test involving 30 respondents, yielding satisfactory internal consistency (Cronbach's $\alpha > 0.70$). Meanwhile, the caregiver involvement questionnaire was

developed based on indicators of caregiver participation in child-rearing and feeding practices.

Data were collected online by distributing questionnaires via social media platforms to respondents who met the study criteria. The collected data were subsequently edited, coded, cleaned, and tabulated prior to analysis. Data analysis consisted of both univariate and bivariate analyses. Univariate analysis was used to describe the frequency distributions of respondents' characteristics and study variables. In contrast, bivariate analysis used the Chi-square test at the 95% confidence level ($\alpha = 0.05$) to examine the relationships among maternal work duration, caregiver involvement, and picky eating behavior among toddlers in Bekasi City.

3. RESULTS

Table 1. Characteristics of the Childrens (n=174)

Child Characteristics	n	%
Age (Years)		
1	25	14.4
2	105	60.3
3	44	25.3
Sex		
Male	76	43.7
Female	98	56.3

Table 1 shows the demographic distribution of the children. The sample predominantly consisted of two-year-old toddlers (60.3%), reflecting the peak

developmental stage where food neophobia and picky eating behaviors typically emerge. The slight female majority (56.3%)

indicates a balanced gender representation in the study cohort.

Table 2. Characteristics of the Mothers

Maternal Characteristics	n (174)	%
Age (Years)		
26 – 35	149	85.6
36 – 45	23	13.2
>45	2	1.1
Highest Educational Attainment		
Senior High / Vocational School	21	12.1
Higher Education	153	88.5

Table 2 highlights the socio-demographic profile of the mothers. The vast majority were in their prime reproductive and productive age group

(85.6% aged 26–35) and possessed higher education (88.5%), indicating a relatively educated urban cohort that may have higher awareness of child nutrition.

Table 3. Characteristics of the Caregivers

Caregiver Characteristics	n (174)	%
Age (Years)		
19 – 25	7	4.0
26 – 35	112	64.4
36 – 45	51	29.3
>45	4	2.3
Highest Educational Attainment		
Elementary School	6	3.5
Junior High School	47	27.0
Senior High / Vocational School	121	69.5

Table 3 shows that most caregivers were in the productive adult age group (64.4% aged 26–35). Educational attainment was predominantly at the

senior high school level (69.5%), which may influence their access to and comprehension of advanced nutritional guidelines.

Table 4. Frequency Distribution of Maternal Work Duration

Maternal Work Duration	n (174)	%
Normal (6-8 hours/day)	87	50.0
Long (>8 hours/day)	87	50.0

Table 4 demonstrates an equal distribution of mothers across normal and long working hours, providing a balanced

comparison group for assessing the impact of work duration on child feeding dynamics.

Table 5. Frequency Distribution of Caregiver Involvement

Caregiver Involvement	n (174)	%
Good	96	55.2
Moderate	74	42.5
Poor	4	2.3

Table 5 reveals a generally positive trend in caregiver engagement, with the majority (55.2%) demonstrating a good

level of involvement in child-rearing and feeding practices.

Table 6. Distribution of Picky Eating Behavior

Picky Eating Behavior	n (174)	%
Non-picky eating	49	28.2
Picky eating (moderate to severe)	125	71.8

Table 6 indicates a striking behavioral trend: a high prevalence of picky eating (71.8%) among the toddlers,

underscoring the significance of this issue in the urban pediatric population of Bekasi City.

Table 7. Relationship between Maternal Work Duration and Picky Eating Behavior

Maternal Work Duration	Picky Eating (Yes)	Picky Eating (No)	p-value
Normal	61	26	0.255
Long	64	23	

Table 7 presents the bivariate analysis of maternal work duration. Although a slightly higher absolute number of picky eaters was observed among mothers working long hours (64 cases) compared to those with normal hours (61 cases), the Chi-square test yielded a p-

value of 0.255. This indicates no statistically significant relationship, suggesting that the sheer duration of maternal work does not directly dictate a toddler's eating behavior, likely due to compensatory feeding strategies or the involvement of other caregivers.

Table 8. Relationship between Caregiver Involvement and Picky Eating Behavior

Caregiver Involvement	Picky Eating (Yes)	Picky Eating (No)	p-value
Moderate & Poor*	60	18	0.179
Good	65	31	

Note: Categories were combined to satisfy the assumptions of the Chi-square test.

Table 8 shows that picky eating behavior was pervasive across all categories of caregiver involvement. The Chi-square test yielded a p-value of 0.179,

indicating no statistically significant relationship. This suggests that basic quantitative involvement is not the sole determinant of a child's food selectivity.

4. DISCUSSION

The findings of this study indicate that longer maternal working hours were not necessarily associated with an increased occurrence of picky eating behavior among children. Although, in theory, mothers who work longer hours may have less time to accompany their children during mealtimes, picky eating behavior is influenced not only by maternal work duration but also by various interrelated factors.

Working mothers may face time constraints in preparing meals, accompanying their children during meals, and monitoring their children's daily eating habits. These limitations may affect feeding practices and, consequently, influence children's eating behaviors (Yuanita et al., 2021). However, picky eating behavior is influenced not only by maternal employment status or work duration but also by feeding practices, the family environment, children's feeding experiences, and the involvement of other family members in caregiving.

In families with working mothers, children's caregiving and feeding needs are often met not only by mothers but also by other family members or caregivers. The involvement of these individuals allows children to continue receiving support and supervision during mealtimes, even when

mothers have demanding work schedules. Therefore, long working hours may not directly contribute to picky eating behavior if caregiving and feeding needs are adequately met. This finding is consistent with the study by Baiti (2020), which reported that children's behavior is influenced not only by parental employment but also by parenting practices and the family environment that shape children's daily habits.

Furthermore, picky eating is a multifactorial condition influenced by numerous interacting factors. Taylor & Emmett (2020) stated that picky eating behavior is affected by children's individual characteristics, the eating environment, feeding practices, and interactions between children and caregivers during mealtimes. Similarly, Kamarudin et al. (2023) explained that a positive eating environment, parental involvement during meals, and early exposure to a variety of foods influence children's acceptance of food.

The findings of Yalcin et al. (2022) also demonstrated that picky eating behavior is associated not only with family-related factors but also with eating habits, lifestyle factors, and children's individual characteristics. Their study suggested that children's eating behaviors develop through the interaction of multiple

environmental influences, indicating that picky eating cannot be explained by a single factor alone. Therefore, although maternal work duration may influence children's eating behavior, other factors, such as feeding practices, family eating habits, caregiver involvement, and children's individual characteristics, may play a more substantial role in the development of picky eating behavior.

The absence of a significant relationship between maternal work duration and picky eating behavior in this study suggests that eating behavior among toddlers is shaped by the interaction of biological, psychological, and environmental factors. Consequently, efforts to prevent picky eating should not focus solely on maternal work duration. However, they should also consider feeding practices, parenting approaches, caregiver involvement, and the creation of a positive eating environment for children.

Based on Table 8, the findings showed that picky eating behavior was observed among children across all levels of caregiver involvement, including good, moderate, and poor involvement. This finding indicates that picky eating behavior is not determined by a single factor but rather by the interaction of multiple factors. During the toddler years, children begin to develop preferences for

certain foods over others, making them more likely to reject unfamiliar foods or foods that do not align with their preferences (Taylor & Emmett, 2020).

Caregiver involvement in the feeding process can play an important role in shaping children's eating habits. Caregivers who actively accompany children during mealtimes can help introduce different types of foods, encourage dietary variety, and provide positive stimulation throughout the feeding process. However, based on the caregiver involvement questionnaire, some caregivers did not optimally accompany children during meals or introduce a sufficient variety of foods. This situation may limit children's eating experiences and encourage them to maintain preferences for specific foods.

These findings are consistent with the study conducted by Yuanita et al. (2021), which reported that feeding practices contribute to the development of children's eating behaviors. Consistent and responsive feeding practices can help improve children's acceptance of a wider variety of foods. In addition, Fitriani et al. (2024) explained that high-quality caregiving, supported by adequate nutritional knowledge and effective caregiving skills, plays an important role in

increasing dietary diversity and helping children accept new foods.

The results of this study are also supported by the findings of Susilawati et al. (2025), who reported that feeding practices are associated with picky eating behavior in children. Picky eating requires attention because it may affect the diversity of children's food consumption. Children who exhibit picky eating behavior tend to prefer specific foods and reject unfamiliar foods, resulting in a more limited dietary variety. Regular, consistent feeding practices that include a diverse range of foods may help improve children's acceptance of new foods. Conversely, suboptimal feeding practices may increase food selectivity and contribute to a greater tendency toward picky eating behavior.

Despite these considerations, the present study found no significant relationship between caregiver involvement and picky eating behavior. This lack of significance may be explained by the multifactorial nature of picky eating, which is influenced by children's characteristics, food preferences, family eating habits, the eating environment, and parenting practices (Yalcin et al., 2022). In families with working mothers, childcare responsibilities are commonly shared with caregivers. Therefore, caregiver involvement alone may not be the sole

factor influencing picky eating behavior among toddlers.

To further elucidate these complex dynamics, future research should employ a longitudinal design or a mixed-methods approach. Such studies could explore the qualitative aspects of caregiver interactions during mealtimes, such as feeding styles, emotional responsiveness, and the overall mealtime climate, rather than merely measuring the quantitative duration of maternal work or the general level of caregiver involvement.

5. CONCLUSION

Picky eating behavior remains a common issue among children aged 1–3 years (toddlers) in Bekasi City. The findings of this study showed that maternal work duration and caregiver involvement were not significantly associated with picky eating behavior among toddlers. Various interrelated factors, including feeding practices, family eating habits, the eating environment, and early feeding experiences, influence picky eating. Therefore, the involvement of both parents and caregivers is essential in implementing appropriate feeding practices, introducing a variety of foods, and creating a positive eating environment to foster healthy eating habits in children. For community health practitioners, such

as Posyandu cadres and public health nurses, these findings imply that educational interventions should not solely target working mothers but must also actively engage caregivers and fathers. Health workers should design comprehensive feeding counseling programs at the community level that emphasize responsive feeding practices and a positive mealtime environment, regardless of the mother's employment status.

AUTHOR CONTRIBUTIONS

AR, contributed to the development of research concepts, data collection, data processing and analysis, interpretation of research results, preparation and revision of the article manuscript. AN & SFN, contributed to research supervision, preparation of research methodology, validation of data analysis, as well as revision and refinement of the article manuscript

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CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest in this research.

DATA AVAILABILITY STATEMENT

The data the findings of this research are available from the corresponding author upon reasonable request.

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59
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