



Effectiveness of Tuina Massage and Mindful Eating on Improving Appetite in Toddlers with Feeding Difficulties

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Track Record Article	Abstract
Revised: 01 February 2026 Accepted: 20 March 2026 Published: 30 March 2026 How to cite: Saidah, H., Prasetyanti, D. K., & Putri Wahyu Wigati, S. (2026). Effectiveness of Tuina Massage and Mindful Eating on Improving Appetite in Toddlers with Feeding Difficulties. <i>Contagion: Scientific Periodical Journal of Public Health and Coastal Health</i>, 8(1), 647–661.	<i>Eating difficulties in toddlers are a common problem and can impact their growth and nutritional status. One effort that can be made to overcome this problem is through an approach to eating behavior and digestive stimulation. This study aims to analyze the effectiveness of mindful eating and Tuina massage on toddlers' eating behavior. This study used a quasi-experimental design with a pretest–posttest with control group design. The study sample consisted of 70 toddlers divided into two groups: 35 toddlers in the intervention group who were given mindful eating and Tuina massage and 35 toddlers in the control group who were given nutrition education. Data analysis used the Wilcoxon test to see the difference before and after the intervention and the Mann–Whitney test to see the difference between the groups. The results showed that in the intervention group there was a decrease in eating difficulties from 100% to 11.43%, while in the control group it decreased from 100% to 34.29%. The results of the Mann–Whitney test showed a p value = 0.024 ($p < 0.05$), meaning there was a significant difference between the two groups. It can be concluded that mindful eating and Tuina massage interventions are more effective in improving toddlers' eating behaviors than nutrition education alone. This intervention can be an alternative non-pharmacological approach that parents can implement to address eating difficulties in toddlers.</i> Keywords: <i>Tuina Massage, Mindful Eating, Eating Behavior, Toddlers</i>

INTRODUCTION

Feeding difficulties refer to a spectrum of eating-related problems characterized by suboptimal food intake and/or a lack of age-appropriate eating habits (Ji et al., 2026) (Hill et al., 2024). Feeding difficulties may include limited food preferences, food refusal, picky eating, food neophobia, and other atypical eating behaviors that can affect children's dietary intake and nutritional adequacy (Marshall et al., 2021). These difficulties are an important concern for parents and healthcare professionals because persistent feeding problems may interfere with and healthy eating development during early childhood (Goodman et al., 2020). These can negatively impact a child's growth and development. Negative impacts include inadequate weight gain, inappropriate height growth, nutritional deficiencies, and decreased nutrient intake, which directly impacts their nutritional status (Marshall et al., 2021).

Eating difficulties in toddlers are a common problem worldwide, with numerous studies showing a high prevalence rate. One form of eating difficulty is "picky eating," where children refuse most types of food or only eat certain foods. Studies in various countries indicate that approximately 25% to 45% of toddlers experience eating difficulties, which can affect their

nutritional intake (Eldridge et al., 2019). For example, a study in the United States found that 50% of toddlers face eating difficulties, which affect their daily eating habits (Liu et al., 2018). In countries such as Singapore, the prevalence of eating disorders has also been observed in a large number of children, indicating that eating difficulties are not limited to one country or region but are a global problem. In Indonesia, the prevalence of picky eating among toddlers is also quite high. According to data from the Indonesian Ministry of Health, approximately 30-40% of toddlers in Indonesia face eating difficulties (Indonesian Ministry of Health, 2023). In East Java, data shows that around 15% to 30% of toddlers experience eating problems, which are directly related to nutritional and growth disorders (SAK & Soetjiningsih, 2022) .

Feeding difficulties in toddlers are a common public health problem that can impact a child's overall health. This condition is characterized by eating behaviors such as refusing food, excessive food choices, or eating for very long periods, which can ultimately lead to inadequate nutritional intake. If not addressed appropriately, feeding difficulties in toddlers can contribute to nutritional disorders, growth retardation, and developmental disorders (Atkinson et al., 2020). According to the 2022 Indonesian Nutritional Status Survey (SSGI), the prevalence of stunting in toddlers reached 21.6%, while the 2018 Basic Health Research (Riskesdas) reported the prevalence of underweight toddlers at 17.7%. These conditions indicate that nutritional intake and eating behavior remain significant challenges requiring family- and community-based promotive and preventive interventions to support optimal child growth and development. The prevalence of stunting in Kediri City, based on E -PPGBM data in March 2024, showed a figure of 5.65% of the total 13,087 toddlers measured, or equivalent to 740 toddlers experiencing stunting (EPPGBM, 2024). Stunting as a manifestation of chronic malnutrition is often related to dietary problems and eating difficulties in toddlers, where inadequate nutritional intake—such as low meal frequency, limited food choices, or less responsive eating behavior—can hinder a child's linear growth (Russo et al., 2016)

In Pojok Village, Kediri City, previous research on 60 toddlers showed that 10 (16.7%) experienced stunting, and of these, 95% experienced feeding difficulties. These findings confirm that feeding difficulties are a significant determinant of stunting in this community. Therefore, addressing feeding difficulties requires not only a clinical approach but also a public health approach through family- and community-based interventions. Parental involvement, education about healthy eating behaviors, and environmental support are crucial factors in helping shape positive eating behaviors in children from an early (Razza & Brann, 2025)

From a public health perspective, malnutrition in toddlers is a complex issue often related to inadequate nutrient intake, which impacts growth and development. When there are

indications of significant nutritional deficiencies or certain medical conditions, the use of appetite stimulants or nutritional supplements may be considered as part of efforts to improve nutritional status. However, in a public health context, pharmacological approaches alone are insufficient and must be used with caution -due to potential side effects, especially in mild or moderate cases. Therefore, it is important to combine this approach with parental education on balanced nutrition and community interventions through nutrition counseling at local health facilities (Sutherland et al., 2018)

Non-Pharmacological Approach is non-pharmacological approaches emphasize modifying eating behaviors and nutrition education, involving the active participation of families and communities. In a public health context, the role of families, especially parents, is crucial in establishing healthy eating practices, creating a positive eating environment, and ensuring a nutritious and varied diet for toddlers (Azhari et al., 2023; Pasca Imann et al., 2023). Research also shows that a mindfulness approach to eating that involves parents can help reduce picky eating behaviors and improve children's relationships with eating by increasing parental dietary competence (Herrmann et al., 2022; Kim de Oliveira da Fonseca et al., 2026)

Eating difficulties in toddlers often stem from psychological, social, or environmental factors. For example, many toddlers feel stressed or anxious during mealtimes, which affects their willingness to eat. Mindful eating *may* be a relevant approach to help toddlers focus more on their mealtime experience, reduce distractions, and improve their eating habits. Furthermore, mindful eating can help toddlers develop awareness of their bodily needs, improving their ability to recognize hunger and fullness (Bennett & Latner, 2022)

A common phenomenon observed in the field is feeding toddlers while watching TV or playing with gadgets, which reduces the child's focus on food and leads to eating difficulties. Another problem is the limited variety of foods offered, where parents often only provide foods that the child likes without introducing a wider variety of nutrients. Force-feeding when a child refuses food can increase stress for both the child and the parent and exacerbate eating problems. Furthermore, a lack of parental knowledge about how to provide healthy, varied, and enjoyable food for children can lead to the formation of unhealthy eating habits (D'Hollander et al., 2022) Therefore, *Mindful Eating* is essential for maintaining children's psychological well-being when eating.

Besides *mindful eating*, another widely studied approach is tuina massage, a traditional Chinese therapy long used to treat various health problems, including eating disorders in children. Tuina massage in toddlers is believed to stimulate digestive system function and improve blood circulation, thereby helping to increase appetite. Several studies have shown

that tuina therapy can improve appetite problems in children and increase food intake, thus supporting better growth. This therapy is performed using manipulation techniques or light pressure on specific points on the child's body to promote relaxation, improve digestive function, and stimulate hunger (Kim de Oliveira da Fonseca et al., 2026).

Although eating difficulties among toddlers in Pojok Village have been identified as an important problem, there is still a need for practical and family-based interventions that address both the behavioral and physiological aspects of eating difficulties. Previous research has examined Tuina massage as an intervention for feeding difficulties in toddlers, including research conducted in Kediri City, which demonstrated an effect of Tuina massage on feeding difficulties. However, interventions that combine Tuina massage with a mindful eating approach involving parents have received limited attention, particularly in community settings.

The specific research problem in this study is whether the combination of Tuina massage and Mindful Eating, implemented with active parental involvement, can produce greater improvement in eating behavior among toddlers with eating difficulties than standard nutrition education alone. This problem is particularly relevant in Pojok Village, Kediri City, where previous local findings identified feeding difficulties among the majority of stunted toddlers, indicating the need for interventions that involve the family in addressing children's eating behavior.

The distinctive aspect of this study lies in the integration of two complementary components: Tuina massage, which provides physical stimulation, and Mindful Eating, which focuses on parental involvement, responsive feeding, and attention to children's hunger and satiety cues. Rather than examining Tuina massage or nutrition education alone, this study evaluates a combined family-based approach and compares it with nutrition education as the control intervention. The study therefore provides community-based evidence on an integrated non-pharmacological approach to addressing eating difficulties among toddlers in Pojok Village, Kediri City.

Based on this research problem and the distinctive approach of the study, this research aims to analyze the effectiveness of Tuina Massage and Mindful Eating as a family-based approach to improving eating behavior among toddlers with eating difficulties in Pojok Village, Kediri City, in 2025. Based on this background, the researcher is interested in conducting research on "The Effectiveness of Tuina Massage and Mindful Eating as a Family-Based Approach to Improve Eating Behavior in Toddlers with Eating Difficulties in Pojok Village, Kediri City in 2025."

METHOD

This study used a *quasi-experimental* with design *Pre-Test Post-Test With Control Group Design*. This study aims to analyze the Effectiveness of Tuina Massage and Mindful Eating as a Family-Based Approach to Improve Eating Behavior in Toddlers with Eating Difficulties. The study involved two groups, namely the intervention group that received Tuina massage and Mindful Eating training, and the control group that only received standard intervention in the form of nutrition education without Tuina massage or Mindful Eating.

The population in this study were toddlers aged 1–5 years who experienced eating difficulties, such as picky eating or low appetite, in Pojok District, Kediri City. The sample size used was 70 toddlers, consisting of 35 toddlers in the intervention group and 35 toddlers in the control group. Sampling was carried out using *purposive sampling*. Toddlers who met the inclusion criteria were first identified, then a lottery process was carried out to determine the division of respondents into the intervention group and the control group to minimize the possibility of selection bias.

Inclusion criteria for this study included toddlers aged 1–5 years who experienced eating difficulties, as identified using the Child Eating Behavior Questionnaire (CEBQ), and parents or caregivers who were willing for their children to participate in the study and sign an informed consent form after explanation. Furthermore, parents or caregivers were also willing to participate in training and carry out intervention instructions throughout the study period. Exclusion criteria included toddlers with medical conditions that could affect eating patterns, such as acute gastrointestinal infections, metabolic disorders, or endocrine disorders that could affect weight and digestive function. Toddlers with severe developmental disorders, such as significant developmental delays or autism spectrum disorders, were also excluded from this study. Furthermore, toddlers with a history of severe allergies to any of the ingredients used in the intervention and parents or caregivers who were unable to participate in all of the study activities were also excluded.

The intervention group received two types of treatment: Tuina massage and Mindful Eating training. Tuina massage was performed by therapists who had received training in Tuina massage techniques for toddlers. The massage was performed for 30 minutes daily for 14 consecutive days, following standard Tuina massage procedures that stimulate several points associated with digestive function and increasing appetite. Compliance with the intervention was monitored through daily observation sheets completed by the researchers. In addition, parents in the intervention group were also trained in Mindful Eating techniques for toddlers, which included how to introduce food in a fun way, gradually introduce food variations, and

pay attention to children's hunger and fullness signals. The training was conducted in two 60-minute sessions per week for two weeks. Parents were then asked to apply the techniques in their daily feeding routines, and their compliance was monitored through a monitoring sheet provided by the researchers.

The control group received nutrition education on healthy eating patterns for toddlers without Tuina massage or Mindful Eating training. The education was provided in two 60-minute sessions during the study period, covering topics on toddler nutritional needs, healthy food variations, and the importance of a balanced diet for child growth and development.

The instrument used in this study was the Indonesian version of the Child Eating Behavior Questionnaire (CEBQ) which was used to assess toddlers' eating behavior and appetite before and after the intervention. With Cronbach's alpha values ranging from 0.62–0.78, therefore, this instrument was considered suitable for measuring children's eating behavior. Data analysis was carried out using the Wilcoxon test to determine the difference in scores before and after the intervention in each group, as well as the Mann–Whitney test to compare the differences in changes between the intervention and control groups.

This research has obtained ethical approval from the Health Research Ethics Committee with number 065/18/VII/KEP/UNIK/2025, and all parents or guardians of toddlers who were respondents have provided written informed consent before the research was conducted.

RESULTS

Table 1. Distribution of Respondent Characteristics by Study Group (n = 35 per group)

Variables	Intervention Group	Control Group
	F	%
Age		
1-3 years	15	42.86
> 3 years	20	57.14
Gender		
Man	20	57.14
Woman	15	42.86
Mother's Education Level		
Elementary (Elementary-Junior High School)	6	17.14
Senior High School–Vocational High School or Equivalent	28	80
Higher Education	1	2.86
Occupation		
Work	12	34.29
Does not work	23	65.71

Table 1 presents the characteristics of the 70 toddlers included in the study, with 35 participants in each group. In the intervention group, most toddlers were older than 3 years (57.14%), while the corresponding proportion in the control group was 65.71%. The proportion of male toddlers was 57.14% in the intervention group and 62.86% in the control

group. Most mothers in both groups had secondary-level education (80%). Regarding maternal occupation, 65.71% of mothers in the intervention and 62.86% in the control group were not employed.

Overall, the reported baseline characteristics indicate that the intervention and control groups had comparable distribution of age, sex, maternal education, and maternal occupation.

Table 2. Distribution of Eating Difficulties in Toddlers Before and After the Intervention

Difficulty Eating	Intervention Group (<i>Mindful Eating</i> and Tuina Massage)				Control Group (Nutrition Education)			
	Pre		Post		Pre		Post	
	f	%	f	%	F	%	F	%
Having Difficulty Eating	35	100.00	4	11.43	35	100.00	12	34.29
No Difficulty Eating	0	0.00	31	88.57	0	0.00	23	65.71

As shown in Table 2, all toddlers in both groups experienced eating difficulties at baseline (35/35; 100%). Following the intervention, the proportion of toddlers with eating difficulties decreased to 4 (11.43%) in the intervention group, while 31 (88.57%) no longer experienced eating difficulties. In the control group, which received nutrition education, 12 toddlers (34.29%) continued to experience eating difficulties and 23 (65.71%) no longer experienced eating difficulties.

These findings indicate a greater reduction in the proportion of toddlers with eating difficulties in the intervention group than in the control group; however, the between-group statistical test is presented in Table 5

Table 3. Pretest–Posttest Difference in Eating Difficulties in the Intervention Group

Difficulty Eating	Intervention Group				p-value*
	Pre		Post		
	f	%	F	%	
Having Difficulty Eating	35	100	4	11.43	0.000
No Difficulty Eating	0	0	31	88.57	

*Wilcoxon test

In the intervention group, the Wilcoxon signed-rank test showed a statistically significant difference in eating difficulty status between pretest and posttest ($p\ 0.000 < 0.05$; $Z = -5.568$). Thus, eating difficulties were significantly reduced following the combined Mindful Eating and Tuina massage intervention.

Table 4. Pretest–Posttest Difference in Eating Difficulties in the Control Group

Table 11: Pretest - Posttest Difference in Eating Difficulties in the Control Group					
Difficulty Eating	Control Group				P_Value *
	Pre		Post		
	F	%	F	%	
Having Difficulty Eating	35	100.00	12	34.29	0,000
No Difficulty Eating	0	0.00	23	65.71	

*Wilcoxon test

In the control group, the Wilcoxon signed-rank test also showed a statistically significant difference between pretest and posttest (p 0,000 < 0.05; Z = -4.796). Thus, nutrition education was associated with a significant reduction in eating difficulties among toddlers in the control group.

Table 5. Comparison of Eating Difficulties Between the Intervention and Control Groups

Difficulty Eating	Groups								p-value*
	Intervention Group				Control Group				
	Pre		Post		Pre		Post		
	F	%	F	%	F	%	F	%	
Having Difficulty Eating	35	100.00	4	11.43	35	100.00	12	34.29	0.024
No Difficulty Eating	0	0.00	31	88.57	0	0.00	23	65.71	

*Mann–Whitney U test

Table 5 shows the pretest and posttest distribution of eating difficulties in the two groups. At pretest, all 35 toddlers (100%) in both groups experienced eating difficulties. At posttest, the number of toddlers with eating difficulties decreased to 4 (11.43%) in the intervention group and 12 (34.29%) in the control group. Conversely, 31 toddlers (88.57%) in the intervention group and 23 toddlers (65.71%) in the control group no longer experienced eating difficulties.

The reduction in eating difficulties was therefore greater in the intervention group than in the control group. The Mann–Whitney U test showed a statistically significant difference between the groups (p = 0.024; p < 0.05).

These results indicate that the change in eating difficulty status differed significantly between the intervention and control groups, with a greater reduction observed in the group receiving the combined Mindful Eating and Tuina massage intervention.

DISCUSSION

The results of the study showed a significant effect between *mindful eating intervention* and Tuina massage on toddlers' eating behavior. This was evidenced by the Wilcoxon test results, which showed a p value of 0.000 (p < 0.05) with a Z value of -5.568. Therefore, it can be concluded that there was a significant difference between the eating difficulty scores before and after the intervention. In theory, toddlers' eating behavior is influenced by various factors, including psychological factors, eating habits, parental stimulation during meals, and the physiological condition of the child's digestive tract. The *mindful eating approach* emphasizes parental awareness in providing food by paying attention to the child's response, a comfortable

mealtime atmosphere, and positive interactions during the mealtime process. Meanwhile, Tuina massage is a massage technique that provides stimulation at specific points on the body related to the digestive system, thereby helping to increase appetite and improve metabolic function in (Nielsen et al., 2018).

In fact, the results of this study show a decrease in eating difficulty scores in toddlers after receiving *mindful eating interventions* and Tuina massage. This condition indicates that an approach that combines behavioral aspects and physical stimulation can have a positive impact on children's eating behavior. Tuina massage works by stimulating nerves and meridian points related to the digestive organs, thereby helping to address complaints such as bloating, decreased appetite, and other digestive disorders. Furthermore, the implementation of *mindful eating* by parents can create a more comfortable mealtime atmosphere, increase positive interactions between parents and children, and help parents be more sensitive to their children's hunger and fullness signals, making the mealtime process more enjoyable for toddlers (CUI et al., 2019; Xu et al., 2023)

The results of this study are also supported by previous research showing that Tuina massage is effective in increasing appetite in toddlers. Research conducted by (Bai et al., 2025) showed that there was a significant increase in appetite in toddlers after being given Tuina massage intervention compared to before the intervention. Tuina massage can significantly increase appetite and weight in toddlers with a p value <0.05 (CUI et al., 2019). The results of this study indicate that stimulation through Tuina massage can improve digestive system function and increase children's metabolism so that children become more easily hungry and more interested in eating. The findings of this study are in line with the results of this study which show that Tuina massage intervention has a positive impact on improving eating behavior in toddlers (Zhang et al., 2026).

Based on these results, researchers believe that the combination of *mindful eating* and Tuina massage is an effective approach to addressing eating difficulties in toddlers. This intervention focuses not only on physiological aspects through digestive system stimulation but also on behavioral aspects by increasing parental awareness of feeding habits. With active parental involvement in implementing more mindful eating patterns and regular massage stimulation, toddlers' eating behaviors can improve. Therefore, this intervention can be used as an alternative non-pharmacological approach that is easy for parents to implement in an effort to improve toddlers' eating behaviors and nutritional status (Siddiqui et al., 2026a)

The results of the study showed a significant effect of education on the eating behavior of toddlers in the control group. This was evidenced by the Wilcoxon test results, which showed

a p-value of 0.000 ($p < 0.05$) with a Z-value of -4.796. Therefore, it can be concluded that there was a significant difference between the scores of eating difficulties before and after education. In theory, health education is a promotive effort aimed at improving a person's knowledge, attitudes, and behaviors in maintaining health. In the context of feeding toddlers, education for parents can increase understanding of proper eating patterns, types of food appropriate for the child's age, and how to deal with food refusal behavior in children, thereby helping to improve toddler eating behavior (Siracusano et al., 2025)

In fact, changes in eating behavior in toddlers after education can occur because parents receive better information about proper feeding practices. This education can increase parental awareness of implementing regular eating patterns, providing a variety of nutritious foods, and creating a pleasant mealtime atmosphere for children. With this increased knowledge, parents are better able to address eating difficulties in toddlers, such as refusing food, choosing excessive amounts of food, or eating for long periods. This situation demonstrates that increasing knowledge through education can contribute to changes in health behavior within the family (Ministry of Health of the Republic of Indonesia, 2022).

The results of this study also align with previous research showing that parental education significantly improves children's eating behavior. Demonstrated that providing nutrition education to mothers of toddlers significantly improved feeding practices and reduced the incidence of feeding difficulties in children (Maitin-Shepard et al., 2024). Another study also found that educational interventions regarding children's eating patterns were effective in increasing mothers' knowledge and leading to more appropriate feeding behaviors. These findings support the findings of this study, which demonstrate that education is an effective strategy in helping parents improve toddlers' eating behavior (Lanyo et al., 2025).

The results of the study showed that *the mindful eating* and Tuina massage intervention significantly improved toddlers' eating behavior. In the intervention group, all respondents experienced eating difficulties before the intervention (100%). However, after the intervention, the majority of toddlers (31 children (88.57%) no longer experienced eating difficulties, while only four (11.43%) still experienced eating difficulties. In theory, children's eating behavior is influenced by the interaction between psychological factors, the family environment, and the physiological condition of the digestive system. A *mindful eating approach* helps parents become more aware of feeding patterns, pay attention to children's responses to food, and create a positive mealtime atmosphere. Meanwhile, Tuina massage stimulates specific points related to the digestive system, thereby helping to increase appetite and improve digestive function in children (Beshara et al., 2013; Durukan & Gül, 2019)

In the control group, which received only nutrition education, there were also changes in eating behavior, although not as significant as in the intervention group. After receiving nutrition education, the number of toddlers still experiencing feeding difficulties decreased from 100% to 34.29%, while 65.71% of toddlers no longer experienced feeding difficulties. This suggests that educating parents can improve knowledge about appropriate feeding practices, such as providing a balanced diet, maintaining a regular meal schedule, and how to deal with children who refuse to eat. This increased knowledge can influence parental attitudes and behaviors regarding feeding their children, thus indirectly improving toddlers' eating behavior (Ministry of Health of the Republic of Indonesia, 2022).

The results of the statistical test using Mann–Whitney showed a p-value of 0.024 ($p < 0.05$), indicating a significant difference between the intervention and control groups after the intervention. This indicates that the combination of *mindful eating* and Tuina massage is more effective in improving toddlers' eating behavior compared to providing nutrition education alone. Tuina massage is effective in increasing appetite and improving toddlers' eating patterns through stimulating digestive function. Furthermore, also showed that behavioral-based approaches such as *mindful eating* can help parents develop more positive eating habits in children. Thus, a combination of interventions involving behavioral aspects and physiological stimulation can be a more comprehensive strategy in overcoming eating difficulties in toddlers (Jiang et al., 2016; Siddiqui et al., 2026b, 2026a; Zhang et al., 2026)

Upon closer examination, the effectiveness of the combination of *mindful eating* and Tuina massage can be explained through a biopsychosocial approach to children's eating behavior. Eating difficulties in toddlers are influenced not only by physical issues such as digestive disorders, but also by emotional factors and interactions between parents and children during the mealtime. Tuina massage plays a role in increasing a child's physical comfort through nerve and circulatory stimulation, thus optimizing digestive function. Meanwhile, *mindful eating* helps parents create a more responsive, patient, and non-pressurizing eating environment for children. The combination of these two interventions can increase comfort, improve hunger-satiety regulation, and foster positive eating experiences for children. Therefore, an integrative approach combining physical stimulation and changes in parental behavior is considered more effective in addressing eating difficulties in toddlers than interventions that focus solely on increasing knowledge (Herrmann et al., 2022)

The findings of this study have practical implications for the provision of complementary care for toddlers with eating difficulties. The combination of Mindful Eating and Tuina massage may be considered as a complementary approach that can be integrated into health

education and parental counseling, particularly by midwives and other health professionals involved in child health services. The intervention emphasizes active parental involvement in creating a positive and responsive mealtime environment while providing non-pharmacological physical stimulation. However, this approach should be considered as complementary to, rather than a replacement for, appropriate nutritional assessment, balanced nutrition, and medical management when clinically indicated. Parents should also receive guidance regarding the appropriate application of Tuina massage and responsive feeding practices to ensure that the intervention is implemented safely and appropriately.

This study has several limitations that should be considered when interpreting the findings. First, the sample consisted of 70 toddlers from a specific study setting, with 35 participants in each group, which may limit the generalizability of the findings to toddlers in other populations or settings. Second, the intervention was conducted over a relatively limited period, so the study could not determine whether the observed improvements in eating behavior would be maintained over the longer term. Third, assessment of eating difficulties may have been influenced by parental reporting and perceptions of children's eating behavior. In addition, although the study included a control group receiving nutrition education, other factors that may influence toddlers' eating behavior, such as individual food preferences, family feeding practices, and children's nutritional or health conditions, may not have been completely controlled. Therefore, further studies with larger samples, longer follow-up periods, and more comprehensive control of potential confounding factors are needed to strengthen the evidence regarding the sustained effects of the combined intervention.

CONCLUSION

This study demonstrated that the combination of Tuina massage and Mindful Eating *significantly* improved eating behavior in toddlers with feeding difficulties. The experimental group demonstrated significant improvements across multiple dimensions of eating behavior, such as Response to Food, Emotional Overeating, Food Enjoyment, Satiety Response, and Food Choice Aversion, compared to the control group that received only standard nutrition education. These results suggest that integrating Mindful *Eating* with Tuina massage is an effective non-pharmacological approach to addressing feeding difficulties in young children.

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