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IMPLEMENTATION OF FAMILY-CENTERED NURSING WITH TUI NA MASSAGE INTERVENTION IN FAMILIES WITH STUNTED CHILDREN: A CASE STUDY

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ABSTRACT
Stunting is a chronic nutritional problem caused by prolonged inadequate nutritional intake that can impair children's growth and development. One complementary intervention that can be applied in family nursing care is Tui Na massage to help improve children's appetite. To analyze family nursing care for children with stunting through the implementation of Family-Centered Nursing using the Tui Na massage intervention. This study employed a case study design involving two families with stunted children in Cempaka Putih Barat Village, Cempaka Putih District, Central Jakarta. Family nursing care was conducted over 8 days, with the Tui Na massage intervention provided for 5 consecutive days. Data were collected through interviews, observation, physical examination, and documentation. After five days of Tui Na massage, both children showed an increase in appetite, as indicated by eating three times a day and being able to finish ¾–1 serving of food, as well as an improvement in family health care practices. The implementation of Family-Centered Nursing with the Tui Na massage intervention was beneficial in improving the appetite of children with stunting, as well as enhancing family knowledge, skills, and the family's health care function in providing independent child care.

Keywords: family-centered nursing; stunting; tui na massage

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INTRODUCTION

Stunting is a chronic nutritional problem in children characterized by impaired linear growth, resulting in a child's length or height being inappropriate for their age (Rahman et al., 2023). This condition is caused by chronic undernutrition and may have long-term consequences for physical growth, cognitive development, and overall health (Haskas, 2020). According to data from UNICEF, WHO, and the World Bank in 2024, the global prevalence of stunting declined from 26.4% in 2012 to 23.4% in 2024. In Indonesia, the prevalence of stunting among children under five decreased from 27.7% in 2019 to 19.8% in 2024, while the prevalence of stunting in the Special Capital Region of Jakarta was reported to be 17.2% (Bappeda DKI Jakarta, 2026).

Stunting is a multifactorial condition, one of the contributing factors being inadequate long-term energy and protein intake. Insufficient nutritional intake may impair tissue formation, bone growth, and the production of growth-related hormones, thereby disrupting children's linear growth. In addition, recurrent infections may increase energy requirements and reduce children's appetite, further worsening their nutritional status (Jepisa & Wati, 2023; Mulyani et al., 2025). For children with stunting, adequate nutritional intake is an essential component in supporting optimal growth and development. Therefore, poor appetite requires particular attention in the implementation of family nursing care.

The management of stunting requires a comprehensive approach. Within the context of family nursing, family involvement is essential because family members play a direct role in meeting children's nutritional needs and providing daily care (Agustina & Dwijayanti, 2023). One approach

that can be applied is Family-Centered Nursing (FCN), in which families are not merely recipients of healthcare services but active partners who are involved throughout the nursing care process, from assessment to evaluation (Suhardin et al., 2024). One aspect of family care in the management of stunting involves meeting children's nutritional needs. However, achieving adequate nutritional intake may be challenging when children experience poor appetite, highlighting the need for interventions that may help improve appetite.

Tui Na massage (twee-nah) is a nonpharmacological intervention that may be used to address feeding difficulties. This technique is a specialized massage method that can be applied to young children experiencing feeding problems and is intended to promote circulation and support digestive function, including in areas associated with the spleen and digestive system according to traditional massage principles (Puspitasari et al., 2023). The study reported that after Tui Na massage therapy was administered for three consecutive days, most respondents (82.1%) demonstrated a good appetite. In addition, Noflidaputri et al. (2020) suggested that Tui Na massage may improve appetite in young children and contribute to weight gain.

This case study is important because the implementation of Family-Centered Nursing provides families with an opportunity to actively participate in the care of children with stunting, particularly in addressing suboptimal appetite by developing the skills required to independently perform Tui Na massage. This report is expected to provide an overview of the implementation of family nursing care based on Family-Centered Nursing in supporting the fulfillment of nutritional needs and the care of children with stunting. Therefore, the aim of this case report was to describe the implementation of Family-Centered Nursing with a Tui Na massage intervention among families with children with stunting and to evaluate changes in children's appetite and families' ability to independently provide care.

METHOD

This case study was conducted in West Cempaka Putih Subdistrict, Cempaka Putih District, Central Jakarta, Indonesia. The case study focused on two families with children diagnosed with stunting. Cases were selected based on the presence of stunting and the need to improve family capacity in providing child care, particularly in meeting nutritional needs and improving appetite. Nursing care was provided over an eight-day period, with active family involvement throughout the care process. Data were collected through interviews, observations, physical examinations and anthropometric measurements, and documentation.

The intervention consisted of the implementation of Family-Centered Nursing (FCN) combined with complementary Tui Na massage therapy. During the initial stage, an assessment was conducted to identify the child's condition, including dietary patterns, appetite, growth, as well as the family's knowledge and ability to provide child care. Families were provided with education regarding stunting, the fulfillment of children's nutritional needs, and the definition, benefits, indications, contraindications, and procedures of Tui Na massage. Subsequently, the nurse demonstrated the Tui Na massage technique according to the established procedure and guided family members to practice and independently repeat the technique. Tui Na massage was then performed for approximately 15 minutes once daily for five consecutive days, with active family participation in the implementation of the intervention. During the final stage, changes in the children's appetite and the families' ability to explain and independently demonstrate the Tui Na massage technique were evaluated.

RESULT

The interventions in this case study were individually designed according to the conditions, needs, and capabilities of each family. The approach used was *Family-Centered Nursing* (FCN), with a focus on improving family capacity to provide care for children with stunting and to meet their

nutritional needs. The primary intervention, Tui Na massage, was provided to both families using the same procedure, while education and guidance were tailored to the circumstances and level of understanding of each family.

Table 1.
Participant Characteristics and Assessment Findings

Characteristics	Client 1	Client 2
Age	17 months	25 months
Sex	Female	Female
Anthropometric measurements	BW: 7.3 kg; BL: 72.5 cm; BMI: 13.9 kg/m²; Chest circumference: 39 cm; Head circumference: 44 cm; MUAC: 12 cm	BW: 10.1 kg; Height: 80 cm; BMI: 15.8 kg/m²; Chest circumference: 42 cm; Head circumference: 46 cm; MUAC: 17 cm
Nutritional status	*Stunted* (short stature)	*Stunted* (short stature)
Immunization status	Complete	Complete

In Family 1 (Client 1), the child had a history of premature birth and low birth weight. The family regularly brought the child to the community health post (*Posyandu*) and was aware that the child had stunting; however, the family's understanding of the condition remained insufficient. The family was not yet able to identify appropriate strategies for managing stunting and optimally meeting the child's nutritional needs. Assessment of the child's dietary pattern showed that the child ate two to three times per day and frequently consumed only approximately half of the meal portion. In Family 2 (Client 2), the child had a body weight of 10.1 kg and a height of 80 cm. The family also routinely brought the child to the *Posyandu* but considered the child to be healthy. The assessment showed that Client 2 had a poor appetite, ate two to three times per day, and frequently consumed only approximately half of the meal portion. Both cases presented with the primary nursing problem of Ineffective Family Health Management, particularly related to insufficient family knowledge regarding the management of stunting.

Both families received education regarding stunting and the fulfillment of children's nutritional needs, followed by education and demonstration of the Tui Na massage technique. The nurse first demonstrated the massage technique, after which family members were given the opportunity to practice the technique under supervision. Once the families were able to perform the technique correctly, Tui Na massage was performed independently for approximately 15 minutes once daily for five consecutive days.

Table 2.
Outcomes of the Tui Na Massage Intervention in Young Children

Outcome	Assessment	Client 1	Client 2
Meal frequency	Pre-intervention	2–3 times/day	2–3 times/day
	Post-intervention	3 times/day	3 times/day
Meal portion	Pre-intervention	Approximately ½ portion	Approximately ½ portion
	Post-intervention	¾–1 portion	Approximately ¾ portion
Meal completeness	Post-intervention	A complete meal consisting of rice, protein-based side dishes, and vegetables	A complete meal consisting of rice, protein-based side dishes, and vegetables
Family capability	Post-intervention	Able to provide care and independently perform Tui Na massage	Able to provide care and independently perform Tui Na massage

The post-intervention findings demonstrated improvements in the dietary patterns of both children. Client 1 showed an increase in meal frequency to three times per day and was able to consume approximately three-quarters to one full meal portion. Similarly, Client 2 demonstrated an increase in meal frequency to three times per day and was able to consume approximately three-quarters of a meal portion. Following nutritional education, the meals provided to both children also became more nutritionally complete. In addition, both families demonstrated improved capacity to provide care for their children. The families were able to explain the definition and benefits of Tui Na

massage and independently demonstrate the massage technique according to the established procedure. Both families also expressed their willingness to continue performing Tui Na massage independently at home.

DISCUSSION

The implementation of Family-Centered Nursing (FCN) among the families of Client 1 and Client 2 demonstrated improvements in the families' ability to recognize health problems, make appropriate decisions, and provide care for children with stunting. The assessment findings showed that both families were aware of their children's growth conditions but did not yet have an optimal understanding of their management, particularly regarding poor appetite. The family of Client 1 regularly brought the child to the community health post (Posyandu) but had not consistently implemented the recommendations provided by healthcare professionals. Meanwhile, the family of Client 2 considered the child's condition to be relatively good because the child did not exhibit severe symptoms. These differences indicate that the utilization of healthcare facilities does not necessarily translate into adequate knowledge and the ability of families to make appropriate health-related decisions. This finding is consistent with Suhardin et al. (2024), who reported that the successful management of stunting is influenced by families' experiences in caring for children, support from family members, parental involvement in feeding practices, utilization of Posyandu services, and communication with healthcare professionals. Therefore, a family-based approach through Family-Centered Nursing may help families become more confident, independent, and actively involved in meeting children's nutritional needs and monitoring their growth.

One of the main findings in both cases was the presence of poor appetite. Based on the assessment, both Client 1 and Client 2 ate approximately two to three times per day and frequently consumed only about half of their meal portions. This condition formed the basis for implementing Tui Na massage as a complementary therapy combined with nutritional education. Following the five-day intervention, both children demonstrated changes in their dietary patterns. Meal frequency increased to three times per day, while the amount of food consumed increased from approximately half a portion to three-quarters to one full portion in Client 1 and approximately three-quarters of a portion in Client 2. The children's meals also became more complete, consisting of rice, protein-based side dishes, and vegetables.

These findings are consistent with Puspitasari et al. (2023), who described Tui Na massage as a complementary therapy involving massage techniques applied to specific meridian points to promote blood circulation, support digestive function, improve nutrient absorption, and stimulate children's appetite. This therapy has been used as a supportive intervention for children experiencing growth problems associated with inadequate nutritional intake. The proposed mechanism of Tui Na massage involves stimulation of the autonomic nervous system and digestive organs, which may help improve gastrointestinal motility and promote comfort in children. In that study, the therapy was administered for three consecutive days as part of an intervention aimed at improving children's appetite. The findings showed that most respondents (82.1%) demonstrated a good appetite after receiving the Tui Na massage intervention.

Another study by Awaliyah et al. (2025) implemented Tui Na massage for six consecutive days and reported an improvement in appetite. The appetite score before the Tui Na massage intervention was 8, indicating a severe reduction in appetite, whereas the score decreased to 2 after the intervention, indicating a mild reduction in appetite. The differences in intervention duration indicate that previous studies have applied Tui Na massage for varying periods, ranging from three to six days. Nevertheless, the changes in appetite observed in both children in the present case study cannot be attributed solely to Tui Na massage. During the intervention period, the families also received education regarding the fulfillment of children's nutritional needs, and the children received additional support through the Supplementary Feeding Program (Program Makanan

Tambahan [PMT]).
The achievement of the third family nursing outcome in both cases was reflected not only in changes in the children's dietary patterns but also in the improved ability of the families to independently provide care. Both families were able to understand the benefits of Tui Na massage, practice the techniques that had been taught, and perform the intervention independently at home. This reflects the principle of participation in FCN, in which families actively participate rather than merely receiving information. Family involvement is important to ensure that interventions can be continued independently at home after healthcare visits have ended. With the skills acquired, families can continue Tui Na massage as part of home-based care. This finding is consistent with Andika and Baso (2024), who stated that family empowerment strengthens health-related behaviors and contributes to more sustainable intervention outcomes. This case study demonstrates that the management of children with stunting within the family context should be holistic and continuous. Nurses should not only provide education regarding stunting but also assist families in translating health information into decisions and practical actions that can be implemented at home. The implementation of FCN may support this process through information sharing, shared decision-making, and active family participation in care.

In practice, nurses can provide education regarding nutritional fulfillment, teach practical caregiving skills that can be performed by family members, and ensure that families are able to demonstrate the required procedures before continuing care independently at home. When implementing Tui Na massage, nurses should also consider the child's condition, ensure that no contraindications are present, monitor the child's comfort, and teach families to discontinue the procedure if the child experiences pain or discomfort. However, several challenges were encountered, including children's occasional lack of cooperation during the massage procedure and difficulties in coordinating home visits with family activities. These challenges were addressed by adjusting the timing of the intervention and using distraction techniques to improve the children's comfort and cooperation.

Overall, the findings from both cases indicate that family knowledge, decision-making ability, caregiving skills, active family involvement, adequate nutritional fulfillment, and appropriate utilization of healthcare services are important factors supporting successful nursing care. Tui Na massage may be used as a complementary supportive therapy, while nutritional education, growth monitoring, family involvement, and continued follow-up through Posyandu or primary healthcare centers (Puskesmas) remain essential components of comprehensive stunting management.

CONCLUSION

The implementation of Family-Centered Nursing (FCN), combined with education and Tui Na massage for five days, demonstrated improvements in the families' ability to care for children with stunting and positive changes in the children's dietary patterns. The meal frequency of both children increased to three times per day, accompanied by an increase in the amount of food consumed. The outcomes of the intervention were influenced by family involvement and the families' ability to apply the education provided, as well as the individual conditions of each child. Nurses are encouraged to actively involve families through education, demonstration, and return demonstration to enable care to be continued independently at home. Further studies involving a larger number of cases and longer intervention periods are needed to strengthen these findings.

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