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Tui Na massage to increase appetite in children

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Abstract
Malnutrition, or inadequate nutrition, is a condition in which the body does not receive sufficient nutrients to function properly. It can be caused by insufficient food intake, impaired nutrient absorption, or certain underlying diseases. Malnutrition can lead to serious health consequences, particularly in children, and may result in various growth and developmental disorders. In infants with low body weight (LBW), *Tui Na* massage has been shown to stimulate blood circulation to the spleen and digestive system, enhance appetite, and optimize nutrient absorption, thereby contributing to weight gain. This massage technique focuses on specific acupuncture points located on the head, arms, legs, and back. The implementation of *Tui Na* massage therapy at Tidar Regional General Hospital in Magelang City demonstrated positive outcomes, including improved appetite and increased body weight in toddlers experiencing nutritional deficiencies. These findings suggest that *Tui Na* massage is an effective complementary therapy for enhancing appetite and supporting nutritional recovery in undernourished children.

Keywords: Food care, Low Body Weight, malnutrition, paediatric care, *Tui Na* massage

Introduction
Malnutrition is a condition characterized by a deficiency of energy and protein resulting from an imbalance between dietary intake and nutritional needs (Saunders & Smith, 2010). Chronic deficiencies in nutrient intake are a major risk factor for malnutrition, often marked by malabsorption or metabolic failure (Kiani et al., 2022; Morales et al., 2023). According to the Indonesian Nutritional Status Study Survey, the prevalence of malnutrition in Indonesia currently stands at 7.7%, showing an increase from 7.1% in 2021. Presidential Regulation No. 72 of 2021 states that children under five years of age who experience malnutrition are entitled to receive nutritional management services. By 2024, the target for malnutrition management coverage is set at 90%, under the coordination of the Ministry of Health. Clinically, malnutrition is identified through anthropometric indicators such as body weight (BB), height (TB), and mid-upper arm circumference (LILA), which fall below nationally and WHO-established standards. Malnutrition can have long-term effects on a child's physical and mental development, as well as overall quality of life (De Sanctis et al., 2021; Chiopris et al., 2024). Nutritional status assessment is based on WHO 2005 standards, as outlined in the Indonesian Minister of Health Regulation No. 2 of 2020 concerning Standard Children's Anthropometrics. Two direct factors influence an individual's nutritional status: nutritional intake and infectious disease, both of which interact. Inadequate quantity and composition of food—lacking diversity, balance, and safety—contribute to poor nutritional outcomes (Bhardwaj et al., 2024; Islam et al., 2023). On a macro level, food consumption by individuals and families is influenced by food availability, which is reflected in national food production and distribution levels (Kearney, 2010).

Malnutrition management is carried out in four phases: stabilization, transition, rehabilitation, and follow-up action. These phases are implemented through ten structured service steps in accordance with the malnutrition management protocol established by the Indonesian Ministry of Health. One complementary therapy that can support nutritional recovery is *Tui Na* massage, an acupressure technique that involves manual stimulation of acupuncture points using the hands (Yang et al., 2014; Dai et al., 2024). *Tui Na* is entirely non-invasive and does not require anaesthesia or sedation (Wang et al., 2024). The technique involves firm pressure applied through squeezing and pressing motions on the skin, targeting specific acupuncture points to release blockages and promote blood circulation. This process is repeated until the therapeutic session is complete. *Tui Na* massage is known to help reduce pain and improve physical mobility by enhancing blood flow throughout the body. Improved circulation supports better nutrient delivery, which in turn facilitates the healing of injured or painful areas. Additionally, *Tui Na* has a calming effect, helping to relax tense muscles, particularly in the upper back, neck, and shoulders. In infants with low body weight, *Tui Na* massage can stimulate blood flow to the spleen and digestive system, increase appetite, and optimize nutrient absorption, ultimately contributing to weight gain (Liang et al., 2020). These benefits make *Tui Na* a valuable complementary intervention in the holistic management of malnutrition, especially in paediatric patients.

This study on the use of *Tui Na* massage to increase appetite in children is important because it addresses childhood anorexia or poor appetite—a common issue that significantly contributes to malnutrition, growth failure, and weakened immunity. With investigating *Tui Na*, a non-invasive, drug-free therapy rooted in Traditional Chinese Medicine, the research offers a safe, accessible, and cost-effective complementary strategy to address this problem, especially valuable in settings where pharmaceutical appetite stimulants are unavailable or undesirable. The role of nurses in implementing this therapy is crucial and multifaceted: nurses can serve as the primary educators, training parents and caregivers on the correct application and specific techniques of *Tui Na* massage points (like those on the abdomen or spine); they act as advocates, integrating this holistic approach into standard paediatric care plans; and they are responsible for monitoring and evaluating the treatment's efficacy by tracking changes in appetite, dietary intake, and subsequent weight gain, thus ensuring adherence and maximizing its potential as a successful adjunct to nutritional counselling.

Case Description

A comprehensive assessment was conducted on a 4-year-old Muslim patient diagnosed with malnutrition at Tidar Regional Hospital in Magelang City. The patient's family reported that the child was often sick, had no appetite, and was frequently nauseous and fussy. Physical examination revealed a weak and thin appearance, with sunken eyes and cheeks, a body weight of 12 kg, height of 94 cm, and a BMI of 13.5, indicating severe thinness. The patient had a history of gastroenteritis and presented with dry lip mucosa and vital signs within normal limits. Based on the data analysis, the focus nursing diagnosis was Nutritional Deficiency related to psychological factors (reluctance to eat). The action plan implemented to overcome the patient's lack of appetite and malnutrition included identifying the patient's favourite foods, monitoring food intake, and teaching parents to provide small but frequent meals. Additionally, non-pharmacological *Tui Na* massage therapy was applied to support nutritional management. The therapy was performed during three meetings and showed positive developments. The evaluation results indicated that the patient's condition had improved, with the family reporting an increase in the patient's appetite and willingness to finish meals. The patient's family also demonstrated an understanding of *Tui Na* massage and its benefits. Notably, the patient experienced a weight gain of 1.2 kg, from 12 kg to 13.2 kg. Based on the evaluation, the nursing problem was considered resolved.

Discussion

Based on the assessment results, the patient's family reported that their child was frequently ill, had a poor appetite, was often fussy and nauseous, and had a weight that was below the expected range for their age. The patient appeared pale, weak, and thin due to inadequate nutritional intake, particularly a lack of essential vitamins and minerals. Research supports the notion that diet and nutritional intake significantly impact growth and development in toddlers (Shi et al., 2023; JaBaay et al., 2023; Endrinikapoulos et al., 2023). Given the patient's symptoms, the nursing diagnosis of Nutritional Deficiency (D.0019) related to psychological factors (reluctance to eat) was identified. This diagnosis was chosen because the patient's lack of appetite was likely contributing to their nutritional deficits. To address this issue, the nursing interventions included identifying the patient's nutritional status to understand their specific needs, monitoring the patient's food intake to ensure they are receiving adequate nutrition, tracking the patient's weight to assess progress and adjust the care plan as needed, teaching the patient's family non-pharmacological *Tui Na* massage therapy to stimulate the patient's appetite and promote weight gain. The goal of these interventions is to improve the patient's nutritional status, increase their appetite, and support their overall growth and development. By empowering the family with knowledge and skills, the patient can receive ongoing support and care to achieve optimal health outcomes.

After three days of implementing the nursing care plan for a diagnosis of nutritional deficit, a positive evaluation was obtained. The patient's family reported that the patient was willing to finish the provided meals, which were given in small but frequent portions. The patient's appetite had improved significantly compared to their condition upon admission. The family demonstrated an understanding of *Tui Na* massage, recalling key points and encouraging the patient to participate. The patient's weight was monitored regularly, showing a notable increase from 12 kg to 13.2 kg after the nursing care interventions. *Tui Na* massage is a traditional Chinese therapeutic technique that goes beyond simple reflexology. It works on muscles, joints, and vital acupuncture points to balance and restore the flow of chi energy throughout the body. This massage method is known to treat various conditions, including bone disturbances like back pain, leg pain, and shoulder pain. Additionally, *Tui Na* massage has been found to stimulate appetite in children, making it a valuable non-pharmacological approach to improving nutritional intake. With incorporating *Tui Na* massage into the care plan, the patient's appetite and overall nutritional status can be effectively supported.

Tui Na massage is a valuable non-pharmacological approach to increasing appetite in children, particularly those with nutritional deficiencies. In this context, nurses play a crucial role in educating and guiding families on how to effectively administer *Tui Na* massage to their children. With teaching families specific massage techniques, nurses empower them to take an active role in their child's care, promoting a sense of control and confidence. Nurses can demonstrate *Tui Na* massage techniques, provide feedback, and monitor the child's progress, while families can incorporate the massage into their daily routine, providing emotional support and comfort to their child. Through this

collaborative approach, nurses and families can work together to stimulate the child's appetite, improve nutritional intake, and support overall health and development. With combining *Tui Na* massage with other nursing interventions, such as dietary counselling and nutritional support, healthcare providers can offer a comprehensive approach to addressing nutritional deficiencies in children.

Conclusion

The study on *Tui Na* massage to increase appetite in children successfully demonstrated that this non-pharmacological complementary therapy is an effective intervention. *Tui Na*, by targeting specific acupuncture points and channels, likely aids in regulating the child's digestive system, reducing stagnation, and enhancing digestive fire, ultimately leading to a measurable improvement in appetite and subsequent nutritional intake. This finding provides valuable, accessible support for managing common issues like childhood functional anorexia or feeding difficulties, offering a low-risk, cost-effective alternative or adjunct to conventional nutritional and pharmacological treatments. The successful integration of *Tui Na* reinforces the value of holistic, family-centred care models in paediatric health. To fully validate and integrate *Tui Na* massage into clinical practice for paediatric appetite enhancement, future research should focus on several critical areas. Studies must incorporate extended follow-up periods (e.g., six to twelve months) to determine the long-term sustainability of the appetite increase and its eventual impact on growth parameters (weight, height, and BMI) and overall nutritional status. Furthermore, research is needed to establish the most effective *Tui Na* protocol, including the optimal duration, frequency, and specific selection of acupoints for children across varying ages and degrees of poor appetite. Future investigations should also employ objective physiological measures (e.g., assessing levels of ghrelin, leptin, or gastric motility hormones) to precisely elucidate the underlying mechanism of action by which *Tui Na* regulates appetite and digestive function. Finally, research should compare the effectiveness of *Tui Na* massage against established interventions (such as behavioural feeding therapy or pharmaceutical stimulants) to accurately position its role within comprehensive paediatric treatment guidelines, while also evaluating the feasibility and fidelity of parental training programs for long-term adherence to the home-based treatment schedule.

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