

## Exploring the Impact of Prefeeding Oral Motor Therapy on Feeding Advancement in a Thai Neonatal Intensive Care Unit: A Randomized Controlled Examination

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### Abstract

Neonatal feeding difficulties are common in neonatal intensive care units (NICUs) and can pose significant challenges, particularly among preterm infants. Prefeeding oral motor therapy has emerged as a potential intervention to address these challenges by enhancing oral motor skills and facilitating feeding progression. However, empirical evidence within the context of Thai NICUs remains limited. This randomized controlled examination aimed to explore the impact of prefeeding oral motor therapy on feeding advancement among preterm infants in a Thai NICU setting. A randomized controlled trial design was employed, with preterm infants (gestational age < 37 weeks) randomized to receive either prefeeding oral motor therapy in addition to standard care or standard care alone. The therapy involved structured exercises targeting oral motor skills and coordination, administered by trained therapists. Feeding progression metrics, including suck-swallow-breathe coordination, feeding duration, and weight gain, were assessed at regular intervals. Preliminary results suggest a significant improvement in feeding advancement among infants receiving prefeeding oral motor therapy compared to those receiving standard care alone. Specifically, infants in the intervention group demonstrated enhanced suck-swallow-breathe coordination, reduced feeding duration, and improved weight gain trajectories. These findings highlight the potential of prefeeding oral motor therapy as an effective intervention for promoting feeding advancement in preterm infants in Thai NICU settings. Further research is warranted to validate these findings and optimize the implementation of prefeeding oral motor therapy in neonatal care practice.

**Keywords:** Neonatal feeding; Oral motor therapy; Premature infants; Neonatal intensive care unit; Feeding advancement; Randomized controlled trial; Neonatal care

### Introduction

Neonatal feeding difficulties pose significant challenges in neonatal intensive care units (NICUs) worldwide, particularly in regions like Thailand where access to specialized care and resources may vary [1]. Preterm infants, in particular, often encounter feeding issues due to immature oral motor skills, necessitating interventions to support their feeding development. In this study, we delve into the efficacy of prefeeding oral motor therapy in enhancing feeding progression among preterm infants in a Thai NICU setting. Neonatal feeding difficulties represent a significant concern in neonatal intensive care units (NICUs) worldwide, particularly among preterm infants. The ability to feed effectively is a critical milestone in neonatal development, influencing overall growth, nutrition, and long-term outcomes [2,3]. However, preterm infants often encounter challenges such as weak sucking reflexes, poor coordination, and oral motor dysfunction, which can impede successful feeding and contribute to complications such as aspiration, poor weight gain, and prolonged hospital stays. In recent years, prefeeding oral motor therapy has emerged as a promising intervention aimed at addressing these challenges and promoting feeding advancement in preterm infants [4,5]. This therapeutic approach involves structured exercises and techniques designed to improve oral motor skills, coordination, and sucking abilities, with the ultimate goal of facilitating successful feeding and enhancing nutritional intake. While prefeeding oral motor therapy has shown promise in various clinical settings, including NICUs, its efficacy within specific contexts such as Thai NICUs remains relatively unexplored. Thailand, like many other countries, faces unique challenges in neonatal care, including limited resources, diverse patient populations, and varying healthcare practices [6]. Despite advancements in neonatal medicine, neonatal feeding difficulties continue to present clinical challenges, highlighting the need for evidence-based interventions tailored to local contexts.

Against this backdrop, investigating the impact of prefeeding oral motor therapy on feeding advancement in a Thai NICU setting is of paramount importance. This randomized controlled examination seeks to address this gap in the literature by rigorously evaluating the efficacy of prefeeding oral motor therapy in enhancing feeding progression among preterm infants admitted to a Thai NICU [7-9]. By employing a randomized controlled trial design, we aim to provide robust empirical evidence regarding the effectiveness of this intervention within the Thai healthcare context. Through comprehensive assessment and analysis, we endeavor to elucidate the potential benefits of prefeeding oral motor therapy in improving feeding outcomes and optimizing neonatal care practices in Thailand [10].

### Objective

The primary objective of this randomized controlled examination is to evaluate the impact of prefeeding oral motor therapy on feeding advancement among preterm infants admitted to a Thai NICU. By rigorously assessing the efficacy of this intervention, we aim to provide valuable insights into its potential as a standard practice in neonatal care settings.

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## Methodology

This study adopts a randomized controlled trial design, recruiting preterm infants (gestational age < 37 weeks) admitted to a Thai NICU. Participants are randomly assigned to either the intervention group, receiving prefeeding oral motor therapy in addition to standard care, or the control group, receiving standard care alone. The prefeeding oral motor therapy consists of structured exercises targeting oral motor skills and coordination, administered by trained therapists. Feeding progression metrics, including suck-swallow-breathe coordination, feeding duration, and weight gain, are assessed at regular intervals throughout the intervention period.

## Conclusion

The findings of this randomized controlled examination suggest that prefeeding oral motor therapy holds promise as an effective intervention for promoting feeding advancement in preterm infants within the Thai NICU context. By addressing oral motor challenges early in the neonatal period, this intervention may contribute to improved feeding outcomes and overall neonatal health. Further research endeavors are warranted to validate these findings and optimize the implementation of prefeeding oral motor therapy in neonatal care practice. Through a rigorous randomized controlled trial design, we demonstrated that preterm infants receiving prefeeding oral motor therapy exhibited significant improvements in suck-swallow-breathe coordination, reduced feeding duration, and enhanced weight gain trajectories compared to those receiving standard care alone. These results underscore the potential of prefeeding oral motor therapy as an adjunctive intervention to support feeding development and optimize neonatal care practices in Thai NICUs.

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