



“EFFECTIVENESS OF PREMATURE INFANT ORAL MOTOR INTERVENTION (PIOMI) AS PRE-FEEDING ORAL MOTOR STIMULATION AMONG PRETERM INFANTS AT THE NEONATAL INTENSIVE CARE UNIT: A META-ANALYSIS”

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INTRODUCTION

The increasing survival rate of preterm infants has led to long-term complications associated with prematurity, such as oral feeding difficulties. Oral motor intervention has been found beneficial among preterm infants. The review aims to determine the effectiveness of early and easily administered premature infant oral motor intervention (PIOMI) among preterm infants 32 weeks and less admitted to the Neonatal Intensive Care Unit, through a meta-analysis.

RESULTS

A total of eight randomized-clinical trials, with 290 participants between 26 to 32 weeks gestational age, were included in the meta-analysis. The study suggested that PIOMI may reduce the transition from gavage to independent oral feeding by 2 days (SMD = -1.97, $z = 4.33$, $p = 0.001$, 95% CI = -2.86 to -1.08), increase weight gain by 810 g (SMD=0.81, $z=3.45$, $p=0.001$, 95% CI = 0.35 to 1.27), and shorten hospital stay, compared to the control group.

METHODOLOGY

Eligible studies were retrieved from six databases (PubMed, MEDLINE, Cochrane Library, Google Scholar, Physiotherapy Evidence Database, and International Clinical Registry Platform) and PIOMI website. These were screened based on established selection criteria. The statistical analysis was conducted using the STATA/MP version 18.

DISCUSSION

The meta-analysis of preterm infant oral motor intervention can be considered in NICUs to improve clinical outcomes of preterm infants 32 weeks gestational age or less. However, careful consideration is warranted due to study variations. Future well-designed randomized clinical trials on PIOMI may include standard oral feeding protocol in the initiation and progression of feeding to minimize methodological limitations or variations in the results

Keywords: premature infant oral motor intervention, prematurity, infant, oral motor stimulation