



بسم الله الرحمن الرحيم

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**Nurses' Practices for Sensorimotor Stimulation to
Enhance Oral Feeding of Preterm Infants: An
Assessment Study**

Thesis

*Submitted for Partial Fulfillment of the Requirements
of the Master Degree in **Pediatric Nursing***

By

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2022**



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List of Abbreviations (Abb.)

Abb.	Full Term
AAP	American Academy of Pediatrics
GER	Gastro-esophageal Reflux
GERD	Gastro-esophageal Reflux Disease
GIT	Gastrointestinal Tract
LES	Lower Esophageal Sphincter
LESR	Lower Esophageal Sphincter Relaxation
IVH	Intraventricular Hemorrhage
NEC	Necrotizing Enterocolitis
NICU	Neonatal Intensive Care Unit
NS	Nutritive Sucking
NNS	Non- Nutritive Sucking
OS	Oral Stimulation
PDA	Patent Ductus Arteriosus
RDS	Respiratory Distress Syndrome
ROP	Retinopathy of Prematurity
SMS	Sensorimotor Stimulation
TKS	Tactile-Kinesthetic Stimulation
UES	Upper esophageal sphincter

**Nurses' Practices for Sensorimotor Stimulation to
Enhance Oral Feeding of preterm Infants:
An Assessment Study
Abstract**

Background: Preterm infants experience feeding problems due to their physiological and neurological immaturity. Sensorimotor stimulation such as oral stimulation, non-nutritive sucking and tactile kinesthetic stimulation are forms of stimulations used to enhance oral feeding for preterm infants at Neonatal Intensive Care Units. **Aim of the study:** Was to assess nurses' practices for sensorimotor stimulation to enhance oral feeding of preterm infants. **Design:** A descriptive design. **Setting:** The study was conducted at selected Neonatal Intensive Care Units (NICU) at Tanta University hospital and Tanta University Educational Hospital at Gharbia Governorate. **Subject:** A purposive sample of 80 nurses and preterm infants that satisfied predetermined inclusion criteria. **Study Tools:** Interviewing questionnaire sheet and observational checklists to assess nurses' knowledge and practices for sensorimotor stimulation to enhance oral feeding of preterm infants. **Results:** It was found that, more than three fifths of the studied nurses had a good level of knowledge and more than four fifths of them had competent level of practice regarding sensorimotor stimulation to enhance oral feeding of preterm infants. **Conclusion:** Nurses' practices to enhance oral feeding of preterm infants were competent and involved oral stimulation (perioral and intraoral stimulation combined with non-nutritive sucking) and tactile-kinesthetic stimulation. **Recommendation:** Raising awareness of nurses about sensorimotor stimulation to enhance oral feeding of preterm infants.

Key words: Preterm infant, Oral feeding, Sensorimotor Stimulation, Nursing practices.

Introduction

Oral feeding issues in preterm infants are a growing concern for neonatologists because attainment of independent oral feeding is one of the prerequisites for hospital discharge. With the increase in survival of infants born continuously more preterm, understanding such issues has certain urgency. Concerns do not pertain only to difficulties encountered by neonatologists during the birth stay hospitalization, but also by pediatricians and pediatric gastroenterologists who attend to long-term feeding difficulties/disorders, such as oral feeding aversion (***Chiou and Ongkasuwan, 2018***).

Oral feeding is a critical milestone needed for proper growth and development in infants. Ability to orally feed is one of the most prominent developmental issues among infants who are in the neonatal intensive care unit (NICU). Healthcare professionals are greatly concerned with infants' oral feeding difficulties because they interfere with their ability to attain breast or bottle feeding, prolong hospitalization, and can lead to long-term childhood feeding disorders (***Park et al., 2015***).

According to *Fucile et al., (2019)*, Prematurity is associated with feeding difficulties. Approximately 82% of preterm infants experience oral feeding difficulties that lead to lengthy hospital stay until improve growth and development.

Safe and efficient oral feeding is a challenge for both preterm infants and their caregivers. Preterm infants have neurodevelopmental immaturity, physiologic instability, and altered behavioral state disorganization that impact caregivers' decisions about how and when the preterm infant is ready for oral feeding (*Pineda et al., 2020*).

Sensorimotor stimulations may be used to optimize infants' oral feeding skills. It consists of providing developmentally appropriate sensory inputs, including oral (Peri and Intraoral), tactile (stroking of trunk and limbs), kinesthetic (range of motion of limbs), auditory (sound) and olfactory (smell) to maintain and facilitate infants' development (*Rhooms et al., 2019*).

Significance of the study:

Oral feeding in preterm infants is a complex and dynamic process involving an interaction between the oral–motor, neurological, cardiorespiratory, and gastrointestinal