

Physiological Measures of Breastfeeding

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Disclosure


<p>Buddhika Prasangi</p> <p>Financial</p> <ul style="list-style-type: none"> • Salary from Miracle L Speech & Hearing Center, Battaramulla, Sri Lanka. <p>Non-financial</p> <ul style="list-style-type: none"> • No relationships to disclose 	<p>Isuru Dharmarathna</p> <p>Financial</p> <ul style="list-style-type: none"> • Salary from the University Health Network, Toronto, Canada <p>Non-financial</p> <ul style="list-style-type: none"> • Member- Feeding Matters Conference Organizing Committee • Council Member- Sri Lankan Association of Speech & Language Pathologists • Member- Dysphagia Research Society • International Affiliate- American Speech- Language & Hearing Association
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INTRODUCTION

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Infant feeding

- Infants suck milk from nipple/ teat through suck-swallow-breathe coordination for nutrition.
- Breastmilk is the best nutritional source for infants (AAP, 2012 & WHO, 2013).
- Breastfeeding is recommended to commence within an hour of birth and continue exclusively for the first 6 months (WHO, 2012).
- Longer duration of breastfeeding in childhood strongly associate with long-term benefits to child's growth & development (Martin et al., 2005; Young et al., 2002; Arenz et al., 2004 & Oddy, 2004).




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Feeding of premature infants

- Premature- Infants born alive before 37 weeks of pregnancy(WHO, 2021).
- Breastmilk for premature infants has proven to offer lower health risks such as infections, gut issues compared to formula milk (Lucas et al., 1990 & Bier et al., 2002).
- However, breastfeeding can be more challenging for preterm infants than term born infants due to immature neurophysiological development (Buckley & Charles, 2006).



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PURPOSE

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Breastfeeding in premature vs term infants


- Understanding suck- swallow- breathe coordination in milk sucking infants can help clinicians to determine the pathophysiology of breastfeeding difficulties in premature infants.
- Therefore, we conducted a comparative study,
 - to determine the physiological differences of breastfeeding between preterm and term born infants.

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METHODS

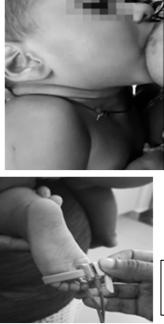
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Study Design	Quantitative, observational, cross-sectional study
Study Setting	Feeding Support Clinic, Ayati, National Centre for Children with Disabilities, Sri Lanka
Study Population	0-12 months old breastfeeding infants
Sample size	53 participants (No. of pre-term infants – 28) (No. of full term infants – 25)



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Study instruments	<ul style="list-style-type: none"> Video-recordings of midfeed sucking of breastfeeding sessions Infant pulse oximeter Digital weight scale The Bristol Breastfeeding Assessment Tool (BBAT)
Data analysis	Quantitative: SPSS (version 26.0)



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Physiological Parameters of Breastfeeding

Number of sucks per swallow	Pulse rate
Number of pauses per swallow	Oxygen saturation (before, during and after feeding)
Suck frequency	Duration of meal time
Swallow frequency	Milk intake per meal
Breath frequency	

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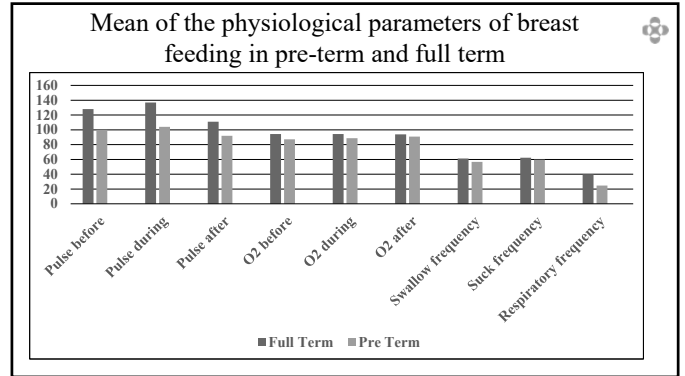
RESULTS

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Significantly higher oxygen saturation levels were reported in term infants compared to that of pre-term infants

Parameter	Pre-term		Full term	
	Mean	Standard Deviation	Mean	Standard Deviation
oxygen saturation during breast feeding	88.79	9.523	94.32	3.660

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CONCLUSION

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- Obtaining objective parameters of breastfeeding is feasible and reliable during clinical feeding assessment.
- Highlights the importance of understanding the unique suck-swallow-breathe coordination in breastfeeding infants.
- Premature infants may indicate lack of efficiency in suck-swallow-breathe coordination in breastfeeding leading to feeding difficulties.

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THANK YOU

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