Online Mother and Baby Yoga for Preterm Infants and Their Mothers in the Time of COVID-19 Pandemic

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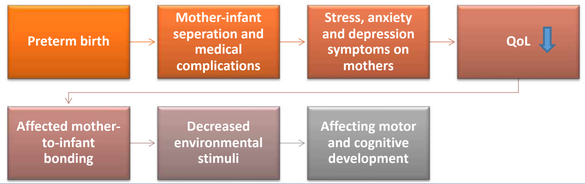
INTRODUCTION

- Preterm birth can cause increased maternal anxiety which may affect bonding, maternal quality of life (QOL), and infant development.
- Considering the global stressors, experiencing preterm birth in a time of COVID-19 could have a negative impact on maternal-infant outcomes.
- Mother and baby yoga exercises draw attention to the presumed effects on mother-infant health.
- However, maintaining in-person group interventions with infants might be challenging during the pandemic.

Figure 1. Background ideas of the study



OBJECTIVES

To examine the effectiveness of an online mother and baby yoga (O-MBY) program:

- on the motor development of preterm infants
- anxiety, postpartum bonding and QOL of their mothers

MATERIALS & METHODS

- Prospective, quasi-randomized controlled trial
- Mother-infant dyads recruited from the NICU

inclusion criteria

(1) Infants, GA between 32 0/7 and 36 6/7 weeks and completed corrected age of 6 weeks
(2) Mothers having proper internet access

exclusion criteria

(1) Infants with congenital, neurological, genetic, metabolic diseases, hearing/visual impairment
(2) Mothers who have any restriction to exercise

MATERIALS & METHODS

Materials

- Evaluations were conducted as videoconference.

Mother and Baby Yoga Group

- Group sessions by the PT (D.B.)
- Once a week, 1-hour sessions, 6 weeks in total

Control Group

- Followed by standardized routine care of the hospital

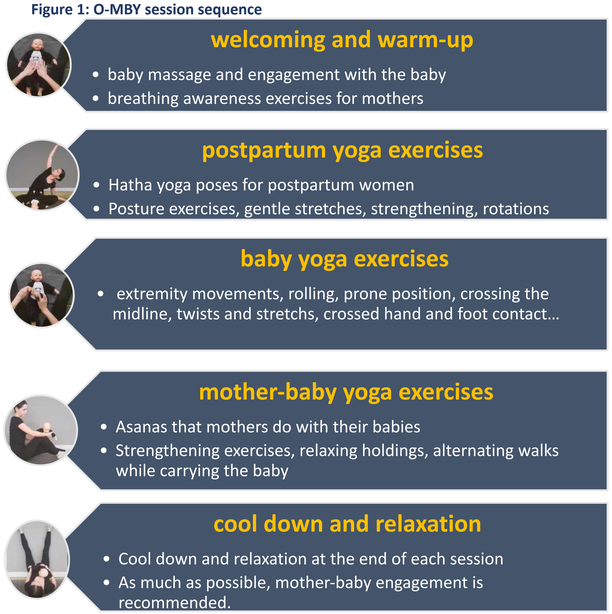
Infant Outcomes

1. Alberta Infant Motor Scale (AIMS) (Primary)

Mother Outcomes

1. State-Trait Anxiety Inventory (STAI)
2. Postpartum Bonding Questionnaire (PPBQ)
3. World Health Organization Quality of Life Scale Short Form (WHOQOL-BREF)

Figure 1: O-MBY session sequence



RESULTS

Sample

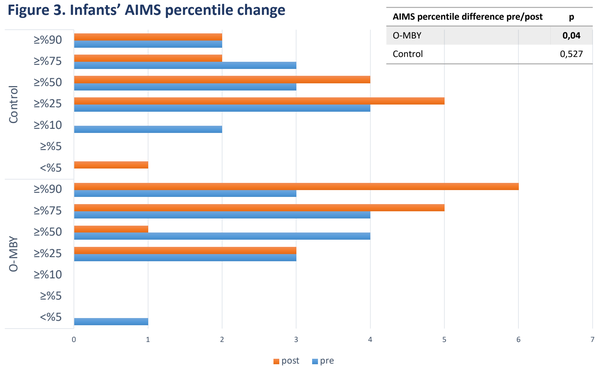
- N: 29
- O-MBY (15), Control (14)
- Mean GA of O-MBY 34.9 (SD 1.2), Control 35.1 (SD 1)
- Mean corrected age at baseline; O-MBY 8.6 (SD 3.6), Control 7.7 (SD 2)
- At the baseline; AIMS, STAI, PPQ and WHOQOL-BREF scores similar between groups

Table 1. Comparison of outcome measures

Outcome Measure	O-MBY Group		Control Group				
	Mean (SD)		Mean (SD)				
	Pre	Post	Pre	Post	*p1*	*p2*	*p3*
AIMS	10,6 (3,4)	17(4,75)	8,4(2,2)	12,9(3,3)	**0,013**	**<0,001**	**<0,001**
STAI-S	29,6(8,4)	24,6(5,3)	29,9(7,2)	30,2(4,6)	**0,002**	0,059	0,360
STAI-T	41,8(10,6)	34(10,5)	38,9(7,5)	38,1(7,2)	0,051	**0,002**	0,244
PPBQ	9,6(5,9)	4,8(5,8)	12,4(7,4)	10,9(7,3)	**0,016**	**0,004**	0,108
WHOQOL-BREF							
physical health	13(2,3)	14,7(1,9)	14,1(2,1)	14(2)	0,318	**0,006**	0,465
psychological	14,2(1,9)	15,5(2)	13,7(1,1)	13,8(1,3)	**0,014**	**0,017**	0,648
social relationships	13(2,6)	15,4(3,2)	14(2,3)	13,6(2,5)	0,098	**0,002**	0,239
environmental	14,1(1,9)	15,9(2,2)	13,8(1,5)	13,7(1,8)	**0,008**	**<0,001**	0,315

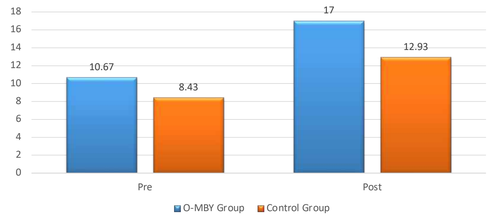
p1: O-MBY post vs. Control post
p2: O-MBY, pre vs. post
p3: Control, pre vs. post

Figure 3. Infants' AIMS percentile change



RESULTS

Figure 2. Infants' AIMS total score change



CONCLUSIONS

- O-MBY may significantly improve motor performance in preterm infants as well as anxiety levels, mother to infant bonding and QOL of the mothers of preterm infants.
- There is a need for studies examining the effects of mother-infant yoga on cognitive and emotional development parameters of preterm infants in the short and long term.
- Randomized controlled trials and trials on other populations such as infants with neurodevelopmental delay or comparisons with term and preterm infants should be considered in future studies

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