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The Norwegian Physiotherapy study for Preterm Infants

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“Everyone in healthcare really has two jobs when they come to work everyday:

To do their work and to improve it”

(Paul Batalden)

Early Interventions:

Early interventions within the first year after preterm birth typically have a preventative focus. A number of early intervention programs have been studied:

- **Passive Movement**
- **Massage**
- **Active Movement**
- **Multi-modal**
- **Task Specific/ Enriched Environment**
- **Parent Infant**

The most effective ones are those that support both the parent and the infant and many of these programs show significant positive effects on cognitive and behavioral outcomes in the infant born preterm.

Motor Development Interventions for Preterm Infants

Early interventions associated with improved motor outcomes specially focuses on motor skills, i.e. active movement interventions

Family Empowerment

The Norwegian Physical Therapy study for Preterm Infants (NOPPI)

Øberg et al. BMC Pediatrics 2012, 12:15
http://www.biomedcentral.com/1471-2431/12/15

BMC Pediatrics

STUDY PROTOCOL Open Access

Study protocol: an early intervention program to improve motor outcome in preterm infants: a randomized controlled trial and a qualitative study of physiotherapy performance and parental experiences

Gunn Kristin Øberg[1,3*], Suzann K Campbell[6], Gay L Girolami[6], Tordis Ustad[5], Lone Jørgensen[1] and Per Ivar Kaaresen[2,4]

NOPPI evaluates whether a parent-administered exercise intervention in the Neonatal Intensive Care Unit (NICU) can improve preterm infant motor outcomes during the NICU stay and up to 24 months CA.

NOPPI:

Clinicians and Research team

UNIVERSITETSSYKEHUSET NORD-NORGE
DAVVI-NORGGA UNIVERSITEHTABUOHCCEVIESSU

ST. OLAVS HOSPITAL
TRONDHEIM UNIVERSITY HOSPITAL

Oslo universitetssykehus

UNIVERSITETET I TROMSØ UiT

UIC The University of Illinois at Chicago

Data was collected at three Norwegian hospitals:
University Hospital of North Norway, Tromsø,
St. Olavs University Hospital, Trondheim,
University Hospital of Oslo, Ullevål.

Study population

- Infants born at gestational age ≤ 32 weeks medically stable at 34 weeks postmenstrual age
- Parents understood and spoke Norwegain
- Enrolled n = 153
- Intervention group n = 74 --> 64
- Controll group n =79 --------> 76

Intervention

- A focus on the optimal handling and facilitation of movements in interaction with the child.

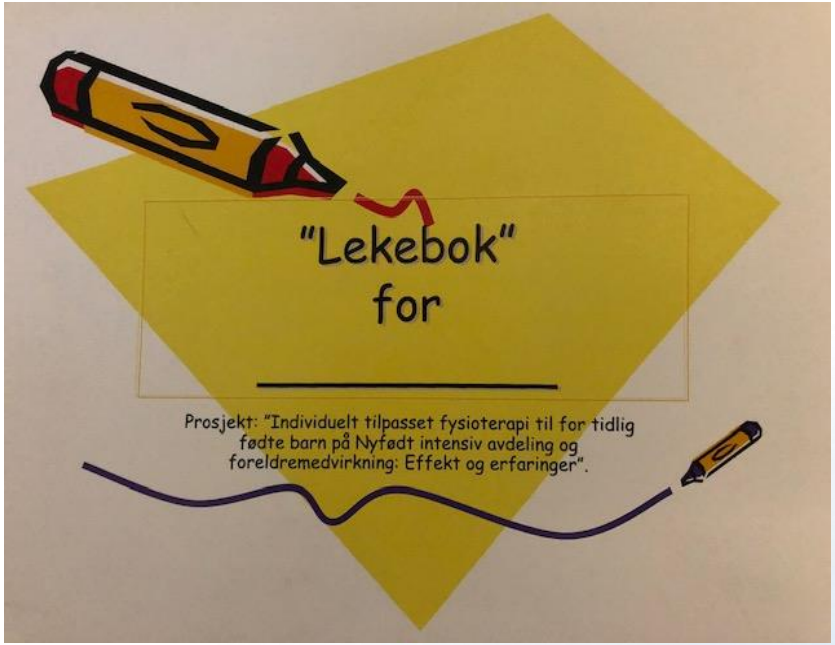
- Developing an awareness of their infant`s cues and learn strategies to respond appropriately to those cues.

- To improve head and trunk control and antigravity midline orientation of arms and legs in prone, supine, side-lying and supported sitting.

Intervention

- 10 minutes X 2 each day X 3 weeks
- The infant’s response and state
- Parents record the duration of each intervention

Play-book



- 15 different “play-exercises”

OBJECTIVE:

to assess the effect of the parent-administered intervention program in the preterm period on motor performance at 24 months' corrected age

Baseline 34 weeks PMA  Primary outcome 24 Months CA

Standardized tests were carried out at baseline, term age and at three, six, twelve and 24 months corrected age

RESULTS

Early Parent-Administered Physical Therapy for Preterm Infants: A Randomized Controlled Trial

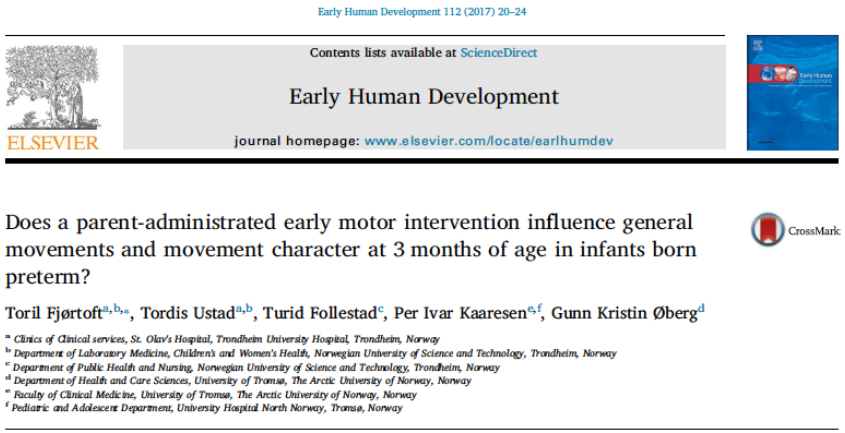
Tordis Ustad, Kari Anne I. Evensen, Suzann K. Campbell, Gay L. Girolami, Jorunn Helbostad, Lone Jørgensen, Per Ivar Kaaresen and Gunn Kristin Øberg

Pediatrics 2016;138;; originally published online July 20, 2016;

DOI: 10.1542/peds.2016-0271

The parent- administered physiotherapy program that was implemented before term-equivalent age in very preterm infants improved short-term motor performance more than for infants in the control group. The intervention was well tolerated by the infants.

RESULTS



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Does a parent-administrated early motor intervention influence general movements and movement character at 3 months of age in infants born preterm?

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There is no evidence that the parent-administered intervention program has a significant effect on the fidgety movements of preterm infants or on the overall movement character.

RESULTS

European Journal of Physiotherapy

Taylor & Francis

ISSN: 2167-9169 (Print) 2167-9177 (Online) Journal homepage: http://www.tandfonline.com/loi/iejp20

Parents' perceptions of administering a motor intervention with their preterm infant in the NICU

Gunn Kristin Øberg, Tordis Ustad, Lone Jørgensen, Per Ivar Kaaresen, Cathrine Labori & Gay L. Girolami

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To link to this article: https://doi.org/10.1080/21679169.2018.1503718

The parent-administered intervention program had a substantial positive impact on parent-infant bonding and parents' perceptions of empowerment and competency.

Quotations:

THE BABY BECAME MINE

“I think it was great to get training in intervention. It was very nice to be allowed to interact with my own baby. Not just sit with her in my lap with all those tubes and only having that experience.

You could see that she was more than that and it was not so dangerous to move her ... She was a baby. She became more like MY BABY …..it was possible to touch her, right?”

“But I noticed that he.. like his…. muscles woke up and he was really awake!

Afterwards he was more aware of what happened around him.

That was awesome!”

“As a newborn he seemed very fragile….and for a first time mother this is very difficult. Therefore, guidance from the PT helped me see what the baby could do. It was OK for me to touch him and … see what he could accept.”

“I feel fine to do the intervention, and I can do it when it suits us, morning or evening. Sometimes we even skip it. I like to be in charge and to do it when it suites me and my baby.”

New article submitted to Journal ☺

“Effects at 3 Months Corrected Age of a Parent-Administered Exercise Program in the Neonatal Intensive Care Unit: A Randomized Controlled Clinical Trial.”

Conclusion

The results of this study suggest that parental administration of an intervention program in the NICU can positively impact infant short term development, parent-infant bonding and parents' feelings of competency.

Thank you to

- The parents and infants for their participation. Without them this study would not have been possible.

- The Norwegain Fund for Post-Graduate Training in Physiotherapy for funding the study

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AV FYSIOTERAPEUTER

Thank you for your attention!