

**Title: The Effectiveness of a Guided Participation Discharge Programme on improving Parental Outcomes for Very Premature Infants:
A Pilot Randomised Controlled Trial**

ABSTRACT

Background

Prematurely born infants have immature body organs and body function and thus there are anticipated health problems. The more premature the infants, the more health problems they could have. Despite an increased risk of behavioural and/or developmental deficits, with the advancement of neonatal intensive interventions, more premature infants can survive. Nevertheless, their survivals are not absolutely free from complications, long term impacts on parenting, family and health services could result. Parents of very premature infants are stressful in seeing their fragile infants. This could be related to the alternation in parenting and confronting to the technical environment of neonatal intensive care unit. Evidence suggests that effective discharge interventions enhance parenting competency and mitigate the high level of stress in taking care of the infants after discharge.

A pilot randomised controlled trial was conducted to evaluate whether implementing a guided participation discharge programme in a neonatal intensive care unit can improve parenting sense of competence and parental stress. The population includes very premature (gestational age ≤ 32 weeks) infants with no congenital abnormalities and required no major surgery right after the infants was born. The sample included 30 very premature infant-parent pairs divided into the intervention and control group. The participants in the intervention group received three bedside guided participation discharge intervention training sessions and one follow-up telephone call after discharge. The control group participants received usual care including three condition updates and a follow-up telephone call after discharge.

Two self-reported questionnaires, the Chinese version of the Parenting Sense of Competence Scale (PSOC) and the Chinese version of the Perceived Stress Scale-10 (PSS-10) were delivered to parents soon after admission when the consent for the trial were obtained at T_0 , at the time of discharge T_1 , at the time after telephone follow up T_2 , and at one month after discharge T_3 to evaluate for the parental outcomes.

Key findings

With adjustment on the confounding factors, the estimated change of parenting sense of competence score in the intervention group was significant ($p = 0.01$) at the time when the infant was discharged from hospital (T_1). On the other hand, the estimated change of perceived stress score was not significant throughout all the time points except at one month after hospital discharge (T_3), the estimated change of perceived stress score in the intervention group was significant ($p = 0.03$).

Significance of the study

The study can arouse the awareness of neonatal nurses for the need of further studies on this scope. Despite there were limitations of the study, the guided participation discharge intervention demonstrated significant effect at certain time points to enhance the parenting sense of competency and to mitigate perceived stress of the parents. In the future, further studies with adjustment on the implementation time point, adjustment on the dose of interventions, addition of measurement in parental knowledge, measurement of parental satisfaction, and involvement of different neonatal units are recommended.