

A randomized controlled trial on the effectiveness of a telephone consultation program on exclusive breastfeeding

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Background

- ◆ WHO and UNICEF (United Nations Children's Fund) have recommended that optimal infant nutrition was exclusive breastfeeding for the first six months of life, followed by the introduction of nutritionally adequate and safe complementary feeding with continued breastfeeding for up to the age of two years or Beyond.
- ◆ Objectives of Healthy People 2020:
 - ◆ 46.2% of infants were breastfeed exclusively through 3 months
 - ◆ 25.5% of infants were breastfeed exclusively through 6 months

Exclusive breastfeeding in Taiwan

- ◆ The rate of exclusive breastfeeding at 6 month postpartum was 24.3% in Taiwan based on a national survey in 2011.
- ◆ An effective strategy needs to be developed and implemented to improve and sustain breastfeeding practice in Taiwan.

Research aims

- To develop a telephone consultation program;
- and to evaluate its' effectiveness on improving exclusive breastfeeding after hospital discharge.

Methods

- **Research design**

- A randomized control trial was used in the study.

- **Participants & sample size**

- The study was undertaken at eight certificated baby-friendly hospitals in Taiwan.
- 120 subjects per hospital were needed in the study.

Methods

- *Participants*

- Inclusion criteria: Mothers were Mandarin or Taiwanese speakers, healthy and had a delivery of a full term healthy infant (37–41 weeks, >2500g); they declared their intention to breastfeed at postpartum units were enrolled.
- Exclusion criteria: Mothers or babies have medical problems; babies admitted to NICU; refused to participate



Control group

- Mothers received the hospital's routine postnatal care and breastfeeding advice during the period of admission.
- They were also provided a breastfeeding hotline to call the nurses in case of breastfeeding problems.



Telephone consultation program

- Professional counselors (PC) were nurses who have at least one year working experiences at maternal or newborn units and received 21-hour formal consulting skill training.
- PC provided scheduled telephone consultations (at Days 7, Weeks 2, 3, 4, and Month 2, 3, 4, 5, 6) to PC group mothers who continued breastfeeding their infants after discharge.
- During every phone call, the PC gave support and all information on fully breastfeeding.



Data collection

- 1016 women who met the inclusion criteria were randomly assigned to one of the two groups, 74 lost to follow up, 472 in the PC group, 470 in the control group were completed the trail.
- Recruitment data were collected through a structured interview, after obtaining signed informed consent and included information on mother's obstetric and breastfeeding history, and current feeding method (To)
- Each study mother was followed for 6 months after they returned home. Follow-up interviews, regardless of whether mothers had changed their feeding methods, were scheduled at one (T₁), two (T₂), four(T₃), and six months(T₄) post-discharge.



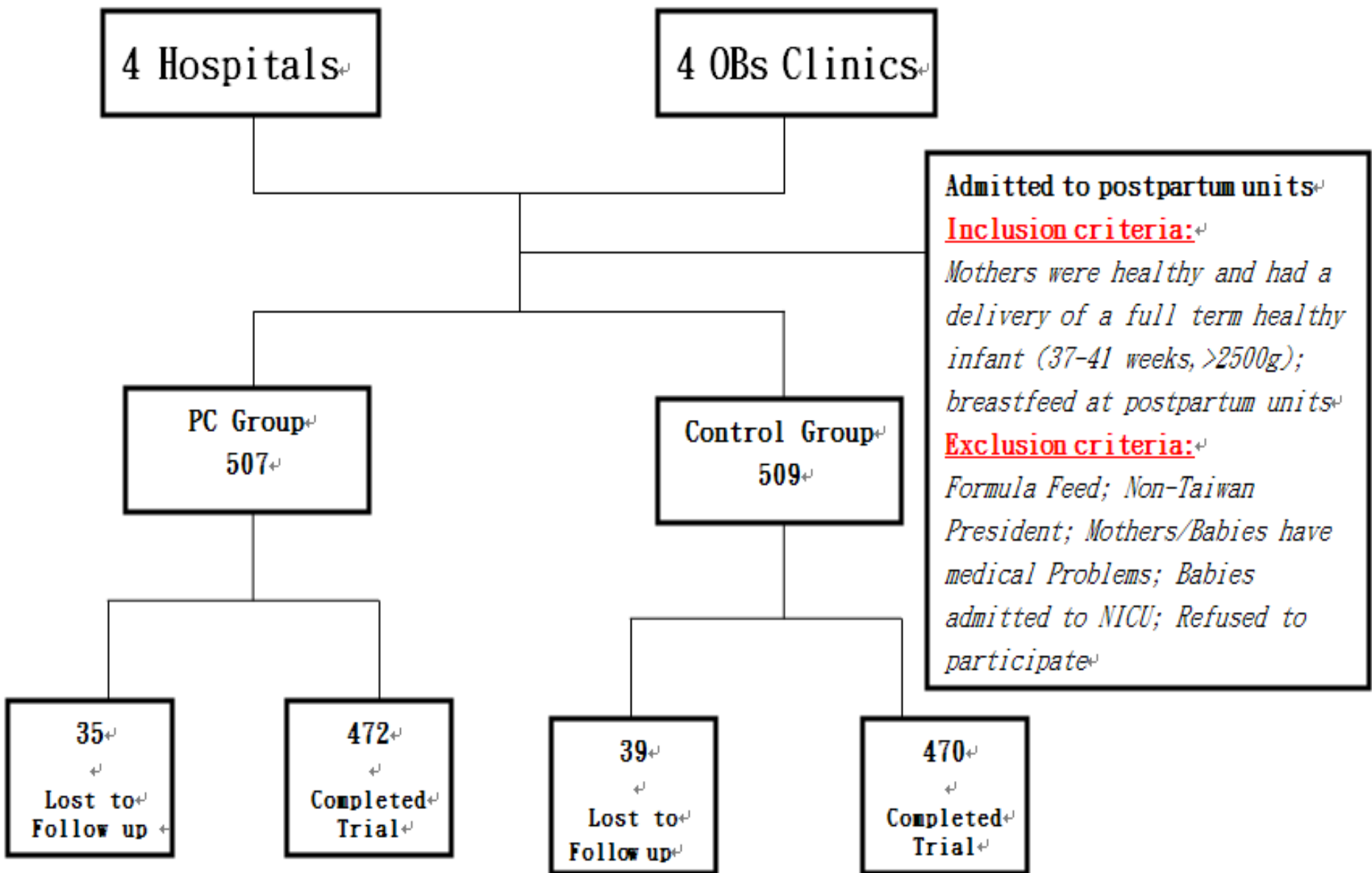


Figure 1: Flow of study participants from recruitment period

Results

- *Group differences*
 - Compared with mothers in the control group, more previous breastfeeding experience were recruited into the PC group ($p < 0.05$).
 - More mothers in the PC group reported exclusive breastfeeding at discharge ($p < 0.05$).
 - Those variables have been controlled in the GEE model.

Table 1: Characteristics of the study participants and group differences

	PC group (n = 472)	Control group (n = 470)
Mean maternal age, year (SD)	30.9 (4.5)	31.0 (4.8)
Mothers education ≤ High school College and university	30.9% 69.1%	31.1% 68.9%
Marital Status: married	97.5%	95.5%
Mothers employment status (yes)	70.3%	69.1%
Family income NTD: ≤ 50,000 NTD: 50,00-100,000 NTD: > 100,000	44.5% 48.1% 7.4%	46.4% 45.3% 8.3%
Primiparae	48.3%	54.0%
Mode of delivery (NSD)	65.5%	68.3%
Exclusive breastfeeding at hospital discharge	41.1%*	31.7%*

* Significantly different with *p value* < .05

Results

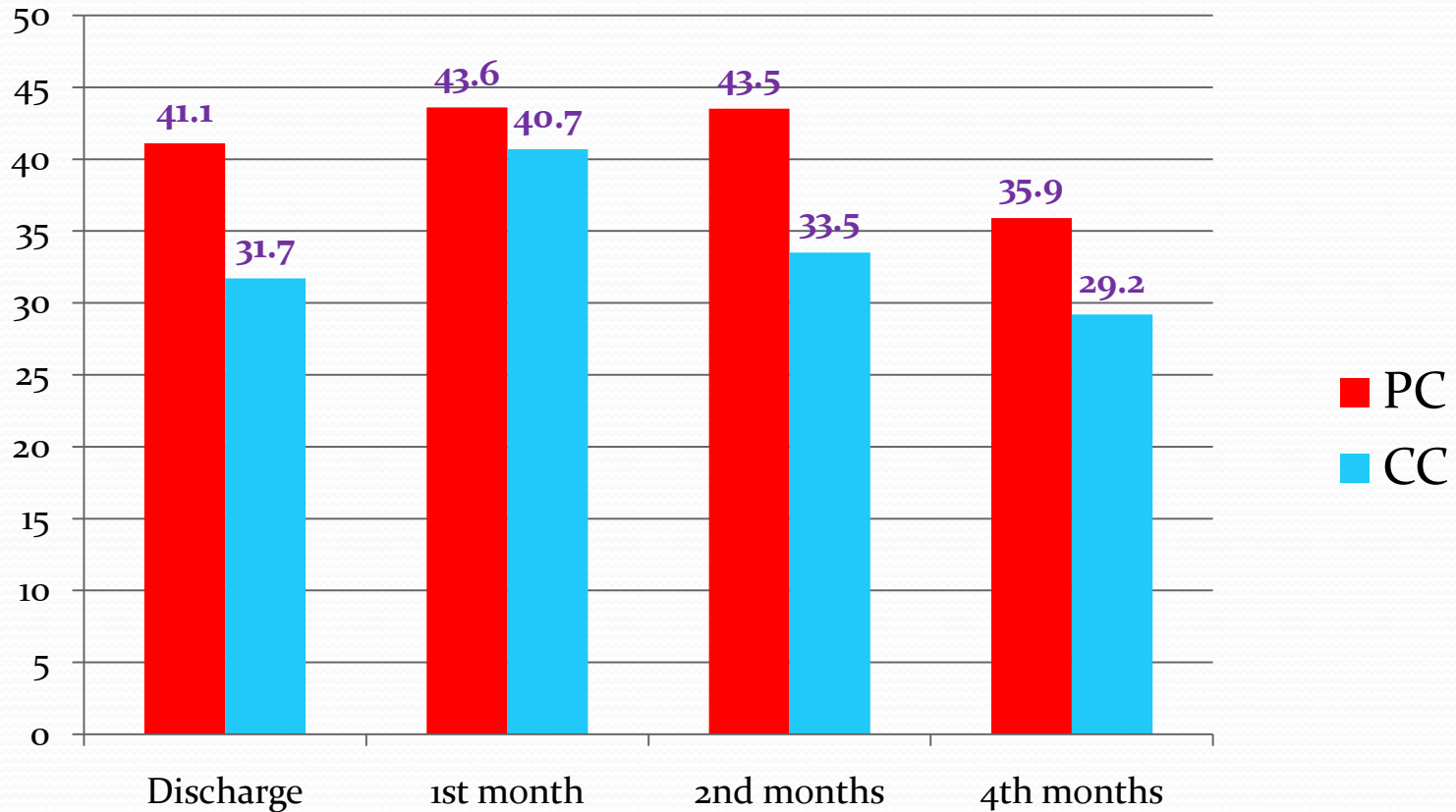


Figure 2: Exclusive breastfeeding percent rates between groups

Table 2: Generalized Estimating Equations Model on the Effect of exclusive breastfeeding practices for telephone consultation program (N= 942)

	<i>B</i>	<i>SE</i>	<i>P</i>	O.R	95% Wald Confidence Interval for Exp(B)	
					Lower	Upper
Group (Experimental vs. control)	.41	.14	.003*	1.50	1.15	1.96
Time						
Baseline (at discharge)	Reference					
1 Month	.30	.13	.017*	1.35	1.05	1.73
2 Months	.11	.13	.395	1.12	.87	1.43
4 Months	-.08	.13	.567	.93	.71	1.20
Group × Time						
Group × Baseline (at discharge)	Reference					
Group × 1 Month	-.25	.18	.161	.78	.55	1.10
Group × 2 Months	-.03	.18	.878	.97	.69	1.38
Group × 4 Months	-.07	.18	.709	.93	.65	1.34

* Significantly different with *p value* < .05

Discussion

- The PC support showed its effectiveness on exclusive breastfeeding during the first 4 months on Taiwanese postpartum women.
- It is important that after hospital discharge, mothers feel that they can express their breastfeeding problems to a competent nurse who gives them all the support and information they need.

Discussion

- The transition period of returning to work is a critical time to support the continuation of breastfeeding amongst female employees.
- Thus, relevant policies (such as providing supportive workplace environments, appropriate facilities, strong management support) should be made in order for women to feel adequately supported and encouraged to continue to breastfeed when returning to work.



Study limitations

- This is an ongoing study. We are still recruiting study participants and will follow the women up to 6 months postpartum.
- Data were collected in eight certificated baby-friendly hospitals in Taiwan, the sample dimension is limited and results may be not representative of all Taiwanese postpartum women. Further larger studies would be necessary to confirm these findings.



Conclusion

- The preliminary results support the effectiveness of use of telephone consultation to improve exclusive breastfeeding after hospital discharge.
- Breastfeeding promotion intervention should start during pregnancy and continue both in the hospital and at home after discharge to effectively improve and sustain exclusive breastfeeding practice in Taiwan.

Acknowledgement

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