DH- Family:Share the Care, Share the Joy

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Share the Care
Share the Joy
愛+人: 共育共樂

I. Background

- Project Name: Family: Share the Care, Share the Joy
- Agency Partner: Department of Health
- Target group: Families with two generations consisting of pregnant women who have parents/in-laws to help childcare after childbirth
- Research Design: Two-arm RCT
  - Arm A: HKU & DH program
  - Arm B: Control [DH Routine Care]

Background

Vulnerabilities

- With the birth of a child, there are shifts in family relationships and new roles for parents and grandparents. This is a time of vulnerabilities but also opportunities to strengthen family relationships.
- Conflict between grandparental generation and parental generation regarding the roles and responsibility of care of the baby.
- Planning for the immediate post-natal period, and communication skills can minimize disharmony.

Need Assessment

- A series of discussion groups have been conducted
- Pregnant women and their husbands:
  - to report their anticipated conflict and disturbance of relationship due to the demand of childcare.
- Postpartum women, their husbands, their parents and parents-in-law:
  - to report on their actual causes of disturbance to family relationships after the birth of the newborn and
  - the protective factors for those who have minimal disturbances in family relationship.

Aim

Using a brief intervention programme with cognitive dissonance approach to promote health, happiness and harmony in families with pregnant women by enhancing intergenerational relationships

Objectives

Primary Objectives

- To test the effectiveness of the intervention in improving self-efficacy of first or second-time mothers in managing conflicts with their in-law (or maternal mothers).
- To enhance intergenerational relationship by promoting better communication and conflict management skills.

Secondary Objective

- To increase satisfaction of family functioning by developing better communication and conflict management skills.
- To upkeep the mental health status of new mothers in terms of their perceived stress level and presentation of depressive symptoms.

Knowledge base

- Cognitive dissonance approach
  (Festinger, 1957, Festinger & Carlsmith, 1959)
- Motivation to change is usually low in the absence of a problem
- Aroused state of psychological discomfort and motivated participants to change when they experienced discrepancies between attitudes and behaviors
- →increase participants' discrepancies while minimizing the resistance to chance the behaviors
- Participants were resourceful. They are primary source in finding answers and solutions for the problem.
  (Cunningham 2006)

Study Design

- Research design: RCT with two arms
  - Arm A: a 4-session intervention
  - Arm B: Control group with usual antenatal care.
- Assessment Time:
  - before the intervention (T1),
  - at the end of the intervention (T2), and
  - 6-8 weeks after delivery (T3)
- District:
  - Maternal and Child Health Centres (MCHCs) of the Department of Health from 4 regions in Hong Kong

PARTICIPANTS

Recruited from antenatal clinics of Maternal & Child Health Centers

Inclusion criteria:

- Pregnant women, 14-30 weeks gestation;
- First or second time mothers living with husband
- Aged 18 years old or above;
- Hong Kong resident; Chinese and can communicate in written Chinese and Cantonese;
- Having at least a parent or parent-in-law living in Hong Kong

Exclusion criteria:

- Those who will not stay in Hong Kong after childbirth or the newborn will be taken care by someone outside Hong Kong
- Those diagnosed with mental illness or have past history of mental illness or requiring medication for mental illness

Measurements

Primary Objectives:

- Relationship Efficacy Measure-12 items *(Bradbury, 1989)*
- The Stryker Adjustment Checklist-10 items *(Stryker, 1955)*
- Rahim Organizational Conflict Inventory-II-35 items *(Rahim, 1983)*

Secondary Objectives:

- Family APGAR-5 items *(Smikstein et al., 1982)*
- Short-Form 12 version 2-2 items *(Ware, 2002)*
- Subjective Happiness Scale-4 items *(Lyubomirsky & Lepper, 1999)*
- Family Harmony Scale-8 items *(a COHORT team of the Family Project)*
- Perceived Stress Scale-4 items *(Cohen et al., 1983)*
- Edinburgh Postnatal Depression Scale-10 items (Cox et al., 1987)

II. Methods: Arm A Description

The HKU program involved four 2-hour group sessions using the dissonance induction approach and the Health Action Process Approach

Session 1	Setting the Stage - Motivating pregnant women to enhance intergenerational relationship for childcare
Session 2	Emotional Management
Session 3	Communication, Negotiation and Active listening
Session 4	Planning and Problem solving skills

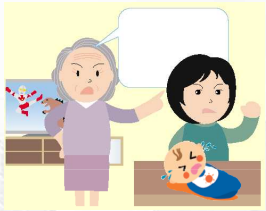
Intervention sessions –Arm A

Handbook Cover Page

Homework Exercise

Quality assurance

- Refinement of intervention manual
- Video-taping of sessions
- Fidelity rating
- Training of interventionist
- Consistency of interventionists



Arm B Description

The agency program involved routine antenatal care from the Maternal and Child Health Centres (MCHCs).

One- hour video show

+

Brief discussion led by trained interventionist

Participant Characteristics

This programme reached the majority as well as the vulnerable populations who were in need of improving parenting skills :

- **Marital status** – 8.4% of participants were single
- **Working status** – 1.3% were not working
- **Immigration status** – 20.8% were recent migrants
- **Lower household income** - 29.6% participants reported < HK$20,000/month

Recruitment and Retention

- The Program was attractive to the target audience as recruitment was over 100% of the target.
  - 2-Arm Recruitment: 156 (Target 150)
    - Arm A (n=78); Arm B (n=78); Total = 156)
- The attendance was moderate and comparable to other attendance rate of other antenatal studies (e.g. 58% in Muñoz et al 2007) and drop-out was common at about 50% (Austin et al. 2008)

	Arm A
Attended at least 1 session	100%
Attended at least 2 sessions	74%
Attended at least 3 sessions	53.8%
Attended all four sessions	33.4%

Hypotheses

Intervention (Arm A) at T2 and T3

- Hypothesis 1: The intervention will increase pregnant women's use of positive conflict management styles
- Hypothesis 2: The Intervention will increase pregnant women's satisfaction with their family.
- Hypothesis 3: The Intervention will increase pregnant women's self-efficacy in managing conflict with their parents and/or in-laws and reduce tension to enhance their intergenerational relationship.
- Hypothesis 4: The Intervention will reduce pregnant women's perceived stress
- Hypothesis 5: The Intervention will improve pregnant women's perceptions of Health, Happiness and Harmony

Results

Outcomes address H1- Intervention vs. Control Group

Participants in Intervention Arm (Arm A) reported significantly more positive conflict management styles (integrating and obliging) than those in Control Arm (Arm B) after the intervention at T2 (Table 1). Arm A demonstrated less avoiding and dominating management styles (negative styles) and higher compromising styles (positive style) than Arm B although the differences between groups were not significant. Same directions were found at T3, however, the differences were not significant.

Perceived changes on conflict management style

Directions: in relating with parents/in-laws there will surely be some dissimilarities or conflict arise. The followings are some of the conflict handling method, please indicate your tendency in adopting the items as your own method in actual reality. (1=Never, 5 = Always)		Means(S.D) T1	T2	T3	Did the intervention Arm improve more than the Control Arm?	p-value# at T2	Effect Size a at T2
1. Integrating Style *(positive style: the higher scores the better)*	Arm A	21.29	23.42	23.05	Yes	.042*	0.26
	Arm B	21.23	21.46	21.53			
2. Avoiding Style *(negative style: the lower scores the better)*	Arm A	24.33	24.3	24.16	Yes	.390	0.08
	Arm B	24.33	23.6	24.57			
3. Dominating Style *(negative style: the lower scores the better)*	Arm A	19.37	19.32	19.82	Yes	.210	0.21
	Arm B	18.73	19.68	20.53			
4. Obliging Style *(positive style: the higher scores the better)*	Arm A	22.59	23.59	22.97	Yes	.032*	0.25
	Arm B	23.6	22.82	23.35			
5. Compromising Style *(positive style: the higher scores the better)*	Arm A	21.29	22.06	21.41	Yes	.285	0.11
	Arm B	21	20.89	21.12			

[a] Effect size criteria (Cohen's f): small = .1, medium = .25, large = .4 ; * $p < .05$ based on repeated measures controlled for baseline

#All p-value at T3 > .05

Outcomes address H2-H4- Intervention vs. Control Group

- Intervention Arm(Arm A) was effective in increasing the satisfaction with Family Functioning and reducing the perceived stress of the participants after the intervention, when compared with the Control Arm(Arm B).

Change in satisfaction on family functioning and self-efficacy in managing conflicts Pre-intervention to Postnatal follow-up

Proximal Outcomes		Means(S.D) T1	T2	T3	Did the intervention Arm improve more than the Control Arm?	p-value# t T2	Effect Size a at T2
Satisfaction with Family Functioning *(1= Hardly ever, 3= Almost always; 5-item scores range from 5-15; higher scores higher satisfaction)*	Arm A	7.08	7.71	7.61	Yes	.045*	0.27
	Arm B	7.08	6.54	6.97			
Self-efficacy in managing conflicts with parents/in-laws *(1= Very Strongly Disagree, 7= Very Strongly Agree; 7-item scores range from 7-49; higher scores lower self-efficacy)*	Arm A	32.77	32.18	31.78	Yes	.362	0.13
	Arm B	33.98	32.07	31.57			
Intergenerational Relationship (in term of tension) *(0= False, 1= True; 10-item scores range from 0-10; higher scores less tension)*	Arm A	4.27	4.5	4.88	No	.763	0.11
	Arm B	4.27	4.65	5.05			
Perceived Stress *(0= Never, 4= Very often; 4-item scores range from 0–16; higher scores higher stress)*	Arm A	6.59	5.82	6.75	Yes	.022*	0.31
	Arm B	6.77	7.14	6.71			

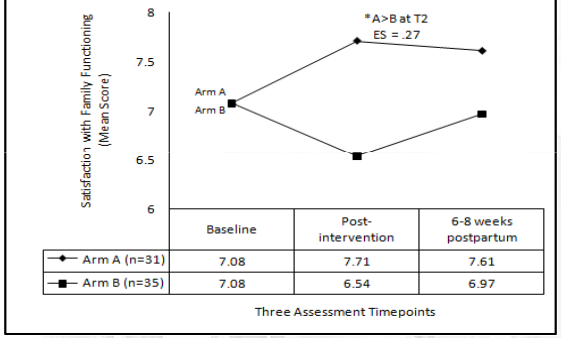
[a] Effect size criteria (Cohen's f): small = .1, medium = .25, large = .4; * $p < .05$ based on repeated measures controlled for baseline

#All *p*-value at T3 > .05

Outcomes (Family Functioning) – Intervention vs. Control Group

The increased satisfaction with family functioning for Intervention (Arm A) was maintained at similar level 6-8 weeks after delivery although the difference with Control (Arm B) was insignificant after delivery (Figure 1).

Figure 1 The effectiveness of the 2 arms on satisfaction with family functioning



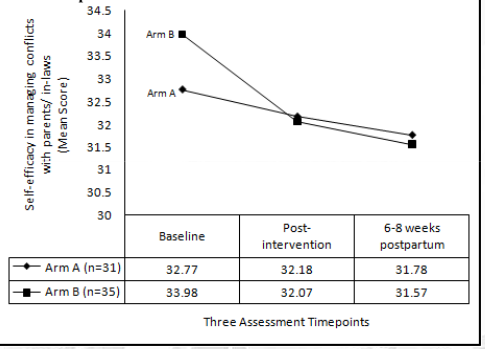
[a] Effect size criteria (Cohen's f): small = .1, medium = .25, large = .4;
* $p < .05$ based on repeated measures controlled for baseline

Results

Outcomes (Self-efficacy in managing conflict)- Intervention vs. Control Group

Both Intervention (Arm A) and Control (Arm B) had a reduction in self-efficacy in managing conflict and the Arm B showed a greater decline from baseline to post-intervention (T2). There was no significant differences between the two groups at either post-intervention (T2) or 6-8 weeks post-postpartum (T3) (Figure 2).

Figure 2 The effectiveness of the 2 arms on self-efficacy in managing conflicts with parents/in-laws



	Baseline	Post-intervention	6-8 weeks postpartum
Arm A (n=31)	32.77	32.18	31.78
Arm B (n=35)	33.98	32.07	31.57

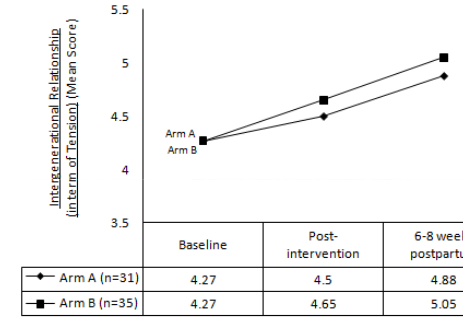
Three Assessment Timepoints

III. Results

Outcome (Intergenerational relationship) - Intervention vs. Control Group

Both groups had increase in tension and there was no significant difference between the two groups immediately after the intervention (T2) and 6-8 weeks postpartum (T3) (Figure 3).

Figure 3 The effectiveness of the 2 arms on Intergenerational relationship (in terms of tension)



	Baseline	Post-intervention	6-8 weeks postpartum
Arm A (n=31)	4.27	4.5	4.88
Arm B (n=35)	4.27	4.65	5.05

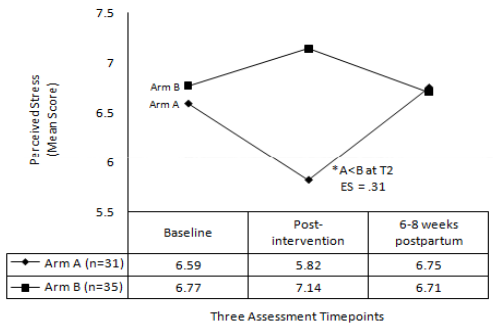
Three Assessment Timepoints

III. Results

Outcomes (Perceived Stress) – Intervention vs. Control Group

Participants in Intervention (Arm A) reported significantly lower perceived stress than the Control (Arm B) at T2 . However, the perceived stress returned to a level similar to that of Arm B 6-8 weeks after the baby was born (Figure 4).

Figure 4 The effectiveness of the 2 arms on perceived stress



	Baseline	Post-intervention	6-8 weeks postpartum
Arm A (n=31)	6.59	5.82	6.75
Arm B (n=35)	6.77	7.14	6.71

Three Assessment Timepoints

[a] Effect size criteria (Cohen's f): small = .1, medium = .25, large = .4;
* $p < .05$ based on repeated measures controlled for baseline

III. Results

Outcomes (Harmony, Happiness & Health)- Intervention vs. Control Group

- Participants in Intervention (Arm A) report greater enhancement of Happiness from pre- to post-intervention vs. participants in the Control (Arm B).

Change in 3H from Pre- to Postnatal follow-up

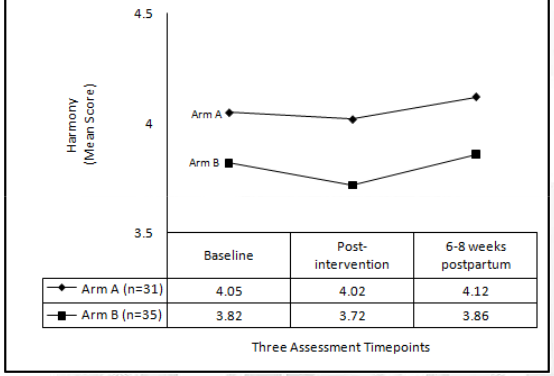
3Hs questions ***(shared with Cohort)***		Means(S.D)			Did the intervention Arm improve more than the Control Arm?	p-value[#]	Effect Size [a]
		T1	T2	T3		at T2	at T2
Harmony *(1=strongly disagree, 5=strongly agree; higher scores more harmony)*	Arm A	4.05	4.02	4.12	Yes	.650	0.06
	Arm B	3.82	3.72	3.86			
Happiness – Multi item *(1=less happy, 7=more happy; higher scores more happiness)*	Arm A	4.6	4.62	4.77	Yes	.027*	0.22
	Arm B	4.58	4.21	4.43			
Happiness – one item *(1=not happy at all, 4=very happy; higher scores more happiness)*	Arm A	3.14	3.24	3.13	Yes	.031*	0.20
	Arm B	2.99	2.81	2.92			
Health *(1=poor, 5=excellent; higher scores better health)*	Arm A	3.69	3.64	3.66	No	.844	0.00
	Arm B	3.42	3.41	3.44			

[a] Effect size criteria (Cohen's f): small = .1, medium = .25, large = .4; *$p < .05$ based on repeated measures controlled for baseline
[#]All p-value at T3 > .05

Outcomes (Harmony) - Intervention vs. Control Group

Arm A did not report significant increases in Harmony either immediately after the intervention (T2) or at 6-8 weeks postpartum (T3) after controlling for baseline scores on Harmony (Figure 5).

Figure 5 The effectiveness of the 2 arms on harmony



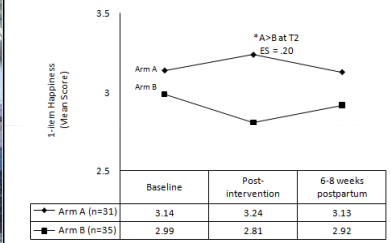
	Baseline	Post-intervention	6-8 weeks postpartum
Arm A (n=31)	4.05	4.02	4.12
Arm B (n=35)	3.82	3.72	3.86

Three Assessment Timepoints

Outcomes (Happiness)- Intervention vs. Control Group

Intervention (Arm A) were effective in increasing levels of Happiness which was significantly higher than Control (Arm B) post-intervention (T2) but the difference was between the two groups was insignificantly at 6-8 weeks after delivery (T3) (Figure 6 & 7); similar findings for 1-item and 4-item scale on happiness.

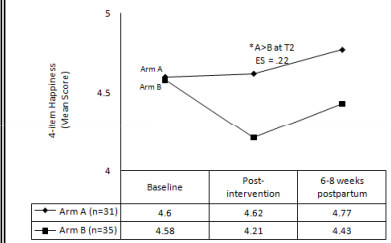
Figure 6 The effectiveness of the 2 arms on 1-item happiness



	Baseline	Post-intervention	6-8 weeks postpartum
Arm A (n=31)	3.14	3.24	3.13
Arm B (n=35)	2.99	2.81	2.92

Three Assessment Timepoints

Figure 7 The effectiveness of the 2 arms on 4-item happiness



	Baseline	Post-intervention	6-8 weeks postpartum
Arm A (n=31)	4.6	4.62	4.77
Arm B (n=35)	4.58	4.21	4.43

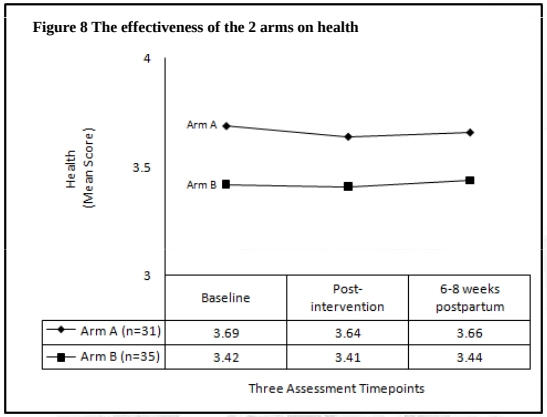
Three Assessment Timepoints

[a] Effect size criteria (Cohen's f): small = .1, medium = .25, large = .4; * $p < .05$ based on repeated measures controlled for baseline

Outcomes (Health) - Intervention vs. Control Group

Levels of health in Intervention (Arm A) was not significantly different from that in the Control (Arm B) either immediately post-intervention (T2), or 6-8 weeks postpartum (T3) (Figure 8).

Figure 8 The effectiveness of the 2 arms on health



	Baseline	Post-intervention	6-8 weeks postpartum
Arm A (n=31)	3.69	3.64	3.66
Arm B (n=35)	3.42	3.41	3.44

Three Assessment Timepoints

Reactions to Program – Arm A (n=33)

Customer satisfaction ratings	Mean	Rated 6 or 7 out of 7 points
Liked the program (1= Don't like at all , 7 = Like very much)	5.68	57.9%
Program was useful (1= Not at all useful, 7 = Very useful)	5.89	73.7%
Recommend to friends and relatives (1=Absolutely not, 7 = Absolutely will)	5.95	79.0%

Feedback on the program

During a post-Intervention discussion group, participants in Arm A gave further feedback on aspects of the program (n=9):

Feedback on the Program

Effect on participant:

- *"I am now able to manage my emotions, express my opinion and solve problem with negotiation skill" "懂得處理自己的情緒,表達自己的意見,運用協商的技巧去解決問題"*
- *"I understood that different people will have different opinions on the baby care in the future " "了解將會要面對湊BB會有其他人參與大家有不同意見"*

Effect on communicating with family:

- *"I realized that I have to understand her [in-law] more in order to know her [in-law's] reasons behind. And only after that I can better express myself. " "知道要多了解對方才知道原因,表達自己"*

Feedback on Methods

Real-case based

- *"I really like to have the participant's real case as the discussion topic. It allows us to have **more thorough understanding of the communication problem** and have room for improvement." "十分喜歡可以用參與者實際的生活環節,作為討論,角色扮演的一部份,讓參加者更深徹體會溝通的問題及可以改善的地方"*

Role Play

- *"The role play session is good as it **specifically tackles the problem** between the participants and the in-laws and offers different practical alternatives" "Role Play 的環節很好,能實際針對組員與婆媳的關係提供意見解決問題"*

Group-based Learning

- *"Through group sharing about our experience, I've had **a deeper understanding on in-laws relationship and communication** " "透過小組分享各人的經歷對與雙親關係,溝通了解更多"*

Relaxation Training

- *"I like the "deep-breathing" section very much. It is very useful" "很喜歡"深呼吸"環節,很有用"*

Discussion and Conclusion

- Evidence for future main study:
  - Acceptability: Strong
  - Feasibility: Strong
    - Recruitment: above target
    - Timeline: on-time completion, extended only due to external unforeseeable factor (Swine Flu)
    - Manpower: tight but manageable with additional strategies
    - Budget: on budget
    - Retention: high (all > 80%) although low attendance of intervention arm. Low attendance is common perinatal studies. More vigorous contacts and reminders are needed in between sessions.

Discussion and Conclusion

- Evidence of intervention outcomes:
  - Increasing Happiness
  - Increasing Satisfaction with Family Functioning
  - Increasing use of positive Conflict Management skills
  - Reductions in Perceived Stress after the intervention.
  - Although many of the effect sizes were small to moderate and/or benefit could not be sustained over the postpartum period, the change was still in the expected direction with more positive changes in the intervention groups.
  - Inconclusive postnatal findings are perhaps due to several factors such as ceiling effects, small sample size or insufficient sensitivity/specificity of measures.

Conclusions

Evidence of successful academic-DH partnership:

- The DH provided:
  - Access to 31 Maternal and Child Health Centers which serve majority of the target population, pregnant women, in Hong Kong and this time utilized only six of them.
  - Access to pregnant women in all regions
  - Knowledge on physical and psychosocial needs of the target population
  - Nurses and Nursing Officers to facilitate the recruitment of participants
- HKU, the academic partner, provided:
  - Study design, intervention manual development, implementation and evaluation
  - Participant recruitment and follow-up, promotion and publicity of the project
  - Data collection, data entry, data analysis, report writing
  - Scientific rigor and guidance for the study
  - Quality assurance measures of the project
  - Practical elements for sustainability

Conclusions

Contribution to science:

- Pioneer in developing intervention for managing intergenerational relationship for women going through transition to parenthood
- Disseminate study findings for publications in international journals
- Presented papers, one oral and one poster, in international conference, the 20th International Union for Health Promotion and Education conference

Acknowledgment

- *This project is one of the intervention projects of* ***FAMILY: A Jockey Club Initiative for a Harmonious Society, funded by The Hong Kong Jockey Club Charities Trust.***
  - *Prof. T. H. Lam, Director of School of Public Health, for the guidance who is the overall Principal Investigator the FAMILY project.*
  - *Prof. Sunita Stewart for her advice on the project.*
  - *Prof. Shirley Leung from Department of Health, MCHC nurse-in-charge and all participants*

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