Purpose-built intervention for mental health of Mainland Chinese immigrant women survivors of intimate partner violence: a randomised controlled trial (abridged secondary publication)

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KEY MESSAGES

1. Immigration is a risk factor for intimate partner violence, and abused women are at risk of depression.
2. There is a need for evidence-based interventions to address the adverse effect of intimate partner violence on the mental health of abused Mainland Chinese immigrant women.
3. A purpose-built intervention for abused Mainland Chinese immigrant women comprising empowerment, parenting, telephone social support, and peer support can reduce depressive symptoms, lower parenting stress, improve mental health, increase perceived social support, reduce intimate partner violence, and promote safety behaviours for at least 6 months following the intervention.
4. The systematic field tracking strategies are successful in retaining study participants.

Hong Kong Med J 2020;26(Suppl 8):S7-9
HHSRF project number: 09101171

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Introduction

Immigration is a risk factor for intimate partner violence (IPV).[1] The rate of IPV is higher among immigrant women. Men are likely to exert greater control on their immigrant partners because of the latter's dependence on them in a new country. Fear of deportation, limited knowledge of their legal rights, and lack of access to community resources may also render immigrant women more vulnerable. The lack of a social support network may further weaken a woman's ability to cope with partner violence.

This study aimed to develop a purpose-built intervention to address the needs of abused Mainland Chinese immigrant women and to assess its effect on their mental health.

Methods

This randomised controlled study was conducted from December 2011 to March 2014 to compare a purpose-built intervention with a standard community health education programme for abused Mainland Chinese immigrant women.

The intervention lasted for 12 weeks and comprised:

(1) An empowerment component that comprised protection and enhanced choice making and problem solving based on an abuse prevention protocol.[2] Empowerment aimed to increase abused women's safety through recognition of increased danger and development of an individualised safety plan (ie protection), and to provide information about the cycle of violence, facts and options, legal protection orders, filing for criminal charges, and community resources. Women could then make decisions about their relationships, relocation, and other transitional issues (ie enhanced choice making and problem solving).

(2) A parenting component that comprised seven non-violent, positive parenting strategies (respect for the child's rights, caring and protection, supportive verbal messages, enhancing parent-child relationship, positive parental behaviours, discipline, and participation rights) based on the United Nations Children's Fund Child Friendly City Framework. Designed to enhance the knowledge, skills, and confidence of abused women in child-friendly parenting, the seven positive parenting strategies were delivered in two workshops of 2 hours each using videotapes, case studies, role play, and interactive talks.

(3) A telephone social support: three scheduled monthly telephone calls were made by our designated social worker-researchers to promote the women's health and well-being.

(4) Peer support: provided by a trained volunteer who acted as a friend to the woman and provided support through listening, validating, and facilitating in response to problems expressed by the woman. The volunteer met with the woman at least once, usually in

one of the parenting workshops, and made scheduled telephone calls, at least once a month.

For the control group, a standard community health education programme was provided. The programme comprised two group sessions lasting 2 hours each: one on the topic of osteoporosis (provided by a nurse) and one on dietary therapy based on the concepts of Chinese medicine (provided by a Chinese Medicine practitioner).

Subjects were assessed at baseline, 3 months, and 9 months, using the Beck Depression Inventory version II (BDI-II), Parenting Stress Index (PSI), Interpersonal Support Evaluation List (ISEL), SF-12 Health Survey (SF-12), Revised Conflict Tactics Scales (CTS2), and Safety Assessment Checklist (SA).

Results

A total of 250 abused Mainland Chinese immigrant women were recruited. All but two (from the control group) completed the study. The characteristics of the intervention and control groups were comparable, except for educational level (Table 1).

TABLE 1. Characteristics of participants in the control and intervention groups*

Characteristics	Control (n=125)	Intervention (n=125)	P value
Age (years)	36.77±5.38	37.64±6.19	0.24
Duration of living in Hong Kong (years)	4.29±1.71	4.01±1.78	0.21
No. of children	1.68±0.86	1.70±0.70	0.84
Education level			0.04
None	0.1	1.6	
Primary	16.7	12.8	
Junior Secondary	76.0	71.2	
Senior Secondary	5.6	14.3	
Tertiary	1.6	0.1	
Marital status			0.32
Married	100	99.2	
Cohabited	0	0.8	
Employment status			0.79
Employed	36.8	38.4	
Unemployed	63.2	61.6	
Financial hardship			0.21
Yes	91.2	95.2	
No	8.8	4.8	
Chronic illness			0.65
Yes	1.6	1.7	
No	98.4	98.3	
Receipt of comprehensive social security assistance			0.60
Yes	34.4	37.6	
No	65.6	62.4	

* Data are presented as mean±SD or %

The linear mixed effect model was used to adjust for the baseline value and education level (Table 2). The adjusted mean BDI-II score was lower in the intervention than control group by 6.31 (95% CI=4.50-8.11, P<0.001) at 3 months and 8.77 (95% CI=6.96-10.59, P<0.001) at 9 months. This suggested that the intervention group had greater reduction in depressive symptoms at 9 months than at 3 months, compared with the control group (interaction, P=0.04)

The adjusted mean PSI score was lower in the intervention than control group by 11.25 (95% CI=8.53-13.97, P<0.001) at 3 months and 16.4 (95% CI=12.59-20.82, P<0.001) at 9 months. This suggested that the intervention group had greater reduction in parenting stress at 9 months than at 3 months, compared with the control group (interaction, P=0.020).

The adjusted mean ISEL score was higher in the intervention than control group by 3.65 (95% CI=2.82-4.49, P<0.001) at 3 months and 6.95 (95% CI=5.58-8.31, P<0.001) at 9 months. This suggested that the intervention group had greater improvement in perceived social support at 9 months than at 3 months, compared with the control group (interaction, P<0.001).

There was no significant difference between groups in the adjusted mean physical component score at 3 months (P=0.746) or 9 months (P=0.273), nor was there a significant interaction with time (P=0.469). In contrast, the adjusted mean mental component score was higher in the intervention than control group by 3.51 (95% CI=2.02-5.00, P<0.001) at 3 months and 6.04 (95% CI=4.06-8.02, P<0.001) at 9 months. The intervention group had better mental health at 9 months than at 3 months, compared with the control group (interaction, P=0.016).

Although there was no significant difference in adjusted mean CTS2 score between the two groups at 3 months (p=0.693), the score in the intervention group was 5.52 (95% CI=1.13-9.90, P=0.014) lower at 9 months. The intervention group had greater improvement in conflict tactics at 9 months than at 3 months, compared with the control group (interaction, P=0.01).

The adjusted mean SA score was higher in the intervention than control group by 3.69 (95% CI=3.09-4.28, P<0.001) at 3 months and 2.88 (95% CI=2.25-3.50, P<0.001) at 9 months.

Discussion

The intervention group reported significantly fewer depressive symptoms on completion of the intervention and also 6 months post-intervention. The purpose-built intervention effectively lowered parenting stress, increased perceived social support, enhanced mental health, reduced intimate partner violence, and promoted safety behaviours among abused Mainland Chinese immigrant women in

TABLE 2. Linear mixed effect model to adjust the baseline value and education level of the intervention and control groups

Instrument	At 3 months		At 9 months		P value (interaction between time-point and groups)*
	Adjusted mean difference (95% CI)	P value	Adjusted mean difference (95% CI)	P value	
Beck Depression Inventory version II	6.31 (4.50-8.11)	<0.001	8.77 (6.96-10.59)	<0.001	0.04
Parenting Stress Index	11.25 (8.53-13.97)	<0.001	16.4 (12.59-20.82)	<0.001	0.02
Interpersonal Support Evaluation List	3.65 (2.82-4.49)	<0.001	6.95 (5.58-8.31)	<0.001	<0.001
SF-12 Health Survey					
Physical component score	-	0.746	-	0.273	-
Mental component score	3.51 (2.02-5.00)	<0.001	6.04 (4.06-8.02)	<0.001	0.016
Revised Conflict Tactics Scale	-	0.693	5.52 (1.13-9.90)	0.014	0.010
Safety Assessment Checklist	3.69 (3.09-4.28)	<0.001	2.88 (2.25-3.50)	<0.001	-

* The adjusted mean scores varied by group and time-point suggesting that improvement was greater at 9 months than at 3 months in the intervention group compared with the control group

Hong Kong.

A previous intervention programme for abused Chinese women comprised empowerment and social support failed to achieve clinically meaningful improvement in depressive symptoms (ie BDI-II score <5).[3] In the present study, we extended empowerment and social support by adding two extra components (parenting and peer support), and focused on abused Mainland Chinese immigrant women. The reduction of the adjusted mean BDI-II score by about 6 points at 3 months and 8 points at 6 months was clinically meaningful.

The systematic field tracking strategies could achieve a high retention rate (99.2%) in the present study, as in our previous study[3] and a study conducted in the USA.[4] We also implemented protocols to ensure participants' safety and data quality in accordance with the World Health Organization's recommendations on 'putting women first' through ethical and safe research on violence against women.[5] We anticipated, planned, and instituted safety protocols in relation to situations in which a participant and/or researcher may encounter retaliation by an abusive partner. This was particularly pertinent when contacting the woman by cell phone. Training and monitoring for researchers during the follow-up to ensure safe methods and times for contacting the women was important. Because of the risks associated with each study-related interaction, we kept such contact to the necessary minimum while using an agreed-upon script and pre-established code words. The protocols can be used to provide guidance for training and supporting research staff in future intervention studies.

Acknowledgements

We are grateful to the Hong Kong S.K.H. Lady MacLehose Centre for allowing us to conduct the project. We thank the staff of the Family Activities & Resources Centre for their valuable contribution. We acknowledge the support from Ms Polly Pang, Centre-in-charge of the Hong Kong SKH Lady MacLehose Centre in training our volunteers. Thanks also go to Mr Lee Hong Cheung, Chinese Medicine Practitioner, and Dr Athena Hong, Lecturer of School of Nursing, The University of Hong Kong for sharing their expertise in health education. We also thank Ms Kallie Law, Research Assistant, for her help in maintaining the quality of this research. We are indebted to the volunteers who devoted their time to the project. We would like to convey our most sincere thanks to the new immigrants who shared their stories.

Funding

This study was supported by the Health and Health Services Research Fund, Food and Health Bureau, Hong Kong SAR Government (#09101171). The full report is available from the Health and Medical Research Fund website (https://rfs1.fhb.gov.hk/index.html).

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