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Title	Development and evaluation of a mental health promotion intervention among Chinese women living in Japan [an abstract of entire text]
Author(s)	羅, 云潔
Description	この博士論文全文の閲覧方法については、以下のサイトをご参照ください。 https://www.lib.hokudai.ac.jp/dissertations/copy-guides/
Degree Grantor	北海道大学
Degree Name	博士(看護学)
Dissertation Number	甲第15343号
Issue Date	2023-03-23
Doc URL	https://hdl.handle.net/2115/91368
Type	doctoral thesis
File Information	Yunjie_Luo_summary.pdf

Hokkaido University Collection of Scholarly and Academic Papers : HUSCAP

博士論文の要約

博士の専攻分野の名称：博士（看護学）　　氏名：羅　　云　潔

学位論文題名

Development and evaluation of a mental health promotion intervention among Chinese women living in Japan
（在日中国人母親へのメンタルヘルス促進の介入プログラムの開発・評価）

Introduction

Chinese women have constituted the largest foreign female population in Japan since 2006. Mental health problems among immigrant women have been observed in countries with high immigration rates. Immigrant women in Japan, particularly Chinese mothers, lack adequate and effective social support mechanisms, leading to distress and social isolation. Following the outbreak of coronavirus disease 2019 (COVID-19), Chinese women living in Japan were highly concerned about COVID-19, which was significantly associated with their poor psychological well-being. It is necessary to provide appropriate social support to improve the mental health of Chinese women living in Japan. However, few studies focused on improving immigrant women's mental health in Japan, including Chinese women. Thus, the purpose of this dissertation is to develop a mental health promotion intervention and evaluate the effect of the intervention among Chinese women living in Japan.

This dissertation comprises five chapters. Chapter I provides the dissertation overview and introduces the mental health status of Chinese women living in Japan. Chapter II presents a systematic review to identify the effectiveness of previous interventions for improving mental health among immigrant women. Chapter III describes a qualitative study to explore parenting and mental health promotion needs and provide development recommendations and evidence for the intervention. Chapter IV illustrates the development of an internet-based mental health

promotion intervention that involved an information provision application and online parenting workshops, and depicts a quasi-experimental study to evaluate the effect of the intervention. Chapter V discusses the relevance of the Internet-based mental health promotion intervention program to healthcare and nursing practice, the limitations and implications of the current study, and directions for future research.

Chapter I

The number of international migrants was approximately 281 million in 2020, accounting for 3.6% of the global population. The health determinants of international migrants vary considerably between the countries of migration and destination due to their different backgrounds. Meanwhile, the process of migration and resettlement is recognized as a stress-inducing phenomenon associated with high mental health risks. Thus, international migration and mental health is a highly complex and nuanced topic that must be explored—particularly, immigrant women's mental health.

In general, Chinese women raising preschool children experience higher parenting stress compared to Japanese, Korean, and Brazilian women. This higher parenting stress is also evident in a relatively old survey among Chinese women who are caring for their preschool-aged children in Japan. Due to the different child-rearing values, Chinese women in Japan have difficulty obtaining child-rearing support from their mothers-in-law. Meanwhile, the child-rearing backing of the woman's mother is also difficult to obtain because of living in a foreign country. Therefore, Chinese women are prone to experiencing stress related to child-rearing, given the lack of social support for child-rearing in Japan, which relates to maintaining traditional culture and adapting to new child-rearing customs. Hence, the research questions 'what is the level of mental health, parenting stress, and social support among Chinese women in Japan?' and 'what are the relationships between mental health, social support, and parenting stress among Chinese women in Japan?' were considered.

To address these research questions, the author conducted a cross-sectional study on

Chinese women in Japan with at least one child under the age of 6, between 1 March and 31 October 2019. The results showed that Chinese women in Japan demonstrated high levels of parenting stress and low levels of mental health. Significant associations were found among mental health, parenting stress, and social support. Meanwhile, based on the 'social support theory', the mediating effect of parenting stress on social support and mental health was found.

Based on these findings, there are three suggestions for the mental health promotion of Chinese women living in Japan. First, social support could be directly provided to improve mental health. This suggestion has been generally implemented for immigrant populations in many countries including Japan. Second, mental health support providers need to focus on stress not only from the acculturation process but also from the child-rearing process among immigrant women. Some mental health promotion programs and interventions only focused on cross-cultural stress while ignoring parenting stress among immigrant women. Third, since parenting stress could influence the effectiveness of mental health support, more attention needs to focus on parenting stress to ensure the effectiveness of mental health support to avoid wasting social resources. A practical and evidence-based mental health promotion program for immigrant Chinese women living in Japan should be developed.

This chapter has elaborated the background of the study on the number and mental health status of Chinese women in Japan before and after the COVID-19 outbreak, the purpose of the study, terms definitions, and an overview of this dissertation.

The studies mentioned in this chapter have been published in Healthcare (Luo Y, Sato Y. Relationships of social support, stress, and health among immigrant Chinese women in Japan: A cross-sectional study using structural equation modeling. *Healthcare (Basel)*. 2021;9(3):258. doi:10.3390/healthcare9030258) and the International Journal of Environmental Research and Public Health (Luo Y, Sato Y. Health-related quality of life and risk factors among Chinese women in Japan following the COVID-19 outbreak. *Int J Environ Res Public Health*. 2021;18(16):8745. doi:10.3390/ijerph18168745).

Chapter II

Immigrant women rearing children and living in a foreign country experience many mental health problems during pregnancy, child-rearing, and acculturation. Mental health problems can be controlled or modified through effective practices. Few studies have examined the role of different types of interventions in alleviating these mental health issues in immigrant women in the perinatal period, and it is unclear whether such interventions are effective. This study aims to identify the effectiveness of interventions for improving immigrant women's mental health and explore the role of these interventions in nursing practice. This systematic review used the Preferred Reporting Items for Systematic Reviews and Meta-Analysis checklist. Studies from December 1948–August 2021 were retrieved from four databases: MEDLINE, CINAHL, EMBASE, and Cochrane Library. This systematic review's protocol was registered at PROSPERO (CRD42020210845). The data were summarised using narrative analysis. Eight studies met the inclusion criteria and were included in the final analyses. The interventions included home visit programmes, asset-building mental health interventions, cognitive-behavioural interventions, nursing interventions, perinatal education interventions, and mindfulness interventions. Home visit programmes and asset-building mental health interventions have reported positive outcomes in improving depressive symptoms and mental health. There are few interventions for improving immigrant women's mental health. Most existing interventions are conducted through group education, but there are no explicit significant effects. Home visits may be an effective approach for conducting interventions to improve immigrant women's mental health. An effective nursing intervention should be developed, and more research is needed in improving immigrant women's mental health. This review provides evidence for nurses and midwives to practice appropriate and effective approaches and strategies for improving immigrant women's mental health, and suggests possible future interventions for this cohort of immigrant women in the perinatal period.

This chapter has depicted a systematic review to identify and analyze the effectiveness of interventions for improving immigrant women's mental health. Depression as a significant

variable has been emphasized to evaluate the effect of mental health promotion among immigrant women. Thus, depression will be evaluated to test the effect of the intervention. Besides, instead of a mixed-methods design, a qualitative study design will be initially conducted to identify the target population's needs in the following chapter.

The findings of this chapter have been published in the Journal of Clinical Nursing (Luo Y, Ebina Y, Kagamiyama H, Sato Y. Interventions to improve immigrant women's mental health: A systematic review. *J Clin Nurs*. 2023;32(11-12):2481-2493. doi:10.1111/jocn.16378).

Chapter III

Chinese women raising children in Japan tend to experience high parenting stress and poor mental well-being. However, their specific parenting and mental health promotion needs remain unknown. This study aimed to explore the parenting and mental health promotion needs of Chinese women living in Japan and provide recommendations to guide interventions. Semi-structured in-depth interviews were conducted. Participants included 15 women aged 28–39 years who were pregnant or rearing a child younger than six years old. Thematic analysis was performed for data analysis. More than half of the participants experienced mental health problems, such as depressive symptoms and child-rearing stress. Four themes relating to their needs were identified: concrete support, information provision, caring and understanding, and social network building. Information provision and social network building should be emphasized as practical social support mechanisms to improve these women's mental health. Furthermore, a mental health promotion intervention should be developed to address this vulnerable population's needs. Healthcare providers and public health workers should help improve the social support systems of Chinese women in Japan to prevent mental health problems. Potential transcultural education can, arguably, help healthcare providers better understand transcultural care.

This chapter has described a qualitative study to explore parenting and mental health promotion needs and provide evidence for the intervention. Information provision and social

network building have been emphasized as practical social support mechanisms to improve the mental health of Chinese women living in Japan. Considering the situation of COVID-19, Internet-based tools and materials as a practical and convenient approach are recommended to develop the mental health promotion intervention in the next chapter.

The findings of this chapter have been published in the International of environmental research and public health (Luo Y, Sato Y, Zhai T, Kagamiyama H, Ebina Y. Promotion of parenting and mental health needs among Chinese women living in Japan: A qualitative study. *Int J Environ Res Public Health*. 2022;19(20):13538. doi:10.3390/ijerph192013538).

Chapter IV

Owing to a lack of social support, child-rearing Chinese women in Japan experience poor mental health, such as depression and parenting stress. Effective interventions to improve the mental health of these women are lacking. This study aimed to develop an Internet-based mental health promotion intervention for this subsection of the population and to evaluate the effectiveness of the intervention. This study used a quasi-experimental pre- and post-intervention testing design whereby the results of the intervention group were compared against a control group. Seventy-three child-rearing women were recruited from online groups of Chinese residents in Japan. The Internet-based intervention involved the participants utilising an information provision application and attending online parenting workshops. The intervention group participated in the online workshops once a week for six weeks and accessed the application, whereas the control group did not. The outcome measures included mental health distress, depression, social support, and parenting stress. Data were collected during the period February to April 2022. Data analysis was performed using repeated-measures analysis of variance. The intervention group showed a significant improvement in mental health distress and a decrease in depression compared with the control group. There were no significant differences in social support and parenting stress between the groups. The Internet-based mental health promotion intervention was highly appraised by the participants in the

intervention group. This intervention can be applied to foreign women with multicultural backgrounds in a variety of settings to improve their psychological well-being.

This chapter has developed an Internet-based mental health promotion intervention that involved an information provision application and online parenting workshops and has conducted a quasi-experimental study to evaluate the effect of the intervention. Internet-based intervention as a possible approach has been recommended to maintain and improve the mental health of Chinese women living in Japan. The next chapter describes a summary of the work that the author has done and a discussion of the study's limitations and implications for future practice.

Chapter V

The study developed an Internet-based mental health promotion intervention that involved an information provision application and online parenting workshops. The intervention significantly improved the depression and mental health distress of Chinese women living in Japan, but did not affect social support and parenting stress. The long-term effect of the Internet-based intervention with more than two repeated measures should be considered for future evaluation. The findings suggest that informational provision applications and online parenting workshops could be utilised to assist foreign women with multicultural backgrounds in attempting to improve their mental health status and quality of life. This study makes a significant contribution to the future practice of cross-cultural healthcare since Internet-based interventions to address immigrant women's mental health difficulties are lacking, even though access to the Internet is widely available.

This chapter has discussed the relevance of the Internet-based mental health promotion intervention program to healthcare and nursing practice, the limitations and implications of the current study, and directions for future research.