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Eating Habits and Nutrition Attitudes among Pregnant Chinese Women in New Zealand

**A thesis presented in partial fulfilment of the requirements for the
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Abstract

Immigration to a Western country can lead to dietary changes among Chinese immigrants, which can cause poor diets and health problems. Chinese immigrants' eating habits might be influenced by both Western and traditional Chinese Medicine (TCM) nutrition recommendations. These two nutrition recommendations point out eating and nutrition during pregnancy is crucial for both maternal and fetal health, and they provide suggestions on eating habits during pregnancy. The population of Chinese women of reproductive age in New Zealand has increased dramatically. Since there is a lack of evidence about the eating habits and nutrition attitudes of pregnant Chinese women in New Zealand, the current study investigates pregnant Chinese women's eating habits, attitudes towards both Western and TCM nutrition, and possible relations to acculturation.

Pregnant Chinese women in New Zealand were recruited mainly via a Chinese website, communities, churches, and the "snow-ball" model. The immigrants' eating habits, attitudes towards Western and TCM nutrition recommendations, and acculturation were measured by an online questionnaire. The questionnaire was completed by 84 pregnant Chinese women, with a median age of 30.0 (95% CI 29.0 - 30.6). The participants' acculturation score was comparatively low (1.98 ± 0.592) compared with the theoretical score range (1.0 to 5.0).

Regarding New Zealand nutrition recommendations, some of the findings cause concerns: (1) most of the participants did not meet the recommended intake of vegetables, cereals, and dairy food during pregnancy; (2) although a large proportion of the participants had positive attitudes towards recommended supplements and food for pregnancy, they did not follow the recommendations in practice, especially for the iodine supplements and food rich in iodine (e.g., bread and breakfast cereals). However, it is positive to find that: (1) most of the participants always consumed folic acid supplements during the first trimester of pregnancy; (2) a majority of the participants thought it was important for them to limit fat, salt, and sugar intake and most of them seldom or never eat food high in fat, sugar, and salt.

A majority of the participants had positive attitudes towards TCM, including: (1) balancing cold and hot (or yin and yang) foods and adjusting their diets according to seasons or body constitutions; (2) eating less greasy food, eating more light food, and eating more spleen and stomach strengthening food. However, only a small proportion of participants had positive attitudes towards foods with specific TCM features and did not consume these foods no matter whether they are recommended by TCM nutrition for pregnancy or not. Meanwhile, a considerable proportion of the participants reported neutral attitudes towards caring and learning about nutrition and most of the TCM nutrition recommendations.

Acculturation was positively associated with meeting the New Zealand recommended intake from food groups, but was not positively associated with other eating habits. Acculturation was not related to most nutrition attitudes. It was only positively associated with attitudes towards Western nutrition recommendations for pregnant women and their attitudes towards TCM nutrition recommendation for healthy eating for adults. In addition, there was a positive correlation between attitudes towards Western nutrition and TCM nutrition ($p < 0.05$).

The above findings of the current study provide useful information for health professionals who work with Chinese immigrants in New Zealand. In particular, health professionals should help immigrants to consume sufficient servings of foods and understand the importance of consuming iodine supplements during pregnancy. Additionally, it might be helpful for health professionals to be familiar with overall TCM nutrition recommendations.

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List of Abbreviations

AI: Adequate Intake

ANOVA: Analysis of Variance

ARSMA: Acculturation Rating Scale for Mexican-Americans

ASSA: Acculturation Scale for Southeast Asians

BMI: Body Mass Index

BP: Blood Pressure

CVD: Cardiovascular Disease

EAR: Estimated Average Requirement

FFQ: Food Frequency Questionnaire

GDM: Gestational Diabetes Mellitus

RDI: Recommended Dietary Intake

SASH: Short Acculturation Scale for Hispanics

SL-ASIA: Suinn-Lew Asian Self-Identity Acculturation Scale

TCM: Traditional Chinese Medicine

UL: Upper Level of Intake

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