Breast Cancer awareness and Uptake of Breast Cancer Screening Services among women in Hong Kong: A Cross-sectional Study

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1. Background

Breast cancer is one of the most prevalent diseases worldwide and poses a significant threat to women's health. It is characterized by the uncontrolled growth of abnormal breast cells, leading to tumor formation. If not detected early, these tumors can metastasize throughout the body, potentially becoming fatal. In Hong Kong, breast cancer is the most common cancer among females. As a multicultural city, Hong Kong boasts a vibrant mix of Eastern and Western influences, a diverse population, and a rich array of traditions, languages, and religions, predominantly featuring ethnic Chinese alongside various communities from South and Southeast Asia. This study investigates breast cancer awareness and the uptake of screening services among both Chinese and Non-Chinese women in Hong Kong.

2. Research Objectives

- Examine the level of awareness of breast cancer among Chinese and Non-Chinese women in Hong Kong
- Assess the uptake of breast cancer screening services among Chinese and Non-Chinese women in Hong Kong
- Examine the correlation between socio-demographic variables and the knowledge of breast cancer.

3. Methodology

Self-administered questionnaires (paper and online) in both Chinese and English composing of (1) socio-demographic, (2) knowledge of breast cancer risk factors, symptoms, and treatment, and (3) uptake of breast cancer screening, frequency, reasons and barriers were used to collect data.

Self-administered questionnaire design and validation: Target population, (1) females aged 18 years old or above living in Hong Kong for more than 6 months & (2) completed the informed consent

Recruitment of participants between January and April 2025 via WhatsApp, Instagram, and Facebook

Data Analysis: IBM SPSS Statistics v29.0 and Microsoft Excel (Graph, Chi-square tests, Spearman's correlation)

4. Results and Discussion

A total of 340 subjects were included in this study, with 52.1% of respondents identifying as "Non-Chinese" and 47.9% as "Chinese." The questionnaire contained eight knowledge-based questions, resulting in an overall mean score of **5.62 (± 2.084)**. Both Chinese and Non-Chinese respondents demonstrated a high level of knowledge. Notably, a **higher proportion** of Chinese respondents **(71.78%)** achieved a high knowledge level compared to Non-Chinese respondents **(49.72%)**. Additionally, 20.90% of Non-Chinese respondents were categorized as having a low knowledge level, whereas only 0.61% of Chinese respondents fell into this category (Figure 1).

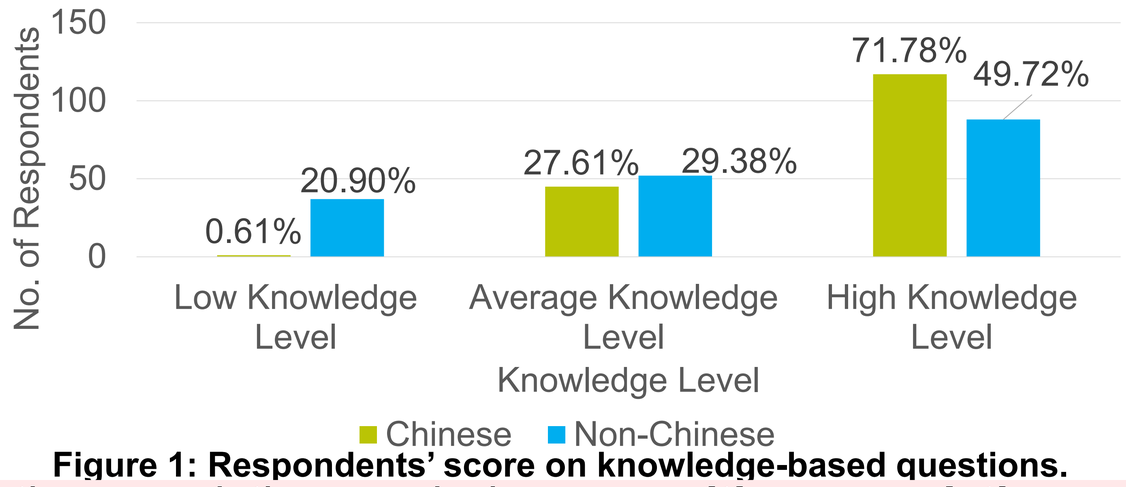

Figure 1: Respondents' score on knowledge-based questions.

In the correlation analysis, a **positive correlation** was observed between "Knowledge Level of Breast Cancer" and both "Education Level" and "Monthly Household Income." This suggests that women with **higher education and income levels** tend to have a better understanding of breast cancer. Conversely, a **negative correlation** was found between "Ethnicity" and "Knowledge Level of Breast Cancer," indicating that **one ethnic group** may possess **lower knowledge level** compared to another. Similarly, a negative correlation between "Age" and "Knowledge Level of breast cancer" suggests that **older respondents tend to have lower knowledge levels** (see Table 1).

Table 1: Spearman's correlation between sociodemographic parameters and knowledge level of breast cancer.

Spearman's Correlation	Knowledge Level
Education Level	r_s= 0.245, p < 0.001
Monthly Household Level	r_s= 0.510, p < 0.001
Ethnicity	r_s= -0.275, p < 0.001
Age	r_s = -0.159, p = 0.003

Overall, **only 32.06%** of respondents reported having previously **participated** in breast cancer screening. Notably, when comparing Chinese and Non-Chinese respondents, 78.53% of Non-Chinese respondents indicated that they had never undergone any screening (see Figure 2).

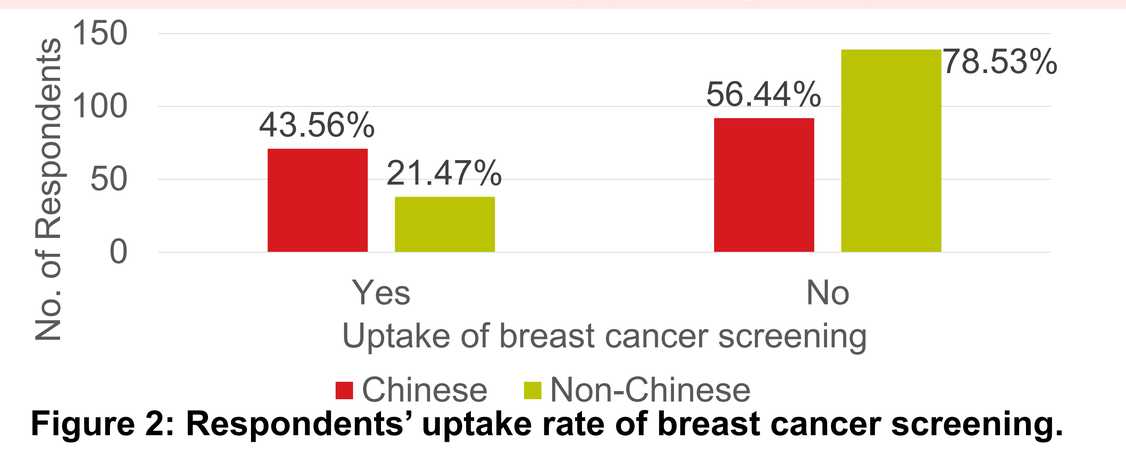

Figure 2: Respondents' uptake rate of breast cancer screening.

5. Conclusion

This study reveals **significant disparities** in breast cancer knowledge among Chinese and Non-Chinese (ethnic minorities). The findings indicate that higher education and income positively correlate with breast cancer knowledge, whereas older age and ethnicity are linked to lower knowledge levels. A notably **high proportion** of Non-Chinese respondents never having participated in such screening. These insights highlight the **urgent need** for targeted educational initiatives and enhanced access to screening services to strengthen healthcare policies related to breast cancer.