
A survey of knowledge, attitudes and behaviours regarding sexual wellbeing among Chinese women living in New Zealand – a pilot study

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Abstract

The aims of the study were to assess sexual wellbeing knowledge and attitudes among Chinese women living in New Zealand and to investigate the factors that prevented them from seeking support from sexual wellbeing services. Seventy-nine Chinese women from Hong Kong, China and Taiwan were recruited through community and personal networks to complete a self-report survey, which included questions on socio-demographics, self-rated adjustment, knowledge of sexual wellbeing, importance of understanding sexual wellbeing, cultural influences, structural influences, and willingness to seek information and assistance. The findings in this study suggested that younger Chinese women lacked sexual wellbeing knowledge and were less likely to seek support when compared to their older age group counterparts. Three out of the eight variables assessed were found to make a significant contribution in the willingness of Chinese women seeking support from sexual wellbeing services. These were knowledge of sexual wellbeing, self-perceived importance of gaining an understanding of sexual wellbeing issues and cultural influences. Our results suggest that despite the length of residency and self-rated adjustment in New Zealand, traditional Chinese values and beliefs continue to influence the perceptions of Chinese women regarding their sexual wellbeing. Interventions to improve sexual and reproductive wellbeing in this population, particularly younger Chinese women, should be tailored to the specific enabling and reinforcing factors that include cultural views, communications between Chinese women and health and social services providers, and access to healthcare information.

Introduction

The increase in migrant populations in Western countries has led to specific problems and dilemmas in the area of sexual and reproductive health and service provision. Unplanned pregnancies, cervical cancer, HIV infections and sexually transmitted infections (STIs) have

become increasingly prevalent and aroused widespread international concern, particularly among Asian immigrants in Western countries such as Australia, New Zealand, UK and USA (Gao, DeSouza, Paterson, & Lu, 2008; Rawson & Liamputtong, 2010; Yu, 2007; Yu, 2010). Research indicates that the lack of sexual and reproductive health knowledge is one of the main explanatory factors for the increase in the transmission of HIV, STIs, unintended pregnancies and unsafe abortions (Meston & Ahrold, 2010; Meston, Trapnell & Gorzalka, 1998). Other research also reports that there remains cultural and ethnic differences in sexual behaviours in developed countries (Coleman & Testa, 2006; Connell, McKeivitt, & Low, 2004). This highlights the importance for sexual health research to concentrate on culturally diverse populations within Western countries, particularly exploring the impact of cultural and societal influences on sexual practices.

Literature

Migration is a world-wide phenomenon occurring at unprecedented levels. It involves the geographical relocation of people, some as individuals and others as families (Castles & Miller, 2003; Raymond, 1990). Whilst there are discrepancies in defining the term 'Asian', literature has highlighted the complexity of its definitions (Rasanathan, Ameratunga, & Tse, 2006). Asian has become one of the fastest growing groups in New Zealand population (Statistics New Zealand, 2003). The percentage of Asians residing in New Zealand had increased to 9.2% by 2006 and is expected to be 15% of New Zealand's population and 20% of the Auckland region's total by 2021. Chinese comprise a majority of Asians (Statistics New Zealand, 2005).

From 1990, research on Asian migrants in New Zealand has begun to focus on issues such as adaptation problems and difficulties, mental health status and the utilisation of mainstream health services and alternative healing practices (Ho, Au, Bedford, & Cooper, 2003; Ngai, Latimer, & Cheung, 2001; Rasanathan et al., 2006). The Asian Public Health Project report published in 2003 (Asian Public Health Project Team, 2003) and the first Asian Health Conference held in Auckland 2004 (Tse, Thapliyal, Garg, Lim, & Chatterji, 2004) provided an important platform to highlight the complex social and health care needs of Asian people in New Zealand. Along with these findings, more population-based studies have emerged to further examine smaller sub-groupings within the Asian population (Rasanathan, Craig, & Perkins, 2004; Scragg & Maitra, 2005). These reports have recognised significant challenges in Asian health and wellbeing including low access to health services; cardiovascular disease and diabetes; low levels of physical activity; and mental and sexual health. Despite the findings from these reports, the New Zealand health care system's response to the health needs of Asian migrants remains questionable. The myth of the model minority seems to create a false representation of the nature of Asian migrants as smart, educated, hard working, healthy and able to deal with their own problems (Suzuki, 2002; Yee, 2003). The healthy migrant effect, which is the need of most migrants to be in good health to be allowed to immigrate and the high socio-economic status in their countries of origin may have contributed to the apparent health advantage (McDonald & Kennedy, 2004).

The diverse and changing Asian populations within New Zealand mean that it is difficult to generalise the needs of the Asian population as a whole. Despite those variations, there is likely to be core beliefs and value positions that differ significantly from Western ones, especially when it comes to interactions with social welfare and health systems (Chau & Yu,

2010). Research on ethnicity and reproductive health behaviours indicates that Asian women may be slower to seek medical attention compared to individuals of European descent, which results in inequities in morbidity and mortality rates (Gao et al., 2008; Scheppers, van Dongen, Dekker, Geertzen, & Dekker, 2006). Several studies have also suggested that the negative consequences of early sexual initiation, such as increased lifetime sexual partners, unwanted pregnancy, STIs and cancer screening are becoming issues of concerns of Chinese women living in Western countries (Meston & Ahrold, 2010; Omura, Hill, & Ritchie, 2006; Woo, Brotto, & Gorzalka, 2009; Yu, 2010).

The proliferation of more liberal attitudes toward sexual behaviour among Chinese people has been noted since the 1980s due to the economic reforms that led to greater mobility, urbanisation, and the influence of mass media and Western culture (Wang, Hertog, Meier, Lou, & Gao, 2005). For many Asian immigrants from countries such as China, Taiwan and Hong Kong, these seeming 'attitudes' in Western countries tend to contradict their cultural traditions. Traditional Asian culture emphasises chastity, with procreation the only goal of sexual activity (Brotto, Chik, Ryder, Gorzalka, & Seal, 2005). Therefore, it is to be expected that Asians generally have more conservative sexual attitudes than their counterparts of other ethnicities. A study conducted in Hong Kong by Chan (1990) reported that Chinese medical students have more conservative sexual attitudes compared to their U.S. peers. Gender differences are also apparent in sexual attitudes, with Asian males generally having more liberal sexual attitudes than Asian females (Chang, Tsang, Lin, & Lui, 1997; Ip, Chau, Chang, & Lui, 2001). Several socio-demographic factors were also identified as being associated with the acquisition of sexual wellbeing knowledge and relevant health seeking behaviours. These include: age, lower education level, lower income and less acculturation (Gao, Paterson, deSouza, & Lu, 2008; Hislop, Teh, Lai, Labo, & Taylor, 2000).

Language and communication have also been found to be essential for reproducing cultural values, including sexual values (Yu, 2007). Factors such as embarrassment and lack of sexual knowledge influence such communication (Mturi & Hennink, 2005; O'Donnell, Myint, O'Donnell, & Stueve, 2003). Chang et al., (1997) claimed that discomfort among Chinese discussing intimate issues happens in numerous contexts such as with the older generation who have inadequate or no sex education background, and lack of parent-child communication about sex-related topics. A recent study (Gao et al., 2008) reported that the uptake of cervical cancer screening was lower among women migrants from mainland China living in New Zealand than that of the national New Zealand average and even that of Chinese women living in North America. The most frequently cited reasons for never having had a smear test were 'thought it is unnecessary' and 'don't know where to go'.

The acquisition of sexual wellbeing knowledge through interaction between the individual and social structures, such as the family, can be seen as an important influence on the determination of sexual behaviours of young people (Sieving, Olphant, & Blum, 2002) in avoiding unsafe sexual practices and STIs. These outcomes can have serious consequences for health and wellbeing in adulthood. A newspaper article by Gregory (2002, June 12) reported that Statistics New Zealand showed that in 2011 abortions accounted for 364 of every 1,000 known Asian pregnancies compared with 226 abortions for every 1,000 pregnancies in the whole population. This could imply that little or no sex education amongst

new immigrants could be a risk factor. During 1999/2000, abortion was the leading hospital discharge condition for Asian people in the Auckland District Health Board area amongst the 25-64-year-old age group with 192 discharges, and the second leading discharge for the 15-24-year-old age group with 23 discharges (Auckland District Health Board, 2001). Such dramatic figures may reflect the lack of knowledge or skills to practise safe sex and access health clinics.

Currently, there is limited published information about the topic of sexual wellbeing, attitudes and potential influencing factors on sexual and reproductive health knowledge among ethnic Chinese women living in New Zealand. This information is essential for social workers and policy makers to develop effective and feasible intervention strategies supporting migrants at increased risk of sexual and reproductive issues. In response to the lack of research on sexual wellbeing knowledge and attitude in the Asian population in New Zealand, a pilot study focusing on Chinese women was conducted to investigate sexual wellbeing knowledge in Chinese women and the factors that affected Chinese women in seeking sexual wellbeing services.

Method

Sampling and procedure

This study employed a cross-sectional design with a self-administered questionnaire to assess sexual wellbeing knowledge and attitude among Chinese women living in New Zealand. A purposive sample of 79 female participants who met the following inclusion criteria was successfully recruited for the study:

Chinese women who:

1. Came from Mainland China, Hong Kong and Taiwan;
2. Resided in Auckland, New Zealand;
3. Were aged 18 and above;
4. Had English as their second language.

Upon gaining ethical approval from the Massey University Human Ethics Committee, potential participants were recruited through personal networks (such as friends and colleagues who had contacts with Chinese women living in Auckland) and affiliations in ethnic community organisations. The process of data collection also involved 10-12 personal contacts recruited to distribute and collect the survey in sealed envelopes provided by the researchers. To ensure the anonymity and confidentiality of respondents, the personal contacts were required to sign a confidentiality agreement to keep confidential all information gained when collecting the completed questionnaires and not to unseal the envelopes containing the responses before sending them back to the researchers. The networks were made aware of the availability of the Chinese and English versions of the survey. One hundred and ten survey packets, with 60 Chinese versions and 50 English versions of the surveys, were requested and distributed. Each packet of the survey contained an information sheet describing the purpose of the study and inviting them to complete the self-administered survey and return the completed form to the researchers using a postage-paid envelope included. Data collection tools contained no identifying information and therefore kept the individual identities anonymous.

Instruments

A questionnaire was developed for this study to measure the knowledge, attitudes and health-seeking behaviours regarding sexual wellbeing information. The questionnaire was based on a review of relevant literature studies and validated by three experts working in sexual health and with migrant services. The information sheet and survey questions were developed in English and translated into Chinese in both traditional and simplified characters and they were examined and back-translated by two independent persons: a Chinese physician who had migrated from Hong Kong and an ex-Chinese language teacher from China, both residing in New Zealand. The reason for having two independent persons from different geographical backgrounds helps ensure compatibility between the context of written Chinese used by people from Hong Kong and from China. The survey was piloted with five Chinese women who were not included in the main study.

Socio-demographic detail

This section focused on socio-demographic background (five items), which included the participants' age, education, duration of residence in New Zealand and country of origin.

Self-rated Adjustment Scale

This scale consists of two items adapted from New Zealand research (Abbott, Wong, Williams, Au, & Young, 1999; Abbott, Wong, Williams, Au, & Young, 2000). Participants were asked to rate their self-perceived ability in English communication and their adjustment to living in New Zealand using a 4-point Likert-like scale ranging from '1 = not at all difficult', to '4 = extremely difficult'. The scale, in this study, was reported to have good internal consistency (Cronbach's alpha = .82). A summated mean score was used for statistical analysis.

Sexual Wellbeing Information Scale

In order to avoid the complexity of defining the concept of 'sexual wellbeing', three main headings with examples, contraceptive choices (e.g., the pill, the diaphragm), cervical cancer screening (cervical smear tests, breast checks) and sexually transmitted infections (HIV/AIDS, genital warts, syphilis) were used as indicators for this scale based on previous studies (Lee, 1998; Meston et al., 1998; Okazaki, 2002). The Sexual Wellbeing Information Scale is a 6-item inventory that consists of two subscales to measure two aspects: (1) knowledge of sexual wellbeing; and (2) self-perceived importance of understanding sexual wellbeing. Items were given a response choice of a 4-point Likert-like scale '1 = not at all knowledgeable/not at all important', to '4 = highly knowledgeable/extremely important' respectively. The reason this study used a 4-point Likert-like scale instead of a standard 5-point scale was because research has suggested that the Likert scale format may be culturally biased (Flaskerud, 1988) and could be challenging with ethnic populations (Bernal, Wooley & Schensul, 1997; Skelly et al., 2000). A study by Lee et al. (2002) reported that the Chinese respondents in their study tended to skip questions with a Likert scale and to select the midpoint more frequently on items that involved admitting to a positive emotion than did the Americans, who in turn were more likely to indicate a positive emotion. They argued that such a phenomenon might be explained by the influence of Confucius' desire to avoid extreme responses and choose the middle. Whilst there was no concrete evidence to indicate the cause of such difficulty might lie with cultural bias or in some other factors such as class or literacy, a 4-point Likert-like scale was chosen in this study to avoid the suspected cultural norm of Chinese participants choosing the midpoint. The two subscales demonstrated good internal consistency (Cronbach's alpha = .89 for knowledge of sexual wellbeing, .77 for importance of understanding sexual wellbeing).

Willingness to Seek Assistance and Information Scale

This is a 3-item inventory, which was designed to ask respondents their willingness to seek information and help on sexual wellbeing, using a 4-point Likert-like scale '1 = not at all willing', to '4 = extremely willing'. The willingness scale had good internal consistency (Cronbach's alpha =.78). A composite score was used for further statistical analysis.

Support Network on Sexual Wellbeing Issues

This is a 6-item inventory designed to assess the respondent's willingness to discuss their sexual wellbeing with numbers of people (i.e., primary health care, mother, father, other female family members, friends/classmates and sexual partners), using a 4-point Likert-like scale '1 = not willing at all', to '4 = extremely willing'. This scale has shown good internal consistency (Cronbach's alpha =#.76).

Sexual Wellbeing Services Utilisation Scale

The 8-item scale was designed based on New Zealand literature (Abbott et al., 2000; Ho, 2002; Ho et al., 2003; Ministry of Health, 2003; Ngai et al., 2001) to assess what prevents Chinese women from accessing sexual wellbeing services. There are two domains of the scale. The domain of Cultural Influence consists of five items (e.g., 'I feel embarrassed', 'I am affected by my cultural values, practices and taboos') while Structural Influence has three items (e.g., 'I have no health insurance', 'It is too expensive to access sexual wellbeing services'). A 4-point Likert-like scale was used ranging from '1 = not at all important', to '4 = extremely important' to measure how important were the items that have affected respondents in seeking support from sexual wellbeing health services. A summated mean of each domain was used for analysis. Both dimensions of the scale were found to have good internal consistency in the current sample (Cronbach's alphas = .73 for Cultural Influences and .74 for Structural Influences).

Data analysis

All data were analysed using IBM PASW Statistics 18. Descriptive statistics were used to show the demographics of the participants and their knowledge and understanding on sexual wellbeing, willingness to seek help and access to services. As the data were skewed and not normally distributed, Kruskal-Wallis tests were conducted to compare knowledge of sexual wellbeing information, importance of understanding and willingness to seek help according to age groups.

The recruitment of at least 40 participants would provide enough statistical power of the eight independent variables in this current study. The estimated number of participants will have 80% power to detect an effect size of 0.5, which is considered a moderate effect according to Cohen (1988). For the model of factors that prevented Chinese women in seeking sexual wellbeing services, a standard multiple regression was used to test the contribution of age, education levels, length of residency, self-rated adjustment, knowledge of sexual wellbeing, importance of understanding sexual wellbeing, cultural influences, structural influences to willingness to seek information and assistance. Whilst there has been debate regarding data derived from the use of Likert scales, which are ordinal, to be analysed by parametric statistics, Norman (2010) argues that many studies have shown that parametric statistics are robust enough with respect to violations of such assumption. Variables used in this study were summated mean scores or composite scores, which can be considered as continuous; hence it was considered appropriate to use multiple regression. Correlations

were run to check the assumptions of multicollinearity and singularity (i.e., that all variables entered into the equation were related to the dependent variable to at least a minimal degree ($r > .3$) but not too high ($r > .7$) to other independent variables (Pallant, 2007; Tabachnick & Fidell, 2001). Multicollinearity was examined with the tolerance values and Variance Inflation Factors (VIF) and both fell into the recommended range ($>.1$ for the tolerance values and <10 for VIF).

Results

Sample characteristics

Of the 110 survey packages distributed, 79 questionnaires were successfully completed and returned, with a response rate of 72%. Characteristics of the 79 participants are presented in Table one. Nearly one-third (30.4%) of the respondents were in the age group of 18-25, followed by 26-35 (26.6%), 46 and above (25.3%), and 36-45 (17.7%). The majority of the respondents reported that they came from Hong Kong (53.2%), followed by China (32.9%) and Taiwan (13.9%). More than half of the respondents (58.2%) reported to have been living in New Zealand for five years or more. Overall, the respondents in the study were quite well-educated, with 74.7% reporting more than 12 years of formal education. This may be due to the fact that most of these respondents entered New Zealand via the immigration policies of 'entrepreneur' or on the 'points system', both of which tend to favour the better educated.

Table one. Characteristics of participants of Chinese women (N = 79).

Characteristics	n	%
<i>Age</i>		
18-25	24	30.4
26-35	21	26.6
36-45	14	17.7
> 46	20	25.3
<i>Country of origin</i>		
Hong Kong	42	53.2
Mainland China	26	32.9
Taiwan	11	13.9
<i>Years of formal education</i>		
0-6	3	3.8
7-12	17	21.5
>12	59	74.7
<i>Length of residency in NZ</i>		
< 5 years	33	41.8
5-10 years	24	30.4
> 10 years	22	27.8

Self-rated adjustment in New Zealand & support network on sexual wellbeing issues

The mean scores of the self-perceived ability in English language communication and adjustment to living in New Zealand were 2.19 (SD=0.93) and 1.87 (SD=0.77) respectively. As

shown in Table two, most of the respondents perceived minimal difficulty with their English language communication (68.4%) and did not find much difficulty in their adjustment of living in New Zealand (83.5%).

Table two. Self-rated Adjustment in New Zealand and Support Network on Sexual Wellbeing (N = 79).

Variable	N (%)	Mean(SD)
<i>Self-rated adjustment</i>		
English communication	54 (68.4)	2.19 (0.93)
Living in NZ	66 (83.5)	1.87 (0.77)
<i>Support Network</i>		
Primary health care	64 (81.0)	3.27 (0.83)
Your mother	45 (57.0)	2.67 (1.04)
Your father	14 (17.7)	1.62 (0.90)
Other female family members (e.g., sisters, aunts)	47 (59.5)	2.68 (1.03)
Friends / classmates	42 (53.2)	2.47 (1.02)
Sexual partner(s)	66 (83.5)	3.33 (0.84)

The respondents were asked to identify which persons they would be likely to discuss sexual wellbeing issues with. Table two shows that the respondents were 'very' likely to discuss sexual wellbeing issues with their sexual partner(s) (83.5%), followed by primary health care professionals (e.g., general practitioners, nurses) (81.0%). The respondents also reported that they would feel comfortable talking to other female figures in their families (59.5%) and their own mothers (57.0%) about sexual wellbeing issues. The respondents reported the least willingness to discuss sexual wellbeing issues with their father (17.7%).

Relationships between age and sexual wellbeing

Results showed similar mean scores of self-perceived knowledge of contraceptive choices 2.49 (SD=1.00), cervical cancer screening 2.51 (SD=1.02) and sexually transmitted infections 2.62 (SD=0.98). Table 3 indicates that 59.5% of the respondents reported their knowledge of contraceptive choices was between 'quite knowledgeable' and 'highly knowledgeable', followed by 53.2% for cervical cancer screening and 48.1% for sexually transmitted infections.

In terms of self-perceived importance to understand sexual wellbeing information, results of the mean scores demonstrated that the respondents considered understanding of contraceptive choices 3.18 (SD=1.00), cervical cancer screening 3.39 (SD=0.91) and sexually transmitted infections 3.37 (SD=0.92) as 'fairly important'. Over 80% of the respondents considered an understanding of cervical cancer screening (86.1%) and sexually transmitted infections (83.3%) as 'fairly' to 'extremely' important. More than 70% of the respondents reported that it was 'fairly' to 'extremely' important to develop an understanding of the use of contraception (75.9%), as shown in Table three.

Chinese women in this study reported to be 'fairly' willing to seek information and help in regards to contraceptive choices 2.62 (SD=1.21), cervical cancer screening 3.00 (SD=1.10) and sexually transmitted infections 2.76 (SD=1.12). As shown in Table 3, 65.8% of the re-

spondents reported 'fairly' to 'extremely' willing in seeking advice and help regarding cervical cancer screening, followed by contraceptive choices (60.8%) and sexually transmitted infections (60.8%).

Table three. Comparison of age and sexual wellbeing (N = 79).

Variable	Mean (SD)	N (%)	Age (%)				p-value
			18-25	26-35	36-45	46 and above	
<i>Sexual wellbeing information</i>							
			'quite a lot' to 'a lot'				
Knowledge							
Contraceptive choices	2.49 (1.00)	47 (59.5)	37.5	52.7	85.7	75.0	0.00**
Cancer screening	2.51 (1.02)	42 (53.2)	20.8	47.6	78.6	80.0	0.00**
Sexually transmitted infections	2.62 (0.98)	38 (48.1)	33.3	38.1	71.5	60.0	0.00**
<i>Importance</i>							
			'very important' to 'extremely important'				
Contraceptive choices	3.18 (1.00)	60 (75.9)	75.0	81.0	85.7	65.0	0.52
Cancer screening	3.39 (0.91)	68 (86.1)	70.8	90.4	100.0	90.0	0.01*
Sexually transmitted infections	3.37 (0.92)	65 (83.3)	75.0	85.7	92.9	80.0	0.41
<i>Willingness to seek assistance and information</i>							
			'quite willing' to 'extremely willing'				
Contraceptive choices	2.62 (1.21)	48 (60.8)	50.0	85.7	78.6	35.0	0.03*
Cancer screening	3.00 (1.10)	52 (65.8)	33.3	85.7	78.6	75.0	0.00**
Sexually transmitted infections	2.76 (1.12)	48 (60.8)	54.1	80.9	71.4	40.0	0.24

#Kruskal-Wallis test

*p<0.05; **p<0.001

Table three shows that a Kruskal-Wallis test revealed statistically significant differences in sexual wellbeing knowledge, an importance of developing an understanding of sexual wellbeing and willingness to seek help across four different age groups. Chinese women in the three older age groups (26-35, 36-45, and 46 and above) had more knowledge about contraceptive choices, cancer screening and sexually transmitted infections (between 52.7 and 82.7%) than 18-25 year olds (37.5%). Whilst no between-group difference was found in understanding the importance of contraceptive choices and sexually transmitted infections, a significant statistical difference was found in 36 to 45-year-old Chinese women who reported they all considered gaining an understanding of cancer screening (e.g. cervical smear test) (100%) as most important. Significant differences were also found for Chinese women aged 26 and above (between 75 and 85.7%), who had a higher willingness to seek

information and support for cancer screening issues compare to the youngest group. Those aged between 26 and 45 (between 78.6 and 85.7%) were more likely to seek information and support in contraceptive choices than 18-25-year-olds, and 46 and above.

Barriers to access sexual wellbeing services

The overall mean score of cultural influences of 3.36 (SD=0.70) reported by the respondents indicated that cultural issues were considered to be 'quite' an important factor that influenced them in utilising sexual wellbeing services. Moreover, the structural influence with an overall mean score of 1.71 (SD=0.61) demonstrated that respondents did not consider structural issues to be a major problem in accessing sexual wellbeing services. Table four summarises how respondents perceived the importance of individual items and cultural and structural factors that influenced their use of sexual wellbeing services. The major cultural concern derived from Chinese women in the study about access to sexual wellbeing services was 'I feel embarrassed' (51.9%), followed by 'I am affected by my cultural values, practices and taboos' (41.8%). According to the respondents, 'I am not familiar with the New Zealand health care system' (44.3%) was considered as the main structural barrier in accessing sexual wellbeing services.

Table four. Barriers to accessing sexual wellbeing services (N=79).

Variable	Mean (SD)	n	%
<i>Cultural issues</i>	3.36 (0.70)		
I feel embarrassed		41	51.9
I am affected by my cultural values, practices and taboos		33	41.8
I prefer to use traditional/ alternative medicine		9	11.4
I feel ashamed of not knowing the information		30	38.0
I never thought about the need to know these things		28	35.4
<i>Structural issues</i>	1.71 (0.61)		
I have no health insurance		25	31.6
It is too expensive to access sexual wellbeing services		24	30.8
I am not familiar with the NZ health care system		35	44.3

Factors influencing help-seeking behaviours in sexual wellbeing

A multiple regression was conducted to assess whether age, education, length of residency, self-rated adjustment, knowledge of sexual wellbeing, importance of understanding sexual wellbeing, and cultural and structural influences could predict how it would affect the willingness of Chinese women in seeking information and assistance on sexual wellbeing. As can be seen in Table five, the model explains 30% of variance ($r^2 = 0.30$) in willingness to seek information and assistance on sexual wellbeing. Three of the eight independent variables were found to make a unique and significant contribution to that prediction. They were knowledge of sexual wellbeing ($\beta = 0.31$, $p < 0.05$), self-perceived importance of understanding sexual wellbeing ($\beta = 0.29$, $p < 0.05$) and cultural influences ($\beta = -0.24$, $p < 0.05$). The remaining five variables were not found to make a unique and significant contribution to this prediction.

Table five. Summary of Regression Analysis of Factors influencing willingness in help-seeking behaviours in sexual wellbeing (N=79).

	R	R ²	Adj. R ²	F	P	β	P
Model	0.62	0.39	0.30	4.47	0.00*		
Age						-0.17	0.15
Education levels						-0.06	0.56
Length of residency						-0.10	0.43
Self-rated adjustment						0.03	0.78
Knowledge of sexual wellbeing						0.31	0.02*
Importance of understanding sexual wellbeing						0.29	0.01*
Cultural issues						-0.24	0.03*
Structural issues						0.16	0.12

*P<0.05

Discussion

Much research has been conducted to explore adaptation issues and difficulties of recent immigrants. Migrant women have frequently been under-represented in the area of health and social work research, especially sexual health research and how their socio-economic and cultural status have influenced their knowledge and help-seeking behaviours. The current research endeavoured to accomplish some measures of understanding in this regard.

The survey shows that sexual wellbeing knowledge is lacking among Chinese young women aged 18 to 25 compared to the rest of the groups, with less than 40% reporting to have a reasonable amount of knowledge on contraceptive choices, cancer screening and STIs. Living in a foreign country at a young age involves disruption of life patterns and exposure to multiple stressors, new experiences and challenges. It becomes even more pertinent when these young women, lonely and in need of support, start intimate relationships. Young Chinese women (aged 18 to 25 years old) were also significantly less likely to seek assistance and information in contraceptive use and screening than the older groups. This could imply that with the poor knowledge about contraceptive choices such as condom use, young Chinese women may engage in risky and unprotected sexual behaviour and make them vulnerable to contracting AIDS/HIV or other infections. Such findings are consistent with the *Health Needs Assessment 2001* released by Auckland District Health Board (2001) in which abortion was the second leading discharge condition for Asian people in the 15-24-year-old age group.

The result of the lack of knowledge among Chinese young women is similar to that of other studies and close to the findings of Chinese college students in Taiwan and Shanghai (Wei, 2004; Zhang, Bi, Maddock, & Li, 2010). Due to the impact of Chinese traditional cultural norms, sexual and reproductive health issues have always been a sensitive and controversial topic. Consistent with a New Zealand study (Gao et al., 2008), our finding that young women had the lowest knowledge, self-perceived importance of understanding of and willingness to seek cancer screening information could be related to their perceived view that they are relatively healthy and not at risk of cervical cancer or other gynaecological problems. Given the survey did not ask about their sexual experiences, we could only speculate that some of

these women might not be sexually active. Although in previous generations Chinese women have generally not become sexually active until marriage (Goodwin & Tang, 1996), another New Zealand study has shown that 56% of Chinese students living in New Zealand had their first sexual experience between ages 16 and 24 years (Cheung, 2004). It is possible that some single and sexually active women simply did not want their sexual behaviour to be known by others and this may reflect their unwillingness to seek help, unlike those women aged between 26 and 35, and 36 and 45. Our current findings highlight the importance of young Chinese women not only needing to gain an understanding of contraceptive use and STIs but also being able to access information on cervical cancer such as smear tests, and Pap tests due to the earlier onset of sexual activity.

Our findings indicate that Chinese women from as early as in their mid-20s were more likely to consider the importance of gaining an understanding of cancer screening issues and seek cancer screening support when compared to their youngest group counterpart. This could be explained by the increasing media coverage of the importance of early detections for both cervical and breast cancer. A similar pattern was noted by the Health Funding Authority (1999) in respect to women's health consultation in which Chinese respondents in their questionnaires ranked cervical and breast cancers as the top two of the most important areas to be addressed. Whilst our study did not specifically ask the Chinese women's screening frequencies, our data reported a fairly high level of knowledge of cancer screening among women over 45, which is consistent with the study by Yu et al. (1998) in which 57% of 189 Chinese American women in Michigan, aged 50 and older had had mammograms or other screening procedures. Such findings may reflect normal development of women developing expected sexual and reproductive health knowledge as they mature. Focus group research conducted by Gao et al. (2008) indicated that being proactive about their wellbeing and taking care of their personal health as a prerequisite for being able to look after the whole family were the main reasons for Chinese women between 40 and 50 considering cancer screening as a health priority.

Whilst literature on acculturation (Brotto, Chik, Ryder, Gorzalka, & Seal, 2005; Gao et al., 2008; Salant & Lauderdale, 2003) may suggest that Asian women who have lived in western countries longer would be more likely to be open-minded, integrated into the dominant culture and engage in preventive health utilisation without the hindrance of their traditional beliefs, our study found that duration of residence and their self-rated adjustment did not contribute significantly to their willingness to seek information and support in sexual wellbeing issues. A possible explanation could be that acculturation and length of residency cannot be separated from the longevity question as they are both related to natural ageing through the life cycle. In a sense, smear tests, contraceptive use and STIs are procedures that require contact with health care professionals. While acculturation may influence one's entry into the system, once the women are introduced to the Western health care system, acculturation may no longer serve as an important determinant to preventative health care utilisation.

When trying to determine the extent to which different factors could predict variance in a willingness to seek assistance and support in sexual wellbeing, it was found that only knowledge of sexual wellbeing, importance of understanding and cultural influence made a substantial contribution to this prediction. Cultural influences on the modesty issue derived from this study are consistent with other studies not only of Chinese women (Hoe-man, Ku, & Ohl, 1996; Mo, 1992), but also of women from other minority cultures and even

majority Caucasian women (Jirojwong & Manderson, 2001; McAllister & Bowling, 1993; Salazar, 1996; Tang, Solomon, Yeh & Worden, 1999). In general, Chinese women may be more conservative with regard to modesty and privacy, and are less willing to disclose and discuss sexual wellbeing issues. The findings reveal that the degree of stigma associated with sexual and reproductive issues is considerable and acts as a barrier for participating in preventative measures among Chinese women living in New Zealand. Taking cultural beliefs about sexual and reproductive health issues into account when designing promotional materials is profoundly important if Chinese women living in New Zealand are to be convinced to seek help and support. Ip et al. (2009) further suggests that educational programmes should attempt to empower women's sexual wellbeing self-efficacy rather than solely enhancing their knowledge. This implies that social workers and health professionals not only provide sexual wellbeing knowledge, but also include concrete support and skills in practising contraception, promoting screening tests, along with an increased perception that the individuals are capable of maintaining more control over their reproduction (Wang, Wang & Hsu, 2003).

The literature suggests that doctors' recommendations strongly motivate women to go for cancer screening tests, regardless of ethnicity (Beaulieu, Beland, Roy, Falardeau, & Hebert, 1996; Fox & Stein, 1991). Our findings indicate a high reliance on primary health care professionals, as they seem to be the essential gateway to health care information. This finding is consistent with the study by Twinn et al. (2002) that Chinese women's dependence on the advice of doctors for attending to cervical screening highlights the normative belief of Chinese women in the authority of doctors in prescribing preventative healthcare (Holroyd, Cheung, Cheung, Luk, & Wong, 1997). According to Twinn et al. (2002), there was clear evidence of the influence of doctors' advice on women's screening behaviours. Confucian-derived perception of the doctors' authority appears to be influential because Chinese women tend to conform unquestioningly to their doctors' advice. Such evidence suggests that knowledge alone may not determine their help-seeking behaviours in achieving sexual wellbeing. Successful preventative strategies in sexual wellbeing must be contextualised within the interaction between Chinese women and the people they trust to discuss the issues with.

As cultural attribute was one of the most important determinants of preventative health care utilisation in this study, programmes targeting Chinese or Asian women should carefully consider cultural barriers to sexual wellbeing in addition to the standard barriers such as cost, training and education. In relation to the Chinese normative belief in power and authority, community outreach programmes could be developed using well-known, respected, female spokespersons in the Chinese / Asian community to model and endorse the importance of sexual wellbeing knowledge and preventative health care utilisation. For young Chinese women, schools and tertiary institutions need to be mindful of their duty of care to ensure better support structures and resources are in place to protect such vulnerable groups.

Social work as a profession concerned about sexual and reproductive health draws primarily on the notion of social workers frequently cited as 'the conscience of the community' (International Federation of Social Workers, 1996). Awareness of the complex sexual wellbeing issues for migrant women is instrumental to working more effectively with Asian communities. Social workers can work towards the elimination of racial and ethnic health

disparities and promote equity for the sexual and reproductive health of migrant women through effective policy development, advocacy, research and practice. The demographic changes in the past 20 years have elevated the importance of addressing the disparities in the sexual and reproductive health status of migrant women. Therefore, the future health of New Zealand will be increasingly influenced by the success or failure of improving the health of the Asian population.

Conclusion

This study was limited by participant selection that was non-randomised, with participants that were mainly from a well educated background. This is possibly a sampling recruitment bias because of the first author's personal contacts for participants being mainly with Hong Kong Chinese. The potential self-reporting bias should also be taken into consideration in interpreting the results, as this group of women might report what they perceived to be socially desirable rather than reporting their actual thinking. Although the current study had a relatively high response rate, generalisations must be made cautiously given that the participants were derived from a convenience sample located in one geographic region (Auckland) and may not be representative of the attitudes and behaviours of the large population of immigrant Chinese women living in New Zealand. As such, the findings reported here may be considered indicative only.

In addition, the lack of sample diversity is not a circumstance that can be easily remedied in future studies given the practical difficulties involved in defining the population in question, locating members and securing their cooperation. Future studies may draw more representative samples from households or telephone surveys, although such sampling approaches are likely to be costly. Recruitment of Chinese women participants who are less educated, recent immigrants, older or less adapted would also be quite difficult and challenging. Strategies to increase participation rates among these women should be addressed in future research. One suggestion may be to collaborate with respected leaders of the organisations and ethnic communities in the recruitment process. More Asian grocery supermarkets have been opened up in many parts of Auckland and throughout New Zealand. Disseminating information at these Asian supermarkets could be another way of raising an awareness of important health and welfare concerns and promoting access to associated services. Furthermore, many local Chinese / Asian newspapers are now available free of charge from Asian supermarkets and shops. These newspapers could provide a generic channel and a good source of communicating health and wellbeing information, which could counteract some of the barriers to acquiring information such as a lack of knowledge, lack of privacy and language barriers. Future research can include these items to explore their effectiveness to enhance Chinese / Asian women's sexual wellbeing.

Despite the limitations, few studies have addressed the sexual health care of Chinese women living in New Zealand, and fewer have identified the complex relationships between age, education levels, length of residency, self-rated adjustment, knowledge of sexual wellbeing, importance of understanding sexual wellbeing, cultural influences, structural influences, and willingness to seek information and assistance. This study does both and raises questions for future research about the interrelationship between the quality of sexual wellbeing and the roles of socio-cultural and behavioural characteristics among Chinese and other Asians living in New Zealand.

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