

Knowledge, practice and barriers concerning cervical cancer screening among female overseas Filipino workers: a web-based mixed-methods approach.

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This thesis is submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy. The candidate has already achieved 180 credits for assessment of taught modules within the blended learning PhD programme.

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I declare that this thesis is my own work and has not been submitted for the award of a higher degree elsewhere

Abstract

Background: Cervical cancer is the second cause of cancer related mortality for Filipino women. Mortality rates of cervical cancer are high amongst Filipino women; however, uptake of cervical cancer screening (e.g., pap-testing) is low. In 2015, 2.34 million overseas Filipino workers (OFW) were recorded. Migration may present additional barriers to accessing pap-testing. Gaining understanding of barriers and facilitators to pap-testing for OFWs is crucial to improve uptake of pap-testing.

Methods: An explanatory sequential mixed-methods research design was adopted comprising two phases, a web-based cross-sectional survey (N=480), followed by web-based qualitative interviews (N=8). A socio-ecological conceptual framework was used to explore barriers and pap-test uptake. Bivariate and multivariate logistic regression analyses were used to assess key determinants of pap-testing. Qualitative results were analysed using thematic content analysis.

Results: The sample included 480 OFWs (59.3% domestic workers) living and working in 28 different countries (mean age 36.69, age range 23-58). The largest proportion of women who participated lived in Hong Kong (24.4%). Nearly all (96.4%) of OFWs were aware of pap-testing but less than half (43.5%) had ever engaged in pap-testing. Statistically significant predictors of pap testing were: marital status; fear of outcome of pap-test; having sufficient time; recommendation from health care provider; and collectivism values. Exploration of results through interviews, revealed additional findings and social and structural contexts not conducive to pap-testing, including poverty and the overriding need to provide financially for family.

Conclusion: This study demonstrated the complexity and multifactorial characteristics of pap-testing following the socio-ecological framework. For OFWs, individual, social-cultural, and institutional barriers to pap-testing were embedded in structural barriers, resulting in health inequalities. Recommendations targeted at multiple levels offer the potential for further

understanding and the development of culturally appropriate interventions, with the ultimate aim of increasing OFWs' uptake of pap-testing.

Key-words: pap-testing, cervical cancer screening, Filipina, Filipino, the Philippines, migrant worker, overseas Filipino workers, cancer screening.

“If access to health care is considered a human right, who is considered human enough to have that right?”

Dr. Paul Farmer, co-founder of Partners in Health

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Key

AAPI= Asian Americans and Pacific Islanders

ACCP= Alliance for Cervical Cancer Prevention

ASR (W)= Age standardised rate (world)

B= Beta-value

CASP= Critical Appraisal Skills Programme

CDC= Centre for Disease Control and Prevention

χ^2 = Chi-square test

CI= Confidence Interval

df= degrees of freedom

GCC= Gulf Cooperation Council (member states: Saudi Arabia, United Arab Emirates, Qatar, Kuwait, Bahrain and Oman)

HBM=Health Belief Model

HCP= Health Care Provider

HPV= Human Papillomavirus

hrHPV= high-risk human papillomavirus based screening

IARC= International Agency for Research on Cancer

IOM=International Organization for Migration

M=Mean

M^2 = Mantel-Haenszel linear by linear chi-square test

MMAT= Mixed-Methods Appraisal Tool

MMR= Mixed-Methods Research

N=Sample size

OFW=Overseas Filipino worker

OR=Odds Ratio

P=Participant

P-value= calculated probability

Pap-test= Papanicolau screening test

POEA= Philippine Overseas Employment Administration

UK= United Kingdom

US= United States

Wald= Wald test

WHO= World Health Organisation

SPSS= Statistical Package for Social Sciences

SD=Standard Deviation

S.E.= Standard error

t =T-test

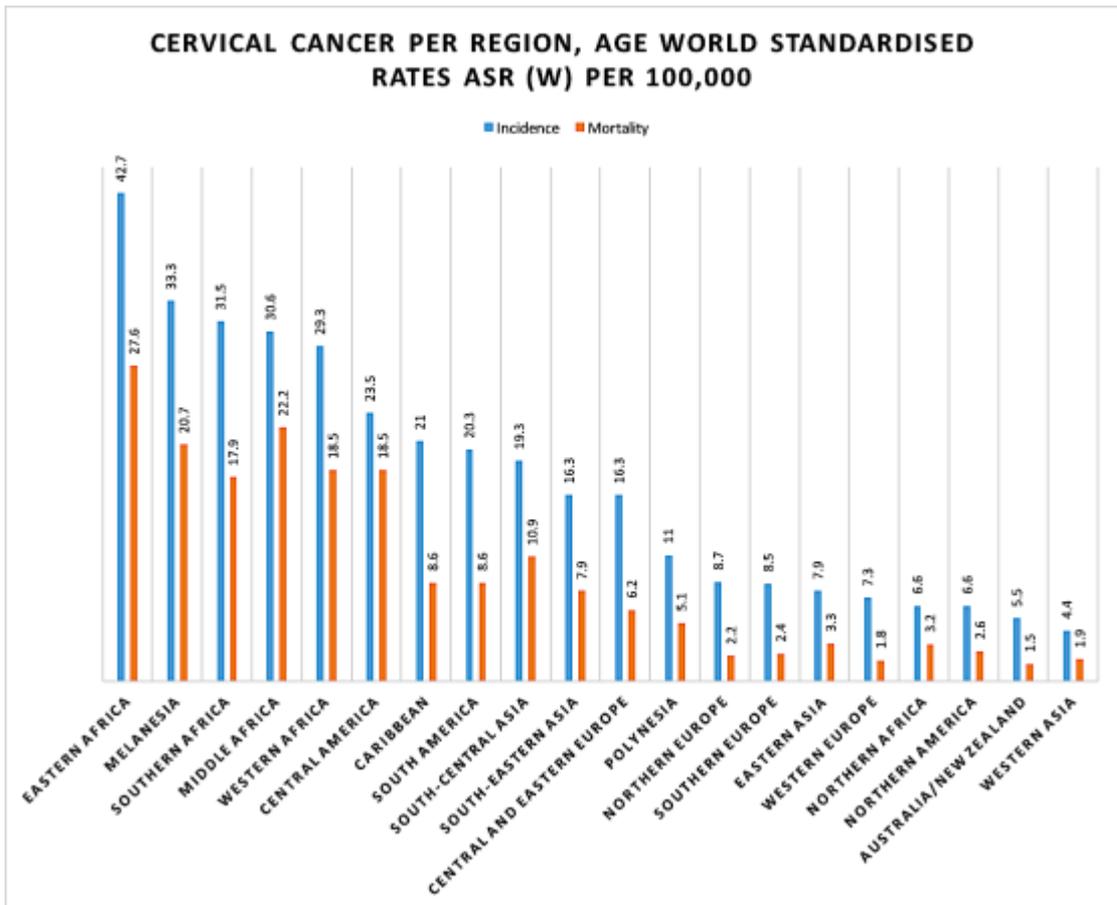
UNIFEM= United Nations Development Fund for Women

1 Chapter 1. Introduction & Background

1.1 Epidemiology of cervical cancer and a focus on the Philippines

Cervical cancer is the fourth most common cancer in women worldwide (Everett *et al.* 2010) and cervical cancer remains one of the leading causes of death among all women globally (WHO 2015). In lower-income countries, proportionally (per 100,000) many more women die of this disease than in high-income countries (Detels 2009; WHO 2015). The WHO (2013) estimates that, of the 270,000 deaths from cervical cancer every year, more than 85% occur in low- and middle-income countries with most in the poorest regions, including Sub-Saharan Africa, South America, South-Central Asia and South-East Asia, in which the Philippines is located. Figure 1 shows global age-standardised incidence and mortality rates per 100,000 women, illustrating disparities between regions worldwide.

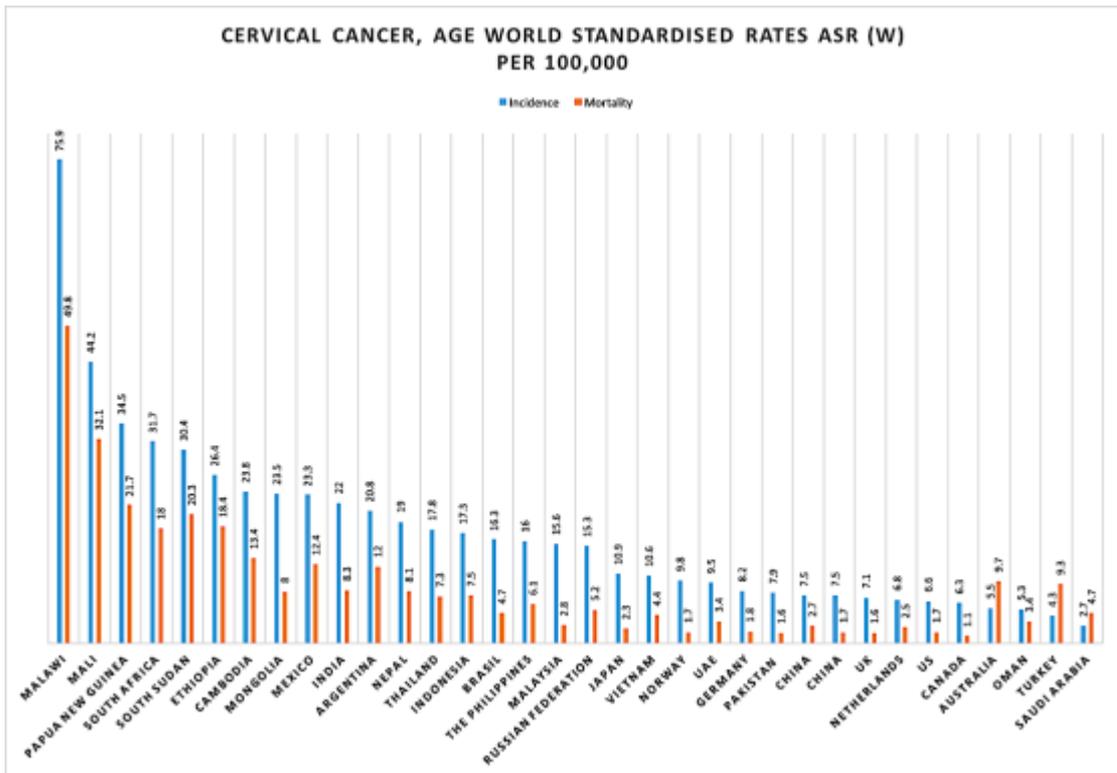
Figure 1 Cervical cancer incidence and mortality ASR (W) per 100,000 by region



Source: (IARC, 2012)

According to the International Agency for Research on Cancer (IARC 2012), cervical cancer is the second most common cancer amongst women after breast cancer in the Philippines. Cervical cancer in the Philippines Age-standardised rate (world) (ASR (W)) incidence is estimated at 16 and mortality at 7.5 per 100,000 (IARC 2012) (Figure 2).

Figure 2 Cervical cancer incidence and mortality ASR (W) per 100,000 by selected countries.



Source: (IARC 2012)

Although the Philippines ASR (W) incidence and mortality rates are not as high as recorded in some areas in Sub-Saharan Africa, these rates are proportionally (per 100,000) higher in the Philippines compared to other countries where national cervical cancer screening programs are in place such as the United Kingdom (UK), where ASR (W) incidence is 7.1 and mortality 1.8, the Netherlands with 6.8 and 1.6, and the United States (US) with 6.6 and 2.7, respectively (IARC 2012) (Figure 2). The high mortality rate for the Philippines has been attributed to late diagnosis in 75% of cases and unaffordability or inaccessibility of treatment (Domingo and Dy Echo 2009).

Migrant women are disproportionately affected by cervical cancer (Mariani *et al.* 2008; Wiedmeyer *et al.* 2012). Survival rates have been found lower (42.9%) for women from the Philippines (Filipinas) resident in the Philippines compared to Filipino-American women (68.8%) (Redaniel *et al.* 2009). Higher incidence rates have been recorded for Vietnamese, Korean and Filipino-American women compared to White and other Asian-American subgroups (De Alba *et al.* 2005; Bates *et al.* 2008; Downs *et al.* 2008; Arnold *et al.* 2013). Cervical cancer incidence rates among Asian-American women of low socio-economic status have been found six times higher than for Asian-Americans of high socio-economic status (Froment *et al.* 2014).

1.2 Cervical cancer risk factors

Human Papillomavirus (HPV) infection is considered the primary cause of invasive cervical cancer in most cases globally (Ngelangel and Wang 2002; Everett *et al.* 2010; Seoud 2012) and has been related to some other cancers including vagina, vulva, penis, anus, rectum, and oropharynx (CDC 2013). Cervical cancer is diagnosed at younger age than other Human Papillomavirus related-cancers (CDC 2013). HPV is a double-stranded DNA virus transmitted to the cervix and vagina predominantly through sexual intercourse and is world-wide the most common sexually transmitted infection (Seoud 2012). Other risk factors of cervical cancer are thought to be high parity, early sexual debut, high number of sexual partners, unprotected sexual intercourse, oral contraceptive use, other sexual transmitted diseases, smoking, and low socio-economic status (Ngelangel *et al.* 2003; Everett *et al.* 2010; WHO 2013; Cancer Research UK 2014; Froment *et al.* 2014). The Oxford Textbook for Public Health states that lower education and social class have been associated with cervical cancer in most countries (Detels 2009). Additionally, having a male partner who has high numbers of sexual partners, genital diseases, or sexual contact with prostitutes puts women at risk (Detels 2009).

The development of the HPV vaccination is a promising method of primary prevention for young girls before their sexual debut, yet there is no convincing evidence as to whether HPV vaccinations might also be effective in women over the age of 26 who are sexually active and therefore likely to have been exposed to the HPV virus (CDC 2012). Secondary prevention through cervical cancer screening remains the only option for women who have and have not been vaccinated (Everett *et al.* 2010).

1.3 Cervical cancer screening and its disparities

Screening for cervical cancer as a secondary prevention method is an effective way of discovering precancerous lesions, meaning the disease is caught at an early stage and treatment of precancerous changes can be offered before malignancy evolves (Maxwell *et al.* 2000; Everett *et al.* 2010; WHO 2013). The Centres for Disease Control and Prevention (CDC) (2014a) states that cervical cancer is preventable and treatable; as a result, no woman should die of the disease. Increasing uptake of screening is important to control the disease through early detection (Everett *et al.* 2010). Cervical cancer screening is usually performed through the use of the Papanicolaou screening test, or pap-testing (cytology). Pap-testing is globally used and aimed at detecting pre-cancerous changes within the cervix and abnormalities in the cells of the cervix (Everett *et al.* 2010). Pap-testing successfully reduced morbidity and mortality globally (Freeman and Wingrove 2005) and since its introduction in the 1940s, age-adjusted mortality rates for invasive cervical cancer were reduced by 75% in the US, making pap-testing the most successful cancer screening program deployed to date (Agency for Healthcare Research and Quality 2002; Freeman and Wingrove 2005). Likewise, the cervical cancer screening program implemented in the UK in 1988 resulted in a significant reduction in mortality of women under 35 (Everett *et al.* 2010). Pap-testing is estimated to save approximately 5,000 lives in the UK annually (Cancer Research UK 2014). The incidence of cervical cancer is thought to be reduced by 92.5% for those women who are pap-

tested every two years, 90.8% for women who have a pap-test every 3 years, and 64.1% for women tested every five years (Everett *et al.* 2010).

Despite its success pap-testing has various limitations; it has moderate to low sensitivity (51%, range 37%-84%), meaning there is a high rate of false-negative results; false-positives are common; and women must be screened frequently (Saslow *et al.* 2012). Another limitation is that the pap-test requires highly experienced cytotechnologists and the test is dependent on the ability of individuals conducting the test, illustrated by the large range in sensitivity (ACCP 2004).

Some countries have adopted national cervical cancer screening programs, inviting women most at risk at specified intervals to attend pap-testing. Intervals vary between countries, ranging between one and five years usually for women aged 20-65 or 25-64, with less frequent screening after the age of 50 (Everett *et al.* 2010; Cancer Research UK 2014). The most recent Cochrane Review on cervical cancer screening concluded that efforts aimed at increasing uptake of pap-testing should include the use of invitation letters as part of organised screening programs (Everett *et al.* 2010).

Implementation of organised cervical cancer screening programs varies widely globally, representing large disparities in uptake of pap-testing between countries (Figure 3) (Gakidou *et al.* 2008), resulting in health inequalities. Low-income countries face multiple barriers to implementing cytology-based screening programs including competing health needs, limited human and financial resources and limited primary health care facilities (Denny *et al.* 2006).

Figure 3 Pap-testing rates (%) in selected host countries for OFWs.

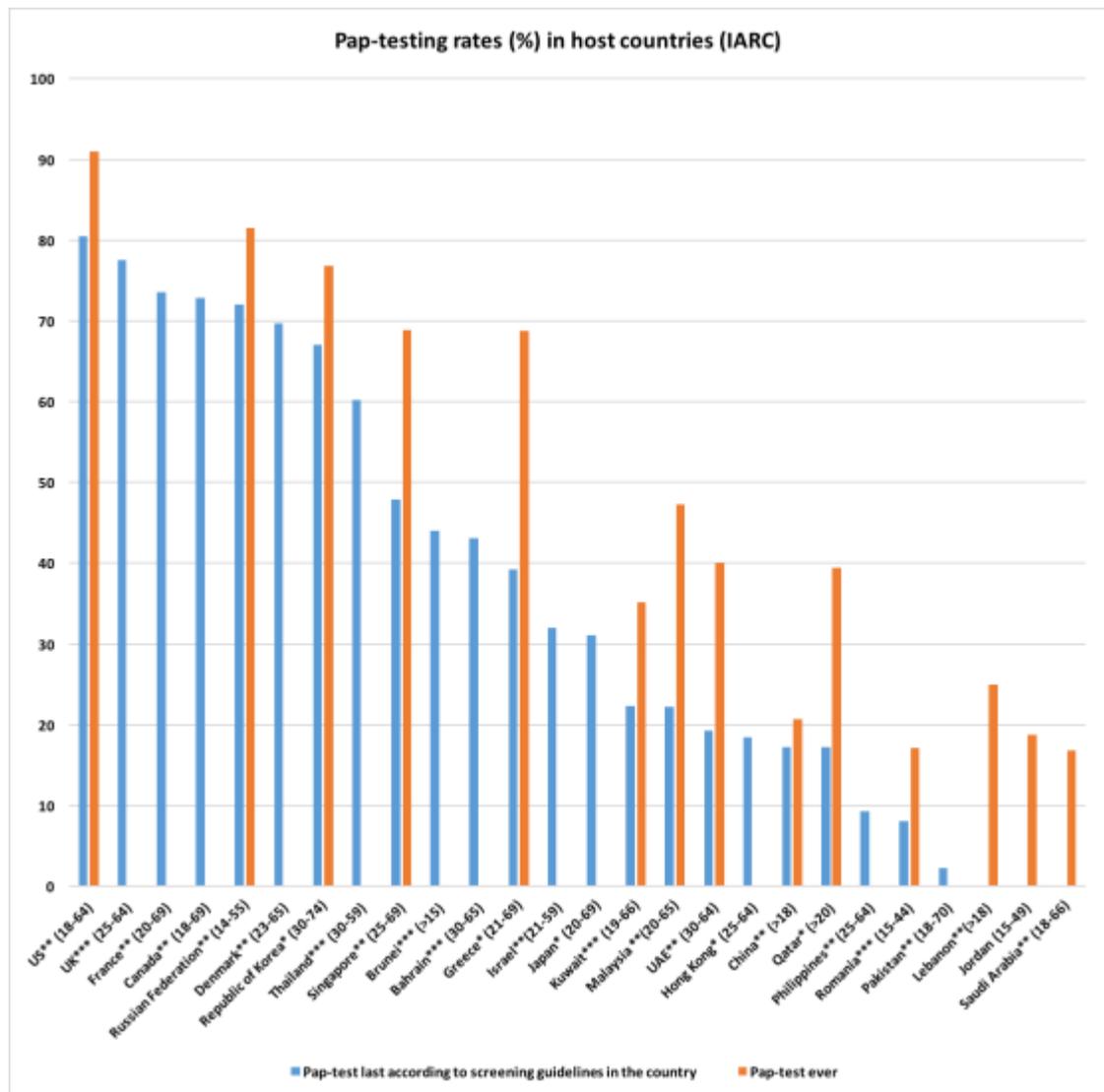


Figure based on data from IARC, HPV Information Centre (2017) presented by country, pap-test screening interval, and the age range data are based on. For some countries data are not available either per screening interval, or for ‘pap test ever’.

*=1-2 year screening interval, **=3 year screening interval, ***=5 year screening interval.

Caution needs to be applied when interpreting Figure 3. Data in Figure 3 are compiled by the International Agency for Cancer Research’s HPV Information Centre. Data are derived from systematic reviews and meta-analysis of published literature (IARC 2017), however differences in pap-testing rates may be due to variations in pap-testing guidelines, as well as methodological differences in data collection. For some countries a wealth of data is available, for other countries, like for example Saudi Arabia, data are based on one single study. Figure

3 demonstrates studies apply different age ranges. Countries that apply younger age ranges, for example 14-20 may be perceived as having lower pap-testing rates as specifically in that younger age group, pap-testing rates are low globally. Screening guidelines regarding age and screening interval differ per country and again, this may make comparisons between countries problematic. Figure 3 also demonstrates significantly higher participation rates in those countries that have established national cervical cancer screening programmes.

The health system infrastructure in the Philippines presents a challenge to the implementation of an organised population-based cervical cancer screening programme (Philippines Department of Health Cervical Cancer Screening Study Group 2001; Guerrero *et al.* 2015). Screening not being readily available has been associated with low uptake and currently screening remains unorganised, or opportunistic, in the Philippines (Garland *et al.* 2008). Domingo and Dy Echo (2009) describe in their report on the epidemiology, prevention and treatment of cervical cancer in the Philippines that of the 389 hospitals in the Philippines, 8% have dedicated screening clinics and 42% offer screening services for cervical cancer, indicating low availability. Uptake of pap-testing remains low for women in the Philippines (Domingo and Dy Echo 2009). Participation rates for pap-testing are not routinely recorded in the Philippines but have been estimated at 9.3% (IARC 2017). Participation rates for pap-testing in Asian-Americans, including Filipinas, have consistently been found lower than their white counterparts in the US (Kagawa-Singer and Pourat 2000; Maxwell *et al.* 2000; Chen *et al.* 2004; Wu *et al.* 2006; Downs *et al.* 2008; Wang *et al.* 2008; Yu *et al.* 2009; Yoo *et al.* 2011; Shoemaker and White 2016). Migrant women in Canada were found to exhibit significantly lower pap-testing rates than Canadian born-women, as can be seen in Table 1 (McDonald and Kennedy 2007).

Table 1 Pap-testing rates (%) women aged 20-65 in Canada

Ethnicity	Pap-test last year		Pap-test last 3 years		Ever had a pap-test	
	Foreign born	Canadian born	Foreign born	Canadian born	Foreign born	Canadian born
White	53.2	57.6	77.3	80.7	89	93
Black	53.5	60.2	78	77.1	84.6	82.3
Hispanic	47.9	54.2	76.5	87	82.5	88.2
Arab	50.3	45	61.4	62.2	69.9	69.8
South Asian	47.5	31.5	63.9	43.3	74.5	50.8
Filipino	37.3	31.3	53.5	39.5	62.8	50.6
Chinese	42.5	41.4	59.1	60	65.2	66.6
Korean	42.8	41.9	55.5	65	62.6	79
Japanese	24.5	52.9	39.2	72.6	66.8	82.3

Based on data from the 1996 National Population Health Survey, 2000-2001 and 2002-2003 Canadian Community Health Survey, sample size 105062 (McDonald and Kennedy 2007)

Hispanic and Black immigrant women were found to eventually report similar pap-testing rates to Canadian born-White women, though only after residing 15-20 years in Canada. For Canadian immigrants from Asian background, native born rates of pap-testing screening are never reached, not even after many years (McDonald and Kennedy 2007). Canadian-born women of Asian descent were found to exhibit lower pap-testing rates than Canadian born-White women (McDonald and Kennedy 2007). Canadian-born women of Filipino descent, and who were born and raised in Canada, showed lower pap-testing rates than foreign born Filipino migrants, suggesting that factors underpinning low pap-test rates are not only related to language, education or access to healthcare, but factors underpinning low pap-test rates could also be cultural.

Studies in the US and Canada report slightly higher pap-testing rates for Filipino women than for other women of Asian descent (Kagawa-Singer and Pourat 2000; Maxwell *et al.* 2000; Chen *et al.* 2004; Kandula *et al.* 2006; McDonald and Kennedy 2007; Shoemaker and White 2016). In Wang *et al.*'s (2008) survey study, for 259 Asian women a lower rate of obtaining a recent Pap smear (70%) was reported compared to their white non-Hispanic US women (81%), yet in Maxwell *et al.*'s (2000) survey of 218 Filipino and 229 Korean women, 48% of

Filipinas had a pap test in the last 2 years and only 14% of Filipinas adhered to all cancer screening guidelines. In most studies Filipinas were reported to have higher participation rates than their Vietnamese, Korean and Chinese counterparts (Maxwell et al., 2000; Kagawa-Singer et al., 2007; Wang et al., 2008; Yu et al., 2009; Shoemaker and White 2016). An explanation could be that very few studies offer research materials in Tagalog, the Filipino language, while several other Asian languages are offered to research participants. This may result in inclusion of only those Filipinas who speak good English and have perhaps lived longer in the US (Chen et al., 2004).

Two studies conducted with Filipino domestic workers in Hong Kong found that 53% (N=98) and 78.3% (N=290) never had a pap-test (Holroyd *et al.* 2001; 2003). Uptake of pap-testing is also low for migrants in the US, Australia, Canada and Sweden despite pap-testing being readily available (Arnsberger *et al.* 2002; Coughlin and Wilson 2002; De Alba *et al.* 2005; Kandula *et al.* 2006; Amankwah *et al.* 2009; Ho and Dinh 2010; Lofters *et al.* 2011; Lu *et al.* 2011; Luque *et al.* 2011; Hou *et al.* 2012; Olsson *et al.* 2014; Weber *et al.* 2014), indicating there are other barriers to pap-testing than availability alone.

Understanding barriers and facilitators to pap-testing for Filipino women is an essential first step to improving uptake. Studies conducted with Asian, including Filipino women, in the US found repeatedly low awareness of cervical screening as well as other more common barriers to screening such as access barriers, economic barriers, cognitive barriers and cultural barriers (Kagawa-Singer and Pourat 2000; Ponce *et al.* 2006; Kagotho and Pandey 2010; Gor *et al.* 2011; Lu *et al.* 2011; Hou *et al.* 2012).

A multitude of barriers to pap-testing has been found in studies conducted with Asian migrant women, other than Filipino women, such as Indian, Bangladeshi, Pakistani, Sri Lankan or Nepalese, Chinese, Vietnamese, Thai migrant women in the UK, US and Canada (Crawford *et al.* 2016). Cognitive factors including beliefs and attitudes towards cancer and screening including lack of knowledge of screening, lack of knowledge of symptoms, rationale or

benefits of screening have been found to act as barriers to pap-testing (Bottorff *et al.* 2001). Low awareness and knowledge of pap-testing as well as a low self-perceived risk, was found amongst Bhutanese refugees in the US (Haworth *et al.* 2014) and Chinese women in Canada (Hislop *et al.* 2004). Fear of pain and fear of the outcome of the test were found barriers to pap-testing for Hindu women in the UK (Cadman *et al.* 2014). Other individual barriers such as language also influence access to pap-testing for Asian Migrant women in the US (Lee *et al.* 2010).

In addition, social and cultural barriers such as collectivism and centrality of family were found to be important in relation to screening (Oelke and Vollman 2007) and family cohesiveness was demonstrated through honour and respect, maintained by not discussing female health related issues for South-Asian Hindu, Sikh and Muslim women in Canada, perpetuated by modesty and embarrassment (Bottorff *et al.* 2001). Loss of social support upon immigration was also found an important barrier to accessing pap-testing for these women (Bottorff *et al.* 2001). Acculturation, meaning that when migrants move to a new country they may adopt attitudes, beliefs and practices common in the host-country, and the length of stay in the host country were also found to act both as barriers and facilitators to pap-testing (Crawford *et al.* 2016) and preference for traditional medicine was found a barrier for Chinese women in the US (Chang *et al.* 2013).

Access barriers such as lack of time and cost of pap-testing are common barriers to pap-testing for Asian migrant women (Crawford *et al.* 2016). Institutional barriers such as gender appropriate healthcare providers and lack of recommendation from the healthcare provider to attend pap-testing have also been found to act as barriers to pap-testing for Asian migrant women in the UK, UK and Canada (Crawford *et al.* 2016). Having a regular healthcare provider was also found an important facilitator to pap-testing for Asian women in the US and Canada (Hislop *et al.* 2002; Islam *et al.* 2006; Ho and Dinh 2011; Shoemaker and White 2016). Lack of health insurance has also been found a predictor of pap-testing for immigrants in the US and a structural barrier (Carrasquillo and Pati 2004; Shoemaker and White 2016).

1.4 A picture of Overseas Filipino Workers

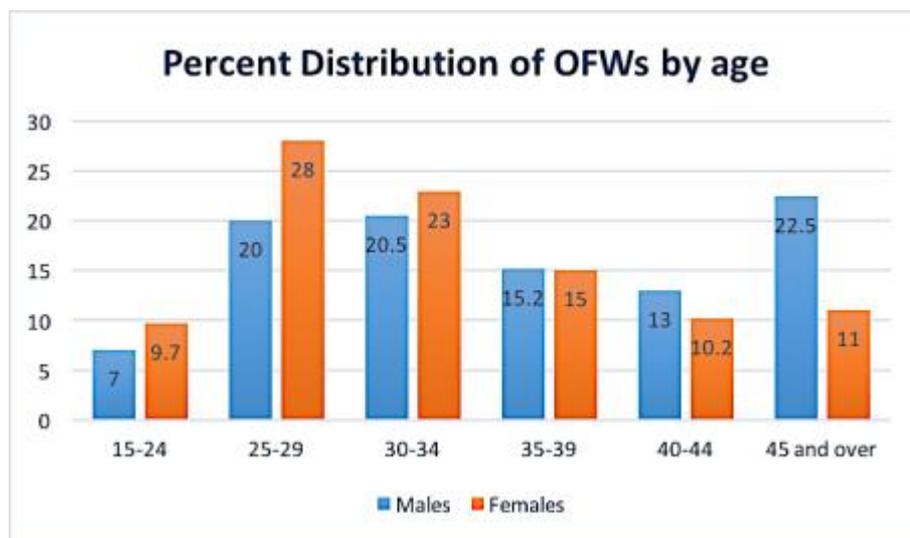
The Philippines comprises over 7,000 islands; of these, approximately 800 are populated. There are more than one hundred different languages and dialects spoken in this population, although Tagalog is spoken by half the population, as well as English. A former Spanish colony, the US helped to overthrow Spanish ruling and declared colonial sovereignty over the Philippines in 1898, which lasted until 1946. Filipino migration started in this period to Hawaii and other parts of the US. In 1972 after years of unrest, the US-backed president Ferdinand Marcos declared martial law and the US invested large amounts of military aid in following years (Constable 2007). A period of economic crisis followed, with unemployment rapidly rising. Oil price increases in the 1980s led to further devastation in the Philippines as well as huge financial opportunities in the Middle East, allowing major infrastructural projects to be developed using low-cost migrant labour (Constable 2007). In the 1980s, two-thirds of the Filipino population were estimated to be living below the poverty line (Constable 2007). By 1992, at least one and a half million Filipino migrant workers had been reported to work abroad, not including permanent immigrants or illegal migrant workers, at that time also estimated to be half a million (Constable 2007). In 2005, 40% of the Filipino population were still living below the poverty line and 62% reported to be poor (Asian Migrant Centre 2005). Government health spending was drastically cut to \$2.5 per Filipino and largely reliant on ‘out-of-pocket’, or private payments, contributing to the drive of workers to find opportunities overseas (Asian Migrant Centre 2005).

Filipinos now make up a significant part of the global workforce. In 2015, an estimated 2.34 million OFWs were deployed overseas and this number continues to grow; the Philippine Overseas Employment Administration (POEA) reports that every day, 3,000 Filipinos leave the country for overseas work (Philippine Overseas Employment Administration 2013; 2016; Caguio

and Lomboy 2014). With economic circumstances continuing unstable to this day, OFWs are perceived as ‘economic heroes’ and it is estimated that OFWs typically support five individuals back home in the Philippines (Asian Migrant Centre 2005; Constable 2007). Personal remittances sent home are vital to the economy and it is estimated that, in 2013, personal remittances alone reached \$25 billion, 9.8% of GDP (The World Bank 2014).

The top ten destinations for OFWs in 2015 were Saudi Arabia, the United Arab Emirates, Singapore, Qatar, Kuwait, Hong Kong, Taiwan, Malaysia, Oman, and Bahrain (Philippine Overseas Employment Administration 2016). More than one-third of OFWs were registered as unskilled workers and 38% have been recorded as ‘household service workers’. Other categories included caregivers (2%), cleaners (3%), labourers (11%), waiters (4%), plumbers (2%), nurses (4%) or unspecified as ‘other’ (36%) (Philippine Overseas Employment Administration 2016). Initial migration of mostly men has now shifted to an increased proportion of women (Tejero and Fowler 2012). In 2012, only slightly more male OFWs (51.7%) than female OFWs (48.3%) were recorded (Philippine Overseas Employment Administration 2013). In 2012, 28.2% of female OFWs were aged between 25-29, 23.7% aged 30-34, 16% aged 35-39, 11% aged 40-44 and 11.5% aged over 45 (Figure 4) (Philippine Overseas Employment Administration 2013).

Figure 4 Percent distribution OFWs by age



Source: (Philippine Overseas Employment Administration 2013)

Filipino culture is considered to be collectivist, in which the well-being of the group is prioritised over the individual. In Filipino culture the family is closely knit and family is considered the most important part of one's life. Marriage, in a predominantly Catholic and traditional country, is sacred, and looking after the marriage is also an important responsibility of the woman (Tejero and Fowler 2012). Women are responsible for the care of their children and family. Often women have to leave family and even their own children back home to work abroad and provide financially for their families (Holroyd *et al.* 2001; Constable 2007). After migration these women often find themselves isolated and removed from their usual social support network while having to adapt to new environments, cultures, languages and norms (Holroyd *et al.* 2001; Constable 2007). In Holroyd's survey study (2001) of 290 Filipino domestic workers in Hong Kong, almost half of women reported feeling lonely, worrying, waking up in the early hours and experiencing difficulty going to sleep, symptoms potentially indicative of the difficult circumstances women endure (Holroyd *et al.* 2001). OFWs are also considered at risk of sexually transmitted diseases and may engage in sexual contact triggered by homesickness, loneliness or economic necessity (Domingo and Dy Echo 2009).

Holroyd *et al.* (2001) indicate that Filipino migrant women in Hong Kong are marginalised by their ethnic identity as well as their temporary status. Host countries have a duty to migrants to ensure equitable access to health care, and human rights may be affected if the 'rights for all' are not adhered to. Even if access to health care is granted by the host country, barriers to accessing health care are likely to exist (Holroyd *et al.* 2001). Migrants possess other health beliefs and practices than their host-country and a disjuncture may exist with the host-country's health system which may lead to more stress and an increase in their perception of marginalisation, impacting health and well-being (Holroyd *et al.* 2001; Tejero and Fowler 2012). Living in a foreign land, men and women face challenges that may affect their health and access to health care may become compromised (Tejero and Fowler 2012). Health is

determined by social, structural and economic conditions, reflecting the unequal distribution of power and resources in society and resulting in health inequalities. Ill health is complex and influenced by many determinants interacting together. Social, economic, behavioural and structural determinants of health all interact and can cause health inequalities (Naidoo & Wills 2016). For example, health inequalities can develop as a result of material disadvantage such as poor education and low income, which may lead to poor working and living conditions and resulting in ill health. Health inequalities can also be explained by inequitable access to healthcare. Research evidence regarding migrants accessing healthcare, is limited yet existing evidence is implying that utilisation of health care services by migrants is lower than for non-migrants in host countries (WHO 2017). Today, with 1 billion migrants globally, migrant health and equity to healthcare, is more important than ever (International Organization for Migration 2017).

Countries differ in their immigration policies and the type of healthcare they allow temporary migrants to access. Migration issues, such as achieving universal health coverage (UHC) and the promotion of a safe and secure working environment for all workers, including migrants, have been included in the UN 2030 Agenda for Sustainable Development (UN Sustainable Development Goals 3 and 8) (Ang *et al.* 2017). All UN Member states have agreed to achieve UHC by 2030 and globally countries already have, or are at varying speeds working towards UHC. UHC is aimed at reducing out-of-pocket expenditure and prevent impoverishment and offer protection from financial risk by providing access to all individuals to quality health services that meet their needs (WHO 2016). No country can provide sustainably free coverage for all possible health interventions, however the WHO (2016) identifies 16 essential health services to be included in UHC as indicator of the level and equity of UHC, of which cervical cancer screening is one. Whether migrants are included in UHC or whether UHC systems pertain to universal coverage for citizens of countries only, is an important issue and non-inclusion of migrants in UHC can be an important barrier to accessing healthcare (Guinto *et al.* 2015).

Table 2 presents UHC and cervical cancer screening availability for migrants in the most popular host countries for OFWS. Table 2 also includes the Philippines as the sending country and presents the arrangements the Philippines has in place for OFWs in terms of healthcare. Table 2 demonstrates that UHC is not available for migrants in most of these countries. From Table 2 it can be seen that health insurance for migrants often depends on the employer, leaving migrant workers dependent on employers for registration with insurance, authorities and health care providers, which can leave migrants vulnerable to abuse, especially migrants who work for smaller organisations, or individuals, like domestic workers do (Guinto *et al.* 2015; Alkhamis *et al.* 2017). Table 2 demonstrates that most of the countries where OFWs reside, do not have cervical cancer screening programmes in place and screening is opportunistic. In some of the Gulf countries pap-testing is available to married women only, excluding OFWs who are single yet engage in sexual relations.

Table 2 OFWs top destinations-Healthcare policies and access to Cervical Cancer Screening

Country	UHC	Cervical cancer screening
Hong Kong	Public healthcare services are provided for all on a ‘fee-for-service’ basis. Residency status determines eligibility for subsidised rates. Documented migrant workers with valid contracts are eligible for subsidised rates, however utilisation of services remains low due to several barriers, including agencies and employers’ exploitation of migrant workers, lack of law enforcement to protect migrant workers from exploitation, lack of knowledge amongst migrant workers about their legal rights and access to services, limited availability (Trummer <i>et al.</i> 2014).	Cervical cancer screening (pap-testing) programme has been in place since 2004 and migrant women are eligible to take part, however women who have never had a pap-smear are not actively recruited (Ting <i>et al.</i> 2016). The cost of a pap-test depends on the provider.
UAE	UHC implemented in 2017. Per 1 st of April 2017 health insurance for all citizens and residents, including domestic workers, is compulsory, and is the responsibility of the employer (Alrawi and Hussain 2011; Lindeman 2017).	No national cervical cancer screening programme is in place, screening (pap-testing) is opportunistic and women are not invited to screening (Khan and Woolhead 2015). Citizens have access to free screenings, residents do not. Whether the cost of pap-testing is covered depends on health insurance package. The Essential Benefits Package, which applies to employees earning less than \$1000, does not cover cervical cancer screening. Cost for pap-

		test depend on facility, ranging between \$80-\$275 (Ismail 2012; Nowais 2016; Lindeman 2017)
Saudi Arabia	Citizens have access to governmental health care, migrant workers require compulsory health insurance covered by the employer, although it was found that 30% of the migrant population still did not have health insurance in 2017 (Alkhamis <i>et al.</i> 2017). The healthcare system is currently under review.	No national cervical cancer screening programme is in place, screening is opportunistic and women are not invited to screening. Opportunistic screening (pap-testing) is offered to married women (Sait <i>et al.</i> 2012; Khudairi <i>et al.</i> 2017). Cost of pap-test depend on the provider. In the city Jeddah appears to be a screening programme offering free pap smears for Saudi and non-Saudi females married for three years ('Jeddah Cervical Screening Program' 2011).
Kuwait	Until 1999 Kuwait used to have UHC and offered free health care to both citizens and residents. Kuwait's healthcare system has been reformed since and remains currently under reform. Increasingly health care for Kuwaiti citizens is prioritised over health care for migrants, with treatment abroad for citizens, segregated times to visit health care facilities and segregated health facilities for citizens and migrants. Health insurance is compulsory for migrants, which gives access to some public health services (WHO 2007; Migrants-right org 2016).	No national cervical cancer screening programme is in place, screening is opportunistic and women are not invited to screening. Opportunistic screening (pap-testing) is offered to married women. Cost of pap-test depends on the provider (Sancho-Garnier <i>et al.</i> 2013).
Qatar	UHC is available to all citizens and migrants. All Qataris receive free healthcare; this is heavily subsidised for migrants. Currently the health care system is migrated to a health insurance system. Health insurance is compulsory for citizens, but not for migrants and this is depended on the employer (Goodman 2015).	No national cervical cancer screening programme is in place, screening (pap-testing) is opportunistic and women are not invited to screening (Bruni <i>et al.</i> 2016). In 2017, Qatar Cancer Society launched a campaign inviting all women to pap-testing, including migrants.
Bahrain	UHC available and health care is free for all Bahraini citizens. Health care used to be heavily subsidised for migrants which is now under reform and a health insurance system is implemented (World Health Organization 2006).	No national cervical cancer screening programme is in place, screening is opportunistic and women are not invited to screening. Opportunistic screening (pap-testing) is offered to women aged 35-64. Cost depend on the provider (Sancho-Garnier <i>et al.</i> 2013).
Oman	UHC available for citizens and residents, health care is free for citizens but relies on out-of-pocket payment or health insurance for migrants (Al-Riyami 2012)	No national cervical cancer screening programme is in place, screening is opportunistic and women are not invited to screening. Opportunistic screening (pap-testing) is offered to women aged 20-69. Cost depends on the provider (Sancho-Garnier <i>et al.</i> 2013).

Singapore	UHC available to Singaporean citizens or permanent residents, not to migrant workers. Migrants require private health insurance by employers (Guinto <i>et al.</i> 2015).	Cervical cancer screening programme is in place, inviting women every three years at subsidized rates for a pap-test (IARC ICO 2017). This is available to Singaporeans or permanent residents (Singapore Cancer Society 2016), not to migrants.
Canada	UHC is available through a publicly funded health care system for Canadian citizens or permanent residents, which pays for most health care services. Newly arrived migrants are not covered immediately but may have to wait up to three months until their application for the health card is processed. Then migrants are equally covered by government health insurance (Government of Canada 2017).	Cervical cancer screening (pap-testing) programme is in place, active invitation to screening varies per region, available for all women aged 21-65/69/70 (varies per region) (IARC ICO 2017)
Philippines	Philippines National Health Insurance Program (PhilHealth) is a social insurance program financed through monthly premiums (for employed and self-employed), as well as through government subsidies. Still high out-of-pocket payments. PhilHealth has a separate programme for Overseas Filipino Workers and is mandatory for those employed through the Philippine Overseas Employment Administration. Overseas hospitalisation is covered for OFWs who are members. This is pay-out of pocket initially, to be reimbursed later. This can cause issues for OFWs and the reimbursement is often inadequate for the medical costs incurred abroad (Guinto <i>et al.</i> 2015).	No cervical cancer screening programme is in place and screening is opportunistic. Opportunistic screening (VIA) is offered to women (aged 25-55) every 5-7 years (IARC ICO 2017). Cervical cancer screening is not included in the PhilHealth regular primary care package, however this is included the Enhanced Primary Care package (PhilHealth 2015).

1.5 What evidence is lacking and this study's contribution to the body of knowledge

Limited research is available regarding the OFW population and their access to pap-testing. The limited studies that were found through a systematic search were conducted in the US. and two studies in Hong Kong (Holroyd *et al.* 2001; 2003). Women in Holroyd's (2001, 2003) Hong Kong studies are less comparable to Filipinas included in the US studies and findings may not be generalisable to OFWs in other countries. Temporary migrants' residence in host-countries depends on their work contract and OFWs are expected to leave at the end of the contract. This temporary status may impact women's assimilation into their host-country (Holroyd *et al.* 2001) and their living and working situation. Therefore, circumstances for OFWs will differ from those Filipinas who become legal permanent residents in the US. In addition, US findings may not be comparable to OFWs based in other countries, as the US has an active cancer screening programme unlike most host-countries where OFWs reside, which may impact OFW's uptake of pap-testing in countries other than the US. This study makes a unique contribution to the body of knowledge by including OFWs residing in a variety of different countries.

Some studies have investigated barriers to pap-testing for Asian women. Aggregating data for Asian populations denies cultural differences between those of different national origins. Although some cultural barriers and facilitators may be similar, some may not or the importance that each Asian group assigns to barriers may vary (McBride *et al.* 1998; Fu *et al.* 2003). This study contributes to the gap in understanding barriers to pap-testing specifically for OFWs.

A deeper understanding of OFW's participation in pap-testing is required in order to develop effective methods to improve uptake of pap-testing amongst OFWs. This needs to include an investigation into uptake rates, knowledge of pap-testing, and a comprehensive understanding of the barriers and facilitators towards pap-testing that OFWs perceive. This study seeks to fill this gap in research with a web-based, mixed-methods study. In phase one, a general understanding of

knowledge, barriers and practices of OFWs regarding pap-testing will be garnered through a cross-sectional survey. Phase two provides a more in-depth understanding of survey findings through individual web-based qualitative interviews. Both phases are complimentary and will provide a more comprehensive understanding of issues involved than either phase by itself could achieve (Andrew and Halcomb 2009).

Barriers to pap-testing for OFWs are likely to be complex, multifactorial and interrelated, shaped by the social, cultural, institutional and economic environments experienced by these women (Detels 2009). Traditionally, health promotion based on medical and educational approaches focused on individual factors, limited to providing information and expecting knowledge of, for example, pap-testing to translate into health behaviour (Naidoo and Wills 2000). Studies have established that knowledge regarding pap-testing is an important barrier and explanation of low uptake, and low awareness for Filipinas has been identified (Lu *et al.* 2011). While the relationship between health knowledge and health behaviour seems rational and logical, ample research is pointing to a complex and problematic relationship (Williams 1995). Health occurs in a social, historical and political context (Creswell 2003), and participants' health behaviour must be interpreted within their cultural and social context because individuals' knowledge, practices, and barriers are grounded in the context of people's daily lives and circumstances (Williams 1995; Travaglia and Braithwaite 2009). This context refers to the structural aspects of a social system, which individuals have to navigate (WHO 2010). Health, and health behaviour, is determined by a complex interplay between individual, social-cultural, institutional and structural factors (Naidoo and Wills 2000). Barriers and facilitators to pap-testing for OFWs should be investigated, explained and improved using a multifactorial approach, recognising the impact of all levels on pap-testing uptake in order to thoroughly understand, explain and improve pap-testing for OFWs. This study makes a unique contribution by recognising the complexity and multifactorial determinants of OFW's pap-testing behaviour through the application of a socio-ecological conceptual framework.

2 Chapter 2. Literature review

2.1 Methods

As a context for this empirical study, a focused narrative literature review adopting a systematic approach was conducted. The aim of the review was to identify the current level of knowledge regarding barriers and facilitators to pap-testing for OFWs. Inclusion criteria for this systematic search are presented in Table 3.

Table 3 Inclusion/exclusion criteria

Inclusion criteria	
Sample	Filipino migrant women, Asian migrant women including Filipinas, Overseas Filipino workers
Phenomenon of Interest	Cervical cancer screening, cervical and breast cancer screening with target population
Location	Global
Design	Qualitative, quantitative, mixed-methods, systematic and literature reviews
Evaluation	Outcomes such as participation rates, and/or knowledge, perspectives, barriers, facilitators
Publication:	Publications in peer-reviewed journals. Grey literature (conference papers and non-published materials, dissertations and theses)
Language:	English
Dates:	Data collected between 1995 and 2015 (inclusive)
Exclusion criteria	
Sample	Asian women excluding Filipinas
Phenomenon of Interest	Screening not focused on cervical/breast cancer

An initial scoping review indicated minimal literature in this area, therefore all types of research designs of studies exploring determinants of cervical cancer screening as relevant to this project, were included. The inclusion criterion of English language was applied as the researcher was not fluent in Tagalog. Setting the time period of 1995-2015 ensured inclusion of both current evidence and older studies (Aveyard 2014). No age limitations on the target population were set, because guidelines regarding age of pap-testing vary between countries

(Lu *et al.* 2011). The exclusion criterion of studies targeting Asian but not Filipinas was applied due to cultural differences between Asian subgroups.

2.1.1 Data sources and searches

Electronic data sources which were most relevant to the field and topic are summarised in Table 4. All relevant articles' reference lists were hand searched. Three experts in the field were contacted but these experts did not identify any new sources for consideration.

Table 4 Data sources

Data sources	
Databases used	Pubmed, CINAHL, Medline (EBSCO), Web of Science International Bibliography of the Social sciences (IBSS), One Search Lancaster University library.
Systematic review databases	Cochrane, UK National Health Service Centre for Reviews and Dissemination (CRD), NICE
Other electronic searchers	Google scholar
Hand searches	Reference lists of all included articles were hand searched.
Grey literature	<ul style="list-style-type: none"> • Three experts were contacted to enquire regarding non-published materials. • Proceedings of cancer conferences were searched on The National Cancer Institute of the US (www.nci.nih.gov)

Keywords used were developed according to the SPIDER (Sample, Phenomenon of interest, Design, Evaluation, Research type) technique. This is an adaptation of the more typically used PICO (Population, Intervention, Comparison, Outcome) (Cooke *et al.* 2012). Keywords and Boolean operators used are presented in Table 5.

Table 5 Keywords used according to SPIDER technique

SPIDER	Search Term
S-Sample	“Filipin*” OR “Asia*” OR “Korea*” OR “Vietnam*” OR “Chin*” OR “India*” OR “Southeast Asia*” OR “migrant* women” OR “immigrant* women” OR “migrant workers*” OR “migrant*” OR “Philippines*” OR “overseas worker*”
PI-Phenomenon of Interest	“Pap-testing*” OR “Pap test*” OR “Pap*” OR “cancer screening*” or “Human papillomavirus*” or “HPV*”
D-Design	“Questionnaire*” OR “survey*” OR “interview*” OR “focus group*” OR “case study*” OR “observ*” OR “review*” OR “intervention*”
E-Evaluation	“Barrier*” OR “facilitator*” OR “challenge*” OR “attitude*” OR “knowledge*” OR “awareness*” OR “perce*” OR “belie*” OR “view*” OR “understand*” OR “feel*” OR “practice*”
R-Research Type	“Qualitative*” OR “quantitative*” OR “mixed method*” OR “review*”

Source: (Cooke *et al.* 2012)

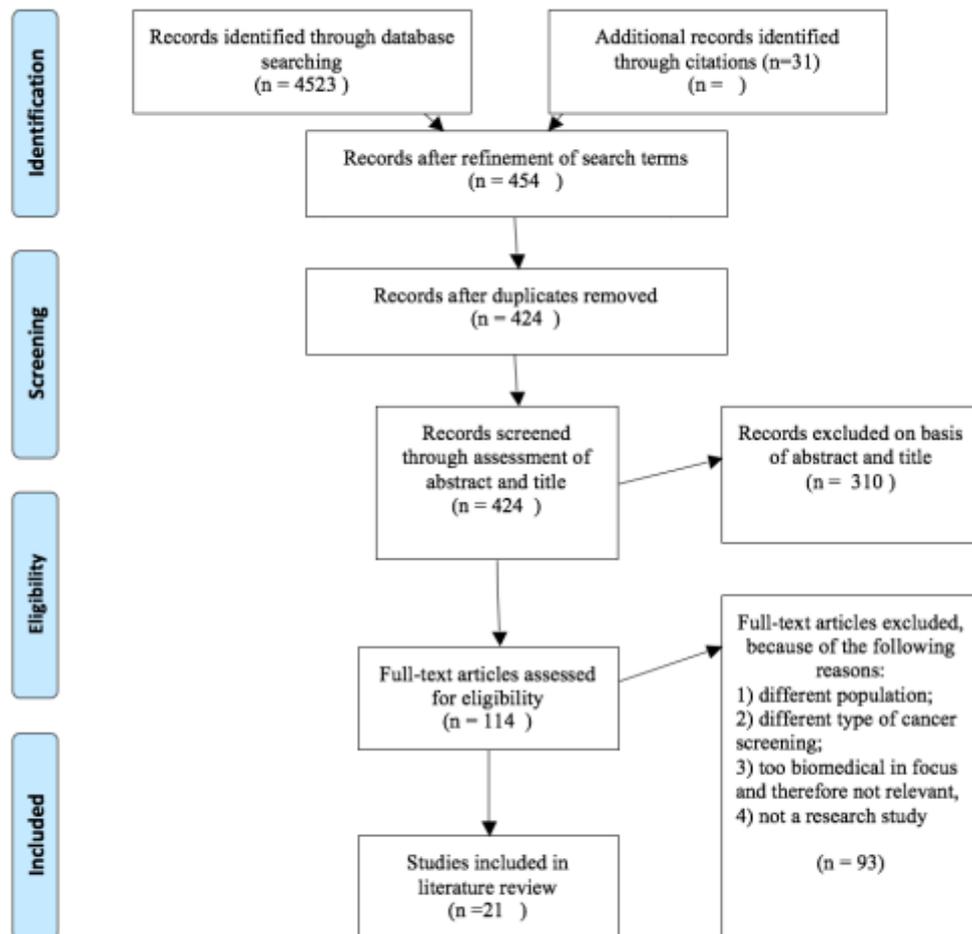
2.1.2 Literature Search Strategy

The search strategy is presented in the flow diagram in Figure 5. One hundred and fourteen studies were identified as relevant from scanning the title or abstract. Of these, 21 studies matched inclusion criteria and were included in the literature review. Studies that were excluded were: 1) not focused on the target population; 2) focused on the wrong type of cancer screening; 3) too biomedical in focus and therefore not relevant, for example, focused on the progression of the disease; 4) duplicate version of the same study; 5) not a research study.

Studies focused on breast cancer screening, or other types of cancer screening, may present considerable differences to studies focused on cervical cancer screening when examining barriers and facilitators to screening (Ko *et al.* 2004). For example, breast cancer screening and colorectal screening apply to a different age group (age 50-75) than cervical cancer screening (age 21-65). As the research question in the current study concentrates on cervical cancer screening only, it was therefore decided to exclude studies in the literature review that

focused on breast cancer screening or colorectal screening only and that did not include cervical cancer screening.

Figure 5 Literature search PRISMA flow diagram



Source: adapted from Moher *et al.* (2009)

2.2 Literature Quality Assessment

Due to the heterogeneity of the studies, multiple methods to assess study quality were used. Literature was critically appraised to limit bias using the six existing checklists specified in Table 6.

Table 6 Checklists used for critical appraisal

Checklists used:
1) Checklist for survey studies (Greenhalgh 2010) (11 questions)
2) Checklist for systematic reviews (10 questions) (University of Glasgow, Institute of Health and Wellbeing 2015)
3) Checklist for qualitative studies (10 questions) (University of Glasgow, Institute of Health and Wellbeing 2015)
4) Checklist for educational interventions (13 questions) (University of Glasgow, Institute of Health and Wellbeing 2015)
5) Critical Appraisal Skills Programme (CASP) checklist for Randomised Control Trials (11 questions) (CASP 2013)
6) Mixed-methods appraisal tool (MMAT) (11 questions) (Pace <i>et al.</i> 2012)

The number of questions per checklist ranged between 10-13, as specified in Table 6. Each question that was scored positively (yes) was allocated one point. Open questions were scored as 'yes' if these could be answered. If information was not reported, a score of zero was awarded. For example, if ethical considerations were not mentioned, a score of zero was applied. An example of scoring is provided in Table 7. Checklists can be found in Appendix 1.

Table 7 Example critical appraisal scoring

Critical Appraisal questions to consider for a questionnaire study (Greenhalgh, 2010) Study applied: Chen <i>et al.</i> (2004)	Score Yes=1 No=0 Can't tell=0
1. What was the research question and was a survey design appropriate to address the research question? (Could this question be answered satisfactorily?)	1

2. Was the survey valid and reliable?	1
3. Was the format of the survey appropriate?	1
4. Was the survey clear? (Could this question be answered satisfactorily?)	0
5. Was a pilot conducted on the survey?	1
6. What was the sampling frame and was the sample appropriate? (Could this question be answered satisfactorily?)	0
7. How was data collection executed and what was the response rate?	1
8. How was the data analysed? (Could this question be answered satisfactorily?)	1
9. What were the main results and where these appropriate? (Could this question be answered satisfactorily?)	1
10. What were the main considerations and were these justified? (Could this question be answered satisfactorily?)	1
11. Have ethical considerations been dealt with appropriately?	0
Total score	8

2.2.1 Data Extraction & Synthesis

Data extraction was applied to the 21 studies that met inclusion criteria. The following information was extracted from each study (Table 8):

- Type of study
- Focus of study
- Type of screening
- Location
- Sample
- Uptake of pap-testing
- Key strengths and limitations
- Theoretical framework

Table 8 Data extraction and strengths and limitations of the 21 included studies

Author	Type & Focus of study	Screening	Location	Sample	Uptake of pap-testing (ever had a pap-test)	Quality Assessment Score	Theoretical Framework	Key Strengths	Key Limitations
Intervention studies						CASP checklist for Randomised Control Trials (11 questions) (CASP 2013)			
Maxwell <i>et al.</i> (2003)	Randomised controlled trial to increase uptake of pap-testing	Breast and cervical	US	447 Filipino women (446 foreign born)	84% ever had pap-test at baseline, 42% in the past year. At 3-month follow up 42% had a pap-test in the past year, at 12-month follow up 54% of women had a pap-test in the past year (12% increase from baseline P<0.0001)	(9)	The Adherence Model	RCT, response rate high, conducted in Tagalog and English	Some pragmatic barriers were not addressed, possible lack of generalisability due to convenience sampling and women were paid for taking part
						Checklists for educational interventions (13 questions) (University of Glasgow)			
Fu <i>et al.</i> (2003)	Case study of an experimental Intervention-pilot to increase uptake of pap-testing	Breast and cervical	Hawaii (US)	118 Filipinas	Not specified	(3)	Form and Function Framework	Informative case study	Lack of transparency in methodology
Systematic reviews						Checklists for systematic reviews (10 questions) (University of			

Glasgow)									
Lu <i>et al.</i> (2011)	Systematic review on intervention studies aimed to increase uptake of pap-testing for Asian women (including Filipino women)	Breast and cervical	Asia and US	18 studies	N/A	(8)	N/A	Systematic approach used according to Cochrane guidelines, multiple reviewers used	Meta-analysis not possible due to studies too heterogeneous
Hou <i>et al.</i> (2012)	Literature review on intervention studies aimed to increase uptake of pap-testing for Asian women (including Filipino women)	Breast, cervical and colorectal	Global	30 studies	N/A	(8)	N/A	Useful and comprehensive literature review	No confidence intervals, no numerical expression of results as not appropriate due to heterogeneity of designs
Mixed-methods design						MMAT (11 questions) (Pace, 2012)			
McBride <i>et al.</i> (1998)	Mixed-methods. Focus on investigating participation rates and factors related to screening	Cervical	US	22 Filipinas for individual interviews, 6 focus groups, focus groups including males and physicians. Survey with 875 Filipino women.	88%	(8)	Adaptation of the Trans-theoretical Model for change	Appropriate language choice, mixed methodology, large sample size, qualitative phase enhanced internal validity	Response rate not reported, older study
Quantitative-survey design All survey design studies were focused on participation rates and factors related to uptake of screening						Checklist for survey studies (11 questions) (Greenhalgh, 2010)			
Holroyd <i>et al.</i> (2003)	Cross sectional survey	Cervical	Hong Kong	98 Filipino domestic workers	47%	(9)	Not specified	Clearly reported study with population	Small sample size and not conducted in

Kagawa-Singer, M. <i>et al.</i> , (2007)	Population based survey data from 2001 California Health interview Study	Breast and cervical	US	Chinese- (711), Filipina- (488), south Asian- (356), Korean- (457), Vietnamese- & Cambodian- (475) and Japanese- (413) Americans	Filipinas: 81% (2 years previously)	(8)	Andersen's behavioural model of health care access	outside US Large sample size, standardised instrument, appropriate sampling strategy	Tagalog Not conducted in Tagalog
Wang <i>et al.</i> (2008)	Cross-sectional survey	Cervical	US	Non-Hispanic White (n=2146) and Asian American women (including Chinese, Vietnamese, Korean, Filipino and Japanese (n=259)	Filipinas: 81%	(9)	Not specified	Randomised digit dialling method, standardised data	Filipino sample relatively small, not conducted in Tagalog
Yoo <i>et al.</i> (2011)	Cross-sectional survey	Cervical	US	304 Asian women aged 18-28 (100 Vietnamese, 104 Filipino, 100 Korean).	Filipinas: 48%	(7)	Not specified	Segregated data	Sample young (18-28), response rate not reported, confidence intervals wide, attitudes receive limited attention
Holroyd <i>et al.</i> (2001)	Survey	Health related behaviours including pap-testing	Hong Kong	290 Filipino domestic workers	21.7%	(9)	Health Locus of Control	Clearly reported study with population outside US, validated scales although all in English, the pilot showed this was appropriate	Response rate and recruitment not reported
Ayres <i>et al.</i>	Survey	Cervical	US	89 Filipinas	38.5%	(3)	Not specified		Convenience

(2010)				(aged 18-21)					sample of 89 Filipino women aged 18-21. Sample size small and age is young
Maxwell <i>et al.</i> (2000)	Cross sectional survey	Cervical, breast and colorectal	US	218 Filipino-, 229 Korean-women	Filipinas: 84%	(8)	Not specified	Questionnaires were not standardised however developed based on focus groups and translated into Tagalog	Convenience sample, limited variables included
Chen <i>et al.</i> (2004)	Population based from the Los Angeles County Health Survey 2001-2002	Breast and cervical	US	383 AAPIs Filipinas (82), Japanese (62), Koreans (59), Chinese (126), Indian (13), Pacific Islander (Samoans, Guamanians, Hawaiians) (25), South-east Asian (Laotians, Cambodians, Vietnamese) (25)	Filipinas: 78%	(8)	Not specified	Standardised data-used random digit-dialling technique	Not in Tagalog, sample size small, some groups were combined for purpose of analysis
Kandula <i>et al.</i> (2006)	Population-based survey (data from 2001 California Health interview Study)	Colorectal, cervical and breast	US	36660 non-Hispanic white, 944 Filipinos, 857 Vietnamese, 803 Koreans, 1036 other Asians.	Filipinas: 81%	(10)	Not specified	Random digit dial population based sample, large sample, different Asian languages used	Not conducted in Tagalog

Kagawa-Singer & Pourat (2000)	Population-based survey (Healthy People 2000) data 1993-1994	Cervical and breast	US	528 non-Hispanic AAPI (including 123 Filipinas)-17,373 non-Hispanic white women	Filipinas: 95.4%	(8)	Not specified	Population based data, standardised survey, large sample	Not conducted in Tagalog, data from 1993-1994 and dated
Shoemaker & White (2016)	Population-based survey (data from National health Interview Survey 2008, 2010, 2013)	Cervical and breast	US	2007 Asian American (including 345 Asian Indian, 440 Chinese, 510 Filipina, 712 'other Asian')	Filipinas: 82.7%	(8)	Not specified	Population based data, standardised survey, large sample	Not available in Tagalog, or other Asian languages, English and Spanish only. Data from different years is combined.
Chawla <i>et al.</i> (2015)	Population-based survey (data from California Health Interview Survey 2001, 2003, 2005, 2007, 2009)	Cervical and breast	US	7865 Asian American (2344 Chinese, 1466 Filipino, 737 Japanese, 1166 Korean, 711 South Asian)	Filipinas: 82.2% (2007)	(8)	Not specified	Random digit dial population based sample, standardised survey, large sample	Not available in Tagalog (but in Cantonese, Mandarin, Korean, Vietnamese, English and Spanish).
Sentell <i>et al.</i> (2015)	Population-based survey (data from California Health Interview Survey 2007)	Cervical and breast	US	15,210 (cervical) (sample sizes not specified for each ethnic group)	Filipinas: 79.5%	(8)	Not specified	Random digit dial population based sample, standardised survey, large sample	Not available in Tagalog (but in Cantonese, Mandarin, Korean, Vietnamese, English and Spanish).
McDonald and Kennedy (2007)	Population-based survey 1996 National Population health survey and 2000-2001 and 2002-2003 Canadian Community Health Survey	Cervical	Canada	105062 women age 21-65 (sample sizes not specified for each ethnic group)	Filipinas (foreign born): 62.8%	(7)	Grossman Health Investment model	Population based data, standardised survey, large sample	Sample sizes not specified for each ethnic group, sampling not discussed, languages data collection not discussed.

Qualitative design				Checklists for qualitative studies (10 questions) (University of Glasgow)					
Gor, B.J. <i>et al.</i> , (2011)	Focus groups-focus on awareness of and attitude to pap-testing of both males and females	Cervical	US	48 low income Vietnamese, Filipino and Korean	Filipinas: 70%	(3)	Not specified		Qualitative focus and analysis is lacking
Aitaoto <i>et al.</i> (2009)	Focus groups- focus on in-depth understanding of barriers and facilitators to uptake of screening	Breast and cervical	Hawaii	42 Filipina, Hawaiian and other American Pacific Islander women, (42 women in total ranging in age 42-69), 18 health workers	Filipinas: 73%	(8)	Not specified	Qualitative approach appropriate and provided important insights. Ilocano, different Filipino language, used	Lack of detail on analysis and recruitment

In order to explore commonalities in key barriers and facilitators across studies, data were narratively synthesised by applying thematic analysis and coding common themes using NVivo qualitative data analysis Software (QSR International PTY Ltd. Version 10 for Mac, 2014). Thematic analysis is a valuable method for synthesising multiple sources of evidence (Dixon-Woods *et al.* 2005). Major themes were identified through coding of the literature for barriers and facilitators. Themes were decided on by carefully organising barriers and facilitators and considering what the studies were about in relation to the studies' findings, fulfilling the review's aim to identify known barriers and facilitators to pap-testing for the target population, allowing an aggregative synthesis of findings. Known barriers and facilitators regarding pap-testing for Filipinas are summarised in Table 9 and grouped into five main themes: demographic, cognitive, access, health care provider and cultural factors.

Table 9 Barriers and Facilitators to pap-testing for Filipinas in the included studies

Studies	Barrier to pap-testing	Facilitator to pap-testing
	Demographic Factors	
Kagawa-Singer <i>et al.</i> (2007), McDonald and Kennedy (2007), Sentell <i>et al.</i> (2015)		Marital Status: married
Yoo <i>et al.</i> (2011), McBride <i>et al.</i> (1998), Kagawa-Singer <i>et al.</i> (2007), McDonald and Kennedy (2007), Sentell <i>et al.</i> (2015)	Increased age	Increased age
Kagawa-Singer <i>et al.</i> (2000), McDonald and Kennedy (2007)	Lower socio-economic status	
Yoo <i>et al.</i> (2011), McBride <i>et al.</i> (1998), Kandula <i>et al.</i> (2006), Maxwell <i>et al.</i> (2000), Maxwell <i>et al.</i> (2003), Chawla <i>et al.</i> (2015); Shoemaker & White (2016), McDonald and Kennedy (2007)	Less time spent in new country	
	Cognitive Factors	
Holroyd <i>et al.</i> (2001), Holroyd <i>et al.</i> (2003), Gor <i>et al.</i> (2011), Aitaoto <i>et al.</i> (2009), Lu <i>et al.</i> (2011), Ayres <i>et al.</i> (2010), Yoo <i>et al.</i> (2011), Sentell <i>et al.</i> (2015)	Lack of knowledge and awareness	
Holroyd <i>et al.</i> (2003)	Low perceived susceptibility Low belief of efficacy Low perceived severity Low perceived benefits	
Holroyd <i>et al.</i> (2003)		
Fu <i>et al.</i> (2003), Aitaoto <i>et al.</i> (2009), Gor <i>et al.</i> (2011), Holroyd <i>et al.</i> (2003)	Fear of outcome	
Holroyd <i>et al.</i> (2003), Yoo <i>et al.</i> (2011),	Fear of the procedure	
Holroyd <i>et al.</i> (2003), Kandula <i>et al.</i> (2006), Maxwell <i>et al.</i> (2000)	Lack of Symptoms	
	Access Factors	
Aitaoto <i>et al.</i> (2009). McBride <i>et al.</i> (1998),	Lack of Health Insurance	

Kagawa-Singer <i>et al.</i> (2000), Shoemaker & White (2016), Sentell <i>et al.</i> (2015)		
Holroyd <i>et al.</i> (2003), Holroyd <i>et al.</i> (2001)	Cost	
Fu <i>et al.</i> (2003), Aitaoto <i>et al.</i> (2009), Lu <i>et al.</i> (2011)	Lack of transportation	
Holroyd <i>et al.</i> (2003), Fu <i>et al.</i> (2003), Aitaoto <i>et al.</i> (2009), Holroyd <i>et al.</i> (2001)	Lack of time	
Holroyd <i>et al.</i> (2001)	Not knowing where to go	
Aitaoto <i>et al.</i> (2009)	Difficult to make an appointment	
	Health Care Provider (HCP) Factors	
Kandula <i>et al.</i> (2006), Kagawa-Singer <i>et al.</i> (2007), Maxwell <i>et al.</i> (2000)		HCP recommendation
McBride <i>et al.</i> (1998),		Gender Appropriate HCP
Fu <i>et al.</i> (2003), Gor <i>et al.</i> (2011)		Culturally appropriate HCP
Kagawa-Singer <i>et al.</i> (2007), Holroyd <i>et al.</i> (2003), Aitaoto <i>et al.</i> (2009), Shoemaker & White (2016)		Regular HCP
Fu <i>et al.</i> (2003), Aitaoto <i>et al.</i> (2009), Gor <i>et al.</i> (2011)		Communication with the HCP
McBride <i>et al.</i> (1998), Chen <i>et al.</i> (2004), Aitaoto <i>et al.</i> (2009), Fu <i>et al.</i> (2003), Gor <i>et al.</i> (2011), Hou <i>et al.</i> (2011), Sentell <i>et al.</i> (2015)		Language appropriate materials
Hou <i>et al.</i> (2011), Aitaoto <i>et al.</i> (2009), Lu <i>et al.</i> (2011), Fu <i>et al.</i> (2003)		Use of Lay Health Workers speaking same language
Lu <i>et al.</i> (2011), Aitaoto <i>et al.</i> (2009)		Cultural awareness training for HCPs
Aitaoto <i>et al.</i> (2009), Holroyd <i>et al.</i> (2001), Kagawa-Singer <i>et al.</i> (2000)	Lack of regular HCP	
	Cultural factors	
Wang <i>et al.</i> (2008), Holroyd <i>et al.</i> (2001), Holroyd <i>et al.</i> (2003),	Personal fate or luck	
Holroyd <i>et al.</i> (2003), Chen <i>et al.</i> (2004)	Embarrassment	
Kagawa-Singer <i>et al.</i> (2007), McBride <i>et al.</i> (1998), Gor <i>et al.</i> (2011), Holroyd <i>et al.</i> (2003)	Modesty	
Kagawa-Singer <i>et al.</i> (2007), McBride <i>et al.</i> (1998)	Value of virginity	
Kagawa-Singer <i>et al.</i> (2007), Fu <i>et al.</i> (2003), McBride <i>et al.</i> (1998), Hou <i>et al.</i> (2011), McDonald and Kennedy (2007), Sentell <i>et al.</i> (2015)	Language barriers	
Gor <i>et al.</i> (2011), McBride <i>et al.</i> (1998)		Support from male relatives
Holroyd <i>et al.</i> (2001), Gor <i>et al.</i> (2011)	Religion	Religion
Aitaoto <i>et al.</i> (2009)		Encouragement from church leaders or community
Holroyd <i>et al.</i> (2001), McBride <i>et al.</i> (1998), Maxwell <i>et al.</i> (2000),		Acculturation
Aitaoto <i>et al.</i> (2009), Fu <i>et al.</i> (2003), McDonald and Kennedy (2007)	Collective culture, lack of family to accompany to clinic for linguistic, cultural and emotional support	Collective culture- Peer encouragement
Maxwell <i>et al.</i> (2005), Aitaoto <i>et al.</i> (2009)		Collective culture-Staying healthy for family and friends
McBride <i>et al.</i> (1998)	Traditional health beliefs	
Lu <i>et al.</i> (2011)		Cultural sensitive print materials

2.3 Findings of the Literature Review

In this section, the 21 studies are reviewed, focusing on the barriers and facilitators to pap-testing that have been reported for OFWs.

2.3.1 *Barriers and facilitators to pap-testing: Demographic factors*

Several demographic factors were associated with pap-testing. Maxwell *et al.* (2000) used ‘time spent in the US’ as a proxy for acculturation, which was highly correlated with education. The longer Filipinas had spent in the US, the more likely they were to adhere to pap-testing guidelines. This is also confirmed by Kandula *et al.* (2006), Chawla *et al.* (2015), McDonald and Kennedy (2007) and Shoemaker & White’s (2016) research. Low socio-economic status (Holroyd *et al.* 2003), specifically education (McDonald and Kennedy 2007; Sentell *et al.* 2015) and increased age (McBride *et al.* 1998) were found to act as barriers to pap-testing, although other studies found increased age to act as a facilitator, albeit at a decreased rate (McDonald and Kennedy 2007; Sentell *et al.* 2015). Marital status was found to be a facilitator and some authors suggest targeting non-married women specifically to increase the uptake of pap-testing (Kagawa-Singer *et al.* 2007; McDonald and Kennedy 2007; Ho and Dinh 2010; Sentell *et al.* 2015).

2.3.2 *Barriers and facilitators to pap-testing: Cognitive Factors*

Cognitive factors, such as knowledge and health beliefs, were discussed and linked to participation rates in 10 studies (Maxwell *et al.* 2000; Holroyd *et al.* 2001; Fu *et al.* 2003; Holroyd *et al.* 2003; Kandula *et al.* 2006; Aitaoto *et al.* 2009; Ayres *et al.* 2010; Gor *et al.*

2011; Lu *et al.* 2011; Yoo *et al.* 2011). Sentell *et al.* (2015) found low health literacy, as measured by self-reported understanding of print health-related materials, was significantly related to pap-testing. Lack of knowledge can be an important determinant of pap-testing (Hou *et al.* 2012); however, basic knowledge was found in two studies (Holroyd *et al.* 2003; Yoo *et al.* 2011). This presence of basic knowledge suggests that barriers other than knowledge alone were important determinants. Other cognitive barriers found were ‘not having symptoms’ (Kandula *et al.* 2006) as well as perceived susceptibility, seriousness of the illness, and benefits of screening (Holroyd *et al.* 2001).

2.3.3 *Barriers and facilitators to pap-testing: Access factors*

Accessibility barriers such as health insurance, cost, transportation and lack of time were reported as important barriers to screening in eight of the studies (McBride *et al.* 1998; Kagawa-Singer and Pourat 2000; Holroyd *et al.* 2001; Fu *et al.* 2003; Holroyd *et al.* 2003; Shoemaker and White 2016; Aitaoto *et al.* 2009; Lu *et al.* 2011). In the Hong Kong studies, it was found that women who reported having limited time due to long working hours and only one day per week off, usually when health care clinics are closed, allowed limited opportunity to attend clinics for testing (Holroyd *et al.* 2001; 2003). This finding was supported in focus groups with Filipino women in Hawaii (Aitaoto *et al.* 2009).

2.3.4 *Barriers and facilitators to pap-testing: Health Care Provider Factors*

Having a regular HCP, HCP recommendation assistance, reminder notices and culturally appropriate HCPs were found to be important factors in pap-testing in seven studies (McBride *et al.* 1998; Maxwell *et al.* 2000; Fu *et al.* 2003; Kagawa-Singer *et al.* 2006; Kandula *et al.* 2006; Kagawa-Singer *et al.* 2007; Gor *et al.* 2011). Communication with the HCP may be an

important part of the decision to engage in pap-testing (Fu *et al.* 2003; Aitaoto *et al.* 2009; Gor *et al.* 2011). HCPs may be aware of cultural sensitivities, such as modesty or embarrassment, around pap-testing for Asian women and therefore less likely to offer them screening (Maxwell *et al.* 2000; Donnelly 2008). Tejero and Fowler (2012) highlighted that Filipinas are in general open to communication about their personal circumstances and health concerns; however, they may need some encouragement from a HCP by talking in a gentle tone accompanied by a soft smile. For Filipinos, communicating in a way that is *karinosa*, (meaning that one talks in a warm and caring manner) is an important way of connecting with one another and a touch on the arm or a hug can convey support and comfort (Fu *et al.* 2003). Filipinas were found to believe that health messages are most effectively conveyed by someone from their own culture in order to understand their cultural particularities and to build trust (Fu *et al.* 2003; Aitaoto *et al.* 2009; Lu *et al.* 2011; Hou *et al.* 2012). Filipinos tend to relate to people rather than to organisations or institutions hence they would rather attend a clinic where they would already know someone (Fu *et al.* 2003; Aitaoto *et al.* 2009). Building trust between Filipinos and HCPs is for Filipinos an essential factor in developing good relationships (Fu *et al.* 2003). Filipinas preferred a female HCP, especially for intrusive procedures such as pap-testing (McBride *et al.* 1998).

2.3.5 *Barriers and facilitators to pap-testing: Cultural Factors*

Cultural factors may help explain disparities in uptake of pap-testing and these cultural factors have been identified as significant barriers to pap-testing (Wang *et al.* 2008). Cultural barriers that were reported by five studies include embarrassment, modesty, the value of virginity and a sexually charged meaning to pap-testing discouraging women to go for pap-testing (McBride *et al.* 1998; Kagawa-Singer and Pourat 2000; Holroyd *et al.* 2003; Chen *et al.* 2004; Gor *et al.* 2011).

In five of the studies, the collective nature of Filipino culture was discussed (Holroyd *et al.* 2001; Fu *et al.* 2003; Maxwell *et al.* 2003; McDonald and Kennedy 2007; Aitaoto *et al.* 2009). Collective communities are characterised by a common set of values, a sense of belonging as part of the community, caring for community members and offering a sense of security to community members. Stepping out of a close community as a migrant may therefore bring a sense of loss of identity and be a stressful experience (van der Ham *et al.* 2014). The feeling that staying healthy for the benefit of family acted as a facilitator to health behaviour and pap-testing (Maxwell *et al.* 2003; Nguyen and Clark 2013). However, it also enhanced worry and not wanting to hear bad news was found to act as a barrier to pap-testing (Aitaoto *et al.* 2009). Knowing that family are financially dependent may also highlight financial concerns (van der Ham *et al.* 2014) and limit spending on health care and increase barriers of cost of accessing pap-testing (Iyer *et al.* 2004). Overseas Filipinas may experience high levels of stress worrying about keeping their jobs secure and earning sufficient funds to financially look after their relatives (Tejero and Fowler 2012).

The collective characteristics of the Filipino population can also work as a facilitator in terms of peer encouragement and women who have friends or family who have attended pap-testing were found more likely to also attend (Holroyd *et al.* 2001; Fu *et al.* 2003; Aitaoto *et al.* 2009). Filipinos tend to treasure health advice given by those close to them (Tejero and Fowler 2012). Health behaviours can be negatively impacted by migration if the migrant is removed from their usual support network that may provide health advice and messages (Tejero and Fowler 2012). Related to this collective culture is the role of women and it has been found that decisions regarding health behaviour are often made in collaboration with their husband; support from males was mentioned as a facilitator by three studies (McBride *et al.* 1998; Gor *et al.* 2011).

Another cultural barrier to pap-testing that Filipino migrant women report is language barriers making access to health care and health care materials problematic (McBride *et al.* 1998; Fu *et al.* 2003; Kagawa-Singer *et al.* 2007; Hou *et al.* 2012). Language is a catalyst as well as

outcome of acculturation. Acculturation has been defined as, ‘the process that may occur when two cultures interact’ (Ayres *et al.* 2010 p.199), meaning that when migrants move to a new country they may adopt attitudes, beliefs and practices common in the host-country (Nguyen and Clark 2013). This process of acculturation is likely to be confusing and conflicting, impacting on physical and mental health in positive as well as negative ways (Ayres *et al.* 2010; Nguyen and Clark 2013). Acculturation may be related to harmful behaviours such as smoking or poor diet however acculturation was also found a predictor of preventative health behaviour (Ayres *et al.* 2010; Nguyen and Clark 2013) and has been positively related to cancer screening (Tang *et al.* 2000). Acculturation to western society was found a facilitator to pap-testing (McBride *et al.* 1998; Maxwell *et al.* 2000; Holroyd *et al.* 2001). Less acculturation and less time in the US were significantly associated with lower rates of pap-testing (McBride *et al.* 1998). Younger women’s lower rates of pap-testing were associated with stronger beliefs of modesty and traditional gender roles, older women’s lower rates of pap-testing were related to less use of English and traditional health beliefs such as believing in traditional healer’s ability to cure illness (*hilot* or *herbolario*) or the power of a witch or sorcerer (*mangkukulam*) to cause illness (McBride *et al.* 1998).

Highlighting differences between Asian cultures and the need to study these separately is the fact that of all Asian countries, the Philippines is the only country in which Catholicism is the predominant religion for approximately 85% of the population (Lagman *et al.* 2014). For many Filipinos, religion is intertwined within their culture, identifying meanings of identity, family, community and how they interact with society (Lagman *et al.* 2014). Religion may offer social support through the connection with the church community as well as God; prayer may be experienced as a source of comfort and healing (Lagman *et al.* 2014). An expression often used in Filipino is ‘*bahala na*’, meaning ‘never mind what happens’. It is thought that this expression stems from the word ‘*bathala*’, the Tagalog word for God and also means ‘it is in God’s hands’ or ‘leave it to God’. This approach is often used by Filipinos to deal with life’s many challenges and difficulties and was found to have a comforting and reassuring

effect (Lagman *et al.* 2014). However, this meaning of ‘*bahala na*’ can also work as a barrier if it is translated into external health locus of control or fatalism, the belief one has no control over one’s destiny or an event being controlled by other forces, possibly leading to passivity regarding self-care (Donnelly *et al.* 2013). Fatalism can act as a barrier to cancer screening for some (Baron-Epel *et al.* 2009). Only three studies included religion as a variable in their studies on pap-testing with Filipino or other Asian women although it has been found that Filipinas appreciate receiving health advice from their church community (Holroyd *et al.* 2001; Aitaoto *et al.* 2009; Gor *et al.* 2011).

2.4 Discussion

The review presented an overview of barriers and facilitators to pap-testing for Filipinas as found in the literature. Data from 21 studies were synthesised and main barriers and facilitators to pap-testing were grouped into five main themes: demographic, cognitive, access, health care provider and cultural factors to pap-testing. None of the included studies focused on all five factors. This limited focus in variables has an impact on the effectiveness of interventions aimed at increasing uptake of screening if barriers and facilitators are not all addressed. Only two of the 21 studies were intervention studies of which one was an experimental case study of a pilot intervention (Fu *et al.* 2003), which had a low methodological quality score. The other was a RCT with 447 Filipinas in the US (Maxwell *et al.* 2003), which offered health education regarding cancer screening to a group of Filipino-American women (all but one foreign born) and a physical activity module to the control group. Cultural aspects including collectivism were also addressed in the health education. No significant increase in screening rates at 12-months follow-up were found. Maxwell *et al.* (2003) suggested that this lack of significant results was partially due to omission of accessibility barriers to screening from the study.

Barriers and facilitators found in this literature review were comparable to barriers and facilitators described in the literature for other Asian migrant women, as described in the introduction chapter. Half of the studies included in the review mentioned that an important limitation to existing literature is that often Asian women are taken as one group, implying they might be experiencing similar cultural barriers. Although some cultural barriers and facilitators may be similar, some may not or the importance that each group awards to those factors may vary (McBride *et al.* 1998; Fu *et al.* 2003). For example, the top four barriers that were found important to Filipinas in a cross-sectional survey with 125 Asian American Women (47 Filipinos, 40 Chinese, and 38 Asian Indian) examining health beliefs and practice regarding breast-cancer screening only, were: 1) fear that the procedure would be painful; 2) feeling uncomfortable with the intimate procedure; 3) fear of the outcome and worrying cancer may be found; and 4) feeling uncomfortable with a male health care provider (HCP). Filipino, Chinese and Asian-Indian groups ranked their strongest barriers differently indicating unique barriers may exist to each particular group (Wu *et al.* 2006).

Although some research is available for Asian migrant women, mostly in the US, scarce research has been conducted for each national group separately, especially Filipinas. Asian Americans and Pacific Islanders (AAPI) communities may consist of 50 different ethnicities and more than 100 different languages (Fu *et al.* 2003; Hou *et al.* 2012). Aggregation of all these groups and assuming they experience similar barriers and facilitators would mean ignoring the richness of each culture by itself (Maxwell *et al.* 2000; Kagawa-Singer *et al.* 2007; Hou *et al.* 2012). Aggregating incidence and mortality data for cervical cancer may mask those national groups more at risk and limit the potential for developing culturally-specific interventions and improving health outcomes (Fu *et al.* 2003).

2.4.1 *Quality assessment*

It was not possible to use one single measurement of quality because different research designs were included in this review. Methodological weaknesses in the extant literature were related to: lack of comprehensive methodological reporting; low response rate or response rate not being reported; conclusions extrapolated beyond results; focus on limited barriers and facilitators; sampling approach such as convenience or snowball sampling used, and lack of external validity. Only four studies used the Filipino language (Tagalog) in their data collection (McBride *et al.* 1998; Maxwell *et al.* 2000; Fu *et al.* 2003; Aitaoto *et al.* 2009). Other studies used either English or other Asian languages which may result in selection bias by including only those Filipinas fluent in English (Chen *et al.* 2004).

Most studies other than Holroyd's Hong Kong studies (2001, 2003) were set in the US and findings may not be transferable to OFWs in different contexts due to temporary status of OFWs and Filipino-American women being included in US cancer screening programs. Although the US is the top one destination for Filipino immigration, the US is not included in the top ten destinations for OFWs (IOM 2013). Other methodological issues identified in the literature review were related to small sample size limiting the possibility of generalisability. A major limitation is that most data are self-reported which may be subject to recall bias, possibly resulting in over-reporting (Maxwell *et al.* 2003; Lu *et al.* 2011).

Other limitations of the literature found were the lack of theoretical guidance. A sound and efficacious theoretical model is essential to help explain pap-testing behaviour and required to inform efficacious design of interventions (Wu *et al.* 2005; Hou *et al.* 2012). Only six studies reported using a theoretical framework (Table 8), and those studies mostly used individual models such as Stages of Change Model or the Health Belief Model (HBM). The Stages of Change model, a behavioural model, has been useful in highlighting to health promoters that health interventions do not impact individuals equally (Nutbeam *et al.* 2010). The HBM was designed to explain health behaviour and based on the belief that when individuals make

health-related decisions they do this on a rational level, balancing individuals' beliefs how likely it is the particular illness will happen to them (susceptibility), severity and consequences of the illness (severity), impact of the decision and behaviour change (efficacy) and personal benefit outweighing costs (benefit) (Baum 2008). The HBM has been a dominant model deployed in the field of health promotion for more than 30 years and has been an important contributor to public health (Nutbeam *et al.* 2010). However, a major critique of this model, as well as most behavioural models, is that the entire focus is on individual factors and social determinants of health are ignored. Hence, the HBM has been said to ignore structural factors that restrict individuals from changing their behaviour (Baum 2008). Other models used in studies reviewed, were Andersen's behavioural model, also a widely used model of studies investigating use of health services (Babitsch *et al.* 2012). Although this behavioural model does include contextual determinants of health, as well as individual determinants (Andersen 1995; Gochman 1997), this model has also been critiqued for not applying sufficient focus to social networks, social interactions and cultural factors (Andersen 1995).

It is vital that health behaviours are studied in the context of people's daily lives and circumstances (Lu and Racine 2015). Understanding people's health behaviour and how social circumstances shape these (Travaglia and Braithwaite 2009), are essential to explaining pap-testing for Filipinas.

2.4.2 *Limitations of this review*

There were limitations to this review. Only literature in English could be searched which means some literature may have been omitted. Due to heterogeneity of research designs and therefore different foci and checklists used, identifying one measure on methodological

quality was not possible. Using individual scores from the checklists was nevertheless useful in providing a proxy of quality.

2.5 Conclusion and Implications for research and practice

Few studies concerning OFWs and pap-testing were found; only two studies specifically explored pap-testing with OFWs outside the US and most studies were quantitative. Further exploratory research should be conducted with OFWs in different locations regarding pap-testing and studies in the US may not be comparable to OFWs elsewhere. Although investigating participation rates for OFWs is vital, research focused on gaining a deeper understanding of barriers and facilitators is needed. This will increase further understanding and have greater potential for developing culturally appropriate interventions. Pap-testing for Asian subgroups requires separate research for each group due to cultural differences between groups and important factors for each are potentially masked by aggregating data.

For future research, multidimensional quality scales for a range of research designs would be helpful to assess methodological quality and more standardisation specifically in researching pap-testing is required, such as standardised surveys including all factors. No studies included all factors. It is important to gain a comprehensive understanding of what barriers and facilitators to pap-testing OFWs may experience. Pap-testing for migrant women is a complex topic and influenced by a multitude of factors. Only with a complex understanding of all barriers and facilitators, underpinned by a holistic theoretical framework, can culturally appropriate interventions be developed for OFWs, which should ultimately improve health outcomes.

3 Chapter 3. The socio-ecological conceptual framework

Findings in the literature review emphasised the need for a holistic and multifactorial theoretical framework for the current study. The socio-ecological conceptual framework was chosen. The socio-ecological conceptual framework for public health is a multi-level and interactive framework. The framework is founded on the idea that in population health, individual outcomes or health problems are complex and cannot be investigated, explained or improved without examining multiple layers of influence on health outcomes, including the larger social context in which these individual outcomes were created (Rimer and Glanz 2014). The socio-ecological conceptual framework stems from Bronfenbrenner's (1977) theoretical psychological model which was applied to explain human development by focusing on three aspects of child development: 1) individual child's perspectives, 2) the environment of the child, 3) the interrelationship between child and environment (Reifsnider *et al.* 2005). The framework was adopted by public health and epidemiology to investigate key determinants of diseases and how diseases were distributed amongst populations.

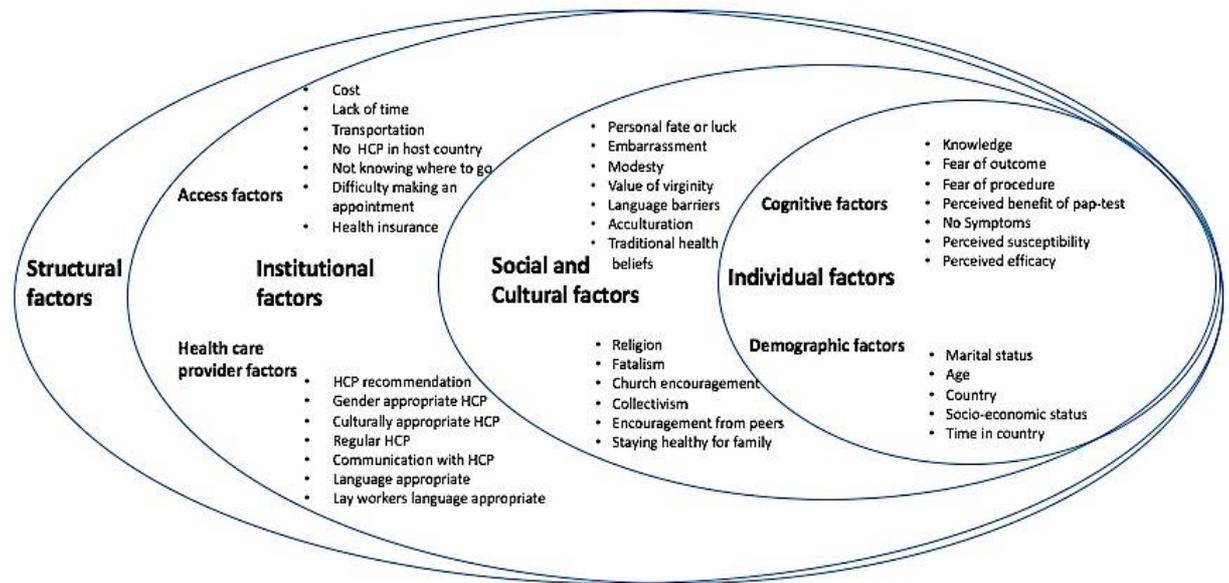
In the late 20th century, realising that prevention of disease and tackling of health inequalities could not be achieved by a mere focus on disease or health promotion, public health moved away from a medical model to a social model. The new public health aims to tackle health inequalities and prevention of disease by addressing root causes of health inequalities, the social determinants of health (Baum 2008; Fielding and Teutsch 2010). The socio-ecological conceptual framework is a prominent model in the field of public health and is used for many public health programmes ranging from smaller public health interventions to large public health programmes such as Healthy People 2020, the US national health promotion and prevention programme (ODPHP 2017). The WHO's Commission on Social Determinants of Health also uses an ecological model (WHO 2008). Although these models differ somewhat in their presentation, they are consistently underpinned by the assumption of a structure-agency approach and an interplay between multiple factors as levels of influence on

determinants of health and health behaviour, all embedded in a broader structural context (Daley *et al.* 2010; Rimer and Glanz 2014).

The socio-ecological model has been described as ‘Russian dolls’, illustrated in Figure 6, in which each layer is nested within a broader level of influence (Reifsnider *et al.* 2005). A socio-ecological conceptual framework for public health highlights the significance of social, physical and environmental determinants that impact individual and population health outcomes. The framework proposes that a single factor is not sufficient in explaining health behaviour (Reifsnider *et al.* 2005). According to the framework, factors that influence health and health behaviour are relational and interdependent. Therefore, the dynamic and interrelationship between individual, social-cultural, institutional, and structural factors impact health outcomes and can create health inequalities across the life span (Fielding and Teutsch 2010). According to the socio-ecological framework, a public health issue like low uptake of pap-testing is the result of a convergence of all factors involved (Daley *et al.* 2010).

In Figure 6, barriers to pap-testing for OFWs as identified in the existing literature and synthesised in the literature review (Table 8), can be presented using the socio-ecological conceptual framework. In this study the presentation of the socio-ecological model is adapted from Daley *et al.* (2010).

Figure 6 Socio-ecological conceptual framework: barriers and facilitators to pap-testing for OFWs based on existing literature.



The ecological model uses four levels of influence on pap-testing when applied to the current study. These four levels include: 1) individual factors, 2) social and cultural factors, 3) institutional factors, and 4) structural factors. Individual factors at the micro level, sometimes referred to as intrapersonal factors, are individual and demographic characteristics, such as age or marital status, which may impact uptake of pap-testing. Other individual characteristics include cognitive factors such as having knowledge about pap-testing, as having knowledge is not sufficient but is essential to engage in pap-testing (Rimer and Glanz 2014).

Social and cultural factors include interpersonal factors such as social support networks that can be related to pap-testing. Social and cultural factors associated with pap-testing include collectivism and acculturation, as well as cultural values such as modesty and embarrassment.

At the next level of the framework are institutional factors, which includes access to pap-testing as well as health care provider factors such as recommendations to pap-testing or

gender appropriate HCPs. The outer layer of the model presents the macro-level and broader context in which all other determinants are embedded. Structural context could include larger economic factors such as living and working conditions, which may directly or indirectly influence uptake of pap-testing. Policies and regulations offering pap-testing programmes would also fall into this level, as well as larger societal and political factors. Figure 6 shows that, in the existing literature, no barriers or facilitators to pap-testing were found at this level. This may indicate a limitation to the existing literature. According to the socio-ecological conceptual framework, the different layers of factors are related, they may overlap and interact within and between factors.

The framework suggests that this interconnection between individual, social-cultural, institutional, and structural factors underpins the production and reproduction of inequalities in health, such as cervical cancer disparities. The socio-ecological approach applies a multifactorial and intersectorial approach to public health and this makes it an ideal conceptual framework for investigating pap-testing in the present study (Daley *et al.* 2010).

The rationale for the inclusion of this conceptual framework is that this framework has the potential to not only describe all types of barriers and facilitators to pap-testing experienced by OFWs, but may also explain them, which could be essential in developing successful interventions aimed at increasing pap-testing uptake. It is important to understand how social structures impact knowledge, practice and barriers in relation to pap-testing by focusing on the interplay between all relevant factors. This framework links structural and behavioural determinants of health, and may help to explain how some of these social inequalities in health are produced and reproduced by offering an understanding as to how individuals' health behaviour is structured, and limited, by the complex interplay between individual, social-cultural, institutional, and structural resources.

4 Chapter 4. Methods

4.1.1 *Aims, objectives and research questions*

The aim and objectives of the study are stated below.

Aim: To gain insights into the knowledge, practices, barriers and associated socio-ecological factors among female overseas Filipino workers (OFWs) regarding cervical cancer screening (pap-testing).

Objectives:

1. To assess the uptake of pap-testing for female OFWs through descriptive analysis of self-reported data collected through a web-based cross-sectional survey.
2. To compare barriers and socio-ecological factors at the individual, social-cultural, institutional, and structural level between OFWs who engage in pap-testing and OFWs who do not engage in pap-testing through bivariate analyses of cross-sectional data.
3. To determine socio-ecological predictors of pap-testing for OFWs through multivariate analyses of cross-sectional data.
4. To explore perspectives of OFWs regarding barriers and socio-ecological factors associated with pap-testing and what these mean to OFWs through thematic content analysis of web-based qualitative interviews.
5. To make recommendations to the organisation Pinoy Overseas Filipino Workers, Philippine Overseas Employment Administration and other relevant Filipino authorities, on how cervical cancer screening services might be improved for OFWs.

The main research questions addressed in the study are:

Research question 1: What is the uptake of pap-testing for female overseas Filipino workers?

Research question 2: What are the barriers to, and socio-ecological factors associated with, pap-testing for OFWs?

Research question 3: What are the socio-ecological predictors of pap-testing for OFWs?

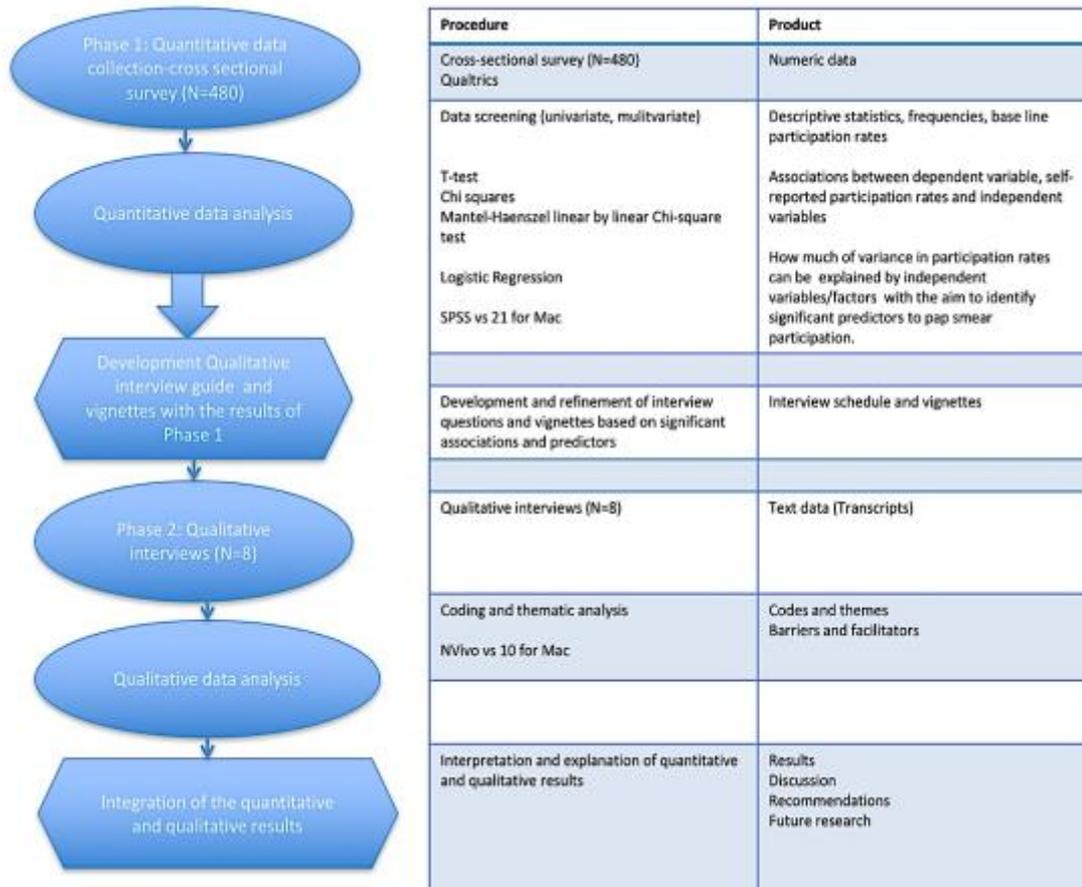
Research question 4: What are OFWs' perspectives regarding barriers and socio-ecological factors associated with pap-testing?

4.1.2 Research Design

This study used a mixed-methods research (MMR) design in which both quantitative and qualitative data sources were used within a single study. Use of both quantitative and qualitative approaches was important to gain a more comprehensive understanding of the issue than either approach could offer in isolation and offer a greater contribution to public health (Andrew and Halcomb 2009; Onwuegbuzie, Johnson, *et al.* 2009; Creswell and Plano Clark 2011; Bazeley 2015). An explanatory sequential MMR design with two distinct phases was used. In phase one, a web-based cross-sectional survey was administered. Phase two included web-based individual qualitative interviews with OFWs. The quantitative phase one aimed to provide insights regarding self-reported pap-testing uptake rates as well as a more general understanding of perceived barriers and facilitators and relationships among variables. The qualitative phase two allowed for a more detailed understanding of these barriers and facilitators (Creswell and Plano Clark 2011) and contextualized findings (Mason 2006). Using the quantitative data source alone would not answer the research questions satisfactorily and result in an incomplete understanding of the issues.

‘Different methods have different strengths’ (Andrew and Halcomb 2009 p.14) and quantitative and qualitative approaches were combined in light of these complimentary strengths (Onwuegbuzie and Johnson 2006). Use of a MMR design strengthened the study by reducing the limitations inherent in each research design. For example, quantitative research has been critiqued for its lack of depth and qualitative research has been criticised for its small sample sizes and limited external validity. Using a MMR design can address some of these issues, provided it is conducted in a rigorous manner (Creswell and Plano Clark 2011; Johnson 2015). Use of a mixed-methods explanatory sequential design with a qualitative phase following the quantitative phase could provide further explanations of quantitative findings and aimed to provide insights into what those results actually meant to participants (Creswell and Plano Clark 2011). The two phases had equal status (QUANT - QUAL) and both played an important part in addressing the research questions. Figure 7 represents the design visually and is adapted from Creswell and Plano Clark (2011).

Figure 7 Model for sequential explanatory MMR design



Source: Creswell and Plano Clark (2011), (QUANT - QUAL)

4.1.3 Integration of quantitative and qualitative data

One of the difficulties identified with MMR is that researchers often find combining or integrating qualitative and quantitative data problematic (Bryman 2007). A mixed-methods study is justified when one element of the study is enhanced by the findings of the other element and integrating findings is more than the sum of the parts (Bryman 2007). In this

study, integration occurred at multiple data points (Figure 7). The first point was mixing the research methods during data collection and quantitative findings informed the qualitative data collection instrument (Creswell and Plano Clark 2011). In addition, combining of quantitative and qualitative data in the results and discussion allowed further integration of both methods. Combining data in the results sections was deemed essential to establish full integration and to fulfil the goal of providing a more comprehensive understanding of the research questions than either the quantitative or qualitative component by itself could have achieved (O'Cathain *et al.* 2010; Bazeley 2015). The results sections are presented according to the levels of the socio-ecological framework. Statistical results are, where appropriate, presented in notes rather than in the main text, a technique discussed by Bazeley (2015), which improves integration of the different methods used and allows the story of the findings to be told in a more flowing manner, whilst still adhering to statistical requirements.

4.1.4 *Philosophical worldview*

Underpinning this research is pragmatism. Pragmatism draws from many approaches in order to suit and answer research questions best rather than being aligned with one single approach or worldview. Pragmatism draws on many ideas and mostly uses the practical ‘what works’ approach. Pragmatism abandons dualism and the forced dichotomy between positivism and constructivism, between objectivity and subjectivity, and between quantitative and qualitative approaches (Johnson *et al.* 2007; Creswell and Plano Clark 2011). The continuing dualism between worldviews today is mostly focused on knowledge and the notion of reality and can be dated back to ancient times in which Plato (429-347 BC) would argue that knowledge must be true, not dissimilar to a positivist worldview of ‘one truth’ or one reality (Johnston and Gray 2010). The scholar Protagoras (490-420 BC) argued that reality was constructed by humans and that there was no objective reality, which resembled a constructivist worldview and was rejected by Plato. Aristotle (384-322 BC) seemed more inclined to the pluralistic ontology of MMR in which it is accepted that the human world exists of multiple realities. This pluralistic ontology in pragmatism exists of accepting subjective realities (such as individual feelings and experiences), objective realities (such as physical and causal processes), and intersubjective realities (such as social structures, organisations and cultures) (Johnston and Gray 2010) and in MMR it is accepted that knowledge is both constructed and based on the reality we live in as well as developed through empirical discovery (Onwuegbuzie, Johnson, *et al.* 2009). Aristotle, like Immanuel Kant (1724-1804) later on, believed that quality as well as quantity are essential elements to human understanding, a principle underpinning MMR (Johnston and Gray 2010) and MMR aims to examine both qualitative and quantitative, constructivist and post-positivist standpoints (Onwuegbuzie, Dickinson, *et al.* 2009). Integrating opposing views in order to answer practical research questions (Johnston and Gray 2010) is the approach used in this study.

4.1.5 *Web-based research*

Internet mediated or web-based health research is still relatively new although other disciplines have used the Internet for research more extensively (Holmes 2009). Web-based research provides a relatively inexpensive and rapid mode of accessing populations that are difficult to reach or geographically dispersed (Whitehead 2007a; Fielding *et al.* 2008; Holmes 2009). A web-based survey offers a non-coercive and anonymous method of data collection (De Vaus 2002; Bryman 2012). Yet, authenticity of those recruited for web-based surveys has been raised as a concern and this could impact the value of the study (Whitehead 2007a). Authenticity in research is important as the aim of research is to understand and explain phenomena, which can only be achieved if the research context is trustworthy, experiences participants share are true to them and interactions between researchers and participants are genuine (Milne 2005). However, it could be argued that authenticity is not only a concern in web-based surveys and people may also misidentify who they are in postal or telephone surveys and even face-to face methods, and this must be taken on trust (Holmes 2009). One web-based study found only one misrepresentation in a sample of 1199 individuals (Buchanan *et al.* 2005).

Web-based surveys require potential participants to have internet access to take part and, as this may cost money, participants may need more motivation to take part than a face-to-face interview or postal questionnaire would require and response rates have been found to be slightly lower than comparable postal questionnaires (Bryman 2012; Fenner *et al.* 2012; Sinclair *et al.* 2012).

Recruiting through online communities can present sampling bias as the method excludes those individuals who do not have access to the internet or are not computer literate and sampling frames of the online population are rarely available (De Vaus 2002; Bryman 2007; Im *et al.* 2007; Holmes 2009; Bryman 2012). With rapidly increasing global Internet access, it is believed this concern is fading away (Whitehead 2007a). The usefulness and reliability of web-based research depends on whether the population of interest are Internet users (Tian

Cole 2005). A survey conducted with 70,000 individuals reported that 45% of individuals in the Philippines connected to the Internet in 2012 and the Internet was found to be the main method that OFWs use to connect with their families and 90% of OFWs use Facebook for this purpose (Noda 2012). Therefore, using the Internet to collect data was deemed an acceptable method for the purpose of this study.

4.2 Methods: Phase 1- Cross sectional web-based survey

4.2.1 Data collection- the instrument

A web-based self-completion survey was used for this study (Appendix 2). A web-based self-completion survey allowed participants privacy to provide honest answers with the least chance of interviewer bias (De Vaus 2002). Total adult literacy levels in the Philippines were estimated at 95.4% (UNICEF 2012); therefore, a self-completion survey was believed appropriate. Professional translators translated the survey into Tagalog. Offering the survey in Tagalog and English was thought to reduce selection bias and allow inclusion of women whose English was not strong (Lee *et al.* 2008). Translations were proofread by a Filipino friend of the researcher.

No existing instrument that covered all factors of interest for this study was found; therefore, a survey was constructed for this research by adapting elements of previous questionnaires. The survey was validated through conducting the literature review and synthesising the relevant constructs, by defining the constructs, developing scales where possible and measuring scale reliability through calculating Cronbach's Alpha and pilot testing (Artino *et al.* 2014).

Topics that were covered in the survey were demographics, knowledge and understanding of pap-testing, attitudes towards pap-testing, and potential barriers and facilitators to pap-testing including cognitive, cultural, access, and health care provider factors.

To allow for meaningful comparisons, questions regarding cognitive and access factors in relation to pap-testing were adapted from the comparable Holroyd *et al.* (2003) study, who based their survey on longstanding work by Seow *et al.* (1995). Some questions regarding specific barriers or facilitators the researcher was aware of because of her previous experience working on a large breast-cancer screening study for Arabic women (Donnelly *et al.* 2011). Other questions regarding cultural factors such as acculturation, collectivism and religion were adapted from Triandis and Gelfand's (1998) 'Culture Orientation Scale', Unger *et al.*'s (2002) 'Acculturation scale' and Krause (2005) 'Religion, Aging and Health Survey'. Additionally, some questions regarding cultural capital were adapted from Abel (Abel 2008). The wording of questions was kept as simple and as short as possible to limit confusion. Negative questions may cause confusion (e.g., Question 24 'reasons for not attending cervical cancer screening') (De Vaus 2002); however, this was not raised as an issue in the pilot phase. The order of questions in the survey was carefully considered and it was decided to place demographics questions at the end as demographics questions can seem intimidating to participants to start with (De Vaus 2002). The survey started with questions that were immediately relevant to the topic, such as knowledge and awareness of pap-testing questions, and relatively easy to answer. Questions were structured by topic (De Vaus 2002). Likert scales were used which can be useful although the literature indicates when using five-point Likert scales occasionally participants may choose the middle answer of 'neither agree or disagree' when unsure of their answer, and this may bias results (De Vaus 2002). To avoid participants choosing the middle option, a sixth 'don't know' option was provided. Statements such as Question 25, which asked participants, 'to what extent do you agree or disagree with the following' could be perceived as leading (Niederhauser and Mattheus 2010) although offering a range of Likert scale answer options including a 'don't know' option was thought to mitigate this problem. None of the questions were compulsory and participants could choose to skip a question to avoid any sense of coercion.

In September 2015, the survey was prepared for data collection in Qualtrics. Qualtrics is web-based survey software and supported by Lancaster University. Qualtrics offers an accessible

and user-friendly survey layout and allows checking for suitability for mobile phone screens (Phillips *et al.* 2011), which made it an ideal choice for this study.

4.2.2 *Constructs measured in the survey*

The dependent variable was ‘pap-testing’ (response options: yes or no). Self-reported pap-testing was defined as, ‘pap-testing at one point in the participant’s life’ and measured by the question ‘Did you ever have a pap-test?’ (Question 18). When participants reported a pap-test, they were also asked to report the date when their last pap-test had been. Participants were not asked to report the number of pap-tests they had ever had. The independent variables were barriers and facilitators to pap-testing as identified from the literature, and measured at the socio-ecological levels: individual, social-cultural, and institutional.

4.2.3 *Constructs measured in the survey: Socio-ecological variables at the individual level*

Measuring individual socio-ecological factors was conducted by measuring demographic variables (age, country of residence, marital status, education, income, religion, employment). For the purposes of univariate analysis, countries were recoded into Gulf Cooperation Council (GCC) countries, Asia, ‘Europe and North America’ and ‘Middle-Eastern countries not GCC’. Other socio-ecological factors measured at individual level were cognitive factors including awareness (e.g., if women had heard of pap-testing, and knowledge of cervical cancer and its screening). The variable ‘knowledge’ was measured by a total knowledge score which was calculated from seven items (Table 10) with possible scores ranging from 0-35. This scale was designed by the researcher building on the existing literature. The total knowledge scale had an acceptable internal consistency reliability with a Cronbach’s α of .7, although values above .8 are preferred (Pallant 2010). Total knowledge scores were categorised into 5 groups:

extremely low knowledge for total score 0-10, low 11-15, moderate 16-20, good 21-25, very good 26-30 and excellent 31-35¹.

Table 10 Items included in the total 'knowledge' score

1. I'm too young or too old to begin having pap-tests
2. Having a pap-test every 3 years is often enough
3. Having many different sexual partners, increases the risk of women having changes in the cervix
4. Having a previous abnormal pap-test finding, increases the risk of women having changes in the cervix
5. Only women with children need to have pap-tests
6. Healthy women do not need to have a regular pap-test
7. Pap-tests are not necessary once a woman has reached menopause

Other individual socio-ecological factors were cognitive factors consisting of health beliefs, including perceived susceptibility, efficacy, severity of cervical cancer, fear, lack of symptoms or perceived benefits of pap-testing (Table 11) (Seow *et al.* 1995). As these items were believed to measure different constructs, a total score was not developed and measurements were conducted at item level.

Table 11 Items included in 'health beliefs'

1. I think it is unlikely I will develop cervical cancer (Susceptibility)
2. The pap-test is effective in detecting cervical cancer early (Efficacy)
3. Cancer cannot be cured even if it is detected early (Severity)
4. I think these tests might be good but I don't need them (Benefit)
5. I sometimes worry about having cancer
6. I am worried about the outcome, I do not want to hear bad news (Fear of outcome)
7. If I did have cancer, I would rather not know about it
8. I am worried about pain of procedure (Fear of procedure)
9. I have had no symptoms and therefore did not see reason to go (No symptoms)
10. I'm in good health

¹ A five-point Likert-scale was used with scores ranging from 1 (strongly disagree with the correct answer) to 5 (strongly agree with the correct answer). Items were reversed where appropriate.

4.2.4 Constructs measured in the survey: Socio-ecological variables at the institutional level

Institutional-level socio-ecological factors were measured using access indicators (time, cost, transportation) and health care provider (HCP) variables, ranging from communication with HCP measured by the question, 'I do not like the way the doctor speaks to me', to 'trust in the doctor overseas'. Again, it was believed these items measured different constructs; therefore, these were measured at item level and not transformed to a scale. The measures, 'no time' and 'long working hours' were combined in one scale; however, Cronbach's α was .58 indicating poor internal consistency for the scale. Thus, this scale was not used. Instead only 'no time' was used. Although the variables time, cost and transportation could be perceived to have an individual element, these measures were categorised as access and institutional factors as there are institutional aspects to these variables, such as limited clinic hours or employment contracts permitting overly long working hours.

4.2.5 Constructs measured in the survey: Socio-ecological variables at social-cultural level

Socio-ecological variables at social-cultural level included modesty and embarrassment, which were combined as these were believed to measure similar constructs, named under the umbrella term of 'embarrassment'. Embarrassment was measured by 5 items (Table 12). Cronbach's α was .802 suggesting good internal consistency for this scale (Pallant 2010). Scores ranged from 0-25 with low scores indicating more embarrassment; 0-5 indicating extremely embarrassed, 6-10 highly embarrassed, 11-15 embarrassed, 16-20 slightly

embarrassed, 21-25 not embarrassed.² Questions 25-20 (e.g., ‘women get cervical cancer because they are promiscuous’), could be measuring modesty and the value of virginity, however as having multiple sexual partners is also a risk factor of cervical cancer (CDC 2014a), the question was ambiguous as a determinant of modesty and not included in the scale.

Table 12 Items included in ‘embarrassment’ scale

- | |
|--|
| <ol style="list-style-type: none">1. I would feel too uncomfortable or embarrassed2. I find it difficult to talk about such an intimate topic with anyone, even a doctor3. Having a pap-test is embarrassing4. I worry the doctor might be male and this makes me feel shy5. I do not want to undress for any doctor |
|--|

The other socio-ecological variable measured at the social-cultural level included religion. Religion could not be measured by a scale as when the four relevant Likert scale questions (‘I pray every day’, ‘I believe in fate/luck’, ‘I don’t need to go for a pap-test as God will determine my fate’, and ‘cancer is a punishment’) were combined Cronbach’s α was .52, which was not an acceptable internal consistency (Pallant 2010). The question ‘I don’t need to go for a pap-test as God will determine my fate’ was measured as a proxy for fatalism relating to pap-testing.

Other socio-ecological variables at social-cultural level included collectivism and acculturation. Each participant was assigned a total score on the six items of the collectivism

² A five-point Likert-scale was used with scores ranging from 1 (strongly agree with answer indicating high embarrassment) to 5 (strongly agree with answer option indicating low embarrassment). Items were reversed where appropriate.

scale (Table 13) (range 0-30, 0-10=low, 11-20=moderate, 21-30= high collectivist)³. This collectivism scale had an acceptable internal consistency with a Cronbach α coefficient of .70.

Table 13 Collectivism items

1. It's my duty to take care of my family, even when I have to sacrifice what I want
2. I want to stay healthy for my family and therefore I do want to have pap-tests
3. I have no family or friends to come with me for support and this is stopping me
4. If my friends or family would tell me to go for pap-tests, I would go
5. Looking after my family financially is more important than my health
6. Attending health care appointments such as pap tests if together with my friends would make it more comfortable for me

Acculturation was measured by seven items (Table 14) forming a scale from 0-35. The scale was reported to have good internal consistency with a Cronbach α coefficient of .75. A total acculturation scale score of 0-10 reflected very low acculturation, 11-15 was low acculturation, 16-20 "some" acculturation, 21-25 "moderate" acculturation, 26-30 high acculturation and 31-35 very high.⁴ High scores meant that someone was more acculturated to their host-country.

Table 14 Acculturation items

1. I am most comfortable being with people from the Philippines
2. I prefer traditional Filipino medicines than western medicines
3. The way I do things and the way I think about things are from the Philippines
4. I mostly watch Filipino television
5. I only have Filipino friends
6. I feel very comfortable speaking English
7. I would prefer my doctor to be Filipino

³ A five-point Likert-scale was used with scores ranging from 1 (strongly agree with answer indicating low collectivism) to 5 (strongly agree with answer indicating high collectivism). Items were reversed where appropriate.

⁴ A five-point Likert-scale was used with scores ranging from 1 (strongly agree with answer indicating low acculturation) to 5 (strongly agree with answer indicating high acculturation). Items were reversed where appropriate.

4.2.6 *Survey Pilots*

The survey was pilot tested with nine individuals. These were Filipino friends of the researcher. Pilot-testing was essential to ensure the wording of questions was understandable and clear and additionally to ensure there were no technical difficulties (Schleyer and Forrest 2000; De Vaus 2002). Several changes were made as a result of the pilot phase. First, it appeared that completion of the survey required longer than anticipated. Therefore, information regarding timing was changed to 20 minutes in the instructions and participant information. Discussions were held about the appropriateness and clarity of questions with participants in the pilot phase. As a result, two questions were slightly altered, as wording appeared unclear. Participants did not fully understand the following questions:

Q10. Number 2.: Pap smears have to be done regularly to be effective

This question was not clear and participants did not understand what ‘to be effective’ referred to. It was decided that ‘pap smears have to be done regularly to be effective to protect my health’, was preferred.

Q26 Number 4: My husband and/or male relatives will support me going for pap smears

The meaning of the question was confusing to women and through discussion the question was changed to read, ‘My husband and/or male relatives would support me if I consult a male doctor for a pap smear’.

There were no technical issues and the survey appeared to function well on a mobile phone screen, which was important to this population. Pilot data were not included in the main research dataset.

4.2.7 Setting, sample and sampling approach

The survey was conducted in an online community of OFWs. The online environment was believed to provide a useful environment to recruit a sample of global female OFWs. A convenience sample was used as only those individuals who visited the website and chose to take part in the survey were included. This sampling approach presents limitations to generalisability of the study, however other sampling approaches were not within the scope of this study (Bryman 2012). Inclusion criteria were: female Overseas Filipino Workers, aged between 21-65. This is the age group that is recommended for pap-testing in most countries. Sample size was aimed to be equivalent to what was previously used in studies on this topic. Sample sizes in Holroyd *et al.*'s (2001; 2003) studies were 290 and 98, respectively.

4.2.8 Recruitment

Before the start of recruitment, a website was developed which functioned as a platform for women to arrive on and read in English or Tagalog about the research before deciding to take part. The website's address is: www.ofwresearch.com. Figure 8 presents a picture of the website's home page. The researcher posted on the website a few pictures of herself with Filipino friends and her own children to give a personal touch. Permission for the pictures to be posted was gained from the women as well as the children (aged 10 and 12 at the time).

Figure 8 Home page www.ofwresearch.com



Additionally, a Facebook page was developed. This page provided brief information but encouraged women in Tagalog to visit the website to read more regarding the study and to take the survey. A Twitter account was also developed: @OFWresearch.

The study was then advertised in three ways:

1. The Facebook page was advertised using Facebook ads. Facebook is the most popular social-networking site with 800 million active users worldwide (Fenner *et al.* 2012). Facebook is a social media site that is regularly used by OFWs as a way of staying in touch with families back home, with other OFWs or with news (Caguio and Lomboy 2014) and offers a good method of recruiting participants for health research (Fenner *et al.* 2012), especially for communities that are geographically dispersed and difficult to access (Holmes 2009). Facebook allows targeting of specific communities based on demographics and interests, called the 'preferred page audience'. Advertising in this manner means that a small 'pop-up advertisement' appears for Facebook users, with the 'preferred page audience' characteristics,

and alert them to the OFW-research Facebook page. The preferred page audience was set as presented in Table 15.

Table 15 Facebook Preferred Page audience

Preferred Page Audience
Location: Bahrain, United Kingdom, Hong Kong, Italy, Kuwait, Oman, Philippines, Qatar, Saudi Arabia, Singapore and United States
Interests: Philippines, Pinoy, Manila Sound, Indonesia, Tagalog language, Overseas Filipino, The Filipino Channel, Philippines, Pinoy hip hop, Singapore, Little Manila, Filipino language, Pinoy pop, Manila, Pinoy rock, Filipino American culture, Hong Kong, Philippine peso, Tagalog people, Philippine Stock Exchange or Bangkok
Age: 21 - 65
Gender: Female

Locations were chosen based on the ‘Top Ten destinations for OFWs 2012’, as specified by the Philippine Overseas Employment Administration (Philippine Overseas Employment Administration 2013). The Facebook page was then advertised and specific posts asking for individuals’ attention, were regularly ‘boosted’ throughout October 2015. The cost of advertisement was calculated through the total of individuals that, as a result of the Facebook advertisement, clicked on the website www.ofwresearch.com as well as additional fee for boosting of posts. In total £194.24 GBP was spent on advertising with Facebook. Facebook reported that the OFW-research Facebook page reached 348,647 Facebook users, resulting in a total of 11,787 website clicks. These numbers cannot be verified. The OFW-research Facebook page was ‘liked’ by 551 Facebook users.

2. The second method of recruitment was through a website called www.pinoy-ofw.com. This is a website that aims to keep OFWs up to date with news, jobs, resources and information related to living and working abroad and attracted 750,000 visitors by April 2015. Paid advertisement was conducted through their website as well as through ‘the Pinoy OFW Facebook Page’, a social media site with 253,503 likes. The Facebook page featured a short

campaign in October 2015 and women were invited to visit the OFW research website and take the survey. In total, £197.57 GBP was spent on advertising with Pinoy OFW. The campaign was featured on Thursdays to make sure that most women would be exposed to the campaign on their day off, which for OFWs in the Middle East is Friday. Pinoy OFW reported that the campaign reached 96,119 people, 7973 clicks on the campaign posts and the posts received 2467 'likes'. A discussion followed and in total 269 comments were placed by OFWs in Tagalog about cervical cancer screening.

3. The third method was promoting the website through Twitter. It became clear that not many OFWs were on Twitter, for example, of the 750,000 Pinoy OFW visitors only 2000 were registered with Twitter. There were no responses on Twitter to promotional attempts of the website.

4.2.9 Methods: analysis of survey data

4.2.10 Data screening and dealing with missing data

Data were analysed using SPSS version 21 (IBM, 2012). Data were prepared by screening data for errors, investigating outliers and mapping missing data by producing descriptive analyses, an essential step before engaging in more complex analyses (Tabachnick and Fidell 2001). Few errors were discovered as Qualtrics has data entry constraints which limit errors; however, an occasional error was made in open questions, such as when participants were asked their age and a '3' was filled in. These outliers were deleted and reported as missing data. New categories were created where required, such as the countries of residence which was asked in the survey as an open question.

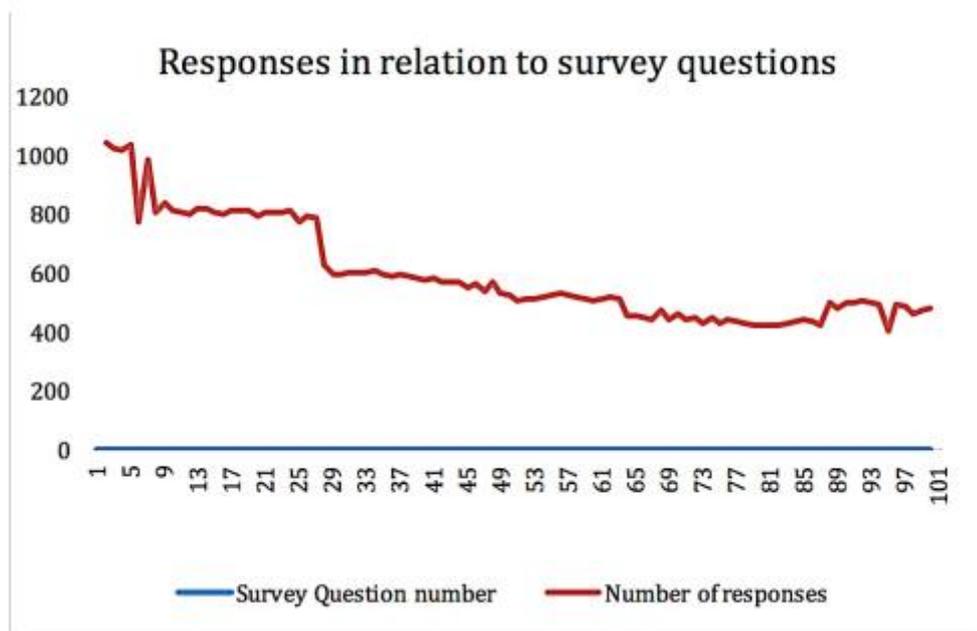
The proportion of completed responses calculated based on the amount of individuals who opened the survey (N=1701) is 28.2%. Calculating the exact response rate was not possible as there was no sampling frame and therefore the sample is of unknown representativeness, which limits generalisability (Fielding *et al.* 2008; Bryman 2012). Item-level missing data were present in many cases where participants had started the survey but did not complete all questions. As demographic questions were at the end of the survey, a large proportion of women did not complete these. Web-based surveys have been reported to have lower response rates than traditional paper-and-pencil surveys as well as more missing data (Tian Cole 2005). Figure 9 presents responses to the survey questions in a line graph, which is a useful method for identifying trends. Examining this figure, it becomes clear that there was a gradual decrease in questions answered and this presents a pattern of missing data. Missing data analysis would be problematic as data were not missing at random and therefore there was a question as to whether data could be validly imputed. Missing data can occur when surveys are long (Field 2013). These missing data meant that bias could be present as participants who completed all items of the survey may differ from those who do not. It has been argued that web-based surveys can prevent this sort of missing data by making completion of questions compulsory (Tian Cole 2005). This was deliberately avoided in this survey because of the ethical consideration that participants should not feel obliged to answer any question to avoid the risk of coercion (De Vaus 2002).

Another ethical issue raised in web-based research is that a participant can close their web-browser. If this happens, it is then not clear whether a participant has the intention of withdrawing their data (Barchard and Williams 2008; Niederhauser and Mattheus 2010). The British Psychological Society states it is best practice to offer a clear 'withdrawal of data' option for participants when they choose to exit by, for example, offering an 'exit' button. As this had not been done, it was decided to exclude cases (N=570) that had not completed the final question of the survey but for whom some data was available. It was decided to only include cases who had clearly chosen to complete the survey and reached the final question,

even if they had some missing data overall. Incomplete cases are included in the data analyses for which they have the necessary information (Pallant 2010); however, transparency was applied and number of responses are clearly identified for each variable.

Missing data may create problems with statistical analyses; however, Field (2013) argues that the presence of missing data for some participants does not mean we should disregard all data available for that participant. Disregarding data and deletion of cases can be an option if data are missing completely at random, however Tabachnick & Fidell (2001) argue that preserving all cases is preferred if there is a pattern in missing data, as was the case in the current study.

Figure 9 Responses to the survey



4.2.11 Univariate and bivariate analyses

Research question 1: What is the uptake of pap-testing for female overseas Filipino workers?

Research question 2: What are the barriers and socio-ecological factors associated with pap-testing for OFWs?

Descriptive statistics were used on the survey data to establish the uptake rate, answering research question 1. Bivariate analyses using independent sample *t*-tests and chi-square tests were used to answer research question 2 and to compare barriers and socio-ecological factors between pap-testing and non-pap-testing groups. The independent sample *t*-test was used where parametric comparisons of the mean score on continuous variables between two groups (e.g., those who were pap-tested compared to those who were not) were possible (Pallant 2010).

The chi-square is founded on observations of frequencies of categories compared to expected counts, based on chance, and chi-squares are a useful non-parametric test to explore the relationship between two categorical variables (Pallant 2010; Field 2013). However, Pearson chi-squares tests are thought not suitable for use with ordinal data, such as Likert scales, as chi-squared tests do not take ordering of variables into account (Agresti 2007). Therefore the chi-square test for linearity was used, also called the Mantel-Haenszel linear by linear chi-square test presented as $M^2 = (n - 1)r^2$ which is distributed on a chi-square statistic on 1 degree of freedom, *r* is the correlation between the dependent and independent variables and *n* is sample size (Howell 2001).

Field (2013) highlights that the chi-square test has one weakness which is that the sampling distribution of the test statistic has an approximate chi-square distribution. The larger the sample size, the more accurate this estimation is. Therefore, the chi-square test has a requirement that cannot be violated which is that all expected cell frequencies need to have a value >5 (Field 2013). The same requirement is proposed for the Mantel-Haenszel linear by

linear chi-square test (Mantel and Fleiss 2005). Therefore, categories were reduced from the six-point Likert to a three-point Likert scale to fulfil this requirement and any variables that violated the requirement were not used.

4.2.12 Multivariate analyses

Research question 3: What are socio-ecological predictors of pap-testing for OFWs?

Although chi-square tests and *t*-tests are useful in exploring associations, they are rarely sufficient to answer questions about the nature of associations (Agresti 2007). Logistic regression was then used to answer research question 3 and to determine how much of the variance in participation rates could be explained by independent variables and how strongly the dependent variable is predicted by theoretically-derived independent variables (Field 2013). Logistic regression is used to identify predictors that increase or decrease the probability of pap-testing given the scores of individual participants on the variables. When the dependent variable is categorical (screening yes/no) rather than continuous, logistic regression is more suitable than regression, which assumes an underlying normal distribution of the error term (Pallant 2010). Only variables that had been identified as statistically significant in univariate analyses were used in bivariate and multivariate logistic regressions. Logistic regression is sensitive to high correlations among independent predictor variables (Pallant 2010). Correlations between independent variables were checked for multicollinearity using collinearity diagnostics in SPSS, including tolerance and variance inflation factors (VIF). Although controversy exists regarding minimum sample size for logistic regression, having categorical predictors with too few cases will produce a poor model fit. The goodness-of-fit test was used to ensure all frequencies, or number of cases in each category, are >1 and no more than 20% are <5 (Tabachnick and Fidell 2001). Post-hoc power analyses were conducted for the final logistic regression model to investigate the

statistical power specific to the effect size for each observed odds ratio (see page 127 for complete description). G*Power was used for all power calculations (Faul *et al.* 2009).

The level of statistical significance for all analyses was set at $\alpha=0.05$.

4.2.13 Hypotheses

Based on the literature, main and sub-hypotheses were developed which are presented in Table 16.

Table 16 Main and sub-hypotheses of the study

Main hypothesis:	
Socio-ecological characteristics at the individual, social-cultural, institutional are related to the practice of pap-testing for OFWs.	
Sub-hypotheses:	
OFWs are more likely to engage in pap-testing if they demonstrate the following characteristics:	
1. At individual level:	
Demographic characteristics: <ul style="list-style-type: none"> ▪ Higher educated ▪ Married ▪ Younger age ▪ No difference in country of residence ▪ Longer overseas 	Cognitive factors: <ul style="list-style-type: none"> ▪ Higher levels of knowledge ▪ Have thought about pap-testing ▪ Less fear of outcome ▪ Less fear of the procedure ▪ Less likely to report ‘not having symptoms’ as reason not to have pap-test ▪ More perceived benefits of pap-testing ▪ More perceived susceptibility ▪ More perceived efficacy
2. At Institutional level:	

<p>Access factors:</p> <ul style="list-style-type: none"> ▪ More time ▪ Cost no problem ▪ Transportation no problem ▪ Know where to go for pap-test ▪ Have an HCP overseas ▪ Have health insurance ▪ Making appointment is not difficult 	<p>HCP factors:</p> <ul style="list-style-type: none"> ▪ Like the way HCP speaks with them ▪ Trust their HCP overseas ▪ Have had recommendation from HCP ▪ No language barrier
3. At Social-Cultural Level	
<p>Social-cultural factors:</p> <ul style="list-style-type: none"> • Less embarrassed • Less fatalism • Lower collectivism score • Higher acculturation score 	

4.3 Methods: Phase 2- Qualitative web-based individual interviews.

Research question 4: What are the perspectives of OFWs of the barriers and socio-ecological factors associated with pap-testing?

4.3.1 Setting, sample, sampling approach and recruitment

The final question of the survey asked if women were interested in participating in a web-based interview, after a short explanation of what this was and what would be involved. Interested participants could supply their email address, or other contact details, and 340 participants supplied an email, Skype, Facebook, or Viber address. Inclusion criteria for the qualitative interviews were: female overseas Filipino workers, aged between 21-65 and able to speak reasonable English as interviews were conducted in English.

Initially purposive sampling was attempted (Ritchie & Lewis 2003) and in February 2016 the researcher invited, by email or Skype message, a small number (12) of participants based on their survey answers such as location, and some who had or had not engaged in pap-testing.

This purposive sampling was used to ensure a variety of participants with different voices were included in the qualitative element of the study (Ritchie and Lewis 2003). However, the response was zero to this approach and the researcher then turned to convenience sampling and sent out an invitation to all participants who had supplied a contact address. Some emails were invalid and some Skype contact requests for those who had given a Skype ID were not answered. Thirteen participants responded to these invitations, but some went quiet after the researcher had sent the participant information sheet and consent form. These participants who had responded were sent one follow-up message to ask if they had any questions and, if there was no reply, women were not contacted again. Participants who wanted to take part were enthusiastic and responded promptly to establish a meeting.

4.3.2 *Data collection*

Qualitative synchronous web-based interviews were used for this qualitative phase. Women could choose to conduct the interviews one-to-one or in small online groups. Although in some contexts discussing personal and sensitive issues like cervical cancer screening might not be appropriate in a group, in this group with women from a collectivist culture and the researcher being an outsider, it was anticipated that women might potentially feel more comfortable discussing these issues collectively rather than individually as group interviews can be perceived as less threatening to participants (Onwuegbuzie, Dickinson, *et al.* 2009). However, none of the participants chose that option and only individual interviews were conducted.

Interviews were conducted using Skype or Viber, which are mobile and desktop applications that allow free phone calls with video option. A video option was chosen because a qualitative interview whilst seeing the participant's face was preferred as these are more similar to natural exchanges, such as in traditional interviews (Fielding *et al.* 2008), and all interviews were conducted with video. Interviews lasted between 30 to 55 minutes with an average of 40

minutes. Audio was recorded using an iPhone 6. Interviews were transcribed verbatim by a professional transcribing service.

4.3.3 Instrument

Vignettes were used to stimulate discussion (Appendix 3) (Ritchie and Lewis 2003). Vignettes are short hypothetical scenarios and are a useful method to discuss sensitive issues as the scenarios can be less threatening than direct questions. Vignettes can also be useful if participants lack personal experience of a topic and offer an opportunity to explore participants' perspectives on the topic (Braun and Clarke 2013). Discrepancies between participants' reality and proposed scenarios in the vignettes may cause problems (Hughes and Huby 2002). Using results from phase one to develop the vignettes were meant to limit this disadvantage. Four short scenarios, which were stories of OFWs in relation to pap-testing, were presented to participants with the intention of exploring particular barriers that had emerged from phase one. Vignettes had been developed at the start of the research and adjusted after phase one to reflect and explore certain barriers in more depth. For example, some of the perceived barriers, such as lack of time and providing for family, were added. Not all variables that had been explored in phase one were included as these were too many for an in-depth discussion, but factors that were statistically significant predictors in the logistic regression were used to help to focus the interviews. Non-leading and open-ended questions were used to explore participants' perspectives of the stories, how stories applied to them and how characters in the stories would or should respond (Braun and Clarke 2013). Probing questions were used to explore participants' understanding of the need for pap-testing and what they perceived as barriers and facilitators to pap-testing (Green and Thorogood 2009). A sample interview has been included (Appendix 4).

4.3.4 *Methods: analysis of interview data*

Data were analysed using Thematic Content Analysis, capturing recurring themes and patterns emerging from the data (Braun and Clarke 2006). This is a suitable analytic approach for use with vignettes (Braun and Clarke 2013). NVivo qualitative data analysis software (QSR International PTY Ltd. Version 10 for Mac, 2014) was used to assist in the analysis. Transcripts were uploaded in NVivo and read and re-read by the researcher and this familiarisation with data was an important part of the analysis (Ritchie and Lewis 2003). Then codes were applied to the data. Codes were concepts or categories that seemed important to the researcher in explaining the meaning of data in relation to the research question. Some codes were ‘a priori’, based on previous understanding from both the literature as well as phase one, some codes were new and emerged from new dimensions in the data (Bazeley 2007). Codes ranged from attitudes, to beliefs, to context surrounding beliefs, all in relation to pap-testing. Coding was an iterative process as one interview could bring up a code that had not been noted in a previous interview; therefore, the researcher went back and forth between interviews, comparing and contrasting between interviews (Bazeley 2007). Once all codes had been applied, codes were organised in categories from which higher-order themes and subthemes were developed which were aimed at capturing and interpreting the meaning of the data and stories participants shared (Ritchie and Lewis 2003). A coding scheme (Appendix 5) was developed to visually capture the essence of the data. To integrate results from both phases qualitative results were then interwoven with the quantitative findings and used as an exploration of meaning.

4.4 Ethical considerations

On 1 October 2015, ethical approval for this research was received from the Faculty of Health and Medicine Research Ethics Committee (FHMREC) at Lancaster University (Appendix 6). For phase one, informed consent was implied and not separately collected. However, the survey started with a tick-box (Question 4) confirming that participants had read the information and agreed to take part (Whitehead 2007a), which is best practice in web-based research (British Psychological Society 2013). Implied consent is an acceptable method of ensuring informed consent for a web-based survey (British Psychological Society 2013). A platform such as the website is important to ensure potentially interested people are informed regarding all aspects of the study and have good understanding of the study (Green and Thorogood 2009). On the website, the purpose of the study was briefly explained and all elements of the Participant Information Sheets (PIS) (Appendices 7-10) were included: what was expected of participants in the study, how anonymity and confidentiality were maintained, voluntary participation and withdrawal at any time, who to contact for questions and where to go in case of a complaint, data storage and what would happen to the data. The website was also available in Tagalog to ensure all potential participants could fully comprehend the information.

The survey was anonymous. It was decided not to collect participants' Internet Protocol (IP) addresses to offer complete anonymity. This decision not to record IP addresses in Qualtrics offered an extra assurance that confidentiality was offered (British Psychological Society 2013). The email or contact addresses of those who kindly offered to be involved in phase two were removed from the data file. There is a key available with participants' SPSS ID number so that participants could be purposively sampled for the next qualitative phase. This information is stored in a separate password protected and encrypted file on the researcher's hard drive. The survey closed with the researcher's email address, so that participants could contact the researcher in case of any questions or concerns.

Participants for the qualitative interviews were recruited in a non-coercive manner by inviting them through an email or a message on a self-solicited contact address. If participants responded to this message, PIS and consent form in Tagalog (Appendices 11-12) were sent as well as the research's website address that also contained all the information on the research. The PIS clearly explained, in understandable language, that participation was voluntary and participants could withdraw their data up to two weeks after the interview. Informed consent was intended to be signed on the consent form; however, all participants accessed the information through their smart phone and had no access to a computer to print, sign and scan the forms. This is an important barrier that presents in web-based research over traditional research (British Psychological Society 2013). In the initial interviews, consent was taken verbally prior to the interview and audio recorded. In subsequent interviews, participants were asked to type consent in email, Skype or Viber. Every interview commenced with a discussion of consent, voluntary participation, withdrawal and what would happen with the findings and data.

4.4.1 Debriefing

In phase one, as sample size goals had been reached to fill the objectives of the study, the last week of the advertisement campaign with Pinoy OFW was used to post debriefing information in Tagalog. This debriefing document (Appendices 13-14) included general information about pap smears answering questions women may have such as what to expect when doing pap-testing, does it hurt and how often women should go. Debriefing information was also posted on the OFW research's website when the survey was closed. A short post was made stating 'Stop Cervical Cancer' on the Pinoy OFW Facebook page directing users to the website for the full debriefing information which was 'liked' by 744 individuals, as can be seen in Figure 10.

Figure 10 Debriefing campaign



In phase two, the same debriefing information document was sent to participants after the interview to deal with any worries participants may have as a result of the conversation. Ample opportunity was offered to participants to ask questions at the end of the interview, which all participants used, and the researcher made an effort at the end of the interview or the next day to help some participants who asked for this to find a suitable address for pap-testing in their host-country.

5 Chapter 5. Integrated Results Cross-sectional Survey-Phase 1 & Interviews-Phase 2

5.1 Introduction to results

In this chapter, section 1-6 present the integrated results from the cross-sectional survey and qualitative interviews. Section 1 presents the socio-demographic profiles of participants in both phases of the study. In section 2, research question 1: ‘What is the uptake of pap-testing for female overseas Filipino workers?’, is addressed.

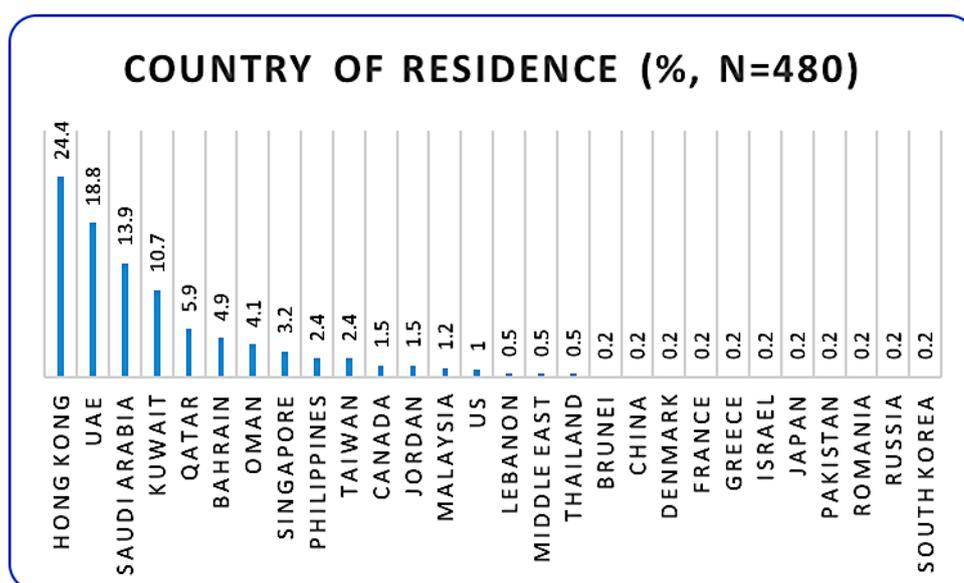
Section 3-5 present results at each socio-ecological level. Section 3 presents ‘Individual factors’, section 4 ‘Institutional factors’, and section 5 ‘Social-cultural factors’. Research question 2: ‘What are the barriers, facilitators and socio-ecological factors associated with pap-testing for OFWs?’, research question 3: ‘What are the socio-ecological predictors of pap-testing for OFWs?’ and research question 4: ‘What are the perspectives of OFWs of the barriers and socio-ecological factors associated with pap-testing?’, are all addressed in section 3-5 in which barriers and facilitators associated with and predictive of pap-testing are discussed at each socio-ecological level. Qualitative results and a discussion of what the barriers and facilitators at each socio-ecological level meant to interview participants, are integrated in section 3-5.

‘Survey participants’ refers to results from participants in the quantitative phase, ‘interview participants’ refers to results from the qualitative phase. Section 6 brings results together on all socio-ecological levels and offers a summary of key results.

5.2 Results Section 1. Socio-demographic profile of women in the study

A total of 480 OFWs completed the survey. The participants in the study were located in 28 different countries (Figure 11), with the largest proportion of women in Hong Kong (24.4%).

Figure 11 OFWs country of residence



Participants' age ranged from 23-58 years ($M=36.69$, $SD= 6.9$). Almost half (47%) of the women were married or living with partner. Of participants, 74% had children, ranging from 1-7 children ($M=2.28$, $SD=1.3$). The majority of women were employed as domestic workers (59.3%) (Figure 12), 38.7% reported earning less than \$500 per month, 46% reported college or university level education and a small minority had primary education only (1%). Of the women with university-level education, 34% earned less than \$500 per month and 48% reported to work as a domestic worker. Most women included in the study were Christian (92%). Participants had been overseas ranging from a few months to 30 years ($M= 6.55$,

SD=5.43). Key demographics of the survey and interview participants are summarized in Table 17 and Table 18 respectively.

Figure 12 Employment OFWs

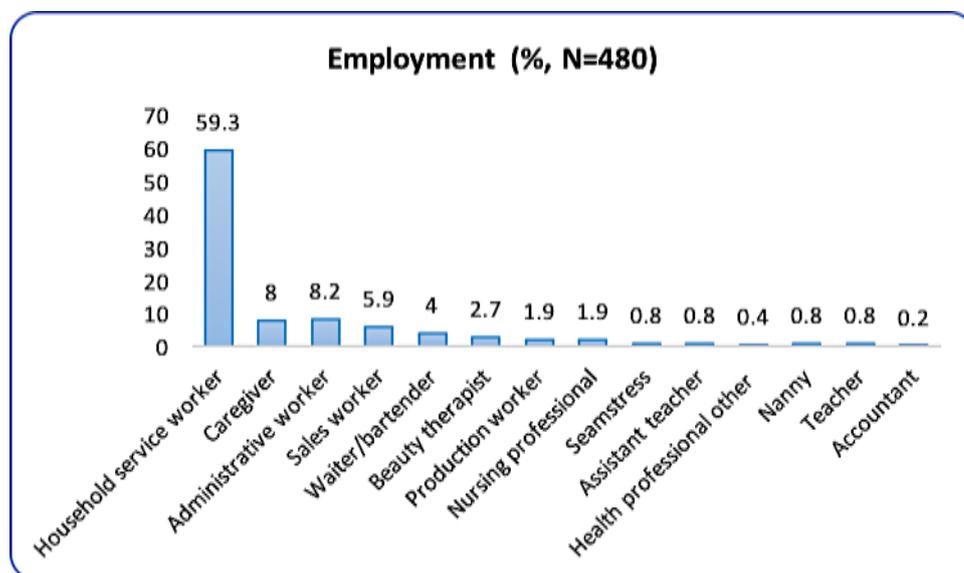


Table 17 Socio-demographic profile per reported pap-testing status

Individual Factors: Demographic Characteristics				
Barrier of facilitator to pap-testing	Did not report Pap-test (N,%) N=271, 56.5%	Reported Pap-test (N,%) N=209, 43.5%	Total (N,%) N=480	Statistic <i>t</i> or χ^2
Age (M±SD) Range	35.05 ± 6.48 23-58	38.82 ± 6.9 23-58	36.69±6.9 23-58	<i>t</i> (n=471)=- 5.95, <i>p</i> =.000*
Religion Christian	256 (94.5)	184 (88.5)	440 (92)	$\chi^2(4, n = 479) = 7.293,$ <i>p</i> =.121
Country of residence, n (%) GCC Asia Europe & North-America Middle East not GCC	119 (53.1) 94 (42) 4 (1.8) 7 (3.1)	120 (64.5) 52 (28) 10 (5.4) 4 (2.2)	239 (58.3) 146 (35.6) 14 (3.4) 11 (2.7)	$\chi^2(3, n = 410) = 12.058,$ <i>p</i> =.007*
Children				

Yes	180 (66.4)	173 (82.8)	353 (74)	$\chi^2(1, n = 480) = 16.22, p = .000^*$
Number of children, ($M \pm SD$)	2.2 \pm 1.32	2.36 \pm 1.30	2.28 \pm 1.3	$t(n=326) = -1.103, p = .271$
Range	1-7	1-7	1-7	
Marital status, n (%)				
Single, never married	94 (36)	34 (16.8)	128 (27.6)	$\chi^2(2, n = 463) = 20.951, p = .000^*$
Married	109 (41.8)	110 (54.5)	219 (47.3)	
Separated, divorced, widowed	58 (22.2)	58 (28.7)	116 (25.1)	
Education, n (%)				
Primary school	5 (1.9)	2 (1)	7 (1.5)	$\chi^2(3, n = 476) = 3.51, p = .476$
High School	109 (40.5)	73 (35.3)	182 (38.2)	
Diploma	38 (14.1)	31 (15)	69 (14.5)	
University	117 (43.5)	101 (48.8)	218 (45.8)	
Income, n (%)				
<\$500	105 (39.5)	78 (37.7)	183 (38.7)	$\chi^2(3, n = 473) = 5.44, p = .142$
\$500-\$1000	29 (10.9)	32 (15.5)	61 (12.9)	
>\$1000	20 (7.5)	24 (11.6)	44 (9.3)	
Missing	112 (42.1)	73 (35.3)	185 (39.1)	
Employment				
Domestic worker	169 (62.4)	114 (54.5)	283 (59)	$\chi^2(1, n = 480) = 2.98, p = .084$
Other screening				
Yes	37 (13.7)	49 (23.7)	86 (18)	$\chi^2(2, n = 477) = 9.77, p = .009^*$
Years overseas ($M \pm SD$)	5.89 \pm 5.02	7.42 \pm 5.94	6.55 \pm 5.43	$t(n=395) = -2.72, p = .007^*$

* Significant at $p < 0.05$

Table 18 Characteristics of interview participants

Participant	Nationality	Age	Country of residence	Profession	Pap-test	Number of Children	Marital Status
(P1)	Filipino	40	Singapore	Domestic worker	No	5	Married
(P2)	Filipino	24	Kuwait	Domestic worker	No	1	Married
(P3)	Filipino	37	Kuwait	Domestic worker	Yes	0	Separated
(P4)	Filipino	40	Hong Kong	Domestic	No	3	Widowed

				worker/Nanny			
(P5)	Filipino	45	Singapore	Domestic worker	No	4	Widowed
(P6)	Filipino	40	Qatar	Domestic worker	No	5	Separated
(P7)	Filipino	37	Kuwait	Sales/Promoter	Yes	1	Married
(P8)	Filipino	35	Kuwait	Domestic worker	No	2	Separated

5.3 Results Section 2. Practice of Pap-testing

Table 19 presents survey findings regarding women’s practice of pap-testing.

Table 19 Practice of pap-testing of OFWs

Practice of pap-testing (N=480)	
Have you ever thought about having a pap-test? ^a (N, %)	Yes= 416 (86.6)
Did you ever have a pap-test? ^a (N, %)	Yes=209 (43.5)
When was your last pap-test? ^b (N, %)	<1 year ago= 63 (30.3) 1-3 years ago= 60 (28.4) 3-5 years ago= 21 (10) >5 years ago = 27 (12.8) I can’t remember = 38 (18.5)
Where was this pap-test? ^b (N, %)	In the Philippines= 152 (72.6) Overseas= 57 (27.4)
Do you attend any other types of health screening? (N, %) ^a	Yes=86 (18)
I intend to go for a pap-test overseas soon? ^c	Agree= 351 (82)

^a (N=480)

^b (N=209)

^c (N=428)

Although 86.6% of participants reported having thought of undergoing a pap-test, 56.5% had never had a pap-test. Only 43.5% reported pap-testing at one point in their life, and only 25.8% of the whole sample reported having had a pap-test within the last 3 years. Of the 209 women who did report a pap-test, slightly more than half (58.7%) had a pap-test within the last 3 years, 38.5% had a pap-test more than 3 years ago and for 17.3% of participants pap-testing had been such a long time ago they could not remember. In the qualitative phase of

this study, there were only two women who had ever had a pap-test. One participant had a pap-test such a long time ago she could not quite remember when this was but she thought it was more than five years ago. The interview participant who was a sales professional, not a domestic worker as were all the other interview participants, had several pap-tests of which one was only one year ago.

Most survey participants (79.9%) did not engage in any other type of health screening, although women who reported pap-testing were significantly more likely to also engage in other types of screening (23.7%) than women who did not report pap-testing (13.7%). More than one-third of participants (38.3%) reported the reason for having a pap-test was that the procedure was part of their normal health care routine. More than a quarter (30.6%) reported symptoms to be the reason, and only a minority (9.5%) reported the reason to be a health care provider's recommendation. Of all survey participants, 82% intended to go for a pap-test overseas soon. Interview participants also intended to go and used expressions like '*I'm excited*' or '*I'm willing*'. Some women had mixed feelings and were partly eager but also somewhat unsure or scared.

I am scared, I am scared, I feel good also, I feel scared and good also, feel scared and good also (P5)

The majority of survey participants (72.6%) had their pap-test in the Philippines and women who did not engage in pap-testing were significantly more likely to state preference for attending pap-testing in the Philippines (55.7%) than the pap-testing group (46.2%)⁵. None of the interview participants seemed to have considered going for a pap-test in their various host countries and all discussed going in the Philippines. All interview participants seemed rather surprised when being asked about attending pap-testing in the host-country and it had not truly occurred to them as an option. All interview participants believed that in the Philippines it would be easier and cheaper for them to go for a pap-test although one participant

⁵ $M^2(1, n=419) = 6.142$ $p = .013^*$

highlighted that health care equipment and health care may be superior in her host-country Singapore than in the Philippines.

Because before I was thinking, I could do it only in Philippines, but when my friend [name] told me so I said “Oh really” is there also in Doha (laughter) (P6)

5.4 Results Section 3. The socio-ecological level: Individual factors

5.4.1 Associations Individual factors- Demographic characteristics

Table 17 presents associations with pap-testing at individual level-demographic factors.

Age did differ significantly between groups ‘pap-testing’ ($M=38.82$, $SD=6.9$)’ versus ‘not pap-testing’ ($M=35.05$, $SD=6.48$)⁶, indicating that those women who reported not engaging in pap-testing were significantly younger.

The proportion of women who reported having children was larger in the pap-testing group (82.8%) than in the non-pap-testing group (66.4%), although the number of children was not significantly different between the groups.

Significantly fewer women residing in Asia (28%) reported pap-testing than women in the GCC (64.5%). Women who were single or never married were significantly less likely to report pap-testing (16.8%) than women who were married (54.5%) or were previously married (28.7%).

Women with higher levels of education were not significantly more likely to report pap-testing than women with lower levels of education. Women who had been overseas longer were more likely to report pap-testing ($M=7.42$, $SD=5.94$) than those who spent fewer years overseas ($M=5.89$, $SD=5.89$)⁷.

⁶ The magnitude of the difference in the means (mean difference=3.75, 95% CI:-4.991 to -2.512) was moderate to large (eta squared=.07)

⁷ The magnitude of the difference in the means (mean difference=1.53, 95% CI:-2.630 to -.421) was small (eta squared=.019)

5.4.2 Predictors at individual level- Logistic Regression Model 1: Demographic Factors

A binary logistic regression was conducted to identify demographic predictors of pap-testing (Table 20)⁸. Age was found a significant predictor of pap-testing; for every one-year increase in age, participants were 1.076 times more likely to report pap-testing (OR= 1.076, 95% CI 1.041-1.112, $p=.000$). Marital status was also identified as a significant predictor of pap testing. Women who were married and women who were married previously but now divorced, separated, or widowed, were respectively 2.8 (OR= 2.794, 95% CI 1.6-4.87, $p=.000$), and 2.6 times (OR= 2.595, 95% CI 1.39-4.83, $p=.003$) more likely to engage in pap-testing than women who were single and never married. OFWs residing in Asia had 49% lower odds of pap testing compared to women in the GCC (OR=.514, 95% CI .32-.82, $p=.005$). Having children was not a significant predictor of pap-testing.

Table 20 Model 1: Binary logistic regression demographic factors

Independent variables	B	S.E.	Wald	df	<i>p</i>	Odds ratio	95% CI for odds ratio Lower	95% CI for odds ratio Upper
Marital status ^a (married)	1.027	.284	13.057	1	.000*	2.794	1.600	4.878
Marital status (divorced, separated, widowed)	.954	.317	9.073	1	.003*	2.595	1.395	4.828
Age	.073	.017	18.681	1	.000*	1.076	1.041	1.112
Having children	.487	.292	2.777	1	.096	1.627	.918	2.886
Country of residence (Asia) ^b	-.666	.238	7.808	1	.005*	.514	.322	.820
$X^2(5, n=375)=52.983$ $p<0.000$. Hosmer and Lemeshow Test= .207, Cox & Snell R square=.132; Nagelkerke R square=.176								

⁸ Variables significant in bivariate analyses were included in model 1 (detailed in Appendix 15). The full model containing all demographic predictors (age, country and marital status) was statistically significant, $\chi^2(8, n = 375) = 52.98$ $p < 0.000$. This suggests that the demographic factors explained a substantial portion of variance in pap testing. Further, the p -value for the Hosmer and Lemeshow test was .207 and therefore exceeded the minimum of .05 for acceptable goodness-of-fit (Pallant 2010). The demographic model explained between 13.2% (Cox & Snell R^2) and 17.6% (Nagelkerke R^2) of the variance in pap-testing, as an indication of model utility (Pallant 2010). The independent variables correctly classified 65.9% of participants' pap-testing status. The variables, 'other screening' and 'years overseas', were excluded from the model due to poor fit resulting in convergence problems.

* Significant at $p < 0.05$

^a 'Single women' are the reference group

^b 'GCC' is the reference group.

5.4.3 Associations individual factors- Cognitive Factors

5.4.3.1 Associations cognitive factors: Knowledge and awareness

The vast majority of survey participants reported that they were aware of pap-testing and 96.4% had heard of pap-testing. Two-thirds (66.9%) of women believed that a pap-test is required once per year and only a small minority (2.3%) answered, in line with current guidelines, that the frequency should be every three years. More than a quarter (26.1%) of participants thought that they were either too young or too old for pap-testing, however, these participants were in the appropriate age range for screening and their characteristics for the variable 'age' ($M = 37.26$, $SD = 7.12$, Range 23-57) remained similar to the entire sample ($M = 36.00$, $SD = 6.9$, Range 23-58), indicating misconception about the age requirements for pap-testing. Most (95%) survey participants thought that cervical cancer could be cured if detected early. Some interview participants also mentioned that finding cancer early was positive and they believed this would help recovery. A few interview participants discussed prevention was better than cure, although one participant also believed hereditary influences to be important and one stated that curing cancer was 'a fifty-fifty chance'.

Knowledge did differ significantly between groups reporting 'pap-testing' ($M = 21.94$, $SD = 4.246$) versus 'not pap-testing' ($M = 19.98$, $SD = 4.246$)⁹, indicating that those women who reported having had a pap-test showed slightly higher knowledge levels (Table 21).

When exploring knowledge in more depth in the qualitative phase, although all eight interview participants had heard of pap-testing, most admitted not knowing a great deal. Some appeared to want to take part in the interview to ask questions about the pap-test, and some

⁹ The magnitude of the difference in the means (mean difference = 1.94, 95% CI: -2.940 to -.987) was small-moderate (eta squared = .05)

had read the researcher's website for information on pap-testing. Nevertheless, considerable misconceptions existed about the purpose of pap-testing. One woman answered that she thought the purpose of pap-testing was 'to check inside the cervix' but what would be checked, she was unsure of. Most interview participants seemed to think pap-testing was for 'cleaning'. One interview participant thought the purpose of pap-testing was 'cleaning the dirt from the ovaries' and she believed this was necessary after taking the contraceptive pill for a long time. Another participant compared pap-testing to cleaning the womb after a miscarriage. Several other participants mentioned the purpose of pap-testing was 'to clean the vagina' and this was required to remove sperm. Sexual activity was related to pap-testing for women and cleaning the vagina or the body from sexual activity was reported to be important and if cleaning was not done this could result in illness.

Ah, because I, need a Pap-smear to bring inside, the sperm like that to clean it, to clean it, you think? Others said[this] (P2)

When discussing pap-testing, cervical cancer was specified by one interview participant. However, other interview participants spoke erroneously about different types of cancer in relation to pap-testing, ovary and uterus cancer were both mentioned, revealing more misconceptions about pap-testing, including for the interview participant who had engaged in several pap-tests.

Regarding the source of knowledge, survey participants indicated that their first choice for obtaining health information was the Internet (44.1%) followed by their health care provider (32.6%). Sources of knowledge for interview participants were friends, the internet, newspapers or their midwife. Some interview participants revealed knowing about pap-testing as they had friends, family or acquaintances who had died from cancer.

I have my relatives die three years ago, she didn't take some pap smear, she died, cancer, a uterus cancer. Then now I have a friend here in Kuwait, she is suffering stage two, uterus cancer because she didn't take care of herself (P7)

5.4.3.2 Associations cognitive factors: Health beliefs regarding pap-testing

Table 21 presents associations with pap-testing at individual level for the cognitive factors.

Table 21 Associations with pap-testing at individual level: cognitive factors (knowledge and health beliefs).

Individual Level: Cognitive Factors				
Barrier or facilitator to pap-testing	Did not report Pap-test (N,%) N=271, 56.5%	Reported Pap-test (N,%) N=209, 43.5%	Total (N,%) N=480	Statistic <i>t</i> , χ^2 , <i>M</i> ²
Knowledge ^a (<i>M</i> ± <i>SD</i>)	19.98 ± 4.246	21.94 ± 4.74	20.93±4.36	<i>t</i> (n=295)= -3.957 <i>p</i> =.000*
Worry about having cancer, n (%) Agree	185 (77.4)	121 (67.6)	306 (73.2)	<i>M</i> ² (1, n=418) = 9.203, <i>p</i> =.002*
Fear of outcome, n (%) Agree	132 (55.2)	60 (34.7)	192 (46.6)	<i>M</i> ² (1, n=412) = 25.831, <i>p</i> =.000*
Fear of procedure, n (%) Agree	138 (58.7)	59 (34.3)	197 (48.4)	<i>M</i> ² (1, n=407) = 31.677, df 1, <i>p</i> =.000*
No symptoms, n (%) Agree	100 (42.9)	48 (27.6)	148 (36.4)	<i>M</i> ² (1, n=407) = 15.923, df 1, <i>p</i> =.000*
Perceived benefit to them, n (%) Agree	43 (18.3)	18 (9.8)	61 (14.6)	<i>M</i> ² (1, n=419) = 13.002, <i>p</i> =.000*
Perceived susceptibility, n (%)				

Agree	124 (53.2)	92 (52.9)	216 (53.1)	$M^2 (1, n=407) = .412, p=.521$
Perceived efficacy, n (%) Agree	234 (91.1)	192 (96)	426 (93.2)	$M^2 (1, n=457) = 2.015, p=.156$
If participant did have cancer, she would rather not know about it, n (%) Agree	62 (27.1)	34 (19.1)	96 (23.6)	$M^2 (1, n=407) = 7.471, p=.006^*$
Good health, n (%) Agree	92 (39.1)	46 (26.7)	138 (33.9)	$M^2 (1, n=407) = 14.309, df 1, p=.000^*$
Severity, n (%) Agree	48 (20.8)	27 (14.6)	75 (18)	$M^2(1, n=416) = 5.890, p=.015^*$

* Significant at $p < 0.05$

^a Total knowledge score: extremely low knowledge 0-10, low 11-15, moderate 16-20, good 21-25, very good 26-30 and excellent 31-35

Between the group reporting pap-testing and the group who did not, results indicated a significant difference for particular health beliefs. Most women believed pap-testing to be beneficial (94%) and women believing that pap-tests were good, but that there was no need for them to have these were in the minority however this was proportionally higher in the non-pap-testing group (18.3%) than in the pap-testing group (9.8%). More than half (53.1%) of women believed it was unlikely that they would develop cancer but there was no significant difference between the groups.

Interview participants expressed concern for their health and taking care of one's health was deemed important. Some participants liked to read on the internet about health and one participant emphasised that engaging in healthy behaviours such as drinking healthy juices would prevent illness, which the participant felt was necessary as her job put strain on her health and did not allow her sufficient rest. Therefore, she believed this was a method of compensating for the physical strain on her body to avoid illness. One interview participant

thought she cared about her health, yet she seemed somewhat disappointed in herself as she believed she could not truly care about herself if she did not engage in pap-testing. Other participants shared stories of women who were suffering from illness or who had died as a result of cancer and were described as ‘*not taking care of themselves*’, as they did not go for a pap-test. All interview participants seemed to find pap-testing important and all believed that pap-testing would be beneficial to them. One participant highlighted the importance of pap-testing in the absence of symptoms.

Because every girl in the world even without sex or we have sex we need to once a year or twice a year make a pap smear [...] because even though your vagina is okay maybe you have problems that that's why you need it (P3)

Survey participants who did not report pap-testing were significantly more likely to worry about having cancer (77.4%) than the pap-testing group (67.6%) and to report as potential reasons for not engaging in pap-testing fear of the procedure and fear of the outcome of pap-testing or not wanting to hear bad news. Fear of the outcome was reported by almost half (46.6%) with a higher proportion in the non-pap-testing group (55.2%) than the pap-testing group (34.7%). Additionally, 23.6% of survey participants reported not wanting to know if they did have cancer, which was significantly higher for the non-pap-testing group (27.1%) than for the pap-testing group (19.1%).

Fear of the actual procedure of a pap-test was raised in the interviews, but this did not seem to worry participants too much. One participant had heard that a pap-test could be somewhat painful or uncomfortable but this did not seem to be a barrier to pap-testing. Rather, the fear of the outcome of the test and hearing bad news was mentioned and appeared a barrier.

I am scared to go because maybe the doctor will say you have cancer. My heart will be broken and my work will be done. I am scared to know what will be my result, and that is it.
[laugh] (P8)

These interview participants who reported feeling scared of the outcome spoke of their worries about what would happen if cancer or another illness was found, of the consequences of an illness for them, but also for their family. Not being able to look after their families financially would be a direct consequence of finding out they might be ill or have cancer. Fear of the outcome also encompassed a fear of medical expense as a result of falling ill and participants worried about not being able to afford health care. Additionally, fear existed that if participants were ill, all their hard earned money would have to be spent on their health care and could not be spent on their families, highlighting the underpinning of poverty as a determinant, as well as the interaction between cognitive factors such as fear and social and cultural factors, such as the need to provide for their families.

Proportionally more survey participants who never had a pap-test reported good health (39.1%) and no symptoms (42.9%) as potential reasons for not attending pap-testing, compared to the pap-testing group (26.7% and 27.6% respectively). In the interviews one participant was not sure if pap-testing was needed in absence of symptoms and another participant admitted that when she felt healthy, she did not think about health care behaviour such as pap-testing.

5.4.4 Predictors at Individual level- Logistic Regression Model 2: Cognitive factors

Only two variables (knowledge, and fear of the outcome of the test and not wanting to hear bad news) were identified as predictive of pap testing¹⁰. Fear of the outcome was the strongest

¹⁰ Binary logistic regression models were used to identify cognitive predictors of pap-testing. Variables significant in bivariate analyses were included in model 2 (detailed in Appendix 15). The model as a whole was significant $X^2(11, n=237) = 39.251 p < 0.000$, suggesting that cognitive factors explained a substantial portion of variance in pap

predictor and women who were not afraid of hearing the outcome of a pap-test were nearly four times more likely to engage in pap-testing (OR=3.963, 95% CI 1.9-8.3, $p=0.000$). For every one-unit increase in knowledge score, the odds of pap-testing increased by 10% (OR=1.095, 95% CI 1.012-1.184, $p=0.023$). The included variables, ‘I think these tests like pap-tests might be good but I don’t need them’; ‘I will go for a pap-test when I suffer symptoms’; ‘I’m in good health’; and, ‘If I did have cancer, I would rather not know about it’ were not significant predictors of pap-testing (Table 22).

Table 22 Model 2: Binary logistic regression cognitive factors

Independent variables	B	S.E.	Wald	df	<i>p</i>	Odds ratio	95% CI for odds ratio Lower	95% CI for odds ratio Upper
Total knowledge	0.91	0.40	5.142	1	0.023*	1.095	1.012	1.184
Fear of outcome (disagree) ^a	1.377	.374	13.529	1	.000*	3.963	1.903	8.254
Good health (disagree) ^a	.207	.460	.202	1	.653	1.230	.499	3.033
No Symptoms (disagree) ^a	-.280	.456	.377	1	.539	.765	.309	1.848
Perceived benefit (disagree) ^a	.551	.497	1.228	1	.268	1.735	.655	4.596
Do not want to know about cancer (disagree) ^a	-.015	.418	.001	1	.972	.985	.434	2.237
$\chi^2 (6, n=237)=39.251 p<0.000$. Hosmer and Lemeshow Test= .243, Cox & Snell R square=.153; Nagelkerke R square=.204								

* Significant at $p<0.05$

^a Reference group is the ‘agree’ group

testing. Estimates suggest that between 15.3% (Cox & Snell R^2) and 20.4% (Nagelkerke R^2) of variance in pap-testing was explained by the predictor variables. The Hosmer and Lemeshow p -value was .243 indicating model goodness-of-fit; the model independent variables correctly classified 67.9% of participants’ pap-testing status. The variables: ‘I sometimes worry about having cancer’; ‘I’m worried about the pain’; and ‘cancer cannot be cured even if it is detected early’, were excluded from the model due to poor fit resulting in convergence problems.

5.5 Results Section 4. The socio-ecological level: Institutional factors

5.5.1 Associations at Institutional level- Access Factors

Table 23 presents associations at institutional level between access factors and pap-testing.

Table 23 Associations with pap-testing at institutional level: access factors

Institutional level Factors: Access Factors				
Barrier or facilitator to pap-testing	Did not report Pap-test (N,%) N=271, 56.5%	Reported Pap-test (N,%) N=209, 43.5%	Total (N,%) N=480	Statistic χ^2, M^2
Has overseas HCP, n (%) No	201 (75.3)	115 (56.4)	316 (67.1)	$\chi^2(1, n=471)=18.686,$ $p=.000^*$
Pap-test too expensive, n (%) Agree	149 (63.9)	81 (45.5)	230 (56)	$M^2(1, n=411)=18.907$ $p=.000^*$
Health insurance, n (%) Yes	133 (49.4)	109 (52.9)	242 (50.9)	$\chi^2(2, n=475)=4.89,$ $p=.087$
Lack of time, n (%) Agree	136 (56.9)	74 (40.7)	210 (49.9)	$M^2(1, n=421)=16.215$ $p=.000^*$
No transport, n (%) Agree	48 (22.1)	31 (19.1)	79 (20.8)	$M^2(1, n=379)= 1.975$ $p=.160$
If the doctor would somehow come to participant, would go for pap-tests, n (%) Agree	127 (54.7)	66 (36.7)	193 (46.8)	$M^2(1, n=412)=18.510$ $p=.000^*$

Doesn't know where to go, n (%) Agree	127 (55.2)	61 (35.7)	188 (46.9)	$M^2(1, n=401)=26.638$ $p=.000^*$
Making an appointment is problematic, n (%) Agree	71 (32)	40 (10.1)	111 (28)	$M^2(1, n=396)=9.228$ $p=.002^*$

* Significant at $p<0.05$

5.5.2 Access factors: Cost as barrier and underpinning structural factor-poverty

Women who had not engaged in pap-testing were more likely to report pragmatic access factors to be a barrier to pap-testing. A statistically significant higher proportion of women who had no history of pap-testing (63.9%) reported cost as a barrier to pap-testing compared with the pap-testing group (45.5%). Women with health insurance were no more likely to engage in pap testing than women without health insurance.

In the qualitative phase, when exploring what cost meant to participants, all but two participants perceived cost to be a barrier and participants revealed that poverty was a key determinant of pap-testing. Participants lacked money and funds for a pap-test were simply not available. One participant discussed how she had a western partner who she believed would help her with any health care related cost and therefore she did not perceive cost to be a barrier. The other participant was the sales professional for whom cost was not a barrier. For the other interview participants, cost was perceived as a definite barrier. Some participants related this to the cost for a pap-test in the host-country and believed this to be higher than in the Philippines. Several participants spoke of having health insurance in the Philippines, but not in the host-country. Access to free health clinics in the Philippines was mentioned, but none of these options were known to be available in the host-country.

Because it depends on money, it depends on what Pap smear is because actually I stay in I stay in a squatter area, those the houses are (P1).

I have no money, just enough for one day. I have to save money to give to my children (P8).

Women told the story of how poverty had affected them and resulted in them working abroad as an OFW. All women had to leave the Philippines and leave their families and children behind to earn money to provide for their children and families. If married, their husbands' salaries were described as not sufficient and participants described how it was relatively easy for women to find a job abroad. Single mothers had no other option than to leave the Philippines and work as an OFW to provide for their children. Most women had not seen their children for several years. Several women described that being away from their children was incredibly difficult for them and feelings of sadness, crying, loneliness, feeling homesick and boredom were described. One woman described her agony when she had to leave her three and five-year-old children behind in the Philippines and how she worried the children would not love her as much as she was not by their side.

It's hard for me especially when I think of my kids, especially the little ones, and I left there and I leave them, my youngest is only 3 years old and the other one is 5 years old, so, I am thinking, I am sad, I really feel sad because I am thinking they grew up without mummy, a mother by their side, taking care of them, yeah for me it's...different, it's different if the mother will take care of them than the father (laughter)..[..] I am worried about that..[..] that they will love me less (P6).

As years of separation passed, women seemed to grow used to dealing with these feelings of sadness and despite the separation from the children still being very painful, somehow they managed to cope. Women seemed to be surviving and the drive to look after their families and children, if only financially, seemed to overpower anything else.

Before, at 1 to 3 years it always made me cry, cry, cry, because I miss them. Now in my mind, I have to work. Because I am a single mother, I have to work. Right? I have to provide them. What can I do? I have to work (P8).

5.5.3 Access factor: Navigating the host country's health system

Not having transportation was an issue to one-fifth of survey participants (20.8%) but there was no significant difference between those who had pap-tests compared to those who did not. For two-thirds of survey participants (67.1%), not having a health care provider overseas was a barrier, which was significantly more likely for the non-pap-testing group (75.3%) than for the pap-testing group (56.4%). For almost half of women (46.9%) not knowing where to go was a barrier, and this barrier was also significantly more common in the group who never had a pap-test (55.2%) than in the pap-testing group (35.7%). Just over a quarter (28%) also reported that making an appointment was problematic. This was significantly higher in the non-pap-testing group (32%) versus pap-testing group (10.1%).

Interview participants also reported not knowing how to make an appointment. In the qualitative phase, most women seemed a little bewildered when asked about accessing a health care provider in their host-country for pap-testing. Interview participants did not have a regular health care provider although a few women were able to use their employer's doctor when seriously ill or in case of an emergency. Most interview participants did not know where to go for a pap-test in their host-country, or comprehend the set-up of hospitals and health clinics and what health care would be offered where, illustrating a lack of understanding how to navigate the health-system in their host-country. However, interview participants discussed the requirement for all migrant workers to have regular contact with health care providers for medical check-ups for their visa continuation and renewal. Participants said they had to attend compulsory medical check-ups every six months. Participants believed these six-monthly

medical check-ups were used to test migrant workers for HIV/AIDS, sexually transmitted diseases and pregnancy, with a more extensive check-up including lung X-rays, when renewing their visa.

Yeah I go see doctor every six months because we need to go for physical health every six months [...] of course only during the medical check-up every six months is the is the urine and they get the blood and check check check check check check just a simple just a simple medical check-up [...] is just a medical check-up if you have HIV, if you are pregnant, I think these two and after you finish your employment contract you want to renew again with another years then they do will do the x-ray (P1)

Another woman described how she felt that her status in the host-country's society impacted her access to quality health care. She heatedly explained how she felt discriminated against based on her status as 'house maid' and believed that migrant workers were marginalised and not offered quality health care.

If I want to make an appointment, not in a public hospital because too many people and the doctors and nurses wont treat a housemaid well. Not that one. They won't treat, their attention is full. As a housemaid or a driver you cannot get 100% attention. They will treat another, just like that (P8).

5.5.4 Access factor: Time as barrier and underpinning structural factors

Not having time to go for pap-testing was reported by half of all survey participants (49.9%). A significantly greater proportion of women who had never had a pap-test reported not having time to go for a pap-test (56.9%) versus the pap-testing group (40.7%). Most interview participants working as domestic workers seemed to have very limited time off work, limiting their opportunities to go for pap-testing and some mentioned they had only a few hours once per month off of work. Two interview participants described not having had any days off

since they had been with their employers, and one participant even reported having no time off in the last six years. One participant described '*feeling shy to ask permission to go out*', and as a consequence she had not left the house since her arrival one year earlier, unless accompanying her employer. Several others mentioned they needed permission from their employer to go out and some women also felt scared to ask permission from their employers to go out for a pap-test. Interview participants described that going for a pap-test was not feasible to them as they always felt pressure to go back to their employers.

And the, the problem is the time. Cause we have our dictations, our families [employer], so it is not possible, always we have to go back ...to our families so we don't have time for ourselves (P4).

One interview participant described how she would go and visit a doctor in secret by pretending to go to the market to do shopping for the family, her employer. Considerable power imbalance seemed to be present in the relationship with the employer, and interview participants referred to the female in the employee household as 'madam', and some participants also addressed the researcher in this way. One interview participant described how her employers kept her passport as well as her employee contract and health insurance policy, which she had never seen. Keeping domestic workers' passports is illegal, yet these practices were described as '*normal*'. Despite this, one interview participant described her employer as '*good*' and felt she was treated well. Others described more problematic relationships with their employers, with reports of employers shouting at them and fears of not being paid or losing jobs were expressed. During one of the interviews, shouting was evident in the background and cries for the participant were heard. The participant listened to her employer's cries and stayed rather stoical with a small smile on her face. She explained to the researcher that she replied to her employer that she was with '*granny*', the elderly frail woman who was present in the room. Another interview participant seemed troubled and angry about the relationship with her employers, however, she revealed how she had to keep her calm when employers became angry with her as ultimately she was not in her home country.

Yeah, if you are good, even if you want to shout, you have to keep inside. You are not in your home country. There will be trouble, they will get angry and shout at you. It's better to be quiet and keep it inside. Hopefully the salary will come and that is it. If they get angry, ok silent yes. I don't like to talk a lot because in the end you are still the loser (P8).

Interview participants described feeling scared of jeopardising their jobs by the employer finding out participants may have an illness or that anything might be wrong with them. One interview participant described the employer taking her to a doctor when she was ill just to check if she might be pregnant. Other interview participants described that doing a pap-test and finding out they might be ill would mean their employer would send them back home to the Philippines, and this would result in the women not being able to provide financially for their children and families in the Philippines, again highlighting the importance of having to provide for one's family.

I'm not scared of the doctor at all because of what happened to me I am scared because... If I go to the doctor then how about if something different for me... And I don't want to be sent to the Philippines. How about if the employer sends me to the Philippines? [...] I'm not scared about what this might happen to me, I'm not scared to go to Doctor, but I'm scared about the employer (P2).

5.5.5 Predictors at institutional level- Logistic Regression Model 3: Access factors

A binary logistic regression was conducted to identify access predictors of pap-testing (Table 24)¹¹. Not having time was found a significant predictor of pap testing. Survey participants who disagreed with the statement that they have “no time” to be tested (e.g., women who reported having time to be tested) were almost twice more likely to engage in pap-testing than women who did not have time (OR=1.87, 95% CI 1.11-3.15, $p=.018$). Cost was also a significant predictor of pap-testing, as survey participants who did not identify cost as a barrier were more than twice as likely to engage in pap-testing than women who reported cost as a barrier (OR=2.08, 95% CI, 1.19-3.36, $p=.009$). Women with an overseas doctor were almost twice as likely to engage in pap-testing than women with a doctor in their home country (OR=1.80, 95% CI 1.05-3.07, $p=.031$).

Table 24 Model 3: Binary logistic regression access factors

Independent variables	B	S.E.	Wald	df	p	Odds ratio	95% CI for odds ratio	
							Lower	Upper
No time (disagree) ^a	.629	.265	5.640	1	.018*	1.876	1.116	3.154
Cost (disagree) ^a	.735	.283	7.733	1	.009*	2.086	1.197	3.3634
No overseas doctor (disagree) ^a	.589	.273	4.648	1	.031*	1.801	1.055	3.076
$\chi^2 (3, n=353)=35.204$ $p<0.000$. Hosmer and Lemeshow Test= .066, Cox & Snell R square=.095; Nagelkerke R square=.127								

* Significant at $p<0.05$

^a Reference group is the ‘agree with’ group

¹¹ Variables significant in bivariate analyses were included in model 3 (detailed in Appendix 15). The model in Table 24 was statistically significant, $\chi^2(6, n = 353) = 35.204$ $p < 0.000$ suggesting that access factors explained a substantial portion of variance in pap testing. The Hosmer and Lemeshow p -value was .066 and therefore exceeded the required value of .05 (Pallant 2010) for goodness-of-fit. The model explained between 9.5% (Cox & Snell R^2) and 12.7% (Nagelkerke R^2) of the variance in pap-testing (Pallant 2010) and the model predictors correctly classified 67.4% of participants’ pap-testing status. The variables, ‘not knowing where to go’ [for a pap test] and ‘making an appointment is problematic’ were excluded from the final model due to poor fit resulting in convergence problems.

5.5.6 Associations at Institutional level- Health Care Provider Factors

Table 25 presents the associations between health care provider factors and pap-testing.

Table 25 Associations with pap-testing at institutional level: HCP factors.

Institutional level Factors: Health care Provider Factors				
Barrier or facilitator to pap-testing	Did not report Pap-test (N,%) N=271, 56.5%	Reported Pap-test (N,%) N=209, 43.5%	Total (N,%) N=480	Statistic χ^2, M^2
Does not like the way the doctor speaks to them, n (%) Agree	34 (16.4)	21 (13.3)	55 (15.1)	$M^2 (1, n=365)=5.382$ $p=.020^*$
Language barrier, n (%) Agree	64 (29.5)	31 (19.5)	95 (25.3)	$M^2 (1, n=376)=8.221$ $p=.004^*$
No recommendation HCP, n (%) Agree	115 (47.7)	33 (19.4)	148 (36)	$M^2 (1, n=411)=36.845$ $p=.000^*$
Trust overseas doctor, n (%) Agree	116 (53.7)	78 (46.7)	194 (50.7)	$M^2 (1, n=383)=1.260$ $p=.262$

* Significant at $p<0.05$

Two-thirds (67.4%) of survey participants disagreed with the statement, 'I do not like the way the doctor speaks to me'; a minority (15.1%) did agree with the statement and this was significantly higher in the non-pap-testing group (16.4%) than the pap-testing group (13.3%). Language barriers were a concern for a quarter of survey participants (25.3%), and these concerns were significantly more common in the non-pap-testing group (29.5%) than in the pap-testing group (19.5%). The ethnicity of the doctor did not make a difference to interview participants and none of the participants seemed to find Filipino nationality of the health care provider important, and language issues as communication barriers were not brought up in interviews.

About one-third of survey participants (36%) reported that having not been advised to take a pap-test was a reason for not having a pap-test, and women who did not get a pap-test (47.7%) were significantly more likely to report not being advised to get a pap-test (19.4%). None of the eight interview participants had ever received a recommendation for a pap-test from a health care provider and no health care provider had ever spoken to them about pap-testing, although one woman had been recommended pap-testing by her midwife when she had her children several years previously.

Yes, even the nurse they can promote, even the midwife nurses, they can promote about the pap smear (P7)

The majority of survey participants (92.5%) responded that they would attend pap-testing if their health care provider recommended it. A minority of survey participants (16.4%) also reported not trusting their doctor overseas, which was not found to be significantly different between groups. However, in the interview phase, trust was brought up by one participant as she was worried about the doctor sharing her confidential information with her employers or with others, such as the police. This participant engaged in sexual contact with a man she was not married to, which is illegal in her host-country. The woman had started bleeding heavily after the last sexual contact she had, and although she was worried about this and believed a

pap-test would be beneficial to investigate this, she was too scared to go to the doctor. She worried her ‘*secret*’ would be ‘*found out*’ if she admitted she was having sex. The participant worried about the consequences of being sent to the police and eventually back home to the Philippines, where she would not be able to provide financially for her children. At the end of the interview the researcher found contact information for a female Filipino gynaecologist based in her host-country and the participant seemed not to have the same confidentiality concerns with this gynaecologist and seemed excited to explore this possibility.

But I don't know what I said if I go to OB, I don't know what I would said to them, what happened because I don't want them to say I have sex (P3)

5.5.7 Predictors at institutional level- Logistic Regression Model 4: Health care provider factors

A binary logistic regression was conducted to identify health care provider (HCP) predictors of pap-testing (Table 26).¹² Results suggest that receiving advice from a HCP was the only significant predictor of pap-testing. Specifically, survey participants who had received advice were 4.7 times more likely to have had a pap-test than survey participants who had not received advice from a HCP (OR=4.763, 95% CI 2.89-7.85, $p=.000$). Language barriers in patient-doctor communication and patient perceptions in the way the doctor speaks to the participant were not significant predictors of pap-testing status.

¹² Variables significant in bivariate analyses were included in model 4 (detailed in Appendix 15). The full model containing all HCP factors displayed in Table 26 was statistically significant, $\chi^2(5, n = 324) = 54.109$ $p < 0.000$, suggesting that HCP factors explained a substantial portion of variance in pap testing. The Hosmer and Lemeshow test p -value was .782 and explained between 15.4% (Cox & Snell R^2) and 20.5% (Nagelkerke R^2) of the variance in pap-testing. These metrics indicate model utility (Pallant 2010). Independent variables correctly classified 67.6% of pap-test reports.

Table 26 Model 4: Binary logistic regression HCP factors

Independent variables	B	S.E.	Wald	df	p	Odds ratio	95% CI for odds ratio Lower	95% CI for odds ratio Upper
Recommendation HCP (yes) ^a	1.561	.255	37.436	1	.000*	4.763	2.889	7.854
Language barrier (disagree) ^b	.692	.416	2.765	1	.096	1.999	.884	4.520
Do not like doctor's way of speaking to me (disagree) ^b	-.083	.470	.031	1	.860	.920	.366	2.314
$\chi^2(3, n = 324) = 54.109$ $p < 0.000$ Hosmer and Lemeshow Test= .782, Cox & Snell R square=.154; Nagelkerke R square=.205								

* Significant at $p < 0.05$

^a Reference group is 'no' group

^b Reference group is 'agree' group

5.6 Results Section 5. The socio-ecological level: Social and cultural factors

Associations between pap-testing and socio-ecological factors at the social-cultural level (embarrassment, religion, collectivism, and acculturation) are presented in Table 27.

Table 27 Associations with pap-testing at social-cultural level: embarrassment, religion, collectivism and acculturation

Social-cultural Factors				
Barrier or facilitator to pap-testing	Did not report Pap-test (N,%) N=271, 56.5%	Reported Pap-test (N,%) N=209, 43.5%	Total (N,%) N=480	Statistic <i>t</i> , <i>M</i> ²
Embarrassment, (M±SD) ^a	15.47 ± 4.4	18 ± 3.9	16.57±4.37	<i>t</i> (n=344)=-5.446, <i>p</i> =.000*
Collectivism, (M±SD) ^b	20.5±4.24	18±4.6	19.43±4.54	<i>t</i> (n=385)=5.243, <i>p</i> =.000*
Acculturation, (M±SD) ^c	20.9±4.61	22.3±4.42	21.54±4.58	<i>t</i> (344)=-2.942, <i>p</i> =.003*
Fatalism, n (%) Agree	41 (18.1)	14 (8.6)	55 (14.1)	<i>M</i> ² (1, n=390)=13.755 <i>p</i> =.001*
Cancer is a punishment, n (%) Agree	82 (36.8)	58 (33.5)	140 (35.4)	<i>M</i> ² (1, n=396)=2.264 <i>p</i> =.132
Daily praying, n (%) Agree	210 (87.5)	172 (92)	382 (89.5)	<i>M</i> ² (1, n=427)=.757 <i>p</i> =.384
Relies on religious community for health advice, n (%) Agree	80 (36.2)	55 (32.2)	135 (34.4)	<i>M</i> ² (1, n=392)=.199 <i>p</i> =.158

* Significant at *p*<0.05

^a Embarrassment scale: Embarrassment scale: 0-5=extremely embarrassed, 6-10= highly embarrassed, 11-15= embarrassed, 16-20= slightly embarrassed, 21-25= not embarrassed.

^b Collectivism scale: 0-10=low 11-20=moderate 21-30= high collectivist

^c Acculturation scale: 0-10= very low, 11-15=low, 16-20=some, 21-25= moderate, 26-30= high, 31-35= very high acculturation

5.6.1 Associations social and cultural factors: Embarrassment

Survey participants in the non-pap-testing group reported significantly more embarrassment ($M=15.47$, $SD=4.4$) than the pap-testing group ($M=18.0$, $SD=3.9$)¹³. Some interview participants did discuss the gender of the doctor and they preferred their doctor to be female as they found that more comfortable. In the interviews, two women reported that embarrassment and feeling shy was an issue. They felt shy about undressing in front of a doctor and one woman shared that after having five children she felt shy about the way her vagina looked. The other interview participants did not feel shy or embarrassed about undressing and not about discussing the topic of pap-testing with a health care provider. These women expressed that talking about these issues was 'normal' to them.

(Laughter) I have already 5 kids, so, I feel shy because (laughter) the vagina it's not same with 5 kids, I feel shy (P6).

Ah for me, no, no embarrassment. Why should I? (P4).

Additionally, although most women connected cervical cancer with having sex with multiple men, only one woman described linking a pap-test with a sexual connotation of 'a bad woman'. Other interview participants did not seem worried about their reputation when going for a pap-test.

¹³ The magnitude of the difference in the means (mean difference=2.49, 95% CI: -3.38 to -1.58) was large (eta squared=.08).

5.6.2 *Associations social and cultural factors: Religion*

A minority of survey participants (14.1%) believed that God would determine their fate and therefore, there was no need for them to attend pap-testing and this was significantly higher in the non-pap-testing group (18.1%) than in the pap-testing group (8.6%). One-third of survey participants (35.4%) believed that cancer was a punishment but no significant difference was found between groups. Praying everyday was reported by 90% of women and this was not significantly different in the groups. One-third (33.6%) of women relied on their religious community for health advice, which was not significantly different between groups.

5.6.3 *Associations social and cultural factors: Collectivism*

Total collectivism score did differ significantly between pap-testing ($M= 18.1$, $SD=4.6$)' versus the non-pap-testing group ($M=20.5$, $SD=4.2$),¹⁴ indicating that those women who reported no pap-test scored significantly higher on the collectivism scale. When exploring this factor in more depth in the qualitative phase, all interview participants wanted to be healthy, particularly for their children. Children came first and all decisions women seemed to make were based on the well-being of their children, even if this was at their own expense. Looking after the children financially, paying for their schooling, their food, and their needs appeared to be participants' priority. Providing financially for their children corresponded to and emerged from the structural factor 'poverty'. The consequence of not being healthy, and thus not being able to look after their children financially, was considered critical by several participants. Sending money home was the ultimate priority and many other barriers seemed related to this key drive for women. Looking after the women's parents financially was also

¹⁴ The magnitude of the difference in the means (mean difference=2.4, 95% CI: 1.47 to 3.28) was moderate (eta squared=.066).

described as crucial, not only because parents often looked after the children in the Philippines, but also because looking after parents is the cultural norm.

No, of course if your Filipinas like us, you always something feeling sad for our children so that is why sometimes whatever feeling or we are feeling, not feeling good or whatever, we always put our family first before ourselves (P1)

5.6.4 Associations social and cultural factors: Acculturation

Total acculturation scores differed significantly between the pap-testing ($M= 22.32$, $SD=4.4$) versus ‘not pap-testing’ groups ($M=20.9$, $SD=4.6$),¹⁵ indicating that those women who did not report pap-testing scored significantly lower on the acculturation scale.

5.6.5 Predictors at social and cultural level- Logistic Regression Model 5: Social and cultural factors

A binary logistic regression was conducted to identify social and cultural predictors of pap-testing (Table 28).¹⁶ Two variables, collectivism and embarrassment about pap-testing, were identified as significant predictors of pap testing. For each one-unit increase on the collectivism scale, the odds of having a pap-test decreased by 11% ($OR=.894$, 95% CI .841-.951, $p=.000$). Women who were not embarrassed were more than twice as likely to engage in

¹⁵ The magnitude of the difference in the means (mean difference= 1.422 , 95% CI: -2.38 to $-.495$) was small (eta squared= $.024$).

¹⁶ Variables significant in bivariate analyses were included in model 5 (detailed in Appendix 15). The model as a whole was significant $X^2(8, n=321)=35.714$ $p<0.000$ and the Hosmer and Lemeshow p -value was $.679$, indicating model goodness-of-fit. The independent variables explained 10.5% (Cox & Snell R^2) and 14.1% (Nagelkerke R^2) of variance in pap-testing. The model predictors correctly classified 64.7% of participants’ pap-status. The variable ‘I do not need to go for a pap-test because God will determine my fate’, was excluded from the model due to poor fit resulting in convergence problems.

pap-testing than women who were embarrassed (OR=2.18, 95% CI 1.23-3.86, $p=008$).

Acculturation and HCP gender were not significant predictors of pap-testing.

Table 28 Model 5: Binary logistic regression social and cultural factors

Independent variables	B	S.E.	Wald	df	<i>p</i>	Odds ratio	95% CI for odds ratio	
							Lower	Upper
Total score collectivism	-.112	.031	12.565	1	.000*	.894	.841	.951
Total score acculturation	-.006	.026	.055	1	.814	.994	.946	1.045
Embarrassment	.779	.292	7.117	1	.008*	2.179	1.230	3.862
Gender HCP (disagree) ^a	.163	.292	.311	1	.577	1.177	.664	2.085
$\chi^2 (4, n=321)=35.714$ $p<0.000$. Hosmer and Lemeshow Test= .679, Cox & Snell R square=.105; Nagelkerke R square=.141								

* Significant at $p<0.05$

^a Reference group is the 'agree' group

5.7 Results Section 6. Research questions revisited and summary of key results section 1-5.

In this final results section, a summary of key results is provided by revisiting the research questions. Significant predictors as previously reported, are combined in one final logistical regression model.

5.7.1 Research questions revisited

5.7.2 Research Question 1: uptake of pap-testing for OFWs

Research question 1 was answered and the uptake of pap-testing was reported. Although 86.6% of participants reported to have thought of having a pap-test, 56.5% reported never having had a pap-test. Only 43.5% reported to have engaged in pap-testing at one point in their life, and only 25.8% of the whole sample had a pap-test within the last 3 years.

5.7.3 Research Question 2: barriers and socio-ecological factors associated with pap-testing for OFWs

Multiple associations were found and hypotheses were tested in answering research question 2: ‘What are barriers and socio-ecological factors associated with pap-testing for OFWs?’ Differences in variables between groups were described for participants who did report pap-testing, and those who did not.

5.7.3.1 Barriers and facilitators as found at individual level

Proportionally fewer women residing in Asia reported pap-testing compared to those living in GCC. No differences in pap-testing by educational attainment or income were observed. Women who did report pap-testing were more likely to be married and had been working overseas for a longer period. Women who reported pap-testing were likely to be older rather than younger, as had been hypothesised. Women who reported pap-testing were not more likely to perceive the pap-test as efficacious and did not perceive themselves as more susceptible to cervical cancer, as had been hypothesised, but were more likely to believe pap-tests were beneficial and good for them. Women who did report pap testing demonstrated significantly slightly higher levels of knowledge, had thought about having a pap-test, showed less fear of the outcome of the pap-test and less fear of the procedure, were less likely to report not having symptoms as a reason not to attend pap-testing. Table 29 presents the findings of this study by individual socio-ecological factors.

Table 29 Barriers and facilitators of pap-testing supported by findings at individual level

Barriers and facilitators to pap-testing supported by findings at individual level			
Demographic Characteristics			
	Positive association	Negative association	No association
Education			✓
Marital status (married)	✓		
Age (older)	✓		
Country (Asia)		✓	
Time overseas	✓		
Income			✓
Cognitive factors			
Knowledge	✓		
Have thought about pap-testing	✓		
Fear of outcome		✓	
Fear of the procedure		✓	
No symptoms		✓	

Perceived benefits of pap-testing	✓		
Perceived susceptibility			✓
Perceived efficacy			✓

5.7.3.2 *Barriers and facilitators as found at institutional level*

Table 30 presents the findings of this study by institutional socio-ecological factors. Hypotheses were supported and women who did have a pap-test were more likely to report they had an overseas HCP and were less likely to indicate the following barriers: time, cost, and knowing where to go. Hypotheses were not supported for transportation and health insurance as these were not identified as barriers. Women who had a pap-test were less likely to report issues with HCP communication, language, or making appointments, and women who had a pap-test were more likely to have received a recommendation to do so from their HCP. Trust in the overseas HCP was not found a barrier, as had been hypothesised.

Table 30 Barriers and facilitators of pap-testing supported by findings at institutional level

Barriers and facilitators to pap-testing supported by findings at institutional level			
Access factors			
	Positive association	Negative association	No association
Having time	✓		
Cost (too expensive)		✓	
Knowing where to go for pap-test	✓		
Have an HCP overseas	✓		
Have health insurance			✓
Transportation no problem			✓
Making appointment is not difficult	✓		

HCP factors			
Communication with HCP	✓		
Trust their HCP overseas			✓
Have had recommendation from HCP	✓		
Making appointment is not difficult	✓		
No language barrier	✓		

5.7.3.3 Barriers and facilitators as found at social-cultural level

Table 31 presents the findings of this study by social-cultural socio-ecological factors. Women who had a pap-test were less likely to report embarrassment as a barrier to pap-testing and less likely to believe God would determine fate; and therefore, not needing a pap-test as a result. Women who had a pap-test scored lower collectivism scores and higher acculturation scores than women who did not have a pap-test.

Table 31 Barriers and facilitators of pap-testing supported by findings at social-cultural level

Barriers and facilitators to pap-testing supported by findings at socio-cultural factors			
Social-cultural factors			
	Positive association	Negative association	No association
Embarrassment		✓	
Fatalism		✓	
Collectivism		✓	
Acculturation	✓		

The main hypothesis ‘socio-ecological characteristics are related to pap-testing for OFWs at the individual, social-cultural, institutional, was supported for all levels.

5.7.4 *Research question 3: socio-ecological predictors of pap-testing for OFWs*

Multivariate analyses were conducted and models 1-5 presented factors significantly predictive of pap testing at each socio-ecological level. To bring all predictors together and determine the independent contribution and predictive value of the independent variables when considered together according to the socio-ecological model, an additional multivariate logistic regression analysis was conducted and resulted in one final model, model 6 (Table 32). Model 6¹⁷ included only the significant predictors from models 1-5 (detailed in Appendix 16).

In model 6, marital status, fear of outcome, time, HCP recommendation and collectivism, were identified as significant predictors of pap testing. HCP recommendation was the strongest predictor of pap-testing; women who had received a HCP recommendation were 8.4 times more likely to engage in pap-testing (OR=8.442, 95% CI 3.746 -19.022, $p=.000$). Women who were married or previously married were 4.2 (OR=4.156, 95% CI 1.525-11.325, $p=.005$) and 3.9 (OR=3.873, 95% CI 1.309 -11.457, $p=.014$) times more likely to engage in pap-testing than women who were single, respectively. Women who had no fear of the outcome were 2.5 times more likely to engage in pap-testing than women who did have fear of the outcome (OR=2.535, 95% CI 1.083-5.932, $p=.032$). Women who reported finding time for pap-testing was not a barrier were more than three times as likely to engage in pap-testing than women who reported no time (OR=3.324, 95% CI 1.428-7.783, $p=.005$). Higher collectivism scores were negatively associated with pap-testing. For each one-unit increase on

¹⁷ The model as a whole was significant $X^2(10, n=207)=101.325$ $p<0.000$. The model correctly classified 79.2% of cases and the Hosmer and Lemeshow p -value was .948, indicating model goodness-of-fit. The independent variables explained 38.7% (Cox & Snell R^2) and 51.8% (Nagelkerke R^2) of variance in pap-testing. Variables ‘country’, ‘cost’ and ‘no overseas doctor’ were excluded from the final model due to poor fit resulting in convergence problems.

the collectivism scale, the odds of having a pap-test decreased by 10% (OR=.901, 95% CI .823-.986, $p=.024$). Age and knowledge were not significant predictors of pap-testing in the final model.

Table 32 presents a summary of all factors significantly predictive of pap testing answering research question 3: What are the socio-ecological predictors of pap-testing for OFWs? To summarise, these predictors include marital status (married and divorced, separated and widowed were more likely to be pap tested than those who were single), cognitive factors (e.g., less fear of outcome); access factors (e.g., sufficient time, recommendation of HCP); and social and cultural factors (e.g., collectivism values).

Table 32 Model 6: Predictive factors of pap-testing socio-ecological levels combined

Independent variables	B	S.E.	Wald	df	p	Odds ratio	95% CI for odds ratio		Actual Power ^d
							Lower	Upper	
Demographic factors									
Marital status (married) ^a	1.425	.511	7.760	1	.005*	4.156	1.525	11.325	.99
Marital status (divorced, separated, widowed) ^a	1.354	.553	5.986	1	.014*	3.873	1.309	11.457	.99
Age	.047	.029	2.679	1	.102	1.048	.991	1.110	.05
Cognitive factors									
Total knowledge	0.82	0.46	3.226	1	0.72	1.086	.993	1.188	.06
Fear of outcome (disagree) ^b	.930	.434	4.598	1	.032*	2.535	1.083	5.932	.84
Access factors									
No time (disagree) ^b	.1.167	.428	7.892	1	.005*	3.324	1.438	7.783	.97
Health care provider factors									
Recommendation HCP (yes) ^c	2.133	.415	26.485	1	.000*	8.442	3.746	19.022	.99
Social and cultural factors									
Total score collectivism	-.105	.046	5.120	1	.024*	.901	.823	.986	.06
χ^2 (8, n=207)=101.325 $p<0.000$. Hosmer and Lemeshow Test= .948, Cox & Snell R square=.387; Nagelkerke R square=.518									

* Significant at $p<0.05$

^a 'Single women' are the reference group

^b Reference group is 'agree' group

^c Reference group is 'no' group

^d Post-hoc power analyses suggest that these analyses were powered at 99% to detect an odds ratio of 3.7. Power calculations specific to each effect size were conducted for each odds ratio in Table 32. G*Power was used for all power calculations.

5.7.4.1 Research Question 4: perspectives of OFWs of the barriers and socio-ecological factors associated with pap-testing

In the qualitative phase of this study, research question 4 was addressed and participants' perspectives regarding barriers and facilitators that were found in the survey phase of the study, were explored in interviews. Interview data provided understanding and context to survey findings. Interview participants described low uptake of pap-testing but all seemed willing to engage in pap-testing, although attending pap-testing in the host-country seemed not to have been considered.

Despite finding moderate to good knowledge levels in the survey phase, misconceptions were found in the interviews regarding knowledge of pap-testing and its purpose. Most participants believed pap-testing to be beneficial and beliefs around prevention and early treatment were noted. Exploration of significant barriers of pap-testing such as time, cost, fear of outcome, restricted access to health care and collectivism and what these factors meant to women, revealed a different dimension to findings, and an added layer of structural context to the quantitative findings. The individual and cognitive factor 'fear of outcome of a pap-test' was underpinned by social and cultural values of putting family and children first, stressed by the underpinning of a structural context of poverty and women's overarching need to provide financially for their children. Difficulty in navigating the health system in host countries was underpinned by women's structural context, ultimately resulting in women experiencing difficult working and living circumstances not conducive to pap-testing. Interview data

demonstrated how barriers were interacting for OFWs and these interviews revealed an interplay between factors at different socio-ecological levels.

Findings from all data combined suggested that socio-ecological characteristics were related to pap-testing for OFWs at individual, social-cultural, institutional, and structural levels.

6 Chapter 6. Discussion

In this mixed-methods, web-based study, knowledge, practices and barriers for OFWs regarding pap-testing were explored and multiple barriers to pap-testing were found. In this chapter, findings are reviewed in light of existing literature and theoretical underpinnings. Additionally, the implication of findings are discussed.

6.1 Practice of pap-testing

The findings from the current study demonstrate a low uptake of pap-testing amongst 480 OFWs. Less than half of participants (43.5%) reported a pap-test at one point in their life, 25.8% reported a pap-test in the last 3 years, 13.1% reported a pap-test in the last year. These pap-testing rates are considerably lower than those rates reported in previous US studies (Table 8), which show considerably higher uptake of pap-testing ranging from 70% to 94.5% for ‘ever had a pap-test’. Two US studies showed lower rates of ever having had a pap-test of 48% (Yoo *et al.* 2011) and 38.5% (Ayres *et al.* 2010), although both studies included samples with younger women (age 21-28 and 18-21 respectively), which may explain their findings. Pap-testing rates reported by OFWs in this study were also lower than for foreign born Filipino women in Canada, of whom reported 62.8% to ever have had a pap-test, 53.5% reported a pap-test in the last three years, and 37.3% reported a pap-test in the last year (McDonald and Kennedy 2007). Pap-test uptake rates in the current study were comparable to both Holroyd’s Hong Kong studies (2001, 2003). Holroyd *et al.* (2003) found in a cross-sectional survey conducted among 98 Filipino female domestic workers in Hong Kong, 47% had ‘ever participated in pap-testing’. In this study, only 4% reported having had a pap-test in the last 1-2 years. In a survey study with 290 Filipino domestic workers recruited through snowball sampling in Hong Kong, 21.7 % of women ever had a pap test (Holroyd *et al.* 2001).

These discrepancies in findings between this study and US studies, could be that samples in the current study as well as in Holroyd's studies (2001, 2003), may not be comparable to samples in the US studies. For migrant Filipinas in different contexts than the US, with possibly less secure immigration status through temporary work contracts, research findings may not be comparable. Temporary migrants who work on a contract basis and whose residency depends on their work contract, experience higher levels of stress in comparison to permanent migrants and may have more difficulty navigating an unfamiliar health care system (Iyer *et al.* 2004). Also, permanent migrants in the US would be included in national cancer screening programmes whilst most OFWs in the current study reside in countries with limited access for migrants to preventative healthcare and opportunistic cancer screening (Table 2). In addition, very few US studies offered research materials in Tagalog, the Filipino language, while several other Asian languages were offered to US-based research participants. This may result in inclusion of only those Filipinas who speak good English and have perhaps lived longer in the US (Chen *et al.* 2004), which may also mean that they are more acculturated. Offering research materials in alternative languages, as was done in the current study, is vital to limit selection bias in participant recruitment (Lewis-Beck *et al.* 2003).

The low uptake of pap-testing amongst OFWs in the current study demonstrates the urgency and importance of the public health issue. In the current study, 82% of women in the survey intended to go for a pap-test and 'excitement' was expressed in interviews about attending pap-testing. Intent may have been stimulated by the research. However, the study may have attracted women who had questions about pap-testing and a potential social desirability response bias in women's responses to interview questions should be considered when interpreting the findings.

OFWs reported significantly lower pap-testing rates than Filipino migrants in some of the host countries, such as the US or Canada (Figure 13). OFWs in this study also reported significantly lower pap-testing rates than native women in the US and Canada. However, comparing the findings on OFWs pap-testing rates to pap-testing rates reported for native

women in the host countries (Figure 13), demonstrates that it seems not in all host countries pap-testing rates for OFWs were lower than pap-testing rates reported for native women. OFWs pap-testing rates in this study compared to pap-testing rates for native women in the host countries, as can be seen in Figure 13, demonstrate that OFWs reported lower pap-testing rates than native women in all host countries, except for native women in the Philippines, Malaysia, China, Romania, Pakistan, Kuwait, Qatar, Lebanon, Jordan, Saudi Arabia and the UAE. Comparisons between this study's findings and the IARC data are not straightforward due to methodological differences. However, none of these countries have established national screening programmes in place (IARCC 2017), presenting health inequalities not only for OFWs, but to all women in these particular countries including their native women.

Hong Kong appears to have a lower pap-testing rate than OFWs in the current study in Figure 13, however Figure 13 presents pap-testing rates at 18.4% for women in Hong Kong (ages 25-64) in the last year. Pap-testing rates at the screening interval of the last year for OFWs in this study was found to be 13.1%. Pap-testing rates for different intervals or 'pap-test ever' was not found for Hong Kong, again making comparisons challenging (IARC 2017). OFWs do report higher pap-testing rates than native women in the Philippines, despite the majority of OFWs (72.6%) reporting to have had their pap-test in the Philippines. A possible explanation for this finding is married or being previously married had been found a predictor of pap-testing and a larger proportion (72.4%) of OFWs fell into these categories than single women (27.6%). Although this was a highly educated sample, this study found education not a predictor of pap-testing and therefore level of education is unlikely to present an explanation for the lower pap-testing rate for the Philippines, as reported by IARC (2017). More research is needed to explain this finding.

Figure 13 Pap-testing rates host countries including the current study's findings

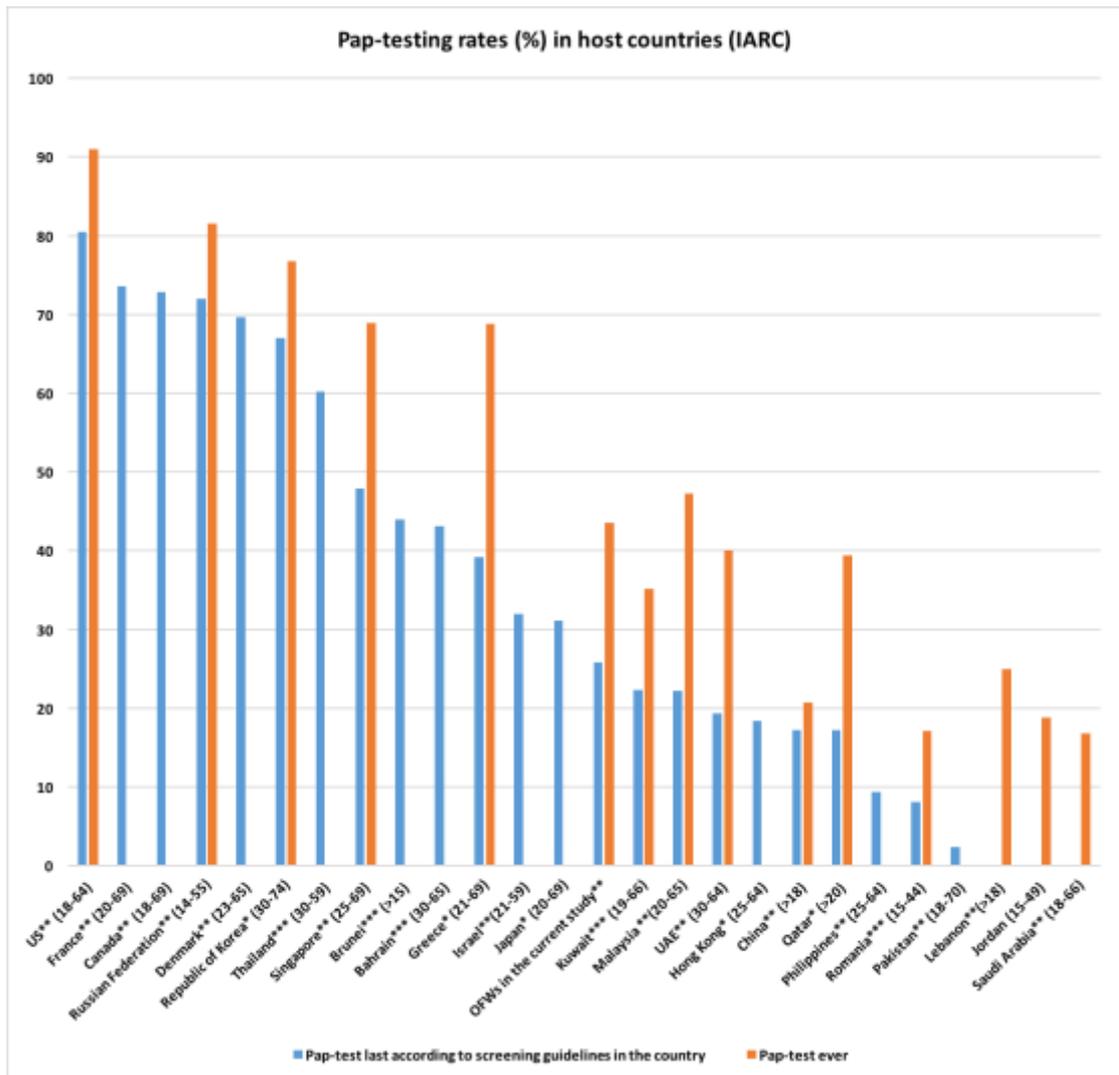


Figure based on data from IARC, HPV Information Centre (2017) presented by country, pap-test screening interval, and the age range data are based on. For some countries data are not available either per screening interval, or for 'pap test ever'.

*=1-2 year screening interval, **=3 year screening interval, ***=5 year screening interval.

6.2 Barriers to pap-testing: Individual factors

6.2.1 Demographic Factors

Age was significantly associated with pap-testing and younger women (<38) were less likely to engage in pap testing than older women, although age was not found a predictor in the final model. In previous literature, age has been found to be associated with pap-testing, although McBride *et al.* (1998) found that pap-testing decreased for women over 50, which was not found in this study. Marital status was found to be a predictor of pap-testing, which was confirmed in other literature and some authors suggest targeting non-married women to increase the uptake of pap-testing (Kagawa-Singer *et al.* 2007; McDonald and Kennedy 2007; Ho and Dinh 2010; Sentell *et al.* 2015). The current study recommends targeting younger and non-married women. The findings for non-married and younger women could be related to sexual in-activity. However, this has not been measured in the current study due to ethical considerations, but future studies with this population should collect data on sexual activity.

OFWs based in Asia were found less likely to engage in pap-testing than in other countries. This finding cannot easily be explained and access to healthcare and cervical cancer screening is as limited and opportunistic for OFWs in Asia as it is in the Gulf countries (Table 2). This finding suggests more research is required into specific countries. Socio-economic status was reported in the literature as related to pap-testing (Kagawa-Singer and Pourat 2000; McDonald and Kennedy 2007), which could not be confirmed in the current study. This discrepancy was possibly due to the sample in the current study reporting high levels of education yet low levels of income, and education was not significantly associated with pap-testing. Income was also not related to pap-testing, which could be connected to income being measured in US dollars, and not in Filipino pesos, possibly leading to missing data for 29% on this variable. The literature highlights that it is common for OFWs to be educated, yet work in low-skilled jobs (Holroyd *et al.* 2001; Iyer *et al.* 2004; Constable 2007), as found in the

current study. Education may therefore not be a good proxy for socio-economic status for OFWs, but income, measured appropriately, or perceived socioeconomic status could be more suitable in future research (Braveman *et al.* 2001).

6.2.2 Cognitive Factors

In both phases of the study, knowledge and health beliefs were found to be significantly associated with pap-testing. Almost all the women were aware of pap-testing. Women who were not pap-tested scored in the 'moderate' range of knowledge levels and women who received pap-tests scored just into the 'good' range. Although findings showed a significant difference between groups in knowledge levels, the difference was small. Possessing knowledge was not found to be a predictor of pap-testing in the final model and when exploring knowledge in more depth, interviews showed some important misconceptions regarding cervical cancer and pap-testing. These findings, in which superficial knowledge seems reasonable but misconceptions are exposed when delving deeper, are confirmed in Holroyd *et al.*'s study (2003). Holroyd *et al.* (2003) found Filipino domestic workers mentioning the uterus instead of cervix. In the current study, women generalised cervical cancer to other parts of the female body such as the ovaries, womb and uterus, suggesting some lack of knowledge. This confusion regarding what cervical cancer really is and what parts of the body this applies to, was also supported in qualitative research with 20 Latin immigrant females in the US (McMullin *et al.* 2005), where women seemed to display similar confusion.

In the current study, the purpose of pap-testing was misunderstood and interview data revealed several women believing that pap-testing was required 'to clean'. This cleansing was related to sexual activity and women wanted a pap-test to be 'cleaned'. It was not clear from the findings whether this cleaning was related to an understanding that cervical cancer is related to HPV, a sexually transmitted virus, or whether the cleansing signifies a conceptualization of a virtuous, religious culture in which Filipino females need to behave as 'paragons of virtue' (Le Espiritu 2001 p. 421). Future research should explore this further, however, these misconceptions suggest that education on cervical cancer and pap-testing is required for this group. Although possessing knowledge is not sufficient and interventions need to target multiple factors, knowledge is necessary to engage in health behaviour (Rimer and Glanz 2014) and misconceptions can lead to unhelpful decisions. For example, although cervical cancer is related to sexual activity, it is a misconception that if a woman is currently not engaging in sexual activity, she does not need pap-testing, which was a question raised by a participant in the interview phase. Most survey participants did not answer the required frequency question correctly and believed a pap-test was required at least once per year. It is a possibility that the threshold of engaging in pap-testing is lowered for OFWs if women realize international guidelines for pap-testing suggest lower frequencies. This finding that knowledge levels were acceptable in the survey phase despite yet some clear misconceptions in the interview phase demonstrated the utility of some survey questions regarding knowledge. For example, the question about the frequency of pap-testing is commonly used in pap-testing research but may not be a good indicator of thorough knowledge, or understanding, of pap-testing in this population and should be revised for future research. The qualitative phase therefore added important information regarding knowledge to the quantitative phase.

Fear of the consequences of the results of a pap-test and fear of hearing bad news was identified as a predictor of pap-testing, a cognitive factor supported in other studies with Filipino women (Fu *et al.* 2003; Holroyd *et al.* 2003; Aitaoto *et al.* 2009; Gor *et al.* 2011).

Interviews in the current study added insight into what this meant for women. In line with the socio-ecological model and a demonstration of how barriers inter-relate, women's own mortality was part of this fear and women's structural and economic circumstances seemed intertwined with this individual factor, as well as with social and community factors, and these factors weighed heavily in that women feared having to spend their hard-earned money on health care. Ultimately, OFWs' illness or death would mean not being able to look after their family and this finding was revealed in interviews, suggesting that poverty was a structural determinant and acted as a key, underpinning barrier to pap-testing for OFWs.

6.3 Barriers to pap-testing: Social and Cultural factors

The collective characteristic of Filipino culture was a predictor of pap-testing in the survey phase. Interviews revealed what an important factor collectivism was for OFWs in influencing uptake of pap-testing, in particular, sacrificing their own needs and health in order to provide for family. In the interviews, it was revealed that providing financially for family and sending money home was OFWs' primary goal. Providing financially applied to women's own children often in the care of OFWs' parents, but OFWs also wanted to provide for their parents. An important Filipino cultural value belonging to the collectivist character is that of reciprocity or '*utang na loob*', meaning that help and support provided will lead to receiving help and support in return. This cultural value applies to caregivers or close family, such as parents. Children may feel grateful or 'indebtedness' to their parents for giving them life and looking after them. Therefore, children will look after their parents to show '*utang na loob*'. This value is closely linked to religion, one can show '*utang na loob*' by praying for one another, and the practice of praying is often perceived as a collective practice with wanting to give and receive prayers (Lagman *et al.* 2014). The feeling that staying healthy for the benefit of family can act as a facilitator to health behaviour (Nguyen and Clark 2013). However, this

feeling may also enhance worry such as not wanting to hear bad news, which was found to act as a barrier to pap-testing in this study.

In line with the socio-ecological model and suspected interplay between factors, collectivism may also have a moderating impact on acculturation and embarrassment. Those women with high collectivist orientation would perhaps have stronger feelings to stay healthy for their family and this motivation may overcome feelings of modesty or embarrassment. In accordance with the Filipino '*utang na loob*', whilst those women with higher acculturation and low collectivist orientation may be more familiar with the procedure of pap-testing, the embarrassment involved, and limited collectivist motivation to help them to overcome the modesty barrier (Nguyen and Clark 2013). Collectivist cultures have been reported to experience more feelings of shyness and embarrassment (Myers 2009) and intimate procedures like pap-testing have been found to act as barriers for Asian women (Kagawa-Singer *et al.* 2007; Donnelly 2008). Embarrassment was also found significantly associated with pap-testing in the current study although did not remain a predictor in the final model. In addition, the majority of women in the interview phase did not describe embarrassment as important. An explanation for this discrepancy between phases of the study could be that women who volunteered for interviews felt comfortable discussing pap-testing while women who declined to participate did not feel comfortable. Recruitment for interviews was problematic and one woman declined invitation by email stating she did not feel comfortable discussing the topic face-to-face. Findings suggest that embarrassment acts as a barrier and gender-appropriate physicians may be a facilitator to overcome barriers of modesty. In the Gulf countries, a pap-tests would always be conducted by female HCPs. Although uptake of pap-testing for OWFs based in the Gulf region was still low in this study, it became clear in the interviews that women were not always aware that a pap-test would be conducted by a female HCP. The value of virginity was found a barrier to pap-testing in the literature (McBride *et al.* 1998; Kagawa-Singer *et al.* 2007), but could not be confirmed in the current study due to ethical considerations associated with measuring sexual activity. Although

women who did not receive pap-tests were more likely to believe that cervical cancer was related to promiscuity, having multiple sexual partners is also a risk factor for cervical cancer (CDC 2014b). Therefore, this variable should be measured differently in future research and conclusions regarding the value of virginity as a barrier to pap-testing cannot be drawn from the current study.

Acculturation and years spent overseas were also associated with pap-testing and significantly varied between groups, although these measures were not significant predictors in multivariate models. Acculturation to western society and more time in the US were found a facilitator to pap-testing in the US (McBride *et al.* 1998; Maxwell *et al.* 2000; Holroyd *et al.* 2001), although women in the current study may differ from those US studies in terms of migration status which may impact acculturation to host-countries. In addition, most host countries for women who participated in the current study were not 'western' societies with well-functioning and accessible cancer screening programmes.

Findings also suggest that cultural tailoring to promote OFWs to engage in pap-testing could be beneficial. Cultural tailoring has been defined as using health messages '*. . . which recognise and reinforce a group's cultural values, beliefs, and behaviours and built upon those to provide context and meaning to the health message*' (Resnicow *et al.* 2002; van der Veen *et al.* 2012 p. 346). In line with the socio-ecological model and the interplay between factors, cultural tailoring is thought to have a positive effect on both cognitive determinants and health behaviours in migrant populations (Erwin *et al.* 2007; van der Veen *et al.* 2014). The collectivist character of Filipino culture as a facilitator of pap-testing has been used in other studies by, for example, allowing Filipino women to attend appointments together in an intervention study with Filipino women in Hawaii, and conducting group education sessions in a randomized controlled trial in the US to encourage women to attend (Maxwell *et al.* 2003; Aitaoto *et al.* 2009). Using the strong social networks among Filipino women is an asset and women rely on health information from social networks which should be used in promotion of pap-testing (Schoenberg *et al.* 2006). Using Filipino 'role models', patient advocates and

survivors of cervical cancer may be an effective way of educating women regarding the importance of engaging in regular pap-testing. Although this study found that nationality of the physician was not important to women, the findings on acculturation imply that including Filipino (health) workers may be a facilitator, which was used in an intervention study in Hawaii (Aitaoto *et al.* 2009). Language barriers, which were found in the current study, could potentially be resolved by having Filipino health-and lay-workers involved in the process of pap-testing. Language barriers can be an important barrier to accessing health care (Zeraiq *et al.* 2015), as was found with Filipino women in Australia (Kelahe *et al.* 2003).

Another cultural value that was found related to pap-testing in this study was religiosity or fatalism, although this variable could have been measured more comprehensively (Dareng *et al.* 2015). Although fatalism was only reported for a minority of women in this sample, fatalism was significantly different between pap-testing and non-pap-testing groups. The role of fatalism in cancer screening is not yet clear (Baron-Epel *et al.* 2009). Fatalism has been related to locus of control which was not explicitly measured in this study and would require further study. Of survey participants, 34% reported relying on health advice from their religious community. In a predominantly catholic community, the church and religious values should also be utilised in the promotion of pap-testing. From a socio-ecological perspective, the church has potential to influence women at multiple levels and can be powerful in reaching the target population (Campbell *et al.* 2007). In the design phase of this study, several Filipino religious leaders were contacted in order to collaborate in recruitment of Filipino women, which was achieved in a study in Singapore (Iyer *et al.* 2004). In the current study, collaboration with churches was not successful, some religious leaders did not respond and others questioned how ‘appropriate’ discussing this subject with women would be, perhaps revealing conservative views towards pap-testing and possibly relating this to women’s sexuality. These theories could not be confirmed as gatekeepers did not engage in discussion and attempts to build trust were unsuccessful. Faith-based promotion of pap-testing has been found an effective method of reaching low-income minorities (Schoenberg *et al.*

2006; Luque *et al.* 2011). It is hoped that future research can establish successful partnerships with Filipino Catholic communities. Trust building with churches and religious organisations are delicate undertakings and should start early on in the design phase of research to allow for ample time to build rapport (Campbell *et al.* 2007).

6.4 Barriers to pap-testing: Institutional Factors

Institutional factors can be discussed in terms of OFWs' awareness of health care services, accessibility, affordability and how accommodating health services are towards the needs of OFWs (Kelahe *et al.* 2003). Results showed that participants had not truly considered attending pap-testing in the host-country. This was not reported in the Holroyd's studies (2001, 2003), as this phenomenon was most likely not measured. The large percentage (67.1%) of women who did not have a regular HCP was considerably higher than Holroyd *et al.*'s (2001) findings in Hong-Kong of 37.7% (N=290). Investigating this finding further showed that, for participants in the current study also residing in Hong Kong, this discrepancy remained. In fact, the proportion of participants in Hong Kong without regular HCP was nearly double (73%) the rate reported in Holroyd *et al.* (2001). An explanation for this discrepancy could not be offered and should be investigated in future research.

Women in the current study were not well-informed about navigating local health services, they did not know where clinics were, or where they could do a pap-test. In a study with 'intermarried' Filipino women in Australia, lack of awareness and understanding of where to go for health care services was also found, however, these women relied heavily on their Australian husbands for making their medical appointments (Hannah and Lê 2012). Most OFWs in this study would not have this level of support, making accessibility more problematic for this population and again demonstrating that temporary migrant workers may

experience additional barriers to accessing health care to permanent migrants, a notion which is supported in the literature (Iyer *et al.* 2004). This finding should also be interpreted in relation to the lack of active national cervical cancer screening programmes and lack of invitation to pap-testing for OFWs (Table 2). Transportation was not a barrier to pap-testing in this sample but has been reported as a barrier in other literature (Fu *et al.* 2003; Lu *et al.* 2011). This discrepancy cannot easily be explained and needs further research.

Affordability was a barrier and the worry about cost has been supported in other studies (McBride *et al.* 1998; Holroyd *et al.* 2003; Aitaoto *et al.* 2009). In this study, cost was initially a predictor of pap-testing but was excluded from the final model due to poor fit resulting in convergence problems. Affordability was, consistent with the socio-ecological model, related to other factors and stemming from the structural factor poverty. Worrying about costs is intertwined with the need to financially look after one's family. Becoming ill would mean not being able to work, and therefore not being able to look after family, resulting in compromising OFWs own health (Liu 2015). Lack of health insurance has been found in the literature as a barrier to screening (Kagawa-Singer and Pourat 2000; Sentell *et al.* 2015; Shoemaker and White *et al.* 2016), although this was not confirmed in the current study. This result could be related to the large proportion (51%) of women who reported not having health insurance, which could be related to a lack of macro-policies regarding Universal Health Coverage (UHC) for *all*, including citizens as well as residents. Table 2 highlights that UHC does not apply to OFWS in the most popular host countries and accessibility to preventative healthcare such as pap-testing is limited, resulting in health inequalities. Explanations for these findings should be studied further in future research.

Having a recommendation from a HCP was found to be the strongest predictor of pap-testing in the final model. OFWs have regular contact with HCPs as OFWs have to undergo routine compulsory medical tests related to visa requirements. Test are specific to each country, although these tend to include HIV/Aids, Hepatitis A, B, C, Tuberculosis, and for domestic workers, pregnancy tests (Philippine Overseas Employment Administration 2016). The

purpose of these tests is to determine suitability to work in the host-country. If women test positive, they cannot work or continue to work in the host-country and are immediately send back to their home country. The contact with HCPs in the context of testing does not seem aimed at caring for the health and well-being of OFWs. Liu (2015 p. 83) described how migrant workers are perceived by host and home countries as ‘unworthy of care’ when unproductive and not able to work; migrant women’s needs are constructed as ‘unnecessary, risky and prone to disease’. OFWs seem to be perceived as bodies prone to transmit diseases or dangerous in terms of their sexuality, yet useful for economic gains, providing they do not require any expenditure (Iyer *et al.* 2004). In a qualitative study with 30 OFWs in Singapore, women reported being forced to complete these compulsory medical tests (Iyer *et al.* 2004). In Singapore, as was also described in the current study, medical tests including pregnancy tests, are conducted every six months. When women start menopause, pregnancy tests are no longer conducted every six months, illustrating that tests are targeting women’s sexuality (Iyer *et al.* 2004), yet pap-testing is not considered. Pap-testing is free for citizens in Singapore (Table 2), and pregnancy tests are not mandatory for Singaporean citizens seeking employment, illustrating discrimination and marginalisation of OFWs in this country.

The only HCP that OFWs reported as mentioning pap-testing were midwives when participants were pregnant, usually many years ago and in the Philippines. HCPs’ failure to suggest that women be pap-tested may exacerbate the misconception that there is no need for pap-testing in the absence of symptoms (Erwin *et al.* 2007). Women not engaging in pap-testing in the absence of symptoms is a common barrier (Maxwell *et al.* 2000; Holroyd *et al.* 2003; Kandula *et al.* 2006) observed in this study and an important element to target in pap-testing education. It has been found that HCPs also communicate differently with individuals of lower socio-economic status who also tend to receive less health information (Ngo-Metzger and Fund 2006). HCPs should be aware of cultural differences and contexts regarding access to health care for migrants and aim to build good patient-HCP relationships to offer holistic care (Nielsen *et al.* 2014). HCPs should inform migrant women of pap-tests at every

opportunity and utilising medical test facilities related to visa requirements, would be an ideal opportunity to inform OFWs of pap-testing. Because widespread accessibility to pap-testing is currently problematic in the host countries, offering pap-testing at every opportunity would be a viable solution. Findings from this study suggested that opening times of clinics conflicted with women's employment responsibilities; a finding supported in Holroyd *et al.*'s studies (2001; 2003). Being more accommodating to specific requirements of OFWs and offering pap-testing at more convenient times when women might have free time, could also aid in maximizing accessibility. In addition, as the most recent Cochrane Review on cervical cancer screening concluded that efforts aimed at increasing uptake of pap-testing should include the use of invitation letters as part of organised screening programs (Everett *et al.* 2010), national cancer screening programmes with the use of invitations to all women, including migrants and OFWs, require urgent implementation in order to increase accessibility and tackle health inequalities.

Important advances in cervical cancer screening need consideration when discussing institutional factors related to pap-testing. Other methods of cervical cancer screening, such as visual inspection with acetic acid (VIA) and visual inspection with Lugol's iodine (VILI), especially in combination with HPV vaccination, have been described as more suitable to low resource settings as these seem more cost-effective, have fewer cytology infrastructural requirements and offer immediate results. These methods may be more cost-effective than pap-tests for the Philippines (Philippines Department of Health Cervical Cancer Screening Study Group 2001; Guerrero *et al.* 2015). However, these new methods have lower specificity, meaning more false-positives and a higher proportion of women will be unnecessarily treated (Lertkhachonsuk *et al.* 2013). Despite limitations, pap-testing is currently still the most widely used test in developed countries although there is evidence that high-risk human papillomavirus (hrHPV)-based screening in combination with pap-testing could be more effective in reducing cervical-cancer incidence than cytology-based screening,

pap-testing, alone (Saslow *et al.* 2012; Haguenoer *et al.* 2014; Arbyn and Castle 2015). However, pap-testing remains more effective than hrHPV alone (Saslow *et al.* 2012; Zhou *et al.* 2016). Some countries are updating cervical cancer screening guidelines, for example, the American Cancer Society recommends for women ages 21-29 pap-testing alone, and for women ages 30-65 a combination of HPV testing and pap-testing every 5 years or pap-testing alone every 3 years (Saslow *et al.* 2012). The Netherlands switches over their national screening programme in 2017 to include a combination of the tests. In the Netherlands, women (ages 30-60) will be invited for cervical cancer screening as previously, however, the first test conducted is hrHPV, investigating presence of HPV DNA (National Institute for Public Health and Environment 2016). If this is negative no other tests will be conducted. If the hrHPV test is positive and HPV DNA is found, a pap-test will be conducted on the same sample aimed at detecting pre-cancerous changes within the cervix and abnormalities in the cells of the cervix (National Institute for Public Health and Environment 2016). Women who do not respond to the invitation letter will be sent a self-sample kit. The hrHPV test can be conducted on a self-sample, which may increase screening rates for women who experience transportation or discomfort barriers to pap-testing. Women who self-sample and then test positive for hrHPV still need a pap-test, possibly encountering similar barriers as before (Arbyn and Castle 2015). Cost-effectiveness of the programme is not yet clear and although hrHPV-testing is thought to be more sensitive than pap-testing, it is not known if this is the case for self-samples (Arbyn and Castle 2015). The programme is also not without logistical problems, as it requires an up-to-date registry and careful monitoring of non-response (Arbyn and Castle 2015). In many of the countries where OFWs reside, cancer registries do not exist. Unless self-sampling were offered to OFWs when in contact with HCPs for medical tests, logistical and pragmatic barriers may still exist. Mail services used to return samples are problematic in some host-countries, and if samples should be returned in person, existing barriers to get to a clinic will persist.

Self-sampling seems a potential solution to some of the cultural and pragmatic barriers that were found for OFWs, however, this remains to be seen and should be further studied. In a study with 630 women in Nigeria, preference for self-sampling was low (19%) (Dareng *et al.* 2015). Women who were described as more religious were less likely to accept self-sampling, although Muslim women were more likely to prefer self-sampling. The authors explain that this might be due to Muslim women feeling more discriminated at health clinics, which was also reported in phase two of the current study as a minority of OFWs did not like the way HCPs spoke to them. For this group, self-sampling may be a solution. In accordance with the socio-ecological model, Dareng *et al.* (2015) suggest that lack of knowledge and understanding of cervical cancer were intertwined with lack of acceptance of self-sampling and they argue that without health education regarding the topic, self-sampling may not be a solution to overcome existing barriers (Dareng *et al.* 2015).

6.5 Barriers to pap-testing: Structural factors

The real strength of using MMR was highlighted by the extra dimension the qualitative phase provided regarding structural factors. The survey was based on barriers to pap-testing as found in the literature, which, as illustrated in Figure 6, did not include structural factors. Health behaviour, such as pap-testing, cannot be separated from the context of women's lives and at the root of inequalities in pap-testing lie structural differences in social class, gender and ethnicity (Naidoo and Wills 2000; Kawachi *et al.* 2002; Wilkinson and Marmot 2003; Whitehead 2007b), which were apparent in this study. Epidemiology and a focus on risk factors has been criticised for victim blaming and assuming individuals have choices when it comes to their health. Individuals may not have choices, rather they have chances in life (Watson and Platt 2002; Williams 2003). OFWs may not experience having a choice as a true

possibility in their everyday life, their choices are shaped by life chances, which are embedded in structural and social context (Watson and Platt 2002).

Social structures are beneath the surface of health inequalities. The task of social science and public health is to comprehend how objective structures of society (social class, gender, ethnicity) impact subjective behaviour (Fries 2010). Lower social classes not in possession of the same economic, cultural and social capital may lag behind, having a different spectrum of health chances resulting in health inequalities (Pinxten and Lievens 2014). Social class, socio-economic status, and occupation are key concepts when discussing health issues and should not only be seen in the light of material disadvantages, but also in terms of power and social stratification. Structural mechanisms such as social class, ethnicity, occupation, income, education, and gender lead to unequal distribution of power and (health relevant) cultural resources in society. These structural mechanisms are the social determinants of health inequalities (WHO 2010). Health promotion based on the WHO's Ottawa charter (1986) takes a comprehensive approach to health of populations, acknowledging this complex interplay between structural and behavioural factors and emphasizing the importance of understanding the social structure individuals are part of. This social structure and how individuals are positioned in this with regard to social class, ethnicity, gender and status, impacts health behaviour and health outcomes (Naidoo and Wills 2000). This social structure determines what health resources are available and visible to individuals and how they make sense of and 'normalise' their health decision-making. In the current study, through exploring the lived-experiences of OFWs, structural constraints of poverty and fundamental inequalities that shape their lives became apparent. Domestic workers' narratives in this study demonstrated neoliberal globalization, resulting in "accumulation by dispossession", juxtaposing the experiences of economically marginalised female OFWs with their privileged employers (Bourdieu 1998; Liu 2015 p.81). Subsequent adverse working and living conditions, labour exploitation, lack of protection and structural support of migrant workers' health and well-being, absorbed by the bodies of OFWs, were found as underpinning structural barriers to

pap-testing in the current study and confirmed in the literature (Liu 2015). OFWs shared stories of caring for their employers' homes, children or relatives, displaying the power in the dominant and hierarchical relationship with employers that leaves little room for caring for themselves, which has been described in other studies with OFWs (Iyer *et al.* 2004; Liu 2015).

Transnational labour migration is gendered and for the largest part includes domestic work, sometimes referred to as reproductive labour (Liu 2015), mostly involving women, which is "undervalued, underpaid and poorly regulated" (Gutierrez-Rodriguez 2014 p. 46). Going for a pap-test seems far removed from these women's realities, a reality of social and economic marginalisation in which women are trying to survive, and look after their families and children from afar. In line with the socio-ecological model, an interplay between traditional feminine qualities such as 'caring' and looking after family and structural conditions of poverty, drives these women abroad and away from their homes and families while it remains women's obligation to look after their family, as well as their employer's (Asis *et al.* 2003; Bullen and Kenway 2004).

Transnational labour migration represents gender, as well as class issues, although it could be argued that femininity is always classed (Bullen and Kenway 2004). The term 'positional suffering' indicates the way one perceives their own position in society, as well as the perception of others of their position (Bullen and Kenway 2004). In the current study, the stories of compulsory pregnancy tests exhibited power and class differences in line with historical views of 'underclass' women as sexual beings who cannot be trusted (Bullen and Kenway 2004). This perception of women as sexual beings is not translated to ensuring their (sexual) health and well-being, by offering pap-tests (for example), but merely in terms of ensuring the woman can continue her labour, like a social object. The narratives of women in the current study described limited freedom in terms of movement, rest days and holidays, evoking memories of colonialism.

Similar findings were described in Constable's (2007) ethnographic account of Filipino domestic workers in Hong Kong in which long working hours were described as the most prominent complaint of OFWs. In the current study, not having sufficient time was found one of the five key predictors of pap-testing. Constable (2007) highlighted that domestic workers in Hong Kong possessed working contracts which stipulated time off such as statutory holidays and a twenty-four hour rest period per week, however, these contracts were rarely enforced (Constable 2007). Equally, the contracts stipulated that employers should provide free medical treatment and are advised to offer health insurance and employers have to pay sick leave. However, a clause in the contract states that if a medical doctor determines women are not fit to work, employers can terminate the contract immediately (Constable 2007). This demonstrates the power imbalance between employer and employee, possibly underpinning the fear women in the current study displayed, of going for a pap-test and found ill. Access to health care for OFWs will differ between host countries but has been related to the generosity of employers (Iyer *et al.* 2004) and structural circumstances for OFWs seem dependent on the relationship with employers. Experiences of hardship, homesickness and sadness of missing their children were described in the current study. High levels of stress have been found amongst OFWs in the literature and relationships with employers were significantly related to stress (Fresnoza-Flot 2009; van der Ham *et al.* 2014). A power imbalance between the employer and OFWs (Asis *et al.* 2003; Iyer *et al.* 2004) contributes to barriers in accessing health care and pap-testing. The arrangements in host countries regarding health insurance also often depend on the employer (Table 2), leaving OFWs vulnerable to abuse (Guinto *et al.* 2015; Alkhamis *et al.* 2017). Constable (2007) argues that Filipino women do not necessarily feel subordinate to their employers, but the overarching need to financially support their families leaves them rather powerless, as was found in the current study. Yet, it has been argued that Filipinas may not perceive themselves as victims, rather accepting and tolerating their working and living circumstances and relationships with employers, which need to be endured in order to achieve their ultimate financial goals of supporting their families (Ebron

2002; Constable 2007; van der Ham *et al.* 2014). This enduring of circumstances and not ‘talking back’ to employers was also described in the current study.

In line with the socio-ecological model and interplay between factors, Filipino migrant women have been found to display passivity when dealing with stress, which has been related to religion and catholic attributes of discipline and endurance (van der Ham *et al.* 2014). Tolerance of discrimination and oppression amongst Filipinos could be related to ‘colonial mentality’ impacting health and well-being of Filipinos (David and Okazaki 2006), highlighting the importance of public health issues such as pap-testing to be tackled at multiple levels, and not only individual factors. Power relations between employer and OFWs are reinforced by a laissez-faire approach of governments and lack of policies to protect OFWs’ health and well-being by both host and sending countries (Iyer *et al.* 2004). The Philippines, as the sending country, benefits economically as remittances are sent home by OFWs and numbers of OFWs grow rapidly (O’Neil 2004; Constable 2007; Liu 2015). The Philippines facilitates migration and should play a more active role in protecting OFWs’ health and well-being in host countries, including tackling structural factors and protecting human rights of OFWs by tackling power relations that host-country governments exhibit towards OFWs. Structural circumstances for OFWs need to be researched by host-country strata. Host-countries gaining economically from cheap labour have a duty to protect not only their citizens, but anyone who resides in their country. Macro-policies should be developed in the host countries ensuring Universal Healthcare Coverage for all, including migrants, ensuring access to emergency healthcare services, as well as preventative healthcare services and cervical cancer screening, as indicated by the WHO and UN Sustainable Development Goals (Ang *et al.* 2017; WHO2016). Cervical cancer is preventable and as a disease only affecting women, presents a gender justice issue. Furthermore, because Filipino women and women in developing countries are disproportionately affected, access to cervical cancer screening is also a matter of social justice. Governments failing to provide available cervical cancer screening violate OFWs’ right to health (UNIFEM 2007).

7 Chapter 7. Reflections on the research process: strengths, limitations and legitimization.

In this chapter, a critical review of the research process is offered. In MMR, the term ‘legitimation’ is proposed to describe what is known as validity in quantitative research, and ‘trustworthiness’ in qualitative research (Onwuegbuzie and Johnson 2006). These terms are included in this chapter where appropriate and presented in Table 33.

Table 33 Typology of Mixed Methods Legitimation Types

Legitimation Type Description		
1. Sample Integration	The extent to which the relationship between the quantitative and qualitative sampling designs yields quality meta-inferences.	This criterion could not be satisfied in this study.
2. Inside-Outside	The extent to which the researcher accurately presents and appropriately utilises the insider's view and the observer's views for purposes such as description and explanation.	This criterion was satisfied in this study. The outsiders' viewpoint was justified, the insiders' viewpoint was checked during interviews and integrated into the results.
3. Weakness Minimisation	The extent to which the weakness from one approach is compensated by the strengths from the other approach.	This criterion was satisfied in this study. Qualitative findings added depth to quantitative findings.
4. Sequential	The extent to which one has minimized the potential problem wherein the meta-inferences could be affected by reversing the sequence of the quantitative and qualitative phases.	This criterion could not be satisfied in this study. One way of assessing this criterion is to change the order and use a ‘wave design’. This was not within the scope of this study.
5. Conversion	The extent to which the quantizing or qualitzing yields	This criterion did not apply in

	quality meta-inferences.	this study.
6. Paradigmatic mixing	The extent to which the researcher's epistemological, ontological, axiological, methodological, and rhetorical beliefs that underlie the quantitative and qualitative approaches are successfully (a) combined or (b) blended into a usable package.	This criterion was satisfied in this study. Paradigmatic perspectives were expressed in this study, preference for pluralism of perspectives was presented and pragmatism was used, using both post-positivist and constructivist elements, facts and values, objective and subjective realities were used in this study.
7. Commensurability	The extent to which the meta-inferences made reflect a mixed worldview based on the cognitive process of Gestalt switching and integration.	This criterion was satisfied in this study. Meta-inferences in the study were based on integrative findings, founded in pragmatism and reflecting an antidualistic stand. This antidualistic stand is inspired by Charles Sander Peirce's (1839-1914) term of <i>synechism</i> , meaning the tendency to consider all things as continuous also related to the principle of <i>syncretism</i> , which entails the idea of integration of opposing views in order to answer practical research questions (Johnston and Gray 2010).
8. Multiple Validities	The extent to which addressing legitimation of the quantitative and qualitative components of the study result from the use of quantitative, qualitative, and mixed validity types, yielding high quality meta-inferences.	This criterion was satisfied in this study. Both quantitative and qualitative components were reviewed for "validities" and MMR's legitimation types were assessed.
9. Political	The challenge of politics includes the extent to which the consumers of mixed methods research value the meta-inferences stemming from both the quantitative and qualitative components of a study, if both components are equally valued as well as political tensions	This criterion cannot be fully satisfied and did not fully apply to this study. No funding was requested and therefore no tension was encountered there. Dissemination of the study is yet to happen. As the researcher was working alone,

	within the research team.	no tensions between researchers with different worldviews however the need for pluralism of perspectives has been justified.
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Source: (Onwuegbuzie and Johnson 2006)

7.1.1 *Review of research design*

In the literature review, only one MMR study was found. Using MMR as research design was a strength in the current study. The approach was chosen as it was predicted that combining qualitative and quantitative approaches would provide a more comprehensive answer to research questions. This was achieved. The quantitative phase of the study produced important information such as pap-testing rates, frequencies of barriers and relationships between barriers and pap-testing uptake. However, without the qualitative phase, the social context and exploration of the lived-experiences would not have been found and this offered an extra dimension to findings. This study used mixed-methods approaches because each approach would contribute a different dimension in answering the research questions (Mason 2006). As such, the two approaches were complementary (Creswell and Plano Clark 2011) and together provided a more comprehensive understanding of the issue (Bryman 2007; Bazeley 2015). As a result, this study satisfied the fundamental principle of MMR, which is combining methodologies with complementary strengths (Onwuegbuzie and Johnson 2006; Schoonenboom 2016). In addition, MMR offers solutions to weaknesses of each research approach, also called the ‘weakness minimisation legitimisation’ (Onwuegbuzie and Johnson 2006), which was satisfied in this study (Table 33). Surveys cannot offer in-depth exploration of perspectives; using MMR this study overcame that weakness. If the field of public health is to make a difference and generate effective interventions, an understanding of lived-

experiences of the relevant population and using that understanding to build culturally appropriate interventions is vital (Andrew and Halcomb 2009).

In this study, a sequential explanatory design was used in which the initial quantitative phase was followed by the qualitative phase (Creswell and Plano Clark 2011). This approach was chosen because common barriers to pap-testing were known; therefore, quantifying these barriers first and then exploring and contextualizing the meaning of these barriers with participants was deemed an appropriate approach. The sequential explanatory design was appropriate as barriers found in the quantitative phase were further explained in the qualitative phase by identifying underpinning structural factors. ‘Sequential legitimation’ refers to the extent to which different meta-inferences could be made if the order of the research phases would have been altered (Onwuegbuzie and Johnson 2006) (Table 33). This MMR research quality criterion could not be satisfied in this research. Different designs may have achieved different findings, for example, utilising a sequential exploratory design, with the qualitative phase first followed by a quantitative phase (Creswell and Plano Clark 2011), may have led to the construction of a different survey, possibly with inclusion of more questions investigating structuring factors such as social context. This may be useful for replication in future research studies. However, recruitment for interviews was problematic which may have been even more difficult without the initial survey phase.

A strong MMR design addresses integration of the qualitative and quantitative elements (Creswell and Plano Clark 2011). Integrating the two phases is often described as a difficult process in MMR (Creswell 2011), and integration was achieved at several points. The quantitative phase informed collection of qualitative data and the interview schedule was adapted accordingly. Results were integrated and qualitative data helped to make sense of survey results. Therefore, it was believed true integration of findings was achieved. Opinions differ on presentation of MMR studies; however, the approach taken in this study was that presenting qualitative and quantitative components separately would result in a ‘multiple methods’ study rather than a ‘mixed-methods’ study. For a study to be ‘mixed-methods’, the

combination of different components should offer more insight than either component by itself could have done (Bryman 2007; Bazeley 2015) and it was believed that the integration of results added to this mixed element in this study.

7.1.2 Review of paradigmatic mixing

Pragmatism, the applied philosophical worldview in this study, with its pluralistic and practical focus on the consequences of the research enabled a combination of multiple perspectives in order to best answer the research questions and was thought to result in greater contribution to public health (Creswell and Plano Clark 2011). Strict division between quantitative and qualitative approaches may not be in the best interest of public health (Fries 2010). Rather, being open to multiple perspectives and combining values and strengths of approaches relevant to each research project is more likely to produce holistic and multifaceted research findings (Johnson 2015). MMR's 'paradigmatic mixing' legitimisation or the extent to which methodological techniques were presented and combined, was satisfied in this research (Onwuegbuzie and Johnson 2006) (Table 33).

7.1.3 Review of web-based approach

Using a web-based approach was both a strength and a limitation of the study. A web-based approach is suitable for difficult-to-reach populations and geographically dispersed populations. Reaching marginalised groups is notoriously difficult in health research (Fielding *et al.* 2008; Holmes 2009). Reaching OFWs from 28 different countries through this method offered a unique contribution. In the quantitative phase, a relatively large sample was recruited quickly and fairly cheaply, which are known advantages of web-based approaches (Fielding *et al.* 2008). Recruitment through Facebook and advertisement with Pinoy OFW

were successful and non-coercive methods of recruitment and reached a large number of women.

A limitation to the study and web-based approach is that women who were not internet users were excluded, which may impact reliability and validity of the study. It is difficult to estimate the degree of representativeness of this sample because characteristics of the true population are not known, although a large proportion of OFWs is thought to be online (Noda 2012). Representativeness and generalisability were also not key aims of this exploratory study. Probability sampling is virtually not feasible in web-based research and in this study a convenience sampling approach was used, again presenting limitations to generalisability of the study (Fielding *et al.* 2008; Bryman 2012). MMR's 'sample integration legitimization', or the extent to which the study can make generalisations to all OFWs, was not satisfied in this research (Onwuegbuzie and Johnson 2006) (Table 33).

7.1.4 Review of survey data collection

An advantage of the web-based approach for the quantitative phase was the anonymity offered, as no identifiers were collected and identification of IP addresses was turned off in Qualtrics. However, this was also a limitation as lack of researcher presence may have impacted the study and potential questions may have been left unanswered. Researcher presence may have prevented some of the large amount of missing data. An explanation for the large amount of missing data could be that mobile phone data may have been required to complete the survey and this would have been expensive for participants. This had not been considered in advance. In future research, a statement could be made at the start of the survey stating that completing the survey should not cost women anything and being on wifi would provide a solution.

The extent of missing data may also have been partially due to some weaknesses in the survey design. The survey was too long; this is a common reason for non-completion of surveys (De Vaus 2002). Although this was discovered in the pilot phase, the length of the survey was not reduced. Instead, the preamble to the survey was changed to provide a more truthful reflection of expected time spent. Although the survey had been constructed by using existing surveys or elements from those, a standardised and validated tool investigating all barriers was not available for the target population, hence the need to construct the survey. As research questions were aimed at gaining comprehensive understanding of all barriers discovered in the literature review in relation to pap-testing, there were many areas to cover. Having a standardised tool should improve rigour regarding reliability and validity (Bryman 2012), but it should also avoid overly long surveys. Also, the format of some of the survey questions such as the income question, country of residence, and education could have been refined to improve the clarity and specificity of these measurements. Nevertheless, this study does make a contribution by discovering commonly used survey questions regarding knowledge of pap-testing were inadequate.

Another limitation to the survey design was that before the start of the demographic questions the following was stated:

You are nearly at the end! A few more demographic questions. As you know, this survey is anonymous.

A drop in numbers of participants was observed after this statement. The sentence was meant to reassure participants that they were nearly at the end and to encourage them to completion; however, this statement may have inadvertently indicated to women that they were at the end already, they may have been fed up by that stage, or women may not have known what 'demographic' meant, although this was not raised in the pilot phase. Overall, the order of questions with demographic questions at the end was appropriate; however, it meant that

before excluding the missing data, it was not feasible to determine whether there were any differences between women who completed the survey and those who did not.

The format of questions appeared to be acceptable to participants, although inclusion of the 'don't know' option in the Likert scale is a controversial option. This option was included to avoid forcing women to choose an answer. However, researchers are divided on the subject as offering this 'don't know' option may also offer an easy option and may not require much thinking. Research suggests that the 'don't know' option is chosen more frequently towards the end of the survey (Bryman 2012), although this was not found in this study. However, the 'don't know' option was problematic in analyses and recoded as missing data. In future, inclusion of this option would not be chosen as it may not enhance data quality (Bryman 2012). Validation of the survey was conducted through several steps. Steps included the literature review and synthesising the relevant constructs, defining the constructs and developing scales where possible, and measuring scale reliability through calculating Cronbach's Alpha and pilot testing (Artino *et al.* 2014). Steps taken were thorough although more steps to validate the survey could have been taken such as conducting interviews with the participants in the pilot phase, conducting expert validation to assess how clear and relevant the survey items were with respect to the constructs of interest, as well as conducting interviews with the survey participants to ensure that they interpreted items in the manner intended (Artino *et al.* 2014). These additional steps in validating the survey were not within the scope of this study but could be undertaken in future research.

A final limitation to the quantitative data is the self-reported measure of practice of pap-testing. Self-reported measures may threaten validity or legitimacy due to recall and social desirability biases. There is evidence of over-reporting of pap-testing. Specifically, women who were white, higher educated, English native and of higher income have been found less likely to over-report pap-testing than their counterparts (McPhee *et al.* 2002; Lofters 2015).

Although more objective measures would be preferred, these were not available and are difficult to access. However, over-reporting of pap-testing rates should be kept in mind when interpreting findings from this study.

7.1.5 Review of interview data collection

Using the web-based approach in the qualitative phase facilitated reaching women in diverse geographical locations. In addition, some women reported rarely leaving the house and therefore, a web-based interview was an ideal method of reaching them. However, conducting interviews online was challenging. All women accessed the internet through their mobile phones on Wi-Fi connections. There were technical difficulties and sometimes it was difficult to understand participants due to connection issues. Technical issues also disrupted the flow of interviews and at times made the researcher feel rushed. At times comments made by participants were missed, not heard or understood correctly and this was only realised when listening to recordings. Problematic communication in web-based synchronous qualitative interviews due to network and technical issues, has been reported in the literature (Fielding *et al.* 2008). Using a different online communication tool than Skype or Viber may have solved that issue. Connection issues are outside the control of researchers. Connection issues combined with language difficulties were not ideal and could threaten the trustworthiness of the qualitative data. Follow-up by email or additional interviews may help to clarify ambiguities in future research.

Although it had been explained that women needed good English to participate in the interviews, at times, there were difficulties in expression. Language is important in qualitative research and can carry subtleties and underlying meaning of questions. When researchers and participants do not share the same language, this can reduce richness of data (Green and Thorogood 2009), which was a limitation in this study. Using a translator may have offered a

solution, yet using translators in qualitative research also creates a different dynamic in qualitative interviews and can also disrupt the flow of interviews (Green and Thorogood 2009). For future research including a bilingual Filipino researcher who is culturally acceptable (Kvale and Brinkmann 2008) and involved in the study as part of the research team, should conduct the interviews to improve credibility and trustworthiness of the study, although this was beyond the scope of this study.

Language limitations were especially apparent when the vignettes were used. Vignettes, short scenarios of OFWs in relation to pap-testing, had been chosen as vignettes can be useful tools to stimulate discussions on sensitive and personal topics (Braun and Clarke 2013). In this research, the vignettes hindered the flow of interviews. This seemed partly due to language issues, as women found the vignettes difficult to understand. Vignettes also seemed unnecessary and women were open to telling their story. The researcher continued with the vignettes to ensure consistency between interviews, however, in future studies, the researcher may be hesitant to use vignettes in this web-based setting. Vignettes in discussions with focus groups could be helpful to stimulate discussions (Braun and Clarke 2013).

The researcher is a European female who lived for a decade as a migrant in three of the Gulf countries. Her experience as a Western migrant in these countries inspired her to choose this topic for her research and provided her with important context and understanding of the setting these women live in. However, when reflecting on the qualitative interviews, the researcher was aware of her positionality and felt a power imbalance between OFWs and the researcher as a western woman with a far more privileged life than OFWs. Qualitative interviews often present a power imbalance between the participant and the researcher, and as the researcher aims to obtain information from the participant, it is not an equal conversation (Kvale and Brinkmann 2008). However, in this social context with most women describing dire circumstances, the researcher felt particularly uncomfortable. The researcher had taken a personal and casual approach, also illustrated on the research's website and offered some personal information and pictured herself as a woman and as a mother including pictures of

herself with her children. This approach had been chosen in order to build rapport and trust, presenting herself as a woman and mother, 'just like them'. Sharing personal information can help to build rapport (Fielding *et al.* 2008). When women described themselves as transnational mothers and being away from their children for several years, rather than finding a commonality based on gender, the researcher realised the enormous social differences between her and participants. The impact of these social differences on research is complex (Green and Thorogood 2009). Although these social differences were not believed to act as barriers in collecting data, and possibly helped to understand the severity of the structural context, social differences did impact on the data in this study, as any relationship between a researcher and a participant enters into the research process itself (Green and Thorogood 2009). The researcher found herself wanting to improve circumstances for women and at the end of interviews, the researcher offered advice about where to obtain pap-testing and helped some women to locate a clinic. This level of individual support is perhaps unusual in a research context, yet it was perceived by the researcher as a form of debriefing and an appropriate method of thanking women for their participation. Inclusion of host-country specific pap-testing information in debriefing information should be considered for future research.

Despite social differences and power imbalances, it was apparent that trust and rapport was built between participants and the researcher. Interviews seemed pleasant and women were open to sharing their experiences. Taking part in interviews can be a positive experience and participants appeared to appreciate someone showing concern for their story, This has been found a motivation for taking part in research (Gysels *et al.* 2008; Green and Thorogood 2009). There were two women who may have had other motives to participate in the research. They had suffered symptoms and the ability to ask the researcher about these may have been the main driver for taking part in the study. The need for more information can be a motivation for taking part in research, and possibly reflects women's need for more information on pap-testing, their worry about their symptoms and their isolation (Gysels *et al.*

2008). The researcher clarified she was not a medical doctor and could not diagnose or answer specific concerns about symptoms. The researcher also ensured that ethical considerations including, but not limited to, the purpose of the research, voluntary participation, and the right to withdraw at any time, were emphasised at the start of all interviews.

7.1.6 Review of survey data analysis

Planning for statistical analyses should take place at the research design phase (Bryman 2012). Although the researcher believed this had been done, the extent of planning was insufficient. The survey was developed after the research proposal, which included proposed statistical analyses to address the proposed research questions. Originally, the researcher had designed the survey with 'yes or no' choices, and without Likert scales. The value of Likert scales over a dichotomous categorical variable 'yes or no' or 'agree or disagree' is that Likert scales offer more rich data. When measuring attitudes or beliefs, Likert scales are a commonly used tool (Niederhauser and Mattheus 2010). However, when data were collected and the researcher prepared for data analyses, the researcher discovered proposed analyses were no longer suitable. Chi-square tests had been proposed, however, Pearson Chi-squares are not suitable for Likert scales. Instead the Mantel-Haenszel linear by linear chi-square test was used. Analyses should have been considered more carefully at the design stage. The Mantel-Haenszel linear-by-linear chi-square test, like the Person chi-square test, has a requirement that cannot be violated which is that all expected cell frequencies need to have a value >5 (Field 2013). To comply with this requirement of cell frequencies >5 , Likert scales had to be reduced which meant some information was lost.

There were a relatively large number of statistical tests and when interpreting findings, it needs to be considered that some findings may be due to random chance (Bland and Altman 1995). Using a smaller alpha of .01 may have been preferred although the alpha of .05 is

standard in behavioural social science research. The study was exploratory and the aim was to explore barriers and facilitators to pap-testing in this unique population. These findings should be corroborated in other, perhaps more pointed, studies of mechanisms and specific risk factors to pap-testing. In addition, although the sample was relatively small for the multivariate analyses when all missing data were removed, post-hoc power analyses confirmed that sufficient statistical power was present to detect robust effects in the final logistical regression model.

7.1.7 Review of interview data analysis

The choice of thematic content analysis for qualitative data analysis was appropriate. This is the most basic analysis but commonly used (Green and Thorogood 2009). Collaborating with another researcher on qualitative analysis and comparing coding would have improved confirmability which was also not within the scope of the study, although analysis was discussed with supervisors, which may also improve legitimation (Litva and Jacoby 2002; Shenton 2004).

MMR's 'inside-outside legitimation' criterion (Table 33), meaning the extent to which the insiders' and outsiders' viewpoint is accurately reflected in the research, was satisfied in this research to some degree. Interpretation of data and the integration of data was reviewed by supervisors and therefore, the outsiders' perspective could be argued as justified (Onwuegbuzie and Johnson 2006). The insiders' viewpoint was checked during interviews by summarising and feeding back to participants what the researcher had heard. Member checking as a form of inside-outside legitimation could be used for future research but was not within the scope of this research (Litva and Jacoby 2002; Onwuegbuzie and Johnson 2006; Harper and Cole 2012; Creswell 2013) (Table 33).

7.1.8 Review of ethical considerations

It had been intended to manage all ethical considerations at the research design stage. To a certain degree, this was achieved. Institutional ethical approval was obtained, and ethical principles of ‘respecting the individual, doing good, not doing harm, social responsibility, maximizing benefits and minimizing harm’, were adhered to by following ethical guidelines in health research (Green and Thorogood 2009; British Psychological Society 2010). Web-based research can raise some particular ethical issues (British Psychological Society 2013) that required consideration at the design stage of the current study. Although implied consent can be assumed in surveys, participants were asked in the survey to agree to taking part, which is a strength. The survey protected anonymity and confidentiality and it was a strength of the study that IP addresses were not collected (British Psychological Society 2013). In in-person research studies, participants may feel pressured to complete a survey, and online surveys offer an ethical advantage without researcher presence (De Vaus 2002).

Making questions compulsory was deemed unethical and it was explained to participants on the research website that withdrawing data would be difficult once the survey was completed. However, withdrawal of survey data required more attention. The British Psychological Society (2013), in their Ethics Guidelines for Internet-Mediated Research, states that withdrawal of consent is not clear in web-based research. Participants can close their web-browser, and it is then not clear whether participants also withdraw their data because Qualtrics stores previous responses (Barchard and Williams 2008; Niederhauser and Mattheus 2010). Neither the American Psychological Society nor the British Psychological Society state that withdrawing from a study by closing the web-browser means withdrawing valid consent (Barchard and Williams 2008), and this issue was also not brought up by the Faculty of Health and Medicine Research Ethics Committee Lancaster University. However, as the British Psychological Society (2013) states that offering a clear exit is best practice, it was decided to follow their guidance, conduct the study in the most ethically responsible manner. Therefore, partially completed data from participants who did not reach the last item of the survey were

excluded. Because this meant excluding a large number of cases (N=570), this was a limitation of the study. Future research should offer a clear ‘withdrawal of data’ option for participants by offering an ‘exit’ button (Barchard and Williams 2008; British Psychological Society 2013).

Providing written informed consent in interviews should also have been considered more carefully beforehand. Women were sent the participant information sheet, informed consent form, and website address; however, as all participants accessed the information through their mobile phone and were not able to access a computer, they could not print, sign and scan the consent form. Ideally, a predesigned tick box (‘I accept’) had been offered to participants prior to the research (Fielding *et al.* 2008). Although the researcher felt assured informed consent had been collected and women were fully aware of the research and what was involved, the web-based informed consent process for interviews could have been improved. Both points of improvements mentioned above may partially stem from the original intention to conduct face-to-face interviews and the research was later revised to be conducted as web-based research. Ethical issues had been considered throughout the study design; however, there were a number of ethical considerations specific to web-based research that could be worth considering in future research.

In conclusion, key aspects of the research process were reviewed and limitations to the study were described. MMR’s ‘multiple validities’ legitimisation refers to whether both the qualitative and quantitative components were reviewed for validities as well as the MMR component (Onwuegbuzie and Johnson 2006) (Table 33), and this criterion was satisfied.

8 Chapter 8. Conclusion and Recommendations.

8.1 Barriers and facilitators to pap-testing

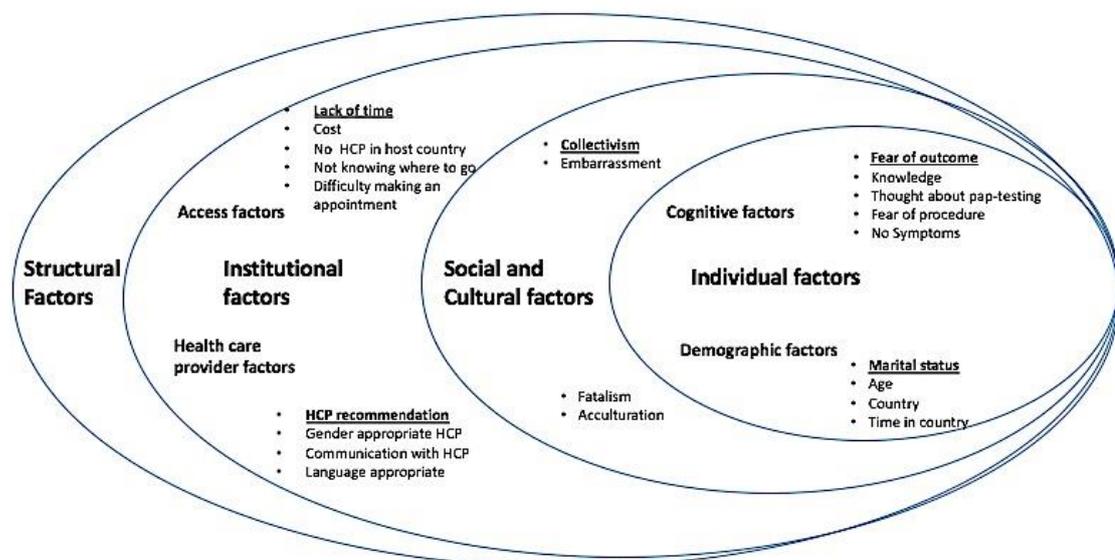
In this mixed-methods, web-based study, knowledge, practices and barriers regarding pap-testing were explored for female overseas Filipino workers. A complex interplay between multiple barriers to pap-testing were found. Despite finding that 96.4% of OFWs were aware of the procedure, less than half (43.5%) had ever engaged in pap-testing. Despite limitations, the study contributes to the body of public health knowledge. Limited research was found for OFWs regarding pap-testing and the majority of existing research had been conducted in the US, which may not be comparable to temporary migrant workers elsewhere throughout the world. In addition, using disaggregated data and researching barriers to pap-testing for Filipino women, rather than aggregated data for Asian women, is imperative due to cultural differences between Asian cultures. This study aimed to fill this gap in knowledge by gaining understanding of barriers to pap-testing specifically for Filipino migrant workers. Understanding barriers is the first stage in tackling low-uptake of pap-testing for this group.

Due to the web-based approach, OFWs in 28 different countries were reached. Although the web-based approach offered limitations, for this geographically dispersed and difficult to reach minority group, web-based approaches offer unique opportunities and future health research should build on strengths and limitations of web-based methods used in this study. Although the study is limited in terms of generalisability, some important findings may be transferable. The limited existing research mostly targeted individual-level barriers to pap-testing. This study aimed to contribute to the body of public health knowledge by using a socio-ecological conceptual framework. According to the socio-ecological model the individual's decision to go for a pap-test is not influenced by a single factor, rather by a complex interplay between multiple factors, which are embedded by the social and structural context surrounding the individual.

In the survey phase of the study, significant associations were found at the individual, social-cultural and institutional levels. Significant predictors of pap testing were individual factors (e.g., marital status, with those married and divorced, separated and widowed were more likely to be pap tested than those who were single); cognitive factors (e.g., less fear of outcome); access factors (e.g., sufficient time); health care provider factors (e.g., recommendation of HCP); and social and cultural values (e.g., higher collectivism values). Knowledge of pap-testing was not a significant predictor in the final model, indicating that health education alone is not sufficient as an intervention aimed at increasing the uptake of pap-testing.

Figure 14 presents all factors that were significantly associated with pap-testing. It should be noted that there were no factors in the last layer of the diagram, the structural factors, as these had not been included in the survey, hence the empty layer in Figure 14.

Figure 14 Summary of significant factors associated with pap-testing presented in the socio-ecological model, as found in the current study

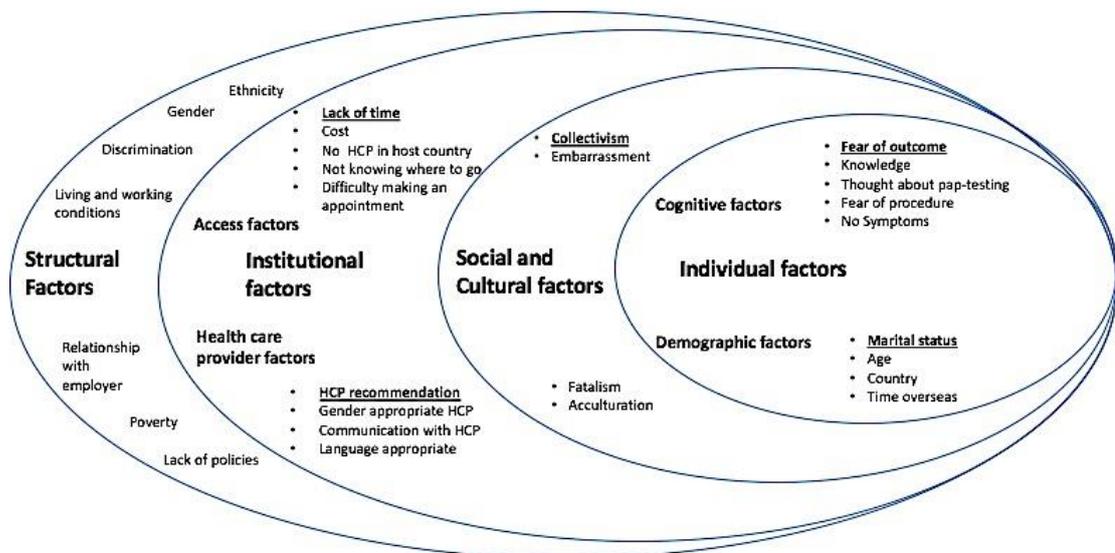


Factors that are bold and underlined were not only associated with, but also predictors of pap-testing.

Mixed-methods approaches offer important advantages to public health research and can help to unravel the diverse and complex dimensions of public health problems, including pap-testing. The current study adds uniquely to the knowledge base of pap-testing for OFWs by combining survey findings and exploration of those findings in qualitative interviews. Barriers had not been described in the existing literature at structural-level and interviews added an extra dimension to the study. Structural factors such as poverty, the need to financially provide for family, difficult working and living conditions for OFWs not conducive to pap-testing, seemed to underpin other barriers to pap-testing. Not previously described in the literature for OFWs were the multifactorial characteristics and complexities of women's decision-making process regarding pap-testing, and these processes were demonstrated in both phases of this study. The qualitative phase provided meaning to quantitative findings by revealing what quantitative findings meant to participants and thereby revealing a different dimension to findings. Data from the two phases of the study were complementary, both phases of the study provided important insights into barriers and facilitators to pap-testing for OFWs and combined, offered a more comprehensive understanding of the issue than either phase by itself could have produced. Combined barriers and facilitators for OFWs to pap-testing found in this study using the socio-ecological conceptual framework are visually presented in Figure 15. Figure 15 differs from Figure 14 (survey findings) and combines findings from both phases. The main hypothesis, that 'socio-ecological characteristics are related to pap-testing for OFWs at the individual, social-cultural, institutional levels', was supported by findings across phases. However, the qualitative phase revealed additional structural factors not conducive to pap-testing. Together, qualitative and quantitative results suggested a number of socio-ecological characteristics related to pap-testing for OFWs at the individual, social-cultural, institutional, and structural levels. The current study (Figure 15) differed from existing literature by measuring all known barriers and facilitators synthesised

from the existing literature (Figure 6). All barriers and facilitators to pap-testing as found in the literature were confirmed in the current study (Figure 15) with the exception of socio-economic status, value of virginity, perceived efficacy and susceptibility, trust in HCP, health insurance, and transportation (Figure 6). In addition, the current study added a unique insight into structural factors which the existing literature did not provide (Figure 6).

Figure 15 Barriers and facilitators to pap-testing for OFWs based on integrated findings



Factors that are bold and underlined were not only associated with, but also predictors of pap-testing.

8.2 Recommendations for policy, practice and research.

Following the socio-ecological model, this study recognises that barriers to pap-testing for OFWs stem from an interplay between multiple barriers at the individual, institutional, social-cultural, and structural levels. Interventions designed to increase uptake of pap-testing for OFWs and tackle the health inequality should aim to include a multifactorial focus and target multiple levels of influence to increase uptake of pap-testing (Whitehead 2007b). Interventions should be built on the underpinning roots of the issue. Findings from the current

study suggested that a focus on individual factors and health education alone would not suffice and, in line with the socio-ecological model, barriers and facilitators at the individual, social-cultural, institutional and structural factors need to be tackled in order to effectively increase uptake of pap-testing for OFWs and address the health inequality. This requires a complex and holistic approach. In this study, recommendations are based on a framework proposed by Dame Margaret Whitehead (2007b), who argues that all levels of the socio-ecological framework need to be included for health interventions to be effective in tackling health inequalities and improve the health of disadvantaged populations. For interventions at the individual-level (such as health education) to be successful, enabling environments need to be created for OFWs and underpinning barriers or the root causes of the issue need to be addressed (Whitehead 2007b).

Recommendations for policy and practice are listed in table 34. Recommendations are based on all barriers and facilitators as found in both phases of the current study, and are consistent with the socio-ecological model.

Table 34 Recommendations for interventions aimed at increasing uptake of pap-testing for OFWs

Recommendations for interventions
<p>1. Interventions aimed at strengthening individuals. Practice: Including programs, such as health education, aimed at empowering OFWs by increasing knowledge and understanding of the importance of pap-testing as well as tackling health beliefs such as fear. Younger and unmarried women should be specifically targeted. Health education could take place in the Philippines when women prepare for migration, in host countries when undergoing medical tests for visa requirements, and through regular web or mobile phone communication. Additionally, OFWs should be supported in learning how to navigate the health system of hosts countries on arrival and where and how to access a regular HCP and screening services.</p>
<p>2. Interventions aimed at social and community factors Practice: Including actions such as cultural tailoring of pap-testing, ensuring conducting of pap-tests is culturally acceptable to OFWs by addressing cultural factors such as modesty and embarrassment in health education, by ensuring the health education and</p>

online communication is produced in collaboration with Filipinos and in the appropriate languages. Interventions need to utilize the collectivist characteristics of OFWs by recognizing women's drive to provide for their families and therefore to emphasise the importance of staying healthy for their families. Using social networks is key in this population. Filipino role-models and cervical cancer survivors can be effective personalities leveraged to deliver prevention messages. Involving the church and religious communities in future research, as well as in promotion of pap-testing, can contribute to acceptance of pap-testing and further spreading of awareness.

3. Interventions aimed at institutional factors

Policy and Practice: Accessibility and affordability can be addressed by including OFWs in national cancer screening programmes and offering optional but free pap-testing when attending medical tests of visa requirements. Gender appropriate HCPs should be available for pap-testing and Filipino (health) workers should be present to facilitate communication and to put women at ease. HCPs should receive training in culturally-appropriate communication with OFWs and informing them at every opportunity of the importance of pap-testing. OFWs should be allowed to attend appointments with friends and clinics should accommodate the working hours of OFWs by opening on days that OFWs usually have off, as well as offering free pap-testing in easily accessible places such as malls or offer mobile screening.

4. Interventions aimed at structural factors.

Policy and Practice: Governments in both host and sending countries have a moral and legal duty to look after the health and well-being of OFWs and universal health coverage has to be offered to all individuals living in a country, citizens and residents equally. Living and working conditions have to be regulated per work contract, contracts need to be enforced, and OFWs need to be empowered by making sure they know and understand their rights. Contracts need to include minimum wage, regulated working hours and statutory holidays, including frequent visits to the home country, and compulsory health insurance paid by the employer. The government of the Philippines need to be more active in the protection of OFWs health by stipulating host countries need to ensure that essential health care, such as pap-testing, is equally accessible to all citizens and residents alike. Host countries have the logistical infrastructure to reach OFWs and should use this to actively reach out to OFWs, offer pap-testing and safeguard their health and well-being.

More research is required regarding pap-testing for OFWS. Recommendations for future research include the development of new research instruments in the research of pap-testing in order to reliably assess all factors involved for different groups of women. In-depth knowledge questions and measures regarding structural contexts should be included. Cultural factors such as religiosity and modesty should be measured more comprehensively. Future research should be conducted to assess structural conditions per country and evaluate differences between countries and structural contexts for OFWs. Relationships with

gatekeepers and community organisations such as the church should be developed to utilise in both research and intervention activities. Future research should include other stakeholders, such as HCPs in the Philippines and host countries, to assess how HCPs should be supported in recommending pap-testing to OFWs. Future research should also include relevant policy-makers in order to assess how they can contribute to increasing uptake of pap-testing. Lessons learned from the web-based approach should be used in the development of guidelines for web-based research. Future research with OFWs could also focus on their overall health and well-being aiming to assess other public health issues for this group, which may be present in a group living in taxing circumstances.

In conclusion, cervical cancer is preventable and no woman should die from cervical cancer. Health inequalities for OFWs exist and are associated with a complex interplay of individual, institutional, social-cultural, and structural factors. Tackling health inequalities and developing effective interventions can only be achieved when all dimensions of this problem are understood. Results from this study suggest that interventions to increase the uptake of pap-testing for OFWs and tackle health inequalities in pap-testing should target multiple levels to increase uptake of pap-testing for OFWs.

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Appendices

Appendix 1: Critical Appraisal Checklists

1. Checklist 1

Critical Appraisal questions to consider for a questionnaire study (Greenhalgh, 2010) Study applied:	Score Yes=1 No=0 Can't tell=0
<input type="checkbox"/> What was the research question and was a survey design appropriate to address the research question? (Could this question be answered satisfactorily?)	
<input type="checkbox"/> Was the survey valid and reliable?	
<input type="checkbox"/> Was the format of the survey appropriate?	
<input type="checkbox"/> Was the survey clear? (Could this question be answered satisfactorily?)	
<input type="checkbox"/> Was a pilot conducted on the survey?	
<input type="checkbox"/> What was the sampling frame and was the sample appropriate? (Could this question be answered satisfactorily?)	
<input type="checkbox"/> How was data collection executed and what was the response rate?	
<input type="checkbox"/> How was the data analysed? (Could this question be answered satisfactorily?)	
<input type="checkbox"/> What were the main results and where these appropriate? (Could this question be answered satisfactorily?)	
<input type="checkbox"/> What were the main considerations and were these justified? (Could this question be answered satisfactorily?)	
<input type="checkbox"/> Have ethical considerations been dealt with appropriately?	
Total score and stars awarded	

2. Checklist 2

<p>Department of General Practice, University of Glasgow.</p> <p>CRITICAL APPRAISAL CHECKLIST FOR A SYSTEMATIC REVIEW.</p> <p>Study Design: Systematic Review, with or without Meta-analysis</p> <p>Available from: http://www.gla.ac.uk/researchinstitutes/healthwellbeing/research/generalpractice/ebp/checklists/ (Accessed 28.10.15)</p> <p>Adapted from: Critical Appraisal Skills Programme (CASP), Public Health Resource Unit, Institute of Health Science, Oxford.</p> <p>Oxman AD, Cook DJ, Guyatt GH. Users' guides to the medical literature. VI. How to use an overview. <i>JAMA</i> 1994; 272:1367-1371.</p> <p>Study applied:</p>	<p>Score Yes=1 No=0 Can't tell=0</p>
<p>DOES THIS REVIEW ADDRESS A CLEAR QUESTION?</p> <p>1. Did the review address a clearly focused issue?</p> <ul style="list-style-type: none"> • Was there enough information on: • The population studied • The intervention given • The outcomes considered 	
<p>2. Did the authors look for the appropriate sort of papers?</p> <p>The 'best sort of studies' would</p> <ul style="list-style-type: none"> • Address the review's question • Have an appropriate study design 	
<p>ARE THE RESULTS OF THIS REVIEW VALID?</p> <p>3. Do you think the important, relevant studies were included?</p> <p>Look for:</p> <ul style="list-style-type: none"> • Which bibliographic databases were used • Follow up from reference lists • Personal contact with experts • Search for unpublished as well as published studies • Search for non-English language studies 	
<p>4. Did the review's authors do enough to assess the quality of the included studies?</p> <p>The authors need to consider the rigour of the studies they have identified. Lack of rigour may affect the studies results.</p>	
<p>5. If the results of the review have been combined, was it reasonable to do so?</p> <p>Consider whether</p> <ul style="list-style-type: none"> • The results were similar from study to study • The results of all the included studies are clearly displayed • The results of the different studies are similar • The reasons for any variations are discussed 	
<p>WHAT ARE THE RESULTS?</p> <p>6. What is the overall result of the review?</p> <p>Consider</p> <ul style="list-style-type: none"> • If you are clear about the reviews 'bottom line' results 	

<ul style="list-style-type: none"> · What these are (numerically if appropriate) · How were the results expressed (NNT, odds ratio, etc) 	
<p>7. How precise are the results? Are the results presented with confidence intervals?</p>	
<p>WILL THE RESULTS HELP LOCALLY?</p> <p>8. Can the results be applied to the local population? Consider whether</p> <ul style="list-style-type: none"> · The patients covered by the review could be sufficiently different from your population to cause concern <p>Your local setting is likely to differ much from that of the review</p> <p>9. Were all important outcomes considered?</p>	
<p>10. Are the benefits worth the harms and costs? Even if this is not addressed by the review, what do you think?</p>	
Total score and stars awarded	

3. Checklist 3

<p>CRITICAL APPRAISAL CHECKLIST FOR AN ARTICLE ON QUALITATIVE RESEARCH. Department of General Practice, University of Glasgow. Study applied:</p>	<p>Score Yes=1 No=0 Can't tell=0</p>
1. Did the article describe an important clinical problem addressed via a clearly formulated question?	
2. Was a qualitative approach appropriate? Does the research seek to understand or illuminate the experiences and/or views of those taking part.	
4. Was the sampling strategy clearly defined and justified? In particular consider: <ul style="list-style-type: none"> · Has the method of sampling (for both the subjects and the setting) been adequately described? · Have the investigators studied the most useful or productive range of individuals and settings relevant to their question? · Have the characteristics of the subjects been defined? · Is it clear why some participants chose not to take part? 	
4. What methods did the researcher use for collecting data? Consider: <ul style="list-style-type: none"> · Have appropriate data sources been studied? · Have the methods used for data collection been described in enough detail? · Was more than one method of data collection used? · Were the methods used reliable and independently verifiable (e.g. audiotape, videotape, fieldnotes)? · Were observations taken in a range of circumstances (e.g. at different times)? 	
5. What methods did the researcher use to analyse the data, and what quality control measures were implemented?	

<p>Consider:</p> <ul style="list-style-type: none"> · How were themes and concepts derived from the data? · Did more than one researcher perform the analysis, and what method was used to resolve differences of interpretation? · Were negative or discrepant results fully addressed, or just ignored? 	
<p>6. Was the relationship between the researcher(s) and participant(s) explicit?</p> <p>Consider:</p> <ul style="list-style-type: none"> · What was the researchers perspective? · Had the researcher critically examined his or her own role, potential bias and influence? · Was it clear where the data were collected and why that setting was chosen? · How was the research explained to the participants? · Confidentiality, ethics, implications and consequences for research findings for all of the above. 	
<p>7. What are the results, and do they address the research question?</p>	
<p>8. Are the results credible?</p> <ul style="list-style-type: none"> · Have sequences from the original data been included in the paper (e.g. direct quotation)? · Is it possible to determine the source of data presented (e.g. by numbering of extracts)? · How much of the information collected is available for independent assessment? · Are the explanations presented plausible and coherent? 	
<p>9. What conclusions were drawn, and are they justified by the results? In particular, have alternative explanations for the results been explored?</p>	
<p>10. To what extent are the findings of the study transferable to other clinical settings?</p> <p>Consider:</p> <ul style="list-style-type: none"> · Were the subjects in the study similar in important respects to your own patients? · Is the context similar to your own practice? 	
<p>Total score and stars awarded</p>	

4. Checklist 4

<p>Department of General Practice, University of Glasgow. CRITICAL APPRAISAL CHECKLIST FOR AN ARTICLE ON AN EDUCATIONAL INTERVENTION. Study Design: Variable. Available from: http://www.gla.ac.uk/researchinstitutes/healthwellbeing/research/generalpractice/ebp/checklists/ (Accessed 28.10.15) Adapted from: Education Group on Guidelines on Evaluation. Guidelines for evaluating papers on educational interventions. <i>BMJ</i> 1999; 318: 1265-1267. Morrison JM, Sullivan F, Murray E, Jolly B. Evidence-based education: development of an instrument to critically appraise reports of educational interventions. <i>Medical Education</i> 1999; 33: 890-893. Study applied:</p>	<p>Score Yes=1 No=0 Can't tell=0</p>
<p>DOES THE STUDY ADDRESS A CLEAR QUESTION? 1. Is there a clearly focused question? Consider · Why the evaluation was required. · Who was the intervention aimed at? · What was the educational issue addressed?</p>	
<p>ARE THE RESULTS VALID? 2. Was there a clear learning need that the intervention addressed? Consider: · Were the aims and objectives clear? · Were the objectives measurable? · Did the objectives fit with the domain (knowledge, skills or attitudes) identified? · Was the research methodology appropriate?</p>	
<p>3. Was there a clear description of the educational context for the intervention? Consider: · Was it a curriculum, course, module or individual session? · Was its place in the overall course clear? · Are the students and setting described?</p>	
<p>4. Was the precise nature of the intervention clear? Consider: · Organisation and materials used. · How it was run in practice. · The content covered. · Length and intensity of the intervention.</p>	
<p>5. Was the study design chosen able to address the aims of the study? Consider: · The type of study design used. · Data collection methods employed.</p>	
<p>6. Were the outcomes chosen to evaluate the intervention appropriate? Consider: · Were they reliable and valid?</p>	
<p>7. Were any other explanations of the results explored by the authors?</p>	

8. Were any unanticipated outcomes explained?	
9. Were any reported behavioural changes after the intervention linked to measurement of other, more objective measures e.g. changes in referral rates?	
WHAT WERE THE RESULTS?	
10. What were the results of the intervention?	
11. How precise were the results?	
ARE THE RESULTS APPLICABLE TO MY SETTING?	
12. Was the setting sufficiently similar to you own and/or representative of real life?	
13. Does it require additional resources to adopt the intervention?	
Total score and stars awarded	

5. Checklist 5

Critical Appraisal Skills Programme (CASP) Randomised Controlled Trials Checklist Available from: http://www.casp-uk.net/#!/casp-tools-checklists/c18f8 (Accessed 28.10.2015)	Score Yes=1 No=0 Can't tell=0
Study applied:	
(A) Are the results of the trial valid? Screening Questions 1. Did the trial address a clearly focused issue? Consider: An issue can be 'focused' In terms of <ul style="list-style-type: none"> • The population studied • The intervention given • The comparator given • The outcomes considered 2. Was the assignment of patients to treatments randomised? Consider: <ul style="list-style-type: none"> • How was this carried out, some methods may produce broken allocation concealment • Was the allocation concealed from researchers? 	
3. Were patients, health workers and study personnel blinded? Consider: <ul style="list-style-type: none"> 1. Health workers could be; clinicians, nurses etc • Study personnel – especially outcome assessors 	
4. Were the groups similar at the start of the trial? Consider: Look at <ul style="list-style-type: none"> • Other factors that might affect the outcome such as age, sex, social class, these may be called baseline characteristics 	
5. Aside from the experimental intervention, were the groups treated equally?	
6. Were all of the patients who entered the trial properly accounted for at its conclusion? Consider: <ul style="list-style-type: none"> • Was the trial stopped early? 	

<ul style="list-style-type: none"> • Were patients analysed in the groups to which they were randomised? 	
<p>(B) What are the results?</p> <p>7. How large was the treatment effect?</p> <p>Consider:</p> <ul style="list-style-type: none"> • What outcomes were measured? <ul style="list-style-type: none"> • Is the primary outcome clearly specified? • What results were found for each outcome? • Is there evidence of selective reporting of outcomes? 	
<p>8. How precise was the estimate of the treatment effect?</p> <p>Consider:</p> <ul style="list-style-type: none"> • What are the confidence limits? • Were they statistically significant? 	
<p>(C) Will the results help locally?</p> <p>9. Can the results be applied in your context? (or to the local population?)</p> <p>Consider:</p> <ul style="list-style-type: none"> • Do you have reason to believe that your population of interest is different to that in the trial • If so, in what way? 	
<p>10. Were all clinically important outcomes considered?</p> <p>Consider:</p> <ul style="list-style-type: none"> • Is there other information you would like to have seen? • Was the need for this trial clearly described? 	
<p>11. Are the benefits worth the harms and costs?</p> <p>Consider:</p> <ul style="list-style-type: none"> • Even if this is not addressed by the trial, what do you think? 	
<p>Total score and stars awarded</p>	

6. Checklist 6

<p>PART I. MMAT criteria & one-page template (to be included in appraisal forms)(Pace <i>et al.</i> 2012)Available from: https://www.biomedcentral.com/content/supplementary/2046-4053-3-149-S3.pdf</p>	
<p>Types of mixed methods study components or primary studies Methodological quality criteria (see tutorial for definitions and examples) Study applied:</p>	<p>Score Yes=1 No=0 Can't tell=0</p>
<p>Responses</p>	
<p>Screening questions (for all types)</p>	
<p>☺ ☐ ☹ ☐</p>	
<p>Are there clear qualitative and quantitative research questions (or objectives*), or a clear mixed methods question (or objective*)?</p>	
<p>1. Qualitative</p>	
<p>1.1. Are the sources of qualitative data (archives, documents, informants, observations) relevant to address the research question (objective)? 1.2. Is the process for analyzing qualitative data relevant to address the research question (objective)? 1.3. Is appropriate consideration given to how findings relate to the context, e.g., the setting, in which the data were collected? 1.4. Is appropriate consideration given to how findings relate to researchers' influence, e.g., through their interactions with participants?</p>	
<p>2. Quantitative randomized controlled (trials)</p>	
<p>2.1. Is there a clear description of the randomization (or an appropriate sequence generation)? 2.2. Is there a clear description of the allocation concealment (or blinding when applicable)? 2.3. Are there complete outcome data (80% or above)? 2.4. Is there low withdrawal/drop-out (below 20%)?</p>	
<p>3. Quantitative non- randomized</p>	
<p>3.1. Are participants (organizations) recruited in a way that minimizes selection bias? 3.2. Are measurements appropriate (clear origin, or validity known, or standard instrument; and absence of contamination between groups when appropriate) regarding the exposure/intervention and outcomes? 3.3. In the groups being compared (exposed vs. non-exposed; with intervention vs. without; cases vs. controls), are the participants comparable, or do researchers take into account (control for) the difference between these groups? 3.4. Are there complete outcome data (80% or above), and, when applicable, an acceptable response rate (60% or above), or an acceptable follow-up rate for cohort studies (depending on the duration of follow-up)?</p>	
<p>4. Quantitative descriptive</p>	
<p>4.1. Is the sampling strategy relevant to address the quantitative research question (quantitative aspect of the mixed methods question)? 4.2. Is the sample representative of the population understudy? 4.3. Are measurements appropriate (clear origin, or validity known, or standard instrument)? 4.4. Is there an acceptable response rate (60% or above)?</p>	
<p>5. Mixed methods</p>	
<p>5.1. Is the mixed methods research design relevant to address the qualitative and quantitative research questions (or objectives), or the qualitative and quantitative aspects of the mixed methods question (or objective)?</p>	

5.2. Is the integration of qualitative and quantitative data (or results*) relevant to address the research question (objective)?	
5.3. Is appropriate consideration given to the limitations associated with this integration, e.g., the divergence of qualitative and quantitative data (or results*) in a triangulation design?	
Do the collected data allow address the research question (objective)? E.g., consider whether the follow-up period is long enough for the outcome to occur (for longitudinal studies or study components).	
<i>Further appraisal may be not feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.</i>	
<i>Criteria for the qualitative component (1.1 to 1.4), and appropriate criteria for the quantitative component (2.1 to 2.4, or 3.1 to 3.4, or 4.1 to 4.4), must be also applied.</i>	
*These two items are not considered as double-barreled items since in mixed methods research, (1) there may be research questions (quantitative research) or research objectives (qualitative research), and (2) data may be integrated, and/or qualitative findings and quantitative results can be integrated.	

Appendix 2: The cross-sectional survey

Cervical cancer screening (Pap-test) female Overseas Filipino Workers

Q1 Welcome! For Tagalog please change from English to Tagalog at the top right. My name is Floor Christie-de Jong and I am conducting this research into cervical cancer screening with female overseas Filipino workers, for my doctoral research for Lancaster University, Lancaster, United Kingdom. The purpose of the research is to investigate if female overseas Filipino workers are aware of cervical cancer screening, or Pap smears, how many women have Pap smears and if they do not have Pap smears, why not. There are no right or wrong answers; I am just trying to find out about your use of pap smears and your views about these. You are not obliged to answer any of these questions. The questionnaire will take about 20 minutes. The questionnaire is anonymous and your name or anything that could identify you will not be recorded on the questionnaire. You cannot be identified from your answers and your answers are treated as confidential information. Please feel free to contact me if you have any questions before or after taking the questionnaire on: f.christie-dejong@lancaster.ac.uk or www.ofwresearch.com

Thank you so much for taking the time to read this. I hope you will take part and help to take the first steps to improve the health for female Overseas Filipino Workers.

Warm wishes,

Floor

Q2 Is your nationality Filipino?

- No
- Yes
- Other, please specify _____

Q3 What is your age?

Q4 Have you read the information about the study and would you like to take part in this questionnaire?

- No
- Yes

Q5 Thank you so much for agreeing to participate; your help is very much appreciated. On the study's website you can find information on the study and all the details that apply to the study. The website has the researcher's contact details in case you have any questions or wish to contact her about any concerns you may have regarding this research. Please find below some questions regarding the topic of this research. Thank you for taking part! From now on the term 'Pap smears' will be used instead of cervical cancer screening.

Q6 Have you heard of Pap smears before?

- No
- Yes
- I'm not sure

Q7 A Pap smear, also called a Pap test, is a procedure to test for cervical cancer in women. A Pap smear involves collecting cells from your cervix — the lower, narrow end of your uterus that is at the top of your vagina. Pap smears can detect changes in your cervical cells that suggest cancer may develop in the future.

Q8 From what age women do you think women are encouraged to have a Pap smear?

Q9 Do you know how often women should have Pap smears?

- Once a year
- Every 2 years
- Every 3 years
- Every 5 years
- I'm not sure
- Other, please specify _____

Q10 The following are some statements about cervical cancer screening or Pap smears. Please choose the option that matches your views best for each statement.

	Strongly Agree (1)	Agree (2)	Neither agree or disagree (3)	Disagree (4)	Strongly disagree (5)	Don't know (6)
I'm too young or old to begin having pap smears (1)	•	•	•	•	•	•
Pap smears have to be done regularly to be effective to protect my health (2)	•	•	•	•	•	•
Healthy women do not need to have a regular smear (3)	•	•	•	•	•	•
Pap smears are not necessary once a women has reached menopause (4)	•	•	•	•	•	•
Having a pap smear every 3 years is often enough (5)	•	•	•	•	•	•

Pap smears help to prevent cervical cancer (6)	.	.	.	.	.	.
Cervical cancer can be cured if detected early (7)	.	.	.	.	.	.
Having many different sexual partners, increases the risk of women having changes in the cervix (8)	.	.	.	.	.	.
Having a previous abnormal Pap smear finding, increases the risk of women having changes in the cervix (9)	.	.	.	.	.	.
Only women with children need to have Pap smears (10)	.	.	.	.	.	.

Q11 Has any friend or family member ever spoken to you about cervical cancer screening or Pap smears?

- No
- Yes
- I'm not sure

Q12 The most recent time you looked for information about any health or medical topics, where did you go first? (you can choose only one)

- Books
- Family (2)
- Friend or co-worker (3)
- Internet (4)
- Media (television, newspaper, radio) (5)
- Magazine (6)
- Community organisation (for example Church) (7)
- Doctor or Health care provider (8)
- Complementary or alternative practitioner (9)
- Brochure or pamphlet (10)
- Other (11) _____

Q13 Did you look or go anywhere else? Choose all that apply

- Books (1)
- Family (2)
- Friend or co-worker (3)
- Internet (4)
- Media (television, newspaper, radio) (5)
- Magazine (6)
- Community organisation (for example Church) (7)
- Doctor or Health care provider (8)
- Complementary or alternative practitioner (9)
- Brochure or pamphlet (10)
- Other (11) _____

Q14 Has any health care professional like a doctor or a nurse ever told you to go for a Pap smear?

- No (1)
- Yes (2)
- I'm not sure (3)

Q15 Have you ever thought about having a Pap smear?

- No (1)
- Yes (2)
- I'm not sure (3)

Q16 If your health care provider would recommend you to have a Pap smear, would you have one?

- No (1)
- Yes (2)
- I'm not sure (3)

Q17 If a Pap smear would be free, would you have one?

- No (1)
- Yes (2)
- I'm not sure (3)

Q18 Did you ever have a Pap smear?

- No (1)
- Yes (2)
- I'm not sure (3)

[Automatic: If no is selected, then skip to 'Do you attend any other types of heal...Q22']

Q19 When was your last Pap smear?

- < 1 year ago (1)
- 1-2 years ago (2)
- 2-3 years ago (3)
- 3-5 years ago (4)
- 5+ years ago (5)
- I can't remember (6)
- I did not have a pap smear (7)

Q20 Was this Pap smear:

- In the Philippines (1)
- Overseas, please specify country (2) _____
- I did not have a pap smear (3)

Q21 What is the reason you had your last Pap smear? Please click all those that match your views best, you can click more than one.

- My doctor/nurse told me this is what I should do at my age (1)
- I had symptoms like bleeding, vaginal discharge or others symptoms (2)
- As part of my normal health care routine (3)
- As part of my health care when I was pregnant (4)
- Other, please specify (5) _____
- I'm not sure (6)
- I did not have a pap smear (7)

Q22 Do you attend any other types of health screening? For example breast cancer screening like a breast examination or a mammogram.

- No (1)
- Yes, please specify the type of screening (2) _____
- I'm not sure (3)

Q23 Do you have a doctor or health care provider you attend where you live overseas?

- No (1)
- Yes (2)

Q24 Here are some potential reasons for not attending cervical cancer screening or having Pap smears. To what extent do you agree or disagree with the following:

	Strongly Agree (1)	Agree (2)	Neither agree not disagree (3)	Disagree (4)	Strongly disagree (5)	Don't know (6)
I have not had time (1)	•	•	•	•	•	•
I have never thought about it (2)	•	•	•	•	•	•
No one has advised me to go (3)	•	•	•	•	•	•
I have not had any symptoms and therefore did not see reason to go (4)	•	•	•	•	•	•
I am in good health (5)	•	•	•	•	•	•
I would feel too uncomfortable or embarrassed (6)	•	•	•	•	•	•
It is too expensive (7)	•	•	•	•	•	•
I am worried about the pain (8)	•	•	•	•	•	•
I do not know where to go (9)	•	•	•	•	•	•
I am worried about the outcome, I do not want to	•	•	•	•	•	•

hear bad news (10)						
I do not go to the doctor unless I am ill (11)	•	•	•	•	•	•
I do not have a doctor overseas (12)	•	•	•	•	•	•
I do not need to go for a pap smear, because God will determine my fate (13)	•	•	•	•	•	•
I find it difficult to talk about such an intimate topic with anyone, even a doctor (14)	•	•	•	•	•	•
The doctor may not speak my language which makes it difficult for me to go for a pap smear (15)	•	•	•	•	•	•
I do not like the way the doctor speaks to me. (16)	•	•	•	•	•	•
I do not have transport to go to a clinic. (17)	•	•	•	•	•	•



Other reasons, please specify (18)	•	•	•	•	•	•
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Q25 To what extent do you agree or disagree with the following:

	Strongly Agree (1)	Agree (2)	Neither agree not disagree (3)	Disagree (4)	Strongly disagree (5)	Don't know (6)
I intend to go for a pap smear overseas soon (1)	•	•	•	•	•	•
I think a pap smear will be beneficial to me (2)	•	•	•	•	•	•
I think it is unlikely that I will develop cervical cancer (3)	•	•	•	•	•	•
The Pap smear is effective in detecting cervical cancer early (4)	•	•	•	•	•	•
I think these tests like pap smears might be good but I don't need them (5)	•	•	•	•	•	•
Cancer cannot be cured even if it is detected early (6)	•	•	•	•	•	•

I will go if or when I suffer symptoms (7)	•	•	•	•	•	•
I have been before and it was so difficult I won't go again (8)	•	•	•	•	•	•
Making an appointment is problematic (9)	•	•	•	•	•	•
Having a Pap smear is embarrassing (10)	•	•	•	•	•	•
I sometimes worry about having cancer (11)	•	•	•	•	•	•
I will go for a Pap smear, but I prefer to go in the Philippines (12)	•	•	•	•	•	•
The Pap smear is a safe procedure (13)	•	•	•	•	•	•
You can do something to avoid getting cervical cancer (14)	•	•	•	•	•	•

<p>If I did have cancer I would rather not know about it (15)</p>	•	•	•	•	•	•
<p>I worry the doctor might be male and this makes me feel shy (16)</p>	•	•	•	•	•	•
<p>Cancer is a punishment (17)</p>	•	•	•	•	•	•
<p>If I did not work such long hours, I would go for pap smears (18)</p>	•	•	•	•	•	•
<p>If the doctor would somehow come to me, I would go for pap smears (19)</p>	•	•	•	•	•	•
<p>Women get cervical cancer because they are promiscuous (20)</p>	•	•	•	•	•	•

Q26 To what extent do you agree or disagree with the following:

	Strongly Agree (1)	Agree (2)	Neither agree not disagree (3)	Disagree (4)	Strongly disagree (5)	Don't know (6)
I am most comfortable being with people from the Philippines (1)	•	•	•	•	•	•
It is my duty to take care of my family, even when I have to sacrifice what I want (2)	•	•	•	•	•	•
I prefer traditional Filipino medicines than western medicines (3)	•	•	•	•	•	•
My husband and/or male relatives would support me if I consult a male doctor for a pap smear (4)	•	•	•	•	•	•
I believe it is my responsibility to look after	•	•	•	•	•	•

my health (5)						
I believe in the traditional healer's (such as a hilot or herbolario) ability to cure illness (6)	•	•	•	•	•	•
I want to stay healthy for my family and therefore I do want to have pap smears (7)	•	•	•	•	•	•
I have no family or friends to come with me for support and this is stopping me (8)	•	•	•	•	•	•
If my friends or family would tell me to go for pap smears I would go (9)	•	•	•	•	•	•
The way I do things and the way I think about things are from the Philippines (10)	•	•	•	•	•	•

I pray every day (11)	•	•	•	•	•	•
I believe in fate or luck (12)	•	•	•	•	•	•
I would prefer my doctor to be Filipino (13)	•	•	•	•	•	•
I believe I have control over my own health (14)	•	•	•	•	•	•
I do not want to undress for any doctor (15)	•	•	•	•	•	•
I only have Filipino friends (16)	•	•	•	•	•	•
I trust my doctor overseas (17)	•	•	•	•	•	•
I rely on my religious community for health advice (18)	•	•	•	•	•	•
I mostly watch Filipino television (19)	•	•	•	•	•	•
Looking after my family financially is more	•	•	•	•	•	•

important than my health (20)						
I feel very comfortable speaking English (21)	•	•	•	•	•	•
Attending health care appointments such as pap smears if together with my friends would make it more comfortable for me (22)	•	•	•	•	•	•
When I grew up a healthy life style was important in my family (23)	•	•	•	•	•	•
When I grew up I had access to information on health (24)	•	•	•	•	•	•

Q27 You are nearly at the end! A few more demographic questions. As you know, this survey is anonymous.

Q28 Which country are you living in overseas?

- Please specify (in English if you can please) (1) _____

Q29 What is your marital status?

- Single/never married (1)
- Married/Living with partner (2)
- Separated (3)
- Divorced (4)
- Widowed (5)
- Other (6)

Q30 If you have a partner does your partner live in the same country as you?

- No (1)
- Yes (2)
- Not applicable (3)

Q31 Do you have children?

- No (1)
- Yes, please specify how many (2) _____

Q32 What is the highest level of education you have completed?

- Never went to school (1)
- Primary/junior school (2)
- High school (3)
- Trade school/diploma (4)
- University (5)
- Other (6) _____

Q33 Are you currently:

- Employed full-time (1)
- Employed part-time (2)
- Self-employed (3)
- Homemaker (4)
- Student (5)
- Retired (6)
- Unemployed (7)
- Unable to work (8)

Q34 What is the best way to describe your employment:

- Household service worker (1)
- Nursing professional (2)
- Waiter/bartender and related work (3)
- Caregiver (4)
- Administrative worker (5)
- Production worker (6)
- Sales worker (7)
- Other, please specify (in English if possible please) (8) _____

Q35 What is your monthly household income in US dollars (\$):

- \$250 (1)
- \$250-\$500 (2)
- \$500-\$1000 (3)
- \$1000-\$2500 (4)
- \$2500-\$4000 (5)
- \$4000-\$6000 (6)
- >\$6000 (7)
- I'm not sure (8)
- I'd prefer not to answer this question (9)
- I am not sure in US dollars but in this currency it would be, please specify currency and amount (10) _____

Q36 How many years have you been overseas?

Q37 What is your religion?

- Muslim (1)
- Christian (2)
- Buddhist (3)
- None (4)
- I would prefer not to answer this question (5)
- Other, please specify (in English if you can please) (6) _____

Q38 Do you have health insurance?

- No (1)
- Yes (2)
- I'm not sure (3)

Q39 How many books were there in your home when you grew up?

- 0-10 (1)
- 11-25 (2)
- 26-100 (3)
- 101-200 (4)
- More than 200 (5)

Q40 What is the highest level of education your father completed?

- Never went to school (1)
- Primary/Junior school (2)
- High school (3)
- Trade school/diploma (4)
- University (5)
- Other (6) _____

Q41 What is the highest level of education your mother completed?

- Never went to school (1)
- Primary/junior school (2)
- High school (3)
- Trade school/diploma (4)
- University (5)
- Other (6) _____

Q42 Further involvement: As part of this research the researcher will also conduct a number of interviews. These are interviews in which questions regarding the same topic will be asked which you can do either alone or in a small group such as with a friend, if you prefer. These interviews will provide more in-depth discussion of the topic. There are no right or wrong answers, the researcher is only interested in your views or experiences. It is hoped you might enjoy discussing this important topic with the researcher. The interview would be conducted through Skype or Face time or any other online communication method that suits you. All information you will share and everything you say alone or in the group will be anonymised, which means that you could not be identified from what you discuss. Participation is voluntary, you do not have to do this and you can withdraw at any time without any consequences. If you would like to participate in this or if you would like to ask more questions about this before you decide, please write here you email address and the researcher will contact you to discuss further or you can email:

f.christie-dejong@lancaster.ac.uk

Your email:

Q43 Thank you so much for taking part in the questionnaire, on behalf of Lancaster University I would very much like to thank you, I really appreciate your time and effort. If you have any more questions, please do not hesitate to contact me: f.christie-dejong@lancaster.ac.uk If you would like a copy of the final report please contact me. I cannot thank you enough for taking part. I hope something useful will come out of this research for all you wonderful Filipino workers!

All the best and thank you!

Floor

Appendix 3: Qualitative Interview Schedule and Vignetes

Introduction:

Thank you so much for joining me today, it is really appreciated. We have discussed the consent already but I just wanted to start with a quick introduction and explanation of what it is we will be doing today.

You do not have to take part and can still decide to leave, that is no problem. Please do understand that even if you want to stop in the middle of the discussion this is fine. This session will be audio-recorded. You can still withdraw your information two weeks after the interview. Later than that your information may have been analysed already but all effort will be made to filter out your information. Your direct quotations will not be used. We will be talking for about one hour about the topic of the research, pap smears. I really would like you to know that there are no right or wrong answers; I am just interested in hearing your views and your understanding. If you have any questions about pap smears or cervical cancer we can discuss at the end, you can ask then anything you like.

It is important to realise that this is meant as a safe environment, in which you can say anything without feeling judged (if applicable). You do not have to answer any of the questions and if you feel uncomfortable about anything we discuss please let me know.

I will be using a few stories today. These are made-up and are not from real people but these are just to help you think about the topics and encourage some discussion. Please do feel free to add anything you want.

Do you have any questions before we start?

Let's start with a question first:

Have you heard of pap smears?

What do you know about pap smears?

Let me read this story to you:

Vignette 1: Rozy

Imagine Rozy, she is a 30-year-old female from the Philippines. She has one child who is 7 years old and lives with her mum in the Phillipines. Rozy has been in Hong Kong for 2 years and is working full time as a domestic worker to earn money for her son's education. Rozy feels fit and healthy and has never seen a doctor in Hong Kong. Rozy has never had a pap smear.

Questions:

What do you think Rozy should do about pap smears? Why do you say that?

How often should a woman go for a pap smear do you think?

Why is this, what do you think a Pap smear does?

Could you think of any reasons why women should have pap smears?

What do you think of having Pap smears? What do you mean?

Do you ever think of having a Pap smear? Why is this?

Do you think cancer is curable? Why do you say that?

Do you feel going for a pap smear is beneficial to you?

Do you think pap smears are important to us?

Vignette 2: Melanie

Imagine Melanie, she is a 45 years old female from the Philippines and has been overseas for 10 years. She has two children who are now in their teens. Melanie has had a Pap smear but felt so embarrassed about the whole situation that she has not gone back. Melanie knows that having regular pap smears is important however she worries about finding out she may have cancer and this stops her going for a pap smear. She thinks that if it is found out she has cancer she will die and she cannot send money home for her two children.

Questions:

What do you think of Melanie's feelings regarding the pap-smear? Why/What do you mean?

Could anyone imagine feeling like Melanie? How is this for you?

Have you had a pap smear?

How was this experience for you?

Where did you have the pap smear?

Do you think Filipino women overseas go for pap smears?

Have you heard from your friends or family about pap smears? Do they have them?

Could you think of any reasons why Filipino women overseas would not go for pap smears?

What do you mean by that?

What else, what other reasons could you think of why women would not go? Can you describe these?

Have you got a doctor where you are overseas? Do you go and see the doctor?

Has a doctor or a nurse ever spoken to you about pap smears? Have they ever explained what these are and why you should have them? How was this? What was the result of this for you?

How would you feel if doctors or nurses would discuss pap smears with you? How would discussing intimate issues be for you? Or undressing in front of a doctor?

What about the language, is that important to you?

Do you think being away from the Philippines makes any difference to you having pap smears? How would this compare to being at home for you or other women, do you think?

Why is this?

What do you think of Melanie's worry about having cancer? Why do you say that?

Do you think her worry is justified?

Do you recognize that worry? How is this for you?

Some women are worried about the pap-smear itself. How is that for you? Are you worried about the pain?

Some women are worried of hearing bad news and are worried about the outcome. How is that for you?

What would that mean for you?

How about your family, do you think staying healthy for your family is important? Do you worry about your health in relation to your family?

What about support from friends, would that be important to you? Would going with friends help you?

Would you be worried about what other people think of you when going for a pap-smear?

Why do you say that?

Vignette 3: Jovelene

Imagine Jovelene, 46 years. She has two children who are now already 16 and 18. Jovelene has been in Singapore for 8 years. Jovelene has a pap smear every three years. She has done this since she was 21. She has never had any symptoms and also never had an abnormal smear test. She knows chances of having an abnormal pap smear are quite small and that cervical cancer is quite rare but she still commits to regular screening. This doesn't cost her very much but it reassures her. She knows where to go in Singapore and phones up to make an appointment and this is not problematic. She has time to go for a pap smear, and her employer let's her go to the doctor.

Questions:

What do you think of Jovelene's approach to pap smears? Why do you say that?

How does Jovelene's approach to pap smears compare to you? Why do you say that?

Would you know where to go?

She has time to go for a pap smear, and her employer let's her go to the doctor.

How is that for you? Have you got time?

What is for you the biggest obstacle stopping from going for a pap smear? Why do you say that? How could this be prevented?

What about the expense, it seems not to worry Jovelene, would it worry you?

What about transport?

What do you think would make it easier for Filipino women to go for a pap smear? Why do you say this?

Is there anything else that could make it easier for women to go for Pap smears? Can you give examples?

Would you like to say anything else?

Do you have any questions?

Thank you so much for participating.

Appendix 4: Sample interview

Filipino, female, 35, domestic worker, Kuwait, separated, 2 children (P8)

- I: Tell me how old you are?
- P: I am now 35 years old
- I: And you are now in Kuwait?
- P: Yeah I am in Kuwait for almost 6 years.
- I: 6 years ok, long time. What do you do there?
- P: I am a housemaid; take care of the babies, cook, and clean, the house.
- I: With one family.
- P: Yes, one family.
- I: Where are they from?
- P: They are from a city in Kuwait.
- I: Ok so they are Kuwaitis, they are from Kuwait?
- P: Yes. They are Kuwaitis.
- I: And have you been with them all along?
- P: Yes, I am with them since 2010. It's my only employer
- I: No other employer?
- P: No.
- I: So can I tell you first, what do you know about Pap smear?
- P: Pap smear, I only hear. It's for cleaning of the vagina of the woman. To keep the vagina clean. That is all I know about Pap smear. I didn't do that but I want to. I never tried it before. I have two kids but I didn't try it. Just washed. I just know what is the feeling. I am zero. Haha
- I: And did any one ever tell you to have one?
- P: My colleague she said that she did it once.

- I: So your colleague did it once?
- P: Yes. Did it once.
- I: And what did she tell you?
- P: She told me that something was put into the vagina to clean, and I don't know. She said something goes inside and something clean. And like that.
- I: So what do you think they clean then?
- P: I think it is to clean the dirty part, from making sex with your husband. Just make it clean. If I am right, I don't know.
- I: No, it is just interesting to hear what your views are, what your thoughts are. So you think that the vagina gets dirty from having sex with your husband? And that it needs to be cleaned?
- P: No, not at all. Maybe, I heard this before; at 18-50 years old you must have a pap smear. I am right. I understand the year from television, and reading books.
- I: At what age did you say? Can you speak in your microphone? I am having a hard time hearing.
- P: 18
- I: Yeah, Yeah better. And what age did you think?
- P: I: As far as I know it's 18 years old. If I am right? 18 years old and above.
- I: Ok. I will tell you later.
- P: If I am right with the age you must be to have a pap smear.
- I: And how often then you think we should do that?
- P: Once a year, or every six months. I think.
- I: Ok. So the reason you think we need to do it is to clean the vagina?
- P: Yeah.
- I: And why would that be good for us?
- P: Because it's common that girl or women it gets dirty inside. Hahaha. It must be clean, it must be out. It needs washing.
- I: Ok. So what would happen to us if we would not clean that?

- P: It could cause cancer if you let that, or not clean, or ignore about your health. You may get sick and have a serious female health problem
- I: Ok. Thank you. So you say that you haven't done it yet?
- P: Yeah, never done it.
- I: So did any Doctor ever tell you to do it ?
- P: No, I didn't come yet to any health center.
- I: No. You didn't go to the health center yet.
- P: Yeah, I didn't visit anymore.
- I: You did not visit a health center at all?
- P: Before I delivered my first baby, they cleaned. I delivered at the hospital and maybe they cleaned. But for my second baby I just stayed at home so no. But for my first baby I make it clean. It is very good if I go to the hospital because they will make it clean, right? If I stayed at home for my second baby ? [unknown part]
- I: Ok. So but you had your babies in the Philippines of course?
- P: Yeah.
- I: How old are your babies now?
- P: I have eleven and eight years old.
- I: Ahhh, ok. Nice ages. Are they at home in the Philippines?
- P: Yeah, they are with my mother.
- I: So what is that like for you?
- P: Hummm?
- I: What is that like for you? How is that like since you are not with them?
- P: Before, at 1 to 3 years it always made me cry, cry, cry, because I miss them. Now in my mind, I have to work. Because I am a single mother, I have to work. Right? I have to provide them. What can I do? I have to work.
- I: Yeah. [sigh] Yeah. So you have to look after them?
- P: I have to keep their needs. I have to work.
- I: Is that important to you, to look after your children?

- P: [pause] for me as a single mama, yeah I have to. There is no one that can give his or her needs so much.
- I: Yah, ok. Can I ask you what happened with your husband?
- P: I heard before he was with another one.
- I: Ok.
- P: We are separate for 9 years. I was pregnant with my second baby, and we separated.
- I: [sigh] Aww, I am sorry.
- P: I stayed 5 months pregnant, and we separated.
- I:[sigh] I am sorry, yeah.
- P: That's ok.
- I: So, what made you decide to go to Kuwait?
- P: Make me decide? I realized I had to work for my daughter, I must send them to school , their needs, their clothes, their food anything they want. Also, I have to help my parents, give them some extra money to buy something. You know? To help them also. Not just for my kids but also for my parents.
- I:Is that normal for the Philippines to help your parents as well?
- P: Yes that is normal. It's values.
- I: Yeah.
- P: I have to look out for my parents.
- I: Ok. So the reason why I am asking you these questions is that for some women that I've interviewed is that looking after their family is more important than looking after their own health. What is that like for you?
- P: Yeah, it is true. For me, here in Kuwait there is a free medical room.
- I: There is a free medical room ?
- P: Yeah, free medical. I have not been. I have to work because my employer will get mad. They will not treat you good if you say you have to go out for a medical or see a doctor, you know what is a Gulf country. They are getting angry if their housemaids

go out for just a little time, because they won't look after the baby, you know? If we are sick, we look for a Paracetamol you know, because you want to get the body clean. We are searching for the medicine. That is good for our body. Sometimes people just ignore, they think oh just take a Paracetamol and it will be done. They will not tell you to go, you cannot say I am tired with the baby. That is why. I'd love to, but I have no time. I didn't have a day off.

- I: How often do you get a day off?
- P: No. I have not had a day off in almost 6 years.
- I: In almost six years? Nothing? No day off?
- P: No. My only day off is in the airport. Vacation. Only 1 month.
- I: And how often do you go on vacation? How often can you go home?
- P: Well, just now I ask to just give me one month.
- I: Ok. And how often is that? Once a year? Twice a year? Or every two years? How often can you go home?
- P: Before they let me go, when I finished after 2 years but I refused to go. I take my [missed word] payment and changed the airplane ticket to send my brother to Kuwait for work. So I told them to give me the money for the ticket but I will not use it for me but send my brother to Kuwait for the payment of his papers. So it makes me get furious before I come back to the Philippines.
- I: Yeah.
- P: It makes me have to wait 2 years on another contract. Even without signing. You know, it's a 2-year contract.
- I: Yeah, so in the six years you have only been home once?
- P: Yeah, one time.
- I: So the one time you were able to go you let your brother come instead of you?
- P: Yeah. I let my brother come to gain work.
- I: So helping your family again? [laugh]
- P: Yeah. [laugh]

- I: So you are telling me that one of the reasons it's difficult for you to go for a Pap smear, even if in Kuwait they have a free medical center, is because of the relationship with your employer? Is that right?
- P: Yeah.
- I: So what do they say if you say I would like to go to the health center. What would they say?
- P: They will say you are too much pain. They will let you go. They will say to stay at home and will give you medicine. Something like that.
- I: So they would say you are not sick enough to go? Is that what you are saying?
- P: Yeah. They will say you can walk, it's only a fever, and it's only a cough. I will give you medicine. But if you get bad, you must sleep and let you go to the hospital to rest and get medicine. That is it.
- I: And how is that for you?
- P: For me, thanks to God, I only got a fever and a cough but my other colleague was sent to hospital for 2 days because was very tired and didn't have enough sleep. Here its not enough sleep, always tired. The body can't absorb the pressure of the world, you know?
- I: How much sleep do you get?
- P: What? Pardon?
- I: How much sleep do you get?
- P: I almost sleep at 12 o'clock, 11 or sometimes 1230, and I wake up at 530 because I have to wake up for school, pack and send the children to school. This is why I have to wake up at 530.
- I: So maybe 5 hours every night?
- P: Yeah, 5 hours. Sometimes 4 hours, because I sleep with the babies for almost two years. Just a couple of months ago, I finally said that I can't sleep with their babies since it makes me tired, cannot clean, cook, and sleep at night with the two babies

crying. Then, they got angry and took my mobile. They are not treating me good, and always angry. Once they got like that.

- I: Like what? Is what your saying is that when you got angry they gave you what you want?
- P: Yeah, well. They are not treating you good and are shouting at you. When they are nice they smile [gesture] and angry they shout [ahhh]. Like that.
- I: [laughter]
- P: [laughter]
- I: Sounds like it's tough for you.
- P: Yeah, it's tough. But I have to. I am almost finished, just another year. Because I will transfer to another job since I can speak Arabic. I can also write in Arabic. That is it.
- I: So what sort of job would you find then?
- P: It's an agency, just helping in the agency. Speaking Arabic is good you know. Understand and write is an advantage for me.
- I: Yeah, fantastic. So one more thing, when they got angry with you they took your phone away?
- P: They pay for the mobile, and the give me an old and a new one. What they do is take the old one and I keep the new one since they have to call and ask how is the baby and call me.
- I: Yeah. So it's a difficult relationship with your employer by the sounds of it.
- P: Yeah, if you are good, even if you want to shout, you have to keep inside. You are not in your home country. There will be trouble, they will get angry and shout at you. It's better to be quiet and keep it inside. Hopefully they salary will come and that is it. If they get angry, ok silent yes. I don't like to talk a lot because in the end you are still the loser.
- I: [sigh] yeah. So back to Pap smear. You are saying while in Kuwait it is difficult for you to go because of your employer.

- P: It is difficult, but I heard that all the babies will go on vacation in London for 20 days and maybe I can go to the hospital. I can maybe tell my employer if I can go, since I will not have to work.
- I: Ok. Ok So when they are on holiday you can maybe do that?
- P: Yeah, because they will go all five of them.
- I: Ok, all five of them.
- P: Hopefully I can go out.
- I: So you would have to do it behind their back so they don't know?
- P: [laugh] I will have to tell them, because you cannot go out. The driver will have to take you to the hospital. It is very dangerous to walk here, if you are a Filipino.
- I: Oh is it? Why is that?
- P: Walk here? Too many Filipinos get raped walking.
- I: So you use their driver? Is that what you do? So he would always know where you are going? That is why you have to tell them?
- P: Yeah, I tell them.
- I: How do you think they would respond?
- P: I think it would be ok since in another place I can save money for the Pap smear.
[laugh]
- I: What about the money would it.., is it an issue for you for the Pap smear?
- P: Not an issue for the money but I want to try it. I really want to.
- I: So you are thinking about it?
- P: Yeah, I want to. I am filing this form before I saw it. I am aggressive to do it. I want to. I need to. As a woman. As a mother.
- I: Why do you say that ? As a mother?
- P: I must always be healthy for my children. [laughter]
- I: What would happen if you were not?
- P: I don't know, what is the future if I am not healthy? [laughter]
- I: Yeah, ok. So what about in the Philippines? Is that an option to go there?

- P: Yeah, I would love to. It may take me 1 year before I can go. Last year I was there, but have to finish the contract. In 2017 I will go. My contract finishes in 2017.
- I: How come you have been thinking of going? Something spark you to think about it?
- P: Pardon me?
- I: So have you been thinking about it for a while? Is there a reason to do it now?
- P: I want to do it, I have to try. My old friend told me its better to clean inside. That is what I know. Mostly the woman can get sick because she did not clean the inside, right? [laugh]
- I: Do you mean cancer or anything else?
- P: I have read on the Internet and Facebook, but maybe it curable.
- I: What is curable? Is cancer curable?
- P: It's not yet been in a cancer stage, it's like. I have read before that for example...hmmm where is this one? [laughter] I read this on the Internet.
- I: Was that my survey that you read on the Internet? Was that my website you read?
- P: Yeah, I read it. I am very interested in health. Like drinking juice with cucumber, parsley, ginger, and honey. Just now I drink. I read that it's good for health. Every night I drink [laugh].
- I: So you like to do things that are good for your health?
- P: Yeah, I have to. To avoid sickness.
- I: Sorry?
- P: It's a replacement for the medicine. It's better to be alert. [laugh]
- I: You mean to prevent?
- P: Yeah, to prevent sickness and keep a healthy body [laugh]
- I: Could you think of why other Filipino women who are in similar situation as you don't go for a Pap smear? Why your friends or other women don't go?

- P: Maybe ignorance, they get paid no much money and just neglect health. It's like me. I have no money, just enough for one day. I have to save money to give to my children.
- I: I am going to read a story to you and see what you think. Imagine Melanie, a 45 year old from the Philippines and has been overseas for 5 years. She has two kids, now in their teens, maybe 14 and 16. Melanie has had a pap smear but felt so embarrassed about the situation that she has not gone back. Melanie knows that having regular pap smears is important however she worries she may find out she has cancer and has stopped going to get a pap smear. She thinks if she finds out she has cancer she will die and not be able to send money home to her children.
- P: Yeah, I can relate. I am scared to go because maybe the doctor will say you have cancer. My heart will be broken and my work will be done. I am scared to know what will be my result, and that is it. [laugh]
- I: So what would happen if you find out?
- P: [sigh] I am sorry. Maybe I will pass away.
- I: Maybe what? Pass away? Aww [...] Is that something that plays on your mind? You are worried about it and thus not going?
- P: Yeah, that also.
- I: Ok. Um, I am just looking. OK. So one more story. Is that ok?
- P: Yeah.

I: Imagine Joveline, she is 46. She has 2 children that are now 16 and 18. Joveline has been in Singapore for 8 years. She has a pap smear every 3 years, and she has done since 21 years old. She has never had any symptoms or also an abnormal smear test. She knows the chances of having an abnormal one are quite small and that cancer is quite rare. She still commits to regular screening. This doesn't cost her very much but it reassures her. She knows where to go in Singapore and phones up to make an appointment and it's not problematic. She has time to go for a pap smear and her employer lets her go to doctor.

- P: For that good it's very good. Every 3 years clean for a pap smear.
- I: Is that good?'
- P: Yeah, this is good.
- I: So she knows where to go for a Pap smear, would you know where to go in Kuwait?
- P: The truth is I don't know, they always told me in the big hospital in that area. But I did not try it before.
- I: Could you find out? Would that be difficult?
- P: If I want to make an appointment, not in a public hospital because too many people and the doctors and nurses won't treat a housemaid well. Not that one. They won't treat, their attention is full. As a housemaid or a driver you cannot get 100% attention. They will treat another, just like that.
- I: So as a housemaid you feel you don't get proper care in the hospital from a doctor or a nurse?
- P: Yes, that is how they treat you a housemaid. Let's say you get very ill, then you go to the doctor and they tell you to open your mouth. Then they give you a medicine and a prescription. The pharmacy is free and the medicine is free. Just like that. But in the private you will be treated nicely because you pay. They will treat you nicely, better to pay.
- I: How do you feel if you are treated like that in a public?
- P: Disappointed, because they are not fair to treat people from other countries.
- I: It's not fair to treat people from other countries like that? Is that what you are saying?
- P: Too much quality in the private, lots of checking, you are well treated, proper, not cheap. Not like in the government, they just look at your eyes and blood pressure and send you to another doctor or hospital. They will pass you here and pass you there. You don't know where the proper way is to go. They will prescribe you and send you to another place. You know. If I can be, I want to be in a private.

- I: Would you be able to afford that?
- P: Excuse me?
- I: Can you pay for that?
- P: If I can, why not? Maybe not too high. Why not. [laugh]
- I: Yeah. Thank you. One more question. Are you worried about what others might think of you if you go for a pap smear? Any ideas about women who get pap smears? Are these bad women who go?
- P: No, not bad.
- I: No? [laugh] What about your friends, important to get support from them?
- P: Yeah it would be good for support, to have strength inside you.
- I: Yeah. So going to get there? It would help, would it? Have you got that there?
- P: I have 5.
- I: Five friends?
- P: Yeah, it's a big house, but just like apartments. All the sons and mother, it's a big house, but its separated. This is for one son, if they are married. It's all separated.
- I: But are they all married?
- P: They have three sons who are married.
- I: So it's all the same family. But not married to same man?
- P: Two of them were married to the same cousin.
- I: So it's good for you to have your friends there. So I have no more questions for you, do you have any questions for me?
- P: Yes. I have. If I want to, can you give me a doctor can do this for me? To have a pap smear here in Kuwait?
- I: I don't see you any more, can you still hear me? Hold on. Ok. I am not based in Kuwait I am based in Dubai, but I can help you find one. I wonder if there is a Filipino doctor, is that important for you?
- P: Its ok. I am comfortable.
- I: Does it have to be a female for you?

- P: No I don't have a problem. It's a profession.
- I: Well actually in Kuwait it probably would always be a woman. I can try to help to Google something, I can do that for you tomorrow. I can hopefully send you a few telephone numbers. Would that be ok? So let me tell you about the Pap smear. It is not to clean the vagina or the ovaries. So what they do is you were right to an extent. They go into your vagina, but they go in above it to the cervix and they take a few cells, and look at those cells. [recording stopped]

Appendix 5: Coding Scheme, Qualitative data

Theme	Subtheme
<ul style="list-style-type: none"> • Experience of pap-testing 	<ul style="list-style-type: none"> • Practice • Intent • Consideration of having pap-test in host country
<ul style="list-style-type: none"> • Perceived Barriers 	<ul style="list-style-type: none"> • Time • Cost • Fear • Embarrassment
<ul style="list-style-type: none"> • Cognitive Factors 	<ul style="list-style-type: none"> • Health beliefs • Knowledge of pap-testing • Misconceptions
<ul style="list-style-type: none"> • Social and cultural factors 	<ul style="list-style-type: none"> • Providing for family • Social support • Sexual connotation to pap-testing
<ul style="list-style-type: none"> • Social and structural context 	<ol style="list-style-type: none"> 1. Institutional factors: <ol style="list-style-type: none"> a. Access to health care b. Health care provider factor 2. Working and living conditions 3. Relationship with employer

Appendix 6: Ethical Approval Faculty of Health and Medicine Research Ethics Committee

Research and Enterprise
Services Division



Applicant: Floor Christie-de-Jong
Supervisor: Dr Siobhan Reilly and Dr Sara Morris
Department: DHR

01 October 2015

Dear Floor,

Re: Knowledge, attitude and practice concerning cervical cancer screening among female Overseas Filipino Workers: a web-based mixed method approach.

Thank you for submitting your amendment for the above project for review by the Faculty of Health and Medicine Research Ethics Committee (FHMREC). The amendment was recommended for approval by FHMREC, and on behalf of the Chair of the University Research Ethics Committee (UREC), I can confirm that approval has been granted for this amendment.

As principal investigator your responsibilities include:

- ensuring that (where applicable) all the necessary legal and regulatory requirements in order to conduct the research are met, and the necessary licenses and approvals have been obtained;
- reporting any ethics-related issues that occur during the course of the research or arising from the research to the Research Ethics Officer (e.g. unforeseen ethical issues, complaints about the conduct of the research, adverse reactions such as extreme distress);
- submitting details of proposed substantive amendments to the protocol to the Research Ethics Officer for approval.

Please contact the Research Ethics Officer, Debbie Knight (01542 592605 ethics@lancaster.ac.uk) if you have any queries or require further information.

Yours sincerely,

A handwritten signature in blue ink that reads "S C Taylor".

Sarah Taylor
Secretary, University Research Ethics Committee

Cc Fiona Aiken, University Secretary, Professor Roger Pickup (Chair, FHMREC); Prof Stephen Decent (Chair, UREC).

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Appendix 7: Participant Information Sheet-Phase 1 (English)

Participant Information Sheet

Phase 1-Questionnaire

Title of study: Knowledge, Attitude and Practice (KAP) concerning cervical cancer screening among female overseas Filipino workers: a web-based mixed method approach.

My name is Floor Christie-de Jong and I am conducting this study as a student in the PhD programme at Lancaster University, Lancaster, United Kingdom.

What is the study about?

This research is investigating the awareness, attitudes and uptake of cervical cancer screening, or Pap smears, in female overseas Filipino workers. We would like to find out what female overseas Filipino workers know about cervical cancer screening, or Pap smears, and how they feel about these. We want to find out if female overseas Filipino workers are having pap smears. We would also like to know the reasons for women having pap smears or reasons for not having these. Trying to answer these questions may be a starting point for informing Filipino women better about pap smears.

Why have I been approached?

You have been approached because you may have clicked on the online advertisement and the study requires information from Filipino women like you who live overseas are aged between 21 and 65.

What will I be asked to do if I take part?

If you decide you would like to take part, you would be asked to fill in an anonymous questionnaire, which will take about 10-15 minutes. The questionnaire will ask some questions about Pap smears and your understanding and views of this. There are no right or wrong answers, we are simply interested in finding out your views.

The questionnaire is available in English and Filipino, you can choose which one you feel more comfortable with.

Will my data be confidential?

The information you provide is anonymous and confidential. The questionnaire will not ask for a name and you cannot be identified from your answers.

The last page of the questionnaire asks you if you would also like to take part in the phase 2 of this study. If you would like to take part you will be asked to fill in your email address but this will be separated from your questionnaire. Your email address will be stored separately from the data but securely in a password protected file and your contact details will be deleted once the project is completed.

The data collected for this study will be stored securely and only the researchers conducting this study will have access to this data:

1. Paper copies of the questionnaires will be kept securely in a locked cabinet for ten (10) years. At the end of this period, these will be destroyed.
2. The researcher will share the data only with her supervisors in the UK but these files will not have your name or anything other that could identify you. Data will not be shared with any other organisations.

Do I have to take part?

No. It's completely up to you to decide whether or not you take part. Participation is voluntary and you can refuse or withdraw at any time, without any disadvantages and without giving a reason. You can also skip a question if you do not want to answer this. Please do note that once you have filled in the questionnaire, it is difficult to withdraw your answers because of the anonymity of the answers, there is no way of telling which were your answers.

What will happen to the results?

The results will be summarised and reported in a thesis and may be submitted for publication in an academic or professional journal. It will be ensured that you cannot be identified in any of the reports. You can request a summary of the study from the researcher once it is completed.

Are there any risks?

There are no risks anticipated with participating in this study. However, if you experience any distress following participation you are encouraged to inform the researcher and contact the resources provided at the end of this sheet.

Are there any benefits to taking part?

Although you may find participating interesting, there are no direct benefits in taking part.

Who has reviewed the project?

This study has been reviewed by the Faculty of Health and Medicine Research Ethics Committee, and approved by the University Research Ethics Committee at Lancaster University.

Where can I obtain further information about the study if I need it?

If you have any questions about the study, please contact the researcher:

Mrs. Floor Christie-de Jong by email: f.christie-dejong@lancaster.ac.uk

Or the researcher's supervisors:

Dr Siobhan Reilly: s.reilly@lancaster.ac.uk

Dr Sara Morris: s.m.morris@lancaster.ac.uk

Complaints

If you wish to make a complaint or raise concerns about any aspect of this study and do not want to speak to the researcher, you can contact:

Professor Bruce Hollingsworth

Head of Division of Health Research

Tel: 0044 (0) 1524 592430

Email: b.hollingsworth@lancaster.ac.uk

Lancaster University

Lancaster

LA1 4YD

If you wish to speak to someone outside of the Health Doctorate Programme, you may also contact:

Professor Roger Pickup Tel: (01524) 593746

Associate Dean for Research

Email: r.pickup@lancaster.ac.uk

Faculty of Health and Medicine

(Division of Biomedical and Life Sciences)

Lancaster University

Lancaster

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Appendix 8: Participant Information Sheet-Phase 1 (Tagalog)

Sheet ng Impormasyon ng Kalahok

Phase 1-Questionnaire

Pamagat ng pag-aaral Kaalaman, Saloobin at Kaugalian patungkol sa Cervical Cancer

Screening sa mga kababaihang Pilipino na nagtatrabaho sa ibang bansa: isang mixed method approach na nakabatay sa web.

Ako si Floor Christie-de Jong at isinasagawa ko ang pag-aaral na ito bilang estudyante ng Phd program sa Lancaster University, Lancaster, United Kingdom.

Tungkol saan ang pag-aaral?

Sinisiyasat ng pag-aaral na ito ang kaalaman, mga saloobin at paggamit ng cervical cancer screening, o Pap smears sa mga kababaihang Pilipino na nagtatrabaho sa ibang bansa. Gusto naming malaman kung ano ang nalalaman ng mga kababaihang Pilipino na nagtatrabaho sa ibang bansa tungkol sa cervical cancer screening, o Pap smears, at kung ano ang palagay nila dito. Gusto naming malaman kung nagpapa-pap smears ba ang mga kababaihang Pilipino sa ibang bansa. Gusto rin naming malaman ang mga rason kung bakit nagpapa-pap smears ang mga kababaihan o amg mga rason para sa hindi pagkakaroon nito. Ang pagsagot sa mga katanungang ito ay maaaring maging panimulang punto para magkaroon ng mas mabuting kaalaman ang mga kababaihang Pilipino tungkol sa pap smears.

Bakit ako nilapitan?

Nilapitan ka dahil maaaring nag-click ka sa online advertisement at nangangailangan ang pag-aaral ng impormasyon mula sa mga kababaihang Pilipino tulad mo na nakatira sa ibang bansa at nasa pagitan ng 21 at 65 taong gulang.

Ano ang hihingin sa aking gawin kung lalahok ako?

Kung nagpasya ka na gusto mong lumahok, hihingin sa iyong punan ang isang anonymous na questionnaire, na tatagal ng humigit-kumulang 15-20 minuto. Magtatanong ang questionnaire ng ilang katanungan tungkol sa Pap smears at ang iyong pag-unawa at mga palagay tungkol dito. Walang mga tama o maling sagot, interesado lang kaming malaman ang iyong mga saloobin.

Available ang questionnaire sa Ingles at Filipino, maaari mong piliin kung alin ang mas komportable ka.

Magiging kompidensyal ba ang aking data?

Anonymous at kompedensyal ang impormasyon na ibibigay mo. Hindi manghihingi ng pangalan ang questionnaire at hindi ka makikilala mula sa iyong mga sagot.

Tinatanong sa iyo ng huling pahina ng questionnaire kung gusto mo ring lumahok sa phase 2 ng pag-aaral na ito. Kung gusto mong lumahok, hihingin sa iyong ilagay ang iyong email address ngunit ihihiwalay ito sa iyong questionnaire. Ang iyong email address ay itatago nang hiwalay mula sa data ngunit nang ligtas sa isang file na protektado ng password at ide-delete ang iyong mga contact detail sa sandaling matapos ang proyekto.

Ang data na nakalap para sa pag-aaral na ito ay itatago nang ligtas at tanging ang mga tagapagsaliksik na nagsasagawa ng pag-aaral na ito ang magkakaroon ng access sa data na ito.

3. Itatago nang ligtas ang mga papel na kopya ng mga questionnaire sa isang nakakandadong aparador sa loob ng sampung (10) taon. Sa pagtatapos ng panahong ito, ang mga ito ay sisirain.
4. Ibabahagi lamang ng tagapasaliksik ang data sa kanyang mga superbisor sa UK ngunit ang mga file na ito ay walang pangalan mo o anupang ibang bagay na maaaring makapagpakilala sa iyo. Hindi ibabahagi ang data sa anumang iba pang mga organisasyon.

Kailangan ko bang lumahok?

Hindi. Nasa iyo ang pagpapasya kung lalahok ka o hindi. Kusang-loob ang paglahok at maaari kang umayaw o umalis sa anumang oras, nang walang anumang mga kawalan o nang hindi nagbibigay ng rason. Maaari mo ring laktawan ang isang katanungan kung hindi mo gustong sagutin ito. Mangyaring tandaan na kapag napunan mo na ang questionnaire, mahirap nang bawiin ang iyong mga sagot. Dahil sa pagiging anonymous ng mga sagot, walang paraan upang malaman kung alin ang iyong mga sagot.

Ano ang mangyayari sa mga resulta?

Ibubuo ang mga resulta at iuulat sa isang thesis at maaaring isumite para sa paglalathala sa isang akademiko o propesyonal na pahayagan. Titiyaking hindi ka makikilala sa alinman sa

mga ulat. Maaari kang humingi ng buod ng pag-aaral mula sa tagapagsaliksik kapag natapos na ito.

Mayroon bang anumang mga panganib?

Walang anumang mga panganib na inaasahan sa paglahok sa pag-aaral na ito. Gayunpaman, kung makakaranas ka ng anumang pagkabalisa bilang resulta ng paglahok, hinihikayat kang abisuhan ang tagapagsaliksik at makipag-ugnayan sa mga resource na ibinigay sa dulo ng sheet na ito.

Mayroon bang anumang mga pakinabang sa paglahok?

Bagama't maaaring kawili-wili para sa iyo ang paglahok, walang mga direktang pakinabang sa paglahok.

Sino ang sumuri sa proyekto?

Sinuri ang pag-aaral na ito ng Faculty of Health and Medicine Research Ethics Committee, at inaprubahan ng University Research Ethics Committee sa Lancaster University.

Saan ako maaaring makakuha ng karagdagang impormasyon tungkol sa pananaliksik kung kailangan ko ito?

Kung mayroon kang anumang mga katanungan tungkol sa pananaliksik, mangyaring makipag-ugnayan sa tagapagsaliksik.

Gng. Floor Christie-de Jong: Tel: +971- (0) 551125717

O email: f.christie-dejong@lancaster.ac.uk

O sa mga superbisor ng tagapagsaliksik:

Dr Siobhan Reilly: s.reilly@lancaster.ac.uk

Dr Sara Morris: s.m.morris@lancaster.ac.uk

Mga Reklamo

Kung nais mong magreklamo o magsabi ng mga alalahanin tungkol sa anumang aspeto ng pananaliksik na ito at ayaw makipag-usap sa tagapagsaliksik, maaari kang makipag-ugnayan kay:

Professor Bruce Hollingsworth

Head of Division of Health Research

Tel: 0044 (0) 1524 592430

Email: b.hollingsworth@lancaster.ac.uk

Lancaster University

Lancaster

LA1 4YD

Kung nais mong makipag-usap sa isang taong nasa labas ng Health Doctorate Program, maaari ka ring makipag-ugnayan kay:

Professor Roger Pickup Tel: (01524) 593746

Associate Dean for Research

Email: r.pickup@lancaster.ac.uk

Faculty of Health and Medicine

(Division of Biomedical and Life Sciences)

Lancaster University

Lancaster

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Appendix 9: Participant Information Sheet-Phase 2 (English)

Participant Information Sheet

Phase 2

Title of study: Knowledge, Attitude and Practice (KAP) concerning cervical cancer screening among female overseas Filipino workers: a web-based mixed method approach.

My name is Floor Christie-de Jong and I am conducting this study as a student in the PhD programme at Lancaster University, Lancaster, United Kingdom.

What is the study about?

This research is investigating the awareness, attitudes and uptake of cervical cancer screening, or Pap smears, in female overseas Filipino workers. We would like to find out what female overseas Filipino workers know about cervical cancer screening, or Pap smears, and how they feel about these. We want to find out if female overseas Filipino workers are having pap smears. We would also like to know the reasons for women having pap smears or reasons for not having these. Trying to answer these questions may be a starting point for informing Filipino women better about pap smears.

Why have I been approached?

You have been approached because you may have clicked on the online advertisement and the study requires information from Filipino women like you who live overseas are aged between 21 and 65.

What will I be asked to do if I take part?

You will be asked to take part in an interview, which is like an informal discussion either one-to-one with the researcher or you could do the interview with a friend if you prefer and we will discuss the topic as a small group. In this interview I would like to discuss the topic of Pap smears in more depth and why women are, or are not, having pap smears. This discussion will last about 45 minutes to 1 hour. I will ask some questions or give some examples that you may want to discuss. There are no right or wrong answers, we are simply interested in finding out your views. The discussion will be conducted in English so you will need to be comfortable in speaking in English. This does not have to be fluent but enough to have a conversation in English. We will conduct the interview via Skype or Face time or any other electronic communication that works for you.

Do I have to take part?

No. It's completely up to you to decide whether or not you take part. Participation is voluntary and you can refuse or withdraw without any disadvantages and without giving a reason, before or even during the interview. Please do note that the interview will be audio recorded. You can still withdraw your information two weeks after the interview. Later than

that your information may have been analysed already but all effort will be made to filter out your information. Your direct quotations will in that case not be used.

Will my data be identifiable?

5. No, you cannot be identified from the data and participation will be anonymous. The researcher will need your email address and possible Skype or Face time details to arrange the time and date with you for the interview but this will be completely separated from what you share in the interview and your contact details will be deleted once the project is completed. The interview will be audio recorded but your real name will not be used on these recordings. Nothing that could identify you will be used in the reports of this study. Anonymised direct quotations from your interview may be used in the reports or publications from the study, so your name will not be attached to them or anything else that could identify you. If you have filled in a questionnaire your answers could also be used in the reporting of the focus group results, but nothing will be used that could potentially identify you.

The data collected for this study will be stored securely and only the researchers conducting this study will have access to this data:

6. Audio recordings will be destroyed when the research project is completed.
7. Your contact details will be destroyed when the research project is completed

8. All other files will be kept for ten (10) years and then destroyed. Paper copies of the consent form or any other documents like paper copies of transcripts, will be kept securely in a locked cabinet.
9. The files will be encrypted (that is no-one other than the researcher will be able to access them) and stored on Lancaster University's secure server, which is the safest place.
- ~~10.~~ The typed version of your participation in the focus group will be made anonymous by removing any identifying information including your name. The researcher will share the data only with her supervisors in the UK but these files will not have your name or anything other that could identify you. Data will not be shared with any other organisations.

There are some limits to confidentiality: if what is said in the interview makes me think that you, or someone else, is at risk of significant harm, I will have to break confidentiality and speak to a member of staff about this. I will tell you if I have to do this.

What will happen to the results?

The results will be summarised and reported in a thesis and may be submitted for publication in an academic or professional journal. It will be ensured that you cannot be identified in any of the reports. You can request a summary of the study from the researcher once it is completed.

Are there any risks?

There are no risks anticipated with participating in this study. However, if you experience any distress following participation you are encouraged to inform the researcher.

Are there any benefits to taking part?

Although you may find participating interesting, there are no direct benefits in taking part.

Who has reviewed the project?

This study has been reviewed by the Faculty of Health and Medicine Research Ethics Committee, and approved by the University Research Ethics Committee at Lancaster University.

Where can I obtain further information about the study if I need it?

If you have any questions about the study, please contact the researcher:

Mrs. Floor Christie- de Jong by email: f.christie-dejong@lancaster.ac.uk

Or the researcher's supervisors:

Dr Siobhan Reilly: s.reilly@lancaster.ac.uk

Dr Sara Morris: s.m.morris@lancaster.ac.uk

Complaints

If you wish to make a complaint or raise concerns about any aspect of this study and do not want to speak to the researcher, you can contact:

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Head of Division of Health Research

Tel: 0044 (0) 1524 592430

Email: b.hollingsworth@lancaster.ac.uk

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Associate Dean for Research

Email: r.pickup@lancaster.ac.uk

Faculty of Health and Medicine

(Division of Biomedical and Life Sciences)

Lancaster University

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Appendix 10: Participant Information Sheet-Phase 2 (Tagalog)

Sheet ng Impormasyon ng Kalahok

Phase 2-Mga qualitative na panayaw

Pamagat ng pag-aaral Kaalaman, Saloobin at Kaugalian patungkol sa Cervical Cancer Screening sa mga kababaihang Pilipino na nagtatrabaho sa ibang bansa: isang mixed method approach na nakabatay sa web.

Ako si Floor Christie-de Jong at isinasagawa ko ang pag-aaral na ito bilang estudyante ng Phd program sa Lancaster University, Lancaster, United Kingdom.

Tungkol saan ang pag-aaral?

Sinisiyasat ng pag-aaral na ito ang kaalaman, mga saloobin at paggamit ng cervical cancer screening, o Pap smears sa mga kababaihang Pilipino na nagtatrabaho sa ibang bansa. Gusto naming malaman kung ano ang nalalaman ng mga kababaihang Pilipino na nagtatrabaho sa iba bansa tungkol sa cervical cancer screening, o Pap smears, at kung ano ang palagay nila dito. Gusto naming malaman kung nagpapa-pap smears ba ang mga kababaihang Pilipino sa ibang bansa. Gusto rin naming malaman ang mga rason kung bakit nagpapa-pap smears ang mga kababaihan o ang mga rason para sa hindi pagkakaroon nito. Ang pagsagot sa mga katanungang ito ay maaaring maging panimulang punto para magkaroon ng mas mabuting kaalaman ang mga kababaihang Pilipino tungkol sa pap smears.

Bakit ako nilapitan?

Nilapitan ka dahil maaaring nag-click ka sa online advertisement at nangangailangan ang pag-aaral ng impormasyon mula sa mga kababaihang Pilipino tulad mo na nakatira sa ibang bansa at nasa pagitan ng 21 at 65 taong gulang.

Ano ang hihingin sa aking gawin kung lalahok ako?

Hihingin sa iyong lumahok sa isang panayam, na tulad ng isang impormal na talakayan na maaaring harapan kasama ang tagapagsaliksik o maaari mong gawin ang panayam kasama ang isang kaibigan kung gusto mo at tatalakayin natin ang paksa bilang isang maliit na pangkat. Sa panayam na ito, gustong kong talakayin ang paksa ng Pap smears nang mas malalim at kung bakit nagpapa-pap smears o hindi ang mga kababaihan. Ang talakayang ito ay tatagal ng humigit-kumulang 45 minuto hanggang 1 oras. Magtatanong ako ng ilang katanungan o magbibigay ng ilang halimbawa na maaaring gusto ninyong talakayin bilang isang pangkat. Walang mga tama o maling sagot, interesado lang kaming malaman ang iyong mga saloobin. Isasagawa ang talakayan sa Ingles kaya kailangang maging komportable ka sa pagsasalita ng Ingles. Hindi kailangang maging matatas sa pagsasalita ngunit sapat upang magawang makipag-usap sa Ingles. Isasagawa natin ang panayam sa pamamagitan ng Skype o FaceTime o anumang iba pang elektronikong komunikasyon.

Kailangan ko bang lumahok?

Hindi. Nasa iyo ang pagpapasya kung gusto mong lumahok o hindi. Kusang-loob ang paglahok at maaari kang tumanggi o umalis nang walang anumang mga epekto at nang hindi nagbibigay ng rason, bago o maging habang nagaganap ang panayam. Mangyaring tandaan na io-audio record ang panayam. Maaari mo pa ring bawiin ang iyong impormasyon dalawang linggo pagkatapos ng panayam. Pagkaraan noon, maaaring nasuri na ang iyong impormasyon ngunit gagawin ang lahat ng pagsusumikap upang salain ang iyong impormasyon. Kung gayon ay hindi gagamitin ang iyong mga direktang sinabi.

Makikilala ba ang aking data?

11. Hindi ka maaaring makilala mula sa data at magiging anonymous ang iyong paglahok. Kakailanganin ng tagapagsaliksik ang iyong email address at mga detalye ng posibleng Skype o FaceTime upang ayusin ang oras at petsa para sa panayam ngunit ihihiwalay ito nang lubusan mula sa kung ano ang iyong ibabahagi sa panayam, at ide-delete ang iyong mga contact detail kapag natapos na ang proyekto. Io-audio record ang panayam ngunit hindi gagamitin ang iyong tunay na pangalan sa mga recording na ito. Walang anumang bagay na maaaring makapagpakilala sa iyo ang gagamitin sa mga ulat ng pag-aaral na ito. Ang mga direktang quotation na ginawang anonymous mula sa iyong panayam ay maaaring gamitin sa mga ulat at paglalathala mula sa pag-aaral, kaya hindi ilalaki ang iyong pangalan sa mga ito o anumang bagay na maaaring makapagpakilala sa iyo. Kung pinunan mo ang isang questionnaire, maaaring gamitin din ang iyong mga sagot sa pag-uulat ng mga resulta ng focus group, ngunit walang gagamitin na maaaring potensyal na makapagpakilala sa iyo.

Ang data na nakalap para sa pag-aaral na ito ay itatago nang ligtas at tanging ang mga tagapagsaliksik na nagsasagawa ng pag-aaral na ito ang magkakaroon ng access sa data na ito.

12. Sisirain ang mga audio recording kapag natapos na ang proyekto sa pananaliksik.
13. Sisirain ang iyong mga contact detail kapag natapos na ang proyekto sa pananaliksik.
14. Itatago ang lahat ng iba pang file nang sampung (10) taon at pagkatapos ay sisirain. Ang mga papel na kopya ng form ng pagsang-ayon o anumang iba pang mga dokumento tulad ng mga papel na kopya ng transcript, ay itatago nang ligtas sa isang nakakandadong aparador.
15. I-e-encrypt ang mga file (walang sinuman maliban sa tagapagsaliksik ang makaka-access sa mga ito) at itatago sa secure server ng Lancaster University, na siyang pinakaligtas na lugar.

16. Ang naka-type na bersyon ng iyong paglahok sa focus group ay gagawing anonymous sa pamamagitan ng pag-aalis ng anumang nakakapagpakilalang impormasyon tulad ng iyong pangalan. Ibabahagi lamang ng tagapasaliksik ang data sa kanyang mga superbisor sa UK ngunit ang mga file na ito ay walang pangalan mo o anupang ibang bagay na maaaring makapagpakilala sa iyo. Hindi ibabahagi ang data sa anumang iba pang mga organisasyon.

Mayroong ilang limitasyon sa pagiging kumpedensyal: kung ang sinabi sa panayam ay pinapaniwala ako na ikaw, o ang ibang tao, ay nasa matinding panganib, kakailanganin kong tapusin ang pagiging kumpedensyal at makipag-usap sa isang miyembro ng staff tungkol dito. Sasabihin ko sa iyo kung kailangan kong gawin ito.

Ano ang mangyayari sa mga resulta?

Ibubuod ang mga resulta at iuulat sa isang thesis at maaaring isumite para sa paglalathala sa isang akademiko o propesyonal na pahayagan. Titiyaking hindi ka makikilala sa alinman sa mga ulat. Maaari kang humingi ng buod ng pag-aaral mula sa tagapagsaliksik kapag natapos na ito.

Mayroon bang anumang mga panganib?

Walang anumang mga panganib na inaasahan sa paglahok sa pag-aaral na ito. Gayunpaman, kung makakaranas ka ng anumang pagkabalisa bilang resulta ng paglahok, hinihikayat kang abisuhan ang tagapagsaliksik.

Mayroon bang anumang mga pakinabang sa paglahok?

Bagama't maaaring kawili-wili para sa iyo ang paglahok, walang mga direktang pakinabang sa paglahok.

Sino ang sumuri sa proyekto?

Sinuri ang pag-aaral na ito ng Faculty of Health and Medicine Research Ethics Committee, at inaprubahan ng University Research Ethics Committee sa Lancaster University.

Saan ako maaaring makakuha ng karagdagang impormasyon tungkol sa pananaliksik kung kailangan ko ito?

Kung mayroon kang anumang mga katanungan tungkol sa pananaliksik, mangyaring makipag-ugnayan sa tagapagsaliksik.

Gng. Floor Christie-de Jong: Tel: +971- (0) 551125717

O email: f.christie-dejong@lancaster.ac.uk

O sa mga superbisor ng tagapagsaliksik:

Dr Siobhan Reilly: s.reilly@lancaster.ac.uk

Dr Sara Morris: s.m.morris@lancaster.ac.uk

Mga Reklamo

Kung nais mong magreklamo o magsabi ng mga alalahanin tungkol sa anumang aspeto ng pananaliksik na ito at ayaw makipag-usap sa tagapagsaliksik, maaari kang makipag-ugnayan kay:

Professor Bruce Hollingsworth

Head of Division of Health Research

Tel: 0044 (0) 1524 592430

Email: b.hollingsworth@lancaster.ac.uk

Lancaster University

Lancaster

LA1 4YD

Kung nais mong makipag-usap sa isang taong nasa labas ng Health Doctorate Program,
maaari ka ring makipag-ugnayan kay:

Professor Roger Pickup Tel: (01524) 593746

Associate Dean for Research

Email: r.pickup@lancaster.ac.uk

Faculty of Health and Medicine

(Division of Biomedical and Life Sciences)

Lancaster University

Lancaster

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Appendix 11: Consent form Phase 2-Interview (English)

Consent Form

Study Title:

Knowledge, Attitude and Practice (KAP) concerning cervical cancer screening among female overseas Filipino workers: a web-based mixed method approach.

We are asking if you would like to take part in a research project. This research is investigating the awareness, attitudes and uptake of cervical cancer screening, or Pap smears in female overseas Filipino workers. Before you consent to participating in the study we ask that you read the participant information sheet and mark each box below with your initials if you agree. If you have any questions or queries before signing the consent form please speak to the researcher, Floor Christie-de Jong

Please initial box after each statement

- 1. I confirm that I have read the participant information sheet and fully understand what is expected of me within this study
- 2. I confirm that I have had the opportunity to ask any questions and to have them answered.
- 3. I understand that my interview will be audio recorded and then made into an anonymised written transcript.
- 4. I understand that audio recordings will be kept until the research project has been completed.
- 5. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.
- 6. I understand that once my data have been anonymised and incorporated into themes it might not be possible for it to be withdrawn, though every attempt will be made to extract my data, up to the point of publication.
- 7. I understand that the information from my interview will be pooled with other participants' responses, anonymised and may be published.
- 8. I consent to anonymised information and quotations from my interview being used in reports, conferences and training events.
- 9. I understand that any information I give will remain strictly confidential and anonymous unless it is thought that there is a risk of significant harm to myself or others, in which case the principal investigator may need to share this information with her research supervisor.
- 10. I consent to Lancaster University keeping written transcriptions of the interview for 10 years after the study has finished.
- 11. I consent to take part in the above study.

Name of Participant _____ Signature _____ Date _____

Name of Researcher _____ Signature _____ Date _____

Appendix 12: Consent Form Phase 2-Interview (Tagalog)**Form ng Pagsang-ayon**

Pamagat ng Pag-aaral Kaalaman, Saloobin at Kaugalian patungkol sa Cervical Cancer Screening sa mga kababaihang Pilipino na nagtatrabaho sa ibang bansa: isang mixed method approach na nakabatay sa web.

Tinatamong namin sa iyo kung gusto mong lumahok sa isang proyekto sa pananaliksik. Sinisiyasat ng pag-aaral na ito ang kaalaman, mga saloobin at paggamit ng cervical cancer screening, o Pap smears sa mga kababaihang Pilipino na nagtatrabaho sa ibang bansa.

Bago ka sumang-ayon na lumahok sa pag-aaral, hinihiling namin na basahin mo ang sheet ng impormasyon ng kalahok at markahan ang bawat kahon sa ibaba ng iyong initials kung sumasang-ayon ka. Kung mayroon kang anumang mga katanungan o pag-aalinlangan bago pirmahan ang form sa pagsang-ayon, mangyaring makipag-usap sa tagapagsaliksik na si Floor Christic-de Jong

Pakilagyan ng initial ang kahon pagkatapos ng bawat pahayag

1. Kinukumpirma ko na nabasa ko ang sheet ng impormasyon ng kalahok at nauunawaan ko nang lubusan kung ano ang inaasahan sa akin sa pag-aaral na ito
2. Kinukumpirma ko na nagkaroon ako ng pagkakataong magtanong ng anumang mga katanungan at masagot ang mga ito.
3. Nauunawaan ko na io-audio record ang aking panayam at pagkatapos ay ilalagay sa isang nakasulat na transcript na ginawang anonymous.
4. Nauunawaan ko na itatago ang mga audio recording hanggang matapos ang proyekto sa pananaliksik.
5. Nauunawaan ko na kusang-loob ang aking paglahok at malaya akong umalis sa anumang oras nang hindi nagbibigay ng anumang rason, at hindi maaapektuhan ang aking pangangalagang medikal at mga legal na karapatan.
6. Nauunawaan ko na kapag ginawang anonymous ang aking data at isinama sa mga sanaysay, maaaring hindi posible na mabawi ito, bagama't gagawin ang bawat pagtatangka na kunin ang aking data, hanggang sa punto ng paglalathala.
7. Nauunawaan ko na ang impormasyon mula sa aking panayam ay isasama sa mga tugon ng iba pang mga kalahok, gagawing anonymous at maaaring ilathala.
8. Sumasang-ayon ako na gamitin ang ginawang anonymous na impormasyon at mga quotation mula sa aking panayam sa mga ulat, komperensya at pagsasanay.
9. Nauunawaan ko na mananatiling kompedensyal at anonymous ang anumang impormasyong ibibigay ko maliban kung pinaniniwalaang may matinding panganib sa aking sarili at sa ibang tao, at sa sitwasyong iyon, maaaring kailanganing ibahagi ng tagapagsiyasat ang aking impormasyon sa kanyang superbisor sa pananaliksik.
10. Sumasang-ayon akong itabi ng Lancaster University ang mga nakasulat na transcription ng aking panayam sa loob ng 10 taon matapos ang pag-aaral.
11. Sumasang-ayon akong lumahok sa pag-aaral na nasa itaas.

Appendix 13: Debriefing Information (English)

Cervical Screening

A cervical screening test (also known as a pap smear test) is a method of detecting abnormal cells on the cervix. The cervix is the entrance to the womb from the vagina.

Detecting and removing abnormal cervical cells can prevent cervical cancer.

Cervical screening is not a test for cancer; it is a test to check the health of the cells of the cervix. Most women's test results show that everything is normal, but for around 1 in 20 women the test will show some abnormal changes in the cells of the cervix.

Most of these changes will not lead to cervical cancer and the cells may go back to normal on their own. However, in some cases, the abnormal cells need to be removed so that they cannot become cancerous.

It's possible for women of all ages to develop cervical cancer, although the condition mainly affects sexually active women between the ages of 30 and 45. The condition is very rare in women under 25.

The aim of cervical cancer screening is to reduce the number of women who develop cervical cancer and the number of women who die from the condition.

Being screened regularly means that any abnormal changes in the cells of the cervix can be identified at an early stage and, if necessary, treated to stop cancer developing.

It is estimated that early detection and treatment can prevent up to 75% of cervical cancers.

The cervical screening test

All women aged between 21 and 65 are encouraged to go for cervical screening. Women aged between 21 and 49 are encouraged to go for testing every three years, and women aged between 50 and 64 are recommend to go every five years.

Being screened regularly means that any abnormal changes in the cells of the cervix can be identified at an early stage and, if necessary, treated to stop cancer developing. It is estimated that early detection and treatment can prevent up to 75% of cervical cancers.

The cervical screening test usually takes around five minutes to carry out. An instrument called a speculum will be gently inserted into your vagina to hold the walls of your vagina open so that your cervix is visible. A small soft brush will be used to take some cells from the surface of your cervix.

The sample of cervical cells will then be sent to a laboratory and examined under a microscope to see whether there are any abnormal cells.

Some women may find the procedure a bit uncomfortable or embarrassing, but for most women it is not painful.

If the test picks up abnormalities in the cells in your cervix, it may be recommended that you have treatment to remove them, or further tests in a few months to see if they return to normal on their own.

What causes abnormal cell changes in the cervix?

Abnormal changes in the cells of the cervix can be caused by certain high-risk types of human papilloma virus (HPV).

HPV is the name of a family of common viruses that affect the skin and the mucous membranes (moist tissue that line parts of the body), such as those in your cervix, anus, mouth and throat.

HPV is very common. It's estimated that 8 out of 10 people in the UK are infected with HPV at some point during their lifetime. For most people, the virus goes away without treatment and does not cause any harm. However, infection with some types of HPV can cause abnormal cell growth, which can lead to cervical cancer. Other forms of HPV cause genital warts.

HPV infection is passed on through skin-to-skin contact. The types of HPV that can cause abnormalities in the cells of your cervix are transmitted through sexual contact.

Can HPV be prevented?

It can be very difficult to prevent HPV, which is one of the reasons cervical screening is considered to be so important.

Using a condom during sex can help reduce your risk of developing an HPV infection, but as condoms do not cover the entire genital area and are often put on after sexual contact has begun, they are no guarantee against the spread of HPV.

A vaccination offering some protection against HPV is now available for girls aged 12-13. This has been shown to provide effective protection against HPV for at least eight years, but it is not yet known how long protection lasts beyond this time.

Human papilloma virus testing

Changes in the cells of the cervix are often caused by the human papilloma virus (HPV).

There are more than 100 different types of HPV. Some types are high risk and some types are low risk. HPV-16 and HPV-18 are considered to be high risk for cervical cancer.

If a sample taken during for cervical screening test shows low-grade or borderline cell abnormalities, the sample should automatically be tested for HPV. If HPV is found in your sample, you should be referred for a colposcopy for further investigation and, if necessary, treatment. If no HPV is found, then you will carry on being routinely screened as normal.

If your sample shows more significant cell changes you will be referred for colposcopy

without HPV testing.

A test for HPV may be carried out as the first test on the screening sample. In these cases, the sample will only be checked for abnormal cells if HPV is found. If HPV isn't found, you will be offered a screening test again in three to five years time (depending on your age).

How common are abnormal results?

For every 100 women who have cervical screening, about six will have an abnormal result. It is very rare for cancer to be diagnosed from the results of a cervical screening test. Less than one in 1,000 test results show invasive cancer.

Are there any disadvantages of screening?

Although cervical screening can help prevent cervical cancer, there are some potential disadvantages associated with screening. These include:

- potential discomfort, embarrassment or, less commonly, pain during the screening test
- a very small chance of getting incorrect results, which could lead to abnormalities being missed or unnecessary distress and treatment
- a chance of having unnecessary treatment if the abnormalities would have corrected themselves naturally
- some treatments used to remove abnormal cells may increase your risk of giving birth prematurely (before the 37th week of pregnancy) if you get pregnant in the future

However, the potential benefits of screening are believed to outweigh these risks.

Should I go for a pap smear, I have no symptoms?

A pap smear, and any cancer screening, looks for abnormal cells before a person has any symptoms. This can help find cancer at an early stage. It is important to remember that if your doctor suggests a screening test, such as a pap smear, this does not mean he or she thinks you may have cancer. Screening tests are given when you have no symptoms but usually when you are at the right age for screening.

My doctor has not said anything, should I go for a pap smear?

Yes, please do ask your doctor or health care professional about this. Sometimes they do not bring it up but if you are over 21 (in the US the starting age is 21, in some countries like the UK this starting age is 25) you are advised to go for a pap smear once every three years.

Where can I do this where I live?

Any doctor or health professional where you live can tell you where to get a pap smear close to you. If you feel more comfortable it might help to go together with a friend. If you would like some help finding a doctor close to you please contact the researcher. Although she may not live in the same country she can perhaps help you to find a doctor online. If you prefer to have this procedure done by a female doctor please do not hesitate to ask your doctor or health professional for this.

How much will it cost?

Some health insurances might cover this at no cost. The costs for a pap smear vary with health providers but usually pap smears should not be too expensive. Even if a payment is required, looking after your health is important. It is best to ask about the cost when making an

appointment so that there are no surprises.

Will it hurt?

Most women do not find the pap smear hurts. It is a little uncomfortable and you may also feel a little embarrassed. That's why bringing a friend might be a good idea. Remember that this test is for the protection of your health.

Where can I find more information?

Reliable websites like these can tell you more:

<http://www.cdc.gov/cancer/cervical/>

<http://www.cancer.gov/types/cervical/patient/cervical-screening-pdq>

Sources: National Health Service (NHS) UK and Centre for Disease, Control (CDC) US, National Cancer Institute (US).

Appendix 14: Debriefing Information (Tagalog)

Cervical Screening

Ang cervical screening test (kilala rin bilang pap smear test) ay isang paraan ng pagtukoy ng mga abnormal na cell sa cervix. Ang cervix ay ang pasukan papunta sa matris mula sa kaluban o vagina.

Ang pagtukoy at pag-aalis ng mga abnormal na cervical cell ay maaaring mapigilan ang cervical cancer.

Ang cervical screening ay hindi isang pagsusuri para sa cancer; isa itong pagsusuri upang tingnan ang kalusugan ng mga cell sa cervix. Ipinapakita ng karamihan ng mga resulta ng pagsusuri ng mga kababaihan na normal ang lahat, ngunit para sa halos 1 sa bawat 20 babae, ipapakita ng pagsusuri ang ilang abnormal na pagbabago sa mga cell ng cervix.

Karamihan sa mga pagbabagong ito ay hindi humahantong sa cervical cancer at ang mga cell ay maaaring kusang bumalik ng normal. Gayunpaman, sa ilang kaso, kailangang alisin ang mga abnormal na cell nang sa gayon ay hindi maging cancerous ang mga ito.

Posible para sa lahat ng kababaihan sa lahat ng edad na magkaroon ng cervical cancer, bagama't ang kondisyon ay pangunahing nakakaapekto sa mga kababaihang aktibo sa pakikipagtalik sa pagitan ng 30 at 45 taong gulang. Lubhang bihira ang kondisyon sa mga kababaihang wala pang 25 taong gulang.

Ang layunin ng cervical cancer screening ay bawasan ang bilang ng mga kababaihang nagkakaroon ng cervical cancer at ang bilang ng mga kababaihang namamatay mula sa kondisyon.

Ang pagpapa-screen nang regular ay nangangahulugang maaaring matukoy nang maaga ang anumang mga abnormal na pagbabago sa mga cell ng cervix at, kung kinakailangan, magamot upang mapigilang mabuo ang cancer.

Tinatanyang ang maagang pagtuklas at paggamot ay maaaring pigilan ang hanggang 75% ng mga cervical cancer.

Ang cervical screening test

Lahat ng kababaihang nasa pagitan ng 21 at 65 taong gulang ay hinihikayat na magpa-cervical screening. Ang mga kababaihang nasa pagitan ng 21 at 49 na taong gulang ay hinihikayat na magpasuri kada tatlong taon, at ang mga kababaihang nasa pagitan ng 50 hanggang 64 na taong gulang ay inirerekomendang pumunta kada limang taon.

Ang pagpapa-screen nang regular ay nangangahulugang maaaring matukoy nang maaga ang anumang mga abnormal na pagbabago sa mga cell ng cervix at, kung kinakailangan, magamot upang mapigilang mabuo ang cancer. Tinatanyang ang maagang pagtuklas at paggamot ay maaaring pigilan ang hanggang 75% ng mga cervical cancer.

Ang cervical screening test ay karaniwang tumatagal nang humigit-kumulang 5 minuto upang maisagawa. Dahan-dahang ipapasok ang instrumentong tinatawag na speculum sa loob ng iyong kaluban (vagina) nang sa gayon ay makita ang iyong cervix. Gagamitin ang isang maliit at malambot na brush upang kumuha ng ilang cell mula sa ibabaw ng iyong cervix.

Pagkatapos ay ipapadala ang sample ng mga cervical cell sa isang laboratoryo at susuriin sa ilalim ng isang microscope upang makita kung mayroon bang anumang mga abnormal na pagbabago.

Maaaring maging hindi komportable o mahiya ang ilang babae sa pamamaraang ito, ngunit hindi ito masakit para sa karamihan ng mga babae.

Kung makakuha ang pagsusuri ng mga abnormalidad sa mga cell sa iyong cervix, maaaring irekomendang magpaggamot ka upang alisin ang mga ito, o mga karagdagang pagsusuri sa loob ng ilang buwan upang makita kung ang mga ito ay kusang babalik sa normal.

Ano ang nagiging sanhi ng mga abnormal na pagbabago sa mga cell sa cervix?

Ang mga abnormal na pagbabago sa mga cell sa cervix ay maaaring sanhi ng ilang partikular na delikadong uri ng human papilloma virus (HPV).

Ang HPV ay ang pangalan ng pamilya ng mga karaniwang virus na nakakaapekto sa balat at mga mucus membrane (moist tissue na nakalinya sa ilang bahagi ng katawan) tulad ng nasa iyong cervix, butas ng puwit, bibig, at lalamunan.

Laganap ang HPV. Tinatayang 8 sa bawat 10 tao sa UK ang nahawaan ng HPV sa isang punto sa kanilang bahay. Para sa karamihan ng mga tao, nawawala ang virus nang hindi ginagamot at hindi magsasanhi ng anumang pinsala. Gayunpaman, ang impeksyon sa ilang uri ng HPV ay maaaring magsanhi ng abnormal na paglaki ng cell, na maaaring humantong sa cervical cancer. Ang iba pang anyo ng HPV ay nagiging sanhi ng mga kulugo sa ari (genital warts).

Naipapasa ang impeksyon ng HPV sa pamamagitan ng skin-to-skin contact. Ang mga uri ng HPV na maaaring magdulot ng mga abnormalidad sa mga cell ng iyong cervix ay naisasalin sa pamamagitan ng pakikipagtalik.

Maaari bang maiwasan ang HPV?

Napakahirap na maiwasan ang HPV, na isa sa mga rason kung bakit itinuturing na mahalaga ang cervical screening.

Ang paggamit ng condom sa pakikipagtalik ay makakatulong na bawasan ang panganib ng pagkakaroon ng impeksyon ng HPV, ngunit dahil hindi natatakpan ng mga condom ang buong ari at karaniwang inilalagay pagkatapos magsimulang makipagtalik, ang mga ito ay hindi garantiya laban sa pagkalat ng HPV.

May available na ngayong bakuna na nag-aalok ng ilang proteksyon laban sa HPV para sa mga batang babae na edad 12-13. Naipakita na nagbibigay ito ng epektibong proteksyon laban sa HPV nang hindi bababa sa walong taon, ngunit hindi pa alam kung gaano kahaba ang itatagal ng proteksyon pagkalipas ng panahong ito.

Human papilloma virus testing

Ang mga abnormal na pagbabago sa mga cell sa cervix ay kalimitang sanhi ng human papilloma virus (HPV). May higit sa 100 iba't-ibang uri ng HPV. Delikado ang ilang uri at ang ibang uri naman ay may mababang panganib. Itinuturing na delikado ang HPV-16 at HPV-18 para sa cervical cancer.

Kung ang isang sample na kinuha para sa cervical cancer screening ay nagpakita ng mababang lebel o bahagyang abnormalidad ng cell, dapat na awtomatikong suriin ang sample para HPV. Kung nakakita ng HPV sa iyong sample, dapat kang i-refer para sa isang colposcopy para sa karagdagang pagsisiyasat, at pagpapagamot kung kinakailangan. Kung walang nakitang HPV, magpapatuloy ka sa pagpapa-screen nang regular tulad ng nakasanayan.

Kung nagpakita ang sample ng mas malulubhang pagbabago sa cell, ire-refer ka para sa

colposcopy nang walang HPV testing.

Maaaring isagawa ang pagsusuri para sa HPV bilang unang pagsusuri sa sample ng screening.

Sa mga kasong ito, susuriin lamang ang sample para sa mga abnormal na cell kung nakakita ng HPV. Kung walang nakitang HPV, mag-aalok ulit sa iyo ng screening test pagkalipas ng tatlo hanggang limang taon (depende sa iyong edad).

Gaano kakaraniwan ang mga abnormal na resulta?

Para sa bawat 100 kababaihang nagpa-cervical screening, halos anim ang magkakaroon ng abnormal na resulta. Napakabihirang ma-diagnose ng cancer mula sa mga resulta ng cervical screening test. Wala pang isa sa 1,000 resulta ng pagsusuri ang nagpakita ng invasive cancer.

Mayroon bang anumang mga disadvantage ang screening?

Bagama't makatutulong ang cervical screening na maiwasan ang cervical cancer, may ilang potensyal na disadvantage kaugnay sa screening. Kabilang rito ang:

- potensyal na pagkabalisa, kahihyan, o, mas hindi pangkaniwan, pananakit sa panahon ng screening test
- napakaliit na tyansang makakuha ng mga maling resulta, na maaaring humantong sa pagkabigong matukoy ang mga abnormalidad o hindi kinakailangang pagkabahala o pagpapagamot
- tyansa ng pagkakaroon ng hindi kinakailangang pagpapagamot kung natural na naitama ang mga abnormalidad
- ilang treatment na ginagamit upang alisin ang mga abnormal na cell ay maaaring pataasin ang iyong panganib ng panganganak nang kulang sa buwan (bago ang ika-

37 linggo ng pagbubuntis) kung mabubuntis ka sa hinaharap

Gayunpaman, ang mga potensyal na pakinabang ng screening ay pinaniniwalaang nakahihigit sa mga panganib na ito.

Dapat ba akong magpa-pap smear, wala naman akong mga sintomas?

Ang pap smear at ang kahit anong cancer screening ay inaalam kung may mga abnormal cell bago pa magkaroon ang isang tao ng kahit anong sintomas.

Nakatutulong ito na malaman ang kanser habang maaga pa. Importanteng tandaan na kung ang inyong doktor ay nagmungkahi ng isang screening test, tulad ng isang pap smear, hindi ito nangangahulugan na iniisip niya na kayo ay maaaring may kanser. Ang mga screening test ay ibinibigay habang wala pa kayong mga sintomas subalit karaniwan ito kapag kayo ay nasa hustong gulang para sa screening.

Wala namang nasabing kahit ano ang aking doktor, dapat pa rin ba akong magpa-pap smear?

Oo, mangyaring sabihan ang inyong doktor o health professional tungkol dito.

Minsan hindi nila ito isinasali sa usapan subalit kung kayo ay lampas 21 (sa US, ang simulang edad ay 21, sa ilang bansa tulad ng UK ang simulang edad ay 25), pinapayuhan kayo na magpa-pap smear isang beses sa loob nang tatlong taon.

Saan ko ito maaaring gawin sa lugar na nakatira ako?

Sinumang doktor o health professional sa lugar kung saan kayo naninirahan ay makapagsasabi kung saan makakapagpa-pap smear na malapit sa inyo. Kung sa

tingin ninyo ay kayo ay komportable, makatutulong kung magsasama kayo ng isang kaibigan. Kung nais ninyo ng tulong na makahanap ng isang doktor na malapit sa inyo, mangyating kontakin ang mananaliksik. Kahit na maaaring hindi siya naninirahan sa katulad na bansa maaaring makatulong siya na mahanapan kayo ng isang doktor online. Kung mas gusto ninyo na ang procedure ay gawin ng isang babaeng doktor mangyaring huwag mag-atubili na sabihan ang inyong doktor o health professional tungkol dito.

Magkano ang gastos dito?

Sa ilang health insurance ay maaaring wala nang gastos para rito dahil sagot na nito. Ang bayad para sa isang pap smear ay nag-iiba-iba depende sa mga health provider subalit ang mga pap smear ay hindi dapat na maging napakamahal. Kahit kinakailangang magbayad, importante ang pangangalaga ng inyong kalusugan. Mainam na magtanong tungkol sa gastos habang nakikipag-appoint para wala nang gulatan.

Makakasakit ba ito?

Hindi tinitingnan ng karamihan ng mga babae na nakakasakit ang pap smear. Dikomportable nang konti at medyo mahihiya kayo. Kaya maaaring isang magandang ideya kung makapagsasama kayo ng isang kaibigan. Tandaan na itong pagsusuri ay para sa pangangalaga ng inyong kalusugan.

Saan ako maaaring makahanap ng karagdagang impormasyon?

Ang mga maaasahang website kagaya nito ang makakapagsabi sa inyo nang higit pa:

<http://www.cdc.gov/cancer/cervical/>

<http://www.cancer.gov/types/cervical/patient/cervical-screening-pdq>

Pinagkunan: National Health Service (NHS) UK and Centre for Disease, Control (CDC) US, National Cancer Institute (US).

Appendix 15: Details of included Variables in Logistic Regression Model 1-5

	Factors significant in bivariate analyses and therefore included in logistic regression.	Factors not significant in bivariate analyses and therefore excluded from logistic regression.	Factors consequently excluded from logistic regression due to poor fit
Model 1: Demographic Factors	<ol style="list-style-type: none"> 1. Age 2. Country of residence 3. Marital status 4. Other screening 5. Years overseas 6. Having children 	<ol style="list-style-type: none"> 1. Education 2. Income 3. Employment 	<ol style="list-style-type: none"> 1. Other screening 2. Years overseas
Model 2: Cognitive Factors	<ol style="list-style-type: none"> 1. Total knowledge 2. I sometimes worry about having cancer 3. Cancer cannot be cured even if it is detected early (Perceived severity) 4. I think these tests might be good but I don't need them (Perceived benefit) 5. I am worried about the outcome, I do not want to hear bad news' (Fear of outcome) 6. If I did have cancer I would rather not know about it 7. I am worried about pain of procedure (Fear of procedure) 8. I have had no symptoms and therefore did not see reason to go (No symptoms) 9. I'm in good health 	<ol style="list-style-type: none"> 1. I think it is unlikely I will develop cervical cancer (Perceived Susceptibility); 2. The pap-test is effective in detecting in cervical cancer early (Perceived Efficacy) 	<ol style="list-style-type: none"> 1. I sometimes worry about having cancer' 2. 'I'm worried about the pain' (Fear of procedure) 3. 'Cancer cannot be cured even if it is detected early' (Perceived severity)
Model 3: Access factors	<ol style="list-style-type: none"> 1. Has overseas HCP 2. Pap-test too expensive 3. Lack of time 4. Doesn't know where to go 5. Making an appointment is problematic 	<ol style="list-style-type: none"> 1. Health insurance 2. No transport 3. If the doctor would somehow come to participant, would go for pap-tests 	<ol style="list-style-type: none"> 1. Doesn't know where to go 2. Making an appointment is problematic
Model 4: HCP factors	<ol style="list-style-type: none"> 1. Does not like the 	<ol style="list-style-type: none"> 1. Trust in overseas 	N/A

	way the doctor speaks to them 2. Language barrier 3. No recommendation HCP	doctor	
Model 5: Social-cultural factors	1. Embarrassment 2. Fatalism 3. Collectivism 4. Acculturation	1. Cancer is a punishment 2. Daily praying 3. Participant relies on religious community for health advice	N/A

Appendix 16: Details of included Variables in Logistic Regression Model 6

	Factors significant in logistic regression analyses model 1-5 and therefore included in logistic regression for final model 6.	Factors not significant in logistic regression analyses model 1-5 and therefore excluded from logistic regression for final model 6.	Factors consequently excluded from logistic regression model 6 due to poor fit
Model 6: Predictive factors pap-testing socio-ecological levels combined	<ol style="list-style-type: none"> 1. Marital Status 2. Age 3. Country 4. Total knowledge 5. Fear of outcome 6. No time 7. Cost 8. No overseas doctor 9. Recommendation HCP 10. Collectivism 11. Embarrassment 	<ol style="list-style-type: none"> 1. Good health 2. No symptoms 3. Perceived benefit 4. Do not want to know about cancer diagnosis 5. Language barrier 6. Do not like the doctor's way of speaking to me 7. Acculturation 8. Gender HCP 	<ol style="list-style-type: none"> 1. Country 2. Cost 3. No overseas doctor 4. I do not need to go for a pap-test because God will determine my fate