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This is the first evaluation volume of the Anti-Cancer Council of Victoria’s PapScreen Victoria program—a program with a considerable history and significant achievements to its credit.

The opportunity to screen for the early signs of cervical cancer became available in the 1950s with the Pap test. This was a breakthrough from the perspective of the Anti-Cancer Council and one which followed closely on the news that lung cancer was caused by smoking. Suddenly the organisation found itself in the position of being able to prevent some cancers. There had been no previous similar opportunities. This opportunity was therefore seized with enthusiasm. A promising local pathologist was sent overseas to train in cytopathology and in 1959 the organisation gave a grant of £8,000 to the Royal Women’s Hospital to train pathologists.

In the 1960s, two nurses were employed in the first public and professional education campaign to introduce this new screening test to women and their doctors.

The Victorian Cytology Service was set up to receive, read and report on all Pap tests taken in this State and was funded for the first two years by the Anti-Cancer Council. Later, the State Government was persuaded to take over the service and fund it, retaining key positions on the Board of Management for staff of the Anti-Cancer Council.

In 1987, a working party was set up to review progress and determine future directions. The working party identified the need to adopt an organised approach to cervical cancer screening. This required a registry of results to ensure that all data was available for analysis from private sector laboratories as well as the publicly-funded Victorian Cytology Service. It also identified future directions in encouraging unscreened and under-screened groups of women to have a Pap test. These included older women, women from diverse cultures, rural women and Koori* women. The need to pilot the best ways of encouraging screening in these groups was given a high priority.

Draft legislation for the Victorian Parliament was developed and a consultation with key community groups carried out. The Victorian Cervical Cytology Registry was set up by the successful passage of the Cancer (Central Registries) Act 1989. In July 1991, Pap Test Victoria, the predecessor to PapScreen Victoria, was launched.

With the setting up of the registry, the task for the Anti-Cancer Council’s education team became finite. A registry would be able to remind women whose tests were overdue, leaving only unscreened and under-screened women to be targeted by information and recruitment campaigns. The number of these women and their geographical location was identifiable and the task of recruiting them could be researched with accuracy. Pilot programs were planned and their results tracked. Successful strategies were incorporated into the statewide recruitment program and refined as the knowledge base grew.

This commitment to an evidence-based approach to cancer control now has widespread support and government-funded infrastructure. The appointment of a dedicated behavioural scientist to plan and carry out the evaluation of the program has borne fruit and the results are evident in this volume.

* Koori is an Aboriginal language term used by Aboriginal people in Victoria, Tasmania and southern New South Wales to identify themselves. In this report, we use the term Koori to refer to Aboriginal and Torres Strait Islander people living in Victoria.
Introduction

Through regular, two-yearly Pap tests, abnormal changes to the cells of the cervix may be readily identified and treated, before they progress to cancer. In this way, up to 90% of the most common type of cervical cancer can be prevented. The message is clear—the Pap test saves lives.

Analysis of the incidence and mortality data shows that there has been a 28% decrease in incidence and a 47% decrease in the death rate from cervical cancer between 1982 and 1997—proof that a coordinated screening program has impact.

PapScreen Victoria’s Communications and Recruitment Strategy aims to inform women about the importance of regular screening, so they can make an informed decision to participate in the cervical screening program. By 1999, 69% of women were screening every 2 years, a rate higher than predicted at the outset of the 1996-99 strategy period.

As the proportion of women who are regularly screened rises, reaching unscreened women becomes more of a challenge, with significant cost and resource implications. We have identified groups of women who are not having Pap tests, but these women are scattered throughout Victoria rather than in discrete geographic pockets.

The program has been influenced by a number of significant issues during 1996–99. The triennium followed Australia’s most public cervical cancer medico-legal case, which impacted on recruitment strategies and cervical screening rates. The ripple effect may have contributed to the program’s current challenge: early re-screening.

New technologies continue to be introduced to the cervical screening arena, requiring us to ensure women have clear information about their options for screening. During most of this period we were unsure of the cause of cervical cancer. It has now become clear that the human papilloma virus (HPV) is closely linked, which impacts on the focus of communications messages.

Screening rates

Since its inception, the coordinated approach to cervical screening has resulted in increasing two-yearly screening rates among Victorian women. Although the Pap test has been available in Australia since the 1960s, it was up to dedicated general practitioners (GPs) and educated women to initiate cervical screening.

Prior to the organised approach to screening, which started in Victoria in 1990, there was no agreement on the age group to be screened or the screening interval. There was no system for monitoring women with abnormal results and no system to monitor the results of women who had been treated.

More importantly, significant groups of women were not being screened, including older women, women living in rural locations, women with disabilities, and Koori women. Seventy-seven percent of cervical cancer occurred in women over 70 years and 57% of women diagnosed had never had a Pap test. Women were dying through lack of knowledge.

This past triennium has seen targeted approaches reaching unscreened and under-screened women, specifically those within the 25–39, 40–59 and 60–69 year age groups. Women from Vietnam and South East Asia, Koori women, those from diverse cultures, women living in rural settings, women with disabilities and lesbians feature as priority groups with initiatives tailored to their needs.
While it is not possible to obtain screening rates for some groups (such as women from diverse cultures, Koori women, women with disabilities and lesbians), we did see an increase in screening in women in particular age groups across Victoria.

Our goal—to screen 66% of the total eligible population by 1999—was surpassed after the first year of the triennium. Screening by women aged 30–49 has been steadily increasing and has reached a high level at around 74–75%. The 50–59 year age group revealed the highest screening rate among all age groups, remaining at around 75% throughout the triennium. Although their rates have improved significantly in the last data collection period, women under 30 years and those over 60 years screen at lower rates than the rest of the target population. Victoria has experienced substantial increases in cervical screening over the triennium.

Early re-screening
The effects of Australia’s most public cervical screening medico-legal incident in 1994 may have continued to have repercussions on screening rates into the 1996–99 triennium. It certainly contributed to the increase in screening rates and subsequent cervical cancer detection during 1994–95.

Raising awareness of the need for regular Pap tests has also had its downside. In 1999, 46% of Victorian women had repeat Pap tests within the two-yearly interval. The Blue Moon Research and Planning report (1999) on over-screening found that ‘over-screeners’ are predominantly young, educated, middle class women, who feel that yearly screening is more of a safeguard but cite misconceptions or misunderstandings about the purpose of Pap tests. Many feel their practitioner confirms their view on annual screening. The national research found that medico-legal concerns emerged as a very common theme among GPs.

The impact of over-screening on cervical screening has repercussions at a national level, with Victoria facing a new responsibility to plan future strategies to address the issue.

Where to from here?
In the past decade, considerable improvements have been made in cervical screening in Australia, particularly in Victoria. We need to maintain our excellent screening rates by encouraging women to continue to screen at two-yearly intervals. We must set realistic and cost-effective goals to further increase our participation rate among the ‘hard to reach’ women. In Victoria, around 200,000 women have never been screened or are under-screened. We must also strive to reduce over-screening, and continue to tackle emerging issues related to cervical screening.

Our past success means that as we enter the 21st century, new issues have emerged. Towards the end of the triennium, it became evident that HPV was detected in almost all cases of cervical cancer, thus confirming that the virus was more closely linked with the disease than was previously thought.

This emerging issue has opened up the area of HPV testing, and will become an increasingly significant issue in cervical screening programs. It also highlights the need to update our communications messages to women, clarifying HPV and its role in cervical screening, in an effort to correct misconceptions and encourage screening behaviour within the approved national screening guidelines.

We must address changing epidemiological evidence, the evolving and often confusing information about new screening innovations and current and future changes in government policy. We need to translate this information for women, in a way that maintains their confidence in the program and most importantly their participation in cervical screening.
Research and evaluation

The 1996–99 triennium saw a range of initiatives result in achievements within a framework of behavioural research and evaluation. Research and evaluation projects have been an essential component for steering our strategies over this period.

Developing messages and researching ideas through focus testing prior to implementation is an example of how research underpins communications strategies within the program. Communication via media reaches a wide range of women across Victoria. Significant increases in screening rates were evident soon after PapScreen Victoria’s 1997 radio campaign and the 1998 national media campaign. PapScreen Victoria’s Communications and Recruitment Program was able to review strategies and inform future directions through information provided by our Research and Evaluation position, located within the Centre for Behavioural Research in Cancer.

This volume documents the research and evaluation studies undertaken during 1997–2000, which evaluated the efficacy of each element of our Communications and Recruitment Program. The outcomes will continue to inspire future research and evaluation and future communications and recruitment strategies for PapScreen Victoria.

Reference

Chapter 1  
Cervical cancer and cervical cancer screening: a review of the literature

Trudi Jones and Valerie Clarke July 1997

Introduction

Cervical cancer is a potentially fatal disease (Gusberg & Runowicz 1991) that is largely preventable. Regular Pap tests every two years, and the appropriate management of any cervical abnormalities detected by the test, can prevent 90% of squamous cell carcinoma (CDHSH 1995a). This is the most common type of cervical cancer, comprising around 85% of reported cases (CDHSH 1994).

Despite the widespread availability of the Pap test, and a relatively high rate of participation in regular cervical screening programs (Mitchell & Higgins 1996), cervical cancer continues to be a problem for Victorian women. In 1994, 304 new cases of invasive cervical cancer were diagnosed, and 76 women died from this disease (Giles et al 1997). Research findings indicate that the current incidence of cervical cancer would be substantially reduced if unscreened and inadequately-screened women increased their practice of cervical screening (Eardley et al 1985; Gordon & Fatovich 1990; Klassen, Celentano & Bookmeyer 1989; Yeoh & Russell 1994). Identifying and targeting the factors that deter women from having regular Pap tests may be crucial to the success of recruitment strategies aimed at the under-screened group.

Recent medico-legal events have also highlighted the need for health authorities to educate the wider community about the limitations of the Pap test. Specifically, the success of legal suits against pathology laboratories for failure to detect cancerous or pre-cancerous cells in cervical smears, and public response to media exposure of the limitations of the Pap test, have revealed a widespread belief that the Pap test is, or should be, infallible (Robb 1993; Vidovich 1994).

In order to develop realistic expectations of the accuracy of the Pap test, health and legal professionals and the general public need to be educated about the function and purpose of screening tests, the error rates associated with the test, and the factors that contribute to these errors (Robb 1993; Vidovich 1994; Yeoh & Russell 1994).

PapScreen Victoria has responded to the recruitment and educational needs of Victorian women by prioritising the effective recruitment of women who are currently unscreened or irregularly-screened and disseminating information about the benefits and limitations of regular Pap tests (Dwyer 1996).

The review in context

The present literature review represents the first phase of a five-phase project, funded by the Department of Human Services, as part of the implementation of the PapScreen Victoria cervical screening program (Dwyer 1996). The primary aim of the project was to develop a series of messages that educate women about the benefits and limitations associated with having regular Pap tests. Emphasis was also placed on the need for new messages that encourage screened and under-screened women to comply with current screening guidelines.

A review of the literature related to cervical cancer and cervical cancer screening was conducted to:

- identify the factors associated with the development of pre-cancerous lesions in the cervix, and with invasive cervical cancer
explore the role of cervical screening in the prevention of cervical cancer
establish the effectiveness of the Pap test
identify the factors that influence women’s cervical screening behaviour
identify the benefits and limitations of Pap tests
identify specific content areas that need to be addressed within educational and recruitment strategies.

Incidence and mortality
Cervical cancer is the seventh most common cancer among Victorian women. In 1994, 304 new cases of cervical cancer were diagnosed, and 76 women died from this disease (Giles et al 1997). Current health risk estimates predict that one in 125 Victorian women will develop cervical cancer during their lifetime (Karlik et al 1996). This risk increases with age, with half of all diagnoses of cervical cancer occurring in women aged over 50 years (Jelfs 1995).

Changes in incidence of cervical cancer
Cervical cancer incidence and mortality has steadily declined since the widespread introduction of the Pap smear screening test (DiBonito et al 1993; Groenwald et al 1993; Sasieni et al 1996), which detects pre-cancerous changes in the cervix (Walsh 1992). Although it has been argued that this observed decline predates the introduction of the Pap test (CDHSH 1995b), it is widely accepted that the decrease in incidence and mortality would not have been as great in the absence of screening programs (CDHSH 1995b; Shingleton et al 1995). Cervical cancer continues to be a leading cause of cancer-related death in developing countries, where screening programs have not been widely established (Gusberg & Runowicz 1991; Walsh 1992).

The incidence of carcinoma in situ and pre-cancerous lesions
In contrast to the observed trends in cervical cancer, the incidence of carcinoma in situ and pre-cancerous lesions has substantially increased (Groenwald et al 1993; Koss 1987). Mitchell and Medley (1990) reported that the prevalence of cervical intraepithelial neoplasia among Victorian women had increased from 4.9 per 1,000 in 1970, to 42.2 per 1,000 in 1988. Patterns of incidence appear to vary according to age, with most diagnoses of cervical dysplasia occurring in women in their 20s (Mitchell & Medley 1990), of carcinoma in situ in women in their 30s (Spanos et al 1989), and of invasive cancer in women aged over 35 years (Karlik et al 1996). The increased incidence of these types of cervical abnormality may reflect the increased rate of detection of the early stages of cervical cancer afforded by widespread screening programs (Gusberg & Runowicz 1991). The differential pattern of incidence according to age accurately reflects the slow linear progression of the disease (MacLean 1996; Shingleton et al 1995), that can take up to 10 years to develop from cervical dysplasia to invasive cervical cancer (Gusberg & Runowicz 1991).

Pathology
Cervical cancer is the final stage of a progressive disease (Lovejoy & Anastasi 1993) that begins with the development of abnormal cells in the transformation zone of the cervix (Groenwald et al 1993). The progression from healthy tissue to invasive cervical cancer is generally orderly (Lovejoy & Anastasi 1993), and is characterised by identifiable stages of increasing cellular change (MacLean 1996; Shingleton et al 1995).
Types of cervical cancer

There are three main types of cervical cancer: squamous cell carcinoma, adenocarcinoma, and adenosquamous carcinoma (Jelfs 1995). Squamous cell carcinoma is the most common type, and accounts for approximately 85% of reported cases (CDHSH 1994). Adenocarcinoma and adenosquamous carcinoma are similar malignancies that account for between five and 15% of cervical cancers. Glandular subtype of cervical cancer. While it accounts for less than 5% of cervical malignancies, it is described as ‘extremely virulent’, and may develop into invasive cancer without progression through pre-invasive stages (Averette & Nguyen 1995).

Classification

The cell changes that mark the pre-invasive stages of cervical cancer are called cervical intraepithelial neoplasia (CIN) (Groenwald et al 1993). CIN can be classified into one of three grades according to the severity of the dysplasia (Oren & Fernandes 1991). Dysplasia is a medical term that describes the development of abnormal tissue. CIN I describes the presence of mild dysplasia, CIN II indicates moderate dysplasia, and CIN III describes the presence of severe dysplasia, or carcinoma in situ (Lieu 1996; Oren & Fernandes 1991).

Diagnostic problems created by the limited number of classifications provided by the CIN system, and high levels of inter-observer variability, prompted the development (in 1988) of a more defined group of diagnostic guidelines known as the Bethesda System (Lieu 1996). This system provides statements regarding the adequacy of the smear, a general categorisation of the diagnosis (normal, other), and a descriptive diagnosis (Groenwald et al 1993; Lieu 1996). This diagnostic terminology incorporates two new terms, low and high grade squamous intraepithelial lesions (SIL). These classifications are comparable to CIN classifications, with low grade SIL corresponding to CIN I, and high grade SIL to CIN II and CIN III. However, ongoing opposition to the Bethesda System has resulted in the continued prevalence of the CIN system in medical practice and related literature (Groenwald et al 1993).

Symptoms

Cervical cancer does not have any characteristic symptoms (Gusberg & Runowicz 1991). Although it is largely asymptomatic during the pre-invasive stages (Cannistra & Niloff 1996), a range of symptoms may develop as the cancer advances (Gusberg & Runowicz 1991). These include bleeding after sexual intercourse or between periods, heavy periods, odorous vaginal discharge, and persistent aches in the lower back and thighs (Groenwald et al 1993; Gusberg & Runowicz 1991).

Progress of the cancer

Cervical cancer generally progresses very slowly, with pre-invasive stages of the disease lasting up to 10 years (Gusberg & Runowicz 1991; MacLean 1996; Singleton et al 1995). Once cervical dysplasia becomes microinvasive or invasive, the progression of the cancer tends to become more rapid, with a potential to cause death within three years (Gusberg & Runowicz 1991). At each stage of development, pre-cancerous lesions in the cervical region may regress, persist (Carmichael & Maskens 1989; Groenwald et al 1993), or advance (Brissin et al 1994; Schal et al 1991). As there is no way to determine which CIN lesions will progress and which will not, it is recommended that all lesions should be treated as soon as they are discovered (Groenwald et al 1993). The pre-invasive stages of cervical cancer are highly curable, with intervention at this stage providing a prognosis similar to that of skin cancer (Gusberg & Runowicz 1991).
Factors that may influence the rate of progress of cervical cancer include the type of cervical cancer that is developing (Averette & Nguyen 1995), and the type, number and combination of risk factors for cervical cancer that are present in the individual (Klassen, Celelano & Bookmeyer 1989).

Epidemiology

A variety of factors have been associated with the development of pre-cancerous lesions of the cervix (Yoder & Rubin 1992). These include age, race, socio-economic status, smoking, sexual behaviour, and human papilloma virus (HPV).

The risk of cervical cancer incidence and mortality increase with age (Smith 1995), with approximately 50% of all diagnoses of cervical cancer occurring in women aged over 50 years (Jelks 1995). Patterns of incidence also indicate a linear increase in the severity of the most commonly-found CIN lesions by age, with the incidence of CIN I and CIN II clustering among women in their 20s (Mitchell & Medley 1990), of carcinoma in situ among women in their 30s (Spaans et al 1989), and of invasive cervical cancer in women aged over 35 years (Karlik et al 1996).

Although Koori women demonstrate similar (Reath, Patel & Moodie 1991) or slightly lower (Mak & Straton 1993) incidence rates for CIN compared to other Australian women, they are at greater risk of developing cervical cancer, and of dying from this disease (Fitzgerald, Thomson & Thompson 1994; Guest, Mitchell & Plant 1990). This pattern of findings suggests that Koori women's lower level of access and/or participation in regular cervical screening programs contributes significantly to their increased risk of cervical cancer (Guest, Mitchell & Plant 1990; Reath, Patel & Moodie 1991).

Information regarding the incidence of cervical cancer among minority ethnic women in Australia is limited. Drawing from international research, it is probable that some ethnic minorities in Australia will demonstrate incidence rates for cervical cancer that differ from those of the majority population. American research indicates that African American, Hispanic, and Vietnamese women are at much higher risk of developing invasive cervical cancer than white American women (Davis et al 1995; Martin et al 1996; Pham & McPhee 1992; Thomas et al 1995). Research conducted in England and Wales observed lower rates of mortality from cervical cancer among East African immigrants, and similar rates among Caribbean immigrants when compared to mortality among women who were native to England and Wales (Grulich et al 1992). Explanations for the observed variations in incidence and mortality focused on differential access and/or participation in cervical screening programs (Davis et al 1995), genetic susceptibility to disease, and environmental lifestyle factors (Grulich et al 1992). Given the cultural diversity of the Australian population, it is of interest to further investigate the cervical cancer risk of ethnic minorities, and the impact of migration on cervical cancer incidence and mortality.

The higher incidence of cervical cancer observed among women from lower socioeconomic levels (Brannon et al 1987; Fouquet & Gage 1996) may reflect the increased risk associated with behavioural correlates of this status, rather than the status itself (Harvard Center for Cancer Prevention 1996). These behaviours include smoking (Giles & Mitchell 1986), deficient nutrition, multiparity and concurrent genital infection (Schiffman & Brannon 1993). Women of low socio-economic groups and low educational levels have been found to have a higher incidence of HPV (de Sanjose et al 1996; Hildesheim et al 1993), resulting in an increased risk of CIN and invasive cervical cancer (Brisson et al 1994; Kousky et al 1992). Smoking has been found to significantly increase the risk of high grade CIN, carcinoma in situ (Kjaer, Engholm et al 1996) and invasive cervical cancer (Brisson et al 1994; Brock et al 1987). While it has been argued that this increase in risk may occur as a function of the correlations between smoking, sexual behaviour and HPV infection (Hildesheim et al 1993), there is evidence to suggest that smoking related risk is independent of sexual risk factors (Kjaer, Engholm et al 1996).
Research findings suggest that the risk of cervical cancer decreases to a level just above that of a non-smoker after the cessation of smoking (Brisson et al 1994; Brock et al 1987).

Cervical cancer is largely viewed as a sexually transmitted disease (Brisson et al 1994; Slattery et al 1989). First intercourse at an early age (Walsh 1992), multiple lifetime sexual partners (Brisson et al 1994; Stone et al 1995), and multiple sexual partners of a women’s male partner (Kjaer, de Villiers et al 1991) have each been associated with increased risk of developing cervical cancer. While not risk factors in themselves, these behaviours provide the opportunity for increased exposure to the genital human papilloma virus (HPV) and herpes simplex virus (HSV) type 2, which have both been linked with the development of cervical cancer (Bock et al 1996b; Gusberg & Runowicz 1991; Kjaer, van den Brule et al 1996).

The genital human papilloma virus is made up of several viral subtypes, that vary in the degree to which they cause changes in cervical tissue (Cannistra & Niloff 1996). HPV types 16, 18, 31 and 33 have been identified as the most significant risk factors for squamous cell carcinoma (Kjaer, van den Brule et al 1996; Morrison et al 1991), with research indicating a strong association between HPV types 16 and 18 and high-grade CIN lesions (Brisson et al 1994; Koursky et al 1992).

While the association between HPV and cervical cancer appears both strong and consistent, the relationship between herpes simplex virus (HSV) type 2 and the development of cervical cancer is less clear (Schiffman & Brinton 1995). Indirect evidence from immunological data suggests that HSV type 2 may have carcinogenic properties (Gusberg & Runowicz 1991). Similarly, serologic studies have observed a higher prevalence of HSV type 2 antibodies in women with cervical cancer (de Sanjose et al 1994). Having multiple sexual partners has also been found to be a risk factor for women who are HPV negative, suggesting a link between cervical cancer and other sexually transmitted diseases (Kjaer, van den Brule et al 1996) such as HSV. However, prospective studies of different populations have failed to demonstrate a clear relationship between HSV and cervical cancer (Lehtinen et al 1992).

Long-term use of oral contraceptives has been associated with an elevated risk of developing high grade CIN (Brisson et al 1994) and invasive cervical cancer (Kjaer, van den Brule et al 1996). While it has been theorised that this risk occurs due to a corresponding reduction in the use of barrier contraception and, as such, increased opportunity of contracting HPV, there is growing evidence of a causal relationship between oral contraceptive use and squamous cell carcinoma (Brinton et al 1990; Thomas & Ray 1993). In a study of 16,003 women across nine countries, Thomas and Ray (1993) found that the relationship between invasive cervical cancer and long-term oral contraceptive use was independent of the presence of HPV or other sexually transmitted diseases. However, a recent meta-analysis (Schlesselman 1995) observed that the increase in risk of cervical cancer as a result of oral contraceptive use was small, and was balanced by the increased protection from other gynaecological cancers that is afforded by oral contraceptive use.

The factors that have been found to reduce the risk of cervical cancer are primarily related to sexual behaviour. The use of condoms and other barrier contraceptives that contain virucides (such as foams, jellies and contraceptive creams) prevents direct exposure to HPV, and as such, decreases the risk of cervical cancer (Klassen et al 1989; Slattery et al 1989). Cervical cancer remains rare among women who have never had intercourse (Karlik et al 1996). The low incidence of cervical cancers noted among frequent Mormon Church attendees is thought to be related to the church’s prohibition of extramarital sex (Gardner, Sanborn & Slattery 1995).

The role of screening in the prevention of cervical cancer

The detection and treatment of pre-cancerous lesions of the cervix can prevent most cases of invasive cervical cancer (Eyers White 1995; Hirst, Mitchell & Medley 1998; Mitchell & Medley 1989; Walsh 1992). The primary method of screening for both CIN and invasive cervical cancer is the Papanicolaou (Pap) smear (Tawa et al 1988).
Described as the most effective screening test for cancer ‘ever invented’ (Lieu 1996), the Pap test is a simple medical procedure, that involves the removal, analysis and classification of a sample of cells from the transformation zone of the cervix (ACCV 1994). The cervix is covered by two different types of cells. The inner cervix, or cervical canal, is covered by endocervical (glandular) cells. The outer cervix, which protrudes into the vaginal canal, is covered by ectocervical (squamous) cells. The transformation zone, where these cells meet, is generally located near the neck of the cervix. This zone is the point at which pre-cancerous changes in the cervix most commonly occur (Shingleton et al 1995).

Cervical cancer incidence and mortality have steadily declined within countries that have introduced organised Pap smear screening programs (DiBonito et al 1993; Groenwald et al 1993; Robb 1993; Sasieni et al 1996). It is presently estimated that having regular Pap smears every two years can prevent squamous cell carcinoma in 90% of cases (CDHSH 1995a). This procedure is less likely to prevent adenocarcinomas or adenosquamous carcinomas, as these cancers do not tend to shed cells during the pre-cancerous stages of their development, and often occur in areas that cannot be accessed via a Pap smear (CDHSH 1994).

As it is not the Pap smear per se that reduces the risk of cervical cancer but the treatment of pre-cancerous lesions that are detected by the test (Eyres White 1995; Mitchell & Medley 1989), the numerical estimates of the effectiveness of the Pap smear provided above are made on the assumption of a high rate of recall and treatment of women with abnormal test results (Mitchell & Medley 1989).

Cervical cancer demonstrates a variety of epidemiological and developmental characteristics that make it a highly suitable candidate for cancer screening (Hakama et al 1991; MacLean 1996; Mitchell & Giles 1996; Walsh 1992). Walsh (1992) proposed four factors that determine the suitability of a disease to a broad-scale screening program: 1) the disease should have a high prevalence among those screened; 2) it should have serious consequences; 3) it should have a pre-clinical stage that can be detected; and 4) the treatment for the disease should be more effective when applied before the symptoms develop. Mitchell and Giles (1996) added to these requirements, with their suggestion that screening is best suited to cancers that have a long development time.

Cervical cancer meets all of these criteria. It is a potentially fatal disease, with a high prevalence in the absence of screening (Gusberg & Runowicz 1991; Walsh 1992) and a long pre-clinical phase that passes through identifiable, progressive stages (Lovejoy & Anastasi 1993; MacLean 1996), for which there are a variety of highly-effective treatment options (Shingleton et al 1995).

Because the pre-invasive stages of cervical cancer are largely asymptomatic (Cannistra & Niloff 1996), women are generally unaware that they have the disease until it becomes quite advanced (Slattery & Gardner 1991). As such, they are unlikely to present spontaneously for an examination that would allow early diagnosis of their condition. Having regular Pap tests significantly reduces mortality from cervical cancer by providing asymptomatic women with the opportunity for early detection and treatment of pre-cancerous lesions that may be present in the cervix.

A primary consideration in the implementation of any screening program is to ensure that large proportions of the targeted population are screened within the program guidelines (IARC Working Group on Evaluation of Cervical Cancer Screening Programmes 1986). In 1991, the Anti-Cancer Council launched ‘Pap Test Victoria’, an extensive, three-year, statewide cervical screening recruitment initiative. This initiative utilised personalised letters of invitation, a media campaign, and community and peer education programs to encourage the uptake and maintenance of regular screening behaviour among Victorian women. Service-based strategies of the initiative included the training of 79 nurses to conduct Pap tests. Evaluative statistics indicated the success of this campaign, with an estimated 79% of Victorian women aged between 20 and 70 having had at least one Pap test during the three year period between 1992 and 1994 (Mitchell & Higgins 1996). In June 1996, the Anti-Cancer Council commenced a three-month, statewide cervical screening recruitment campaign.
on metropolitan and rural radio stations. An evaluation report produced by the Victorian Cervical Cytology Registry (Mitchell 1997) indicated that the number of Pap smears taken had increased by 5% during the three-month period of the radio campaign, as compared with the same time period in 1995, and that the most substantial impact had occurred on the screening behaviour of women aged over 50 years. An increase in reminder activity by the registry during this period, however, made it difficult to assess whether the observed increase in screening rates occurred solely as a function of the radio campaign, or reflected the combined impact of the two campaigns.

Recent statistics suggest that 66% of women aged between 20 and 70 years had at least one Pap test during the two-year period 1994–95 (Hirst 1997).

The Victorian Cervical Cytology Registry also provides a reminder service for women after they have had their first Pap test (VCCR 1995). The registry receives the smear results of Victorian women from the Victorian Cytology Service, which processes around half of the Pap smears conducted in the State, and 33 private pathology laboratories that process the remainder. It is estimated that when combined, these laboratories report nearly all of the Pap tests conducted with Victorian women (Mitchell & Higgins 1995). Once registered with the service, the regularity of each woman’s screening behaviour is monitored. When no smear result is received for 27 months, a letter is sent to the woman, reminding her that her Pap test is overdue.

The Pap smear is a screening test for cervical cancer (Robb 1993; Yeoh & Russell 1994). Like all screening tests (Jelfs 1995), it is not 100% accurate. Errors that occur during sampling (Falcone & Ferenczy 1986; Modan 1993; Rogers & Hansell 1988; Shingleton et al 1995) and analysis of the sample (CDHSH 1995a; Rogers & Hansell 1988), can produce two types of inaccuracy in Pap test results: false negative error, and false positive error.

A false negative error occurs when a Pap test fails to identify the presence of abnormal changes in a woman’s cervix. While different studies suggest that the false negative error rate may range from 6% to 55% (Shingleton et al 1995), there appears to be academic and clinical agreement that approximately 20% of negative Pap test results are false negative results (Soost et al 1991; Yeoh & Russell 1994). False negative error rates may be higher for older, menopausal women, as the transformation zone can retreat further up the cervical canal, making it more difficult to take an adequate sample (Walsh 1992).

A false positive error occurs when the Pap test process falsely indicates the presence of abnormalities in a normal, healthy cervix. Approximately 6% of positive results are false positive results (Soost et al 1991). False positive error rates may also be higher for older, post-menopausal women, as reduced levels of oestrogen can result in cell changes that resemble pre-cancerous changes (Walsh 1992). False positive results are generally identified when subsequent testing indicates that no abnormalities are present in the cervix.

These errors occur as a result of a number of factors. Abnormal cell changes can occur in minute areas of the cervix, so it is possible to take a Pap smear that does not contain any of the abnormal cells that are present in the cervix (CDHSH 1995a). In order to increase the likelihood of detecting any abnormalities that may be present, a Pap smear should contain cells from the transformation zone of the cervix, where pre-cancerous changes most frequently occur (Cannistra & Niloff 1996; Shingleton et al 1995). To ensure that this area is sampled, cells should be taken from the endocervix (cervical canal) in addition to the more accessible ectocervix and vagina (Modan 1993; Oren & Fernandes 1991).

Inaccurate results can occur when the service provider samples an insufficient number of cells from the cervix (Modan 1993), samples a clear area of the cervix when abnormal cells are present (CDHSH 1995a), or does not properly fix the cells on the slide (Falcone & Ferenczy 1986; Rogers & Hansell 1988), or uses a slide of poor quality (Modan 1993).

Pap smear results can be difficult to interpret. Layers of tissue, and the presence of non-cervical matter, can reduce the clarity of individual cervical cells. Reporting errors occur when abnormal cells present in the smear are not detected (Falcone & Ferenczy 1986; Rogers & Hansell 1988), and less commonly, when normal cells are diagnosed as abnormal (Walsh 1992).
Finally, a very small proportion of cervical cancers (less than 5%) are highly virulent, and can develop over short periods of time, without progression through pre-invasive stages (Averette & Nguyen 1995). Women with this type of cervical cancer can present with a highly abnormal Pap smear after a history of regular, negative smear results (CDHSH 1994).

**New developments in Pap test technology**

In order to maximise the accuracy of the Pap test, new instruments and technology have been developed for taking, preparing and analysing Pap smears.

The **cytobrush** is a small ‘brush-like’ instrument, that has been developed to facilitate the removal of an adequate sample of cells from the cervix (Klassen et al 1989).

'Thin Prep' is a thin layer of cells on a prepared slide. This method of slide preparation was developed to increase the clarity of individual cervical cells for analysis. The cells on the swab/brush used to take the Pap smear are suspended in a preserving solution rather than being placed on a slide. At the pathology laboratory, the cells are filtered, and placed on a slide in a single layer. While this process results in the analysis of fewer cells, the cells are much more distinct, and easier to see (Dow 1996).

PAPNET is a computer-driven instrument that analyses conventional Pap smear slides for abnormalities, and produces a highly-magnified image of any cells that are identified as abnormal. These images are then reviewed by a pathologist (Koss et al 1994).

The ‘Pathfinder’ is a small computer that can be attached to a microscope to track the eye movements of technicians as they review Pap smear slides. By mapping the eye movements, technicians can be made more aware of their visual patterns of review, and can be alerted to any areas of the slide that they may have inadvertently missed (Berger 1997).

**Screening interval**

Current screening guidelines recommend a two-year interval between Pap tests (ACCV 1994; Jelfs 1995). Because cervical cancer takes a long time to develop, screening at this interval provides the opportunity to detect and treat abnormal changes that may have been missed in a previous smear (false negative error), before they become substantially more advanced (Cannistra & Niloff 1996; MacLean 1996). While there has been some support for a one-year screening interval, the financial costs of maintaining a screening program on this basis may outweigh the benefit of the 1% increase in detection of cervical cancer that yearly screening affords (Karlik et al 1996).

**Who should have a Pap smear?**

It is currently recommended that all women aged between 20 and 70, who have ever had sexual intercourse, should have a Pap test every two years (ACCV 1994).

The screening requirements of women who have had a hysterectomy are slightly different, and vary according to the type of hysterectomy performed, the clinical diagnoses that required the hysterectomy, and the status of Pap smears taken prior to the hysterectomy (ACCV 1994; Blesch & Prochaska 1991). Women who have had a hysterectomy that left their cervix intact, should continue to have Pap tests every two years until the age of 70 (SA Cervix Screening Program 1996). Women who have had a total or radical hysterectomy, in which the cervix was removed for a malignant condition, should continue to have regular vaginal, or ‘vault’ smears (ACCV 1994), as they may still be at risk of developing vaginal cancer (SA Cervix Screening Program 1996). Women who have had a hysterectomy that included the removal of the cervix...
for a benign condition do not need to have further Pap smears (ACCV 1994) unless they have a history of moderately or severely abnormal Pap smears. In this case, it is recommended that regular Pap tests be continued (SA Cervix Screening Program 1996).

Who is having Pap tests?

While health record statistics such as those provided by the Victorian Cervical Cytology Registry (Mitchell & Higgins 1996) indicate the proportion of women who are adequately screened, they tell us little about these women. Studies of women's cervical screening behaviour suggest that screening is not distributed evenly among different groups of women (Straton, Holman & Edwards 1993). Research conducted in Australia, America and Britain confirms this uneven pattern of distribution, and indicates that women who are at high risk of cervical cancer are under represented in groups of adequately-screened women (Eardley et al 1985; Gordon & Fatovich 1990; Klassen et al 1989).

Despite the availability of a simple, effective screening test for cervical cancer, up to 50% of women who present with this disease have never had a smear (Yeoh & Russell 1994). In order to increase the practice of cervical screening among women who are at high risk of cervical cancer, there is a need to identify and target the factors that influence their screening behaviour.

Factors that influence screening behaviour

Demographic factors

Screening behaviour appears to vary according to age, with older women demonstrating the lowest prevalence of screening (Camirand, Potvin & Beland 1995; Mitchell & Higgins 1995) despite their increased risk of cervical cancer (Jelfs 1995; Smith 1995). Victorian Cervical Cytology Registry data indicate that between 1990 and 1992, screening rates peaked among women aged 30 to 39 years, with 73% of these women obtaining a smear within this period. This compared with 57% of women aged 50 to 59 years, and 33% of women aged 60 to 69 years (Mitchell & Higgins 1993). More recent data from the Victorian registry suggests that screening behaviour has increased among older women, with 70% of women aged between 50 and 59 years and 45% of women aged between 60 and 69 years being screened at least once between 1994 and 1995 (Mitchell & Higgins 1996). This increase may reflect the impact of recent initiatives to increase screening behaviour among older women.

A lower prevalence of adequate screening has been observed among single women (Camirand, Potvin & Beland 1995; Clarke & Jones 1996; Nicoll, Narayan & Paterson 1991), women of low educational (Nicoll, Narayan & Paterson 1991) or socio-economic level (Kowalski & Brown 1994; Weinrich et al 1996), rural women (Straton, Holman & Edwards 1993), and women from non-white and ethnic backgrounds (Yancey & Walden 1994).

Practical correlates of some demographic factors, socio-economic in particular, may reduce the ability of these women to utilise available medical services (Centers for Disease Control 1989; Dewar, Hall & Perchalski 1992). Competing financial obligations, limited access to transport or telephones, and time limitations can make it difficult for women to attend medical centres for routine, preventive health care (Dignan et al 1990; Weinrich et al 1996).

Knowledge of the Pap test

Women need to have a basic knowledge of Pap tests, and some understanding of the function of the test, before they will initiate screening (Gordon & Fatovich 1990). Although the majority of Western women are aware of the existence of the Pap test for cervical cancer (Clarke & Jones 1996; Dignan et al 1990), their knowledge of the function of the test appears to be poor, and is characterised by misunderstanding (Bonelli et al 1996; Gordon & Fatovich 1990).
There appears to be widespread confusion regarding the difference between a screening test and a diagnostic test for cancer (Gibbs 1994; Robb 1993; Vidovich 1994). A diagnostic test is a procedure carried out in response to the presentation of a symptom, in order to identify the cause of that symptom. In contrast, a screening test is a procedure that is conducted on asymptomatic people to detect the presence or absence of a given abnormality. A telephone interview study of 835 Australians aged between 18 and 70 found that while 68% of the respondents were aware of screening tests, only 21% appreciated that screening tests were conducted in the absence of any symptoms (Cockburn et al 1995).

A significant proportion of women fail to recognise their need to have regular Pap tests in the absence of symptoms. Australian qualitative research studies have observed that some women believe that in the absence of overt symptoms, they would inherently know that some sort of abnormality was developing in their body, and that this knowledge of illness would prompt them to seek treatment (Savage & Clarke 1996; Stancombe Research and Planning 1996). Beliefs such as these contribute to the misunderstanding that screening is not necessary in the absence of symptoms, and are contrary to participation in regular screening programs (Eyres White 1995; Kortke et al 1995; Nicoll, Narayan & Paterson 1994; Savage & Clarke 1996; Stancombe Research and Planning 1996).

While women appear to place strong emphasis on the test's ability to diagnose cancer (Gordon & Fatovich 1990), a lack of knowledge regarding the role of the Pap test in the early detection and prevention of cervical cancer is common (Dignan et al 1990). Older women (Mamon et al 1990), ethnic women, and women from lower socio-economic and educational levels (who are over-represented among the unscreened group), tend to demonstrate lower levels of knowledge of the test (Cockburn et al 1995), of the procedure involved, and of the treatment outcomes related to a positive result (Orbell et al 1995). Women who are screened regularly have been found to have more extensive knowledge about the test (Nicoll, Narayan & Paterson 1994).

Perceived accuracy of the Pap test

Many people overestimate the accuracy of the Pap test. In their study of the screening-related beliefs and behaviour of Australian men and women, Cockburn et al (1995) found that 45% of the respondents estimated the Pap test to be more than 90% accurate. Of this group, two-thirds expected the test to be more than 95% accurate. Such misperceptions have been noted among physicians, governmental and private agency staff, and the legal profession (Robb 1993). The difference in real and expected levels of accuracy of the Pap test (Yeoh & Russell 1994), and the perception that health agencies underplay the Pap test's limitations (Covello, Winterfeldt & Slovic 1986) may lead women to question the utility and credibility of the test.

In order to develop realistic expectations of the accuracy of the Pap test, health and legal professionals and the general public need to be educated about these issues (Robb 1993; Vidovich 1994; Yeoh & Russell 1994). They also need to be reminded that the Pap test is still the most highly-effective means of reducing mortality due to invasive cervical cancer (Lieu 1996).

Participants in a recent Australian focus group study (Gibbs 1994) indicated that they would be prepared to accept inaccuracy in a screening test if they were previously informed of this fact. However, research in the area of health risk communication has suggested that care needs to be taken in the communication of test inaccuracy, as sectors of the target audience may respond to the disclosure of these limitations in very different ways (Johnson & Slovic 1995). The Director of the Victorian Cytology Service reinforced this need for caution when she described a varied pattern of response among Victorian women to recent media publicity regarding the accuracy of the Pap test (Medley 1995). She indicated that some regularly-screened women had needlessly increased the frequency of their screening, while some under-screened women, feeling that their questions regarding the utility of the test had been validated, had become more resolute in their avoidance of screening.
Knowledge of risk factors for cervical cancer

Women's perception that they are susceptible to cervical cancer is an important determinant of cervical screening behaviour (Eardley et al 1985). A lack of knowledge regarding the range of risk factors associated with cervical cancer can lead some women to falsely assume a low level of personal risk, which in turn, influences their screening behaviour (Mamon et al 1990).

An interview study of 614 English women found that women did not take their smoking habits into account when they either estimated their susceptibility to cervical cancer, or compared their level of risk to that of other women (Orbell et al 1995).

The relationship between sexual behaviour and cervical cancer may be the most commonly-recognised, and misunderstood, risk factor for this disease (Dignan et al 1990; Gordon & Fatovich 1990; Modan 1993; Orbell et al 1995). The widely promulgated association between the experience of multiple sexual partners and increased risk of cervical cancer has been found to deter women from screening in two ways: the stigma associated with promiscuity can make women more reluctant to present for screening, and more fearful of the social implications of an abnormal smear; and women who have been in long-term monogamous relationships do not identify themselves as being at risk (Dignan et al 1990; Modan 1993). Similarly, the belief that women only need to be screened when they are sexually active may deter those women who are not currently involved in sexual relationships (Stancombe Research and Planning 1996).

Some women who have experienced menopause may believe that they are no longer at risk of diseases of the reproductive organs, and believe that they are no longer eligible for a regular screening program (King 1987; Stancombe Research and Planning 1996).

Emotional factors

The expectation of emotional and physical discomfort can strongly deter women from having a Pap test (Eyre White 1995; King 1987; Stancombe Research and Planning 1996). Under-screened women are more likely to report fear, anxiety and/or embarrassment in relation to the Pap test (Eyre White 1995; King 1987; Orbell et al 1995; Peters, Bear & Thomas 1989), and to demonstrate stronger feelings of fear (Eyre White 1995; Orbell et al 1995) and concern about cancer (Savage & Clarke 1996), than their screened counterparts. Women who are regularly screened are more likely to report that having a Pap test brings them ‘peace of mind’ (Clarke & Jones 1996; Orbell et al 1995), suggesting a concurrent belief in the reliability of the test.

Anxiety has been shown to influence women's screening behaviour. Women who are well integrated socially, and experience low levels of social anxiety, are more likely to participate in preventive health behaviours, while women who are over concerned about body cleanliness, or experience anxiety related to their body image are less likely to have a Pap test (Kowalski & Brown 1994). Discomfort regarding the exposure of the body is also a deterrent to screening among older women (Stancombe Research and Planning 1996).

Fear of cancer influences screening behaviour among women who view the Pap test as a tool for the detection, rather than the prevention, of cancer (Elkind, Haran & Eardley 1988). This belief appears to be associated with higher-than-normal levels of anxiety and distress when an abnormal test result occurs (Kennedy 1989).

Knowledge and emotion

There is evidence to suggest that some of the emotional barriers to screening experienced by women can be mediated by the provision of accurate knowledge about the Pap test (Elkind, Haran & Eardley 1988; Foxwell & Alder 1993; Gordon & Fatovich 1990; Griffith & Williams 1992; Kennedy 1989). A recent interview study of Australian women (Stancombe Research and Planning 1996) found that a lack of knowledge about the procedure of the Pap test created anxiety among never-screened women. Similarly, an earlier study (Foxwell & Alder 1993) found that anxiety related to the Pap test and the test result was reduced when information about the Pap test procedure was provided before the test was conducted.
It is possible that anxiety related to a lack of knowledge about the Pap test may contribute to under-screened women's reluctance to ask a GP for a Pap test, or refusal to have a test when it is suggested by the GP (Gordon & Fatovich 1990).

**Value of personal health**

A significant finding that has recently emerged from qualitative research investigating women's attitudes towards different preventive health behaviours is the role of women's beliefs regarding the value of their own personal health (Dignan et al 1990; Eyres White 1995; Savage & Clarke 1996). A recent study of older Australian women's cancer-related beliefs indicated that these women viewed cancer screening as being more important for younger than older women. Further investigation elicited beliefs that the value of a woman's health is strongly related to her maternal role. Older women, who had already raised their children, implied that their personal health was less important as they had fulfilled their maternal role (Savage & Clarke 1996). Similar findings were noted in an earlier qualitative interview study of older New Zealand women's attitudes towards cervical screening (Eyres White 1995). The belief that the value of a woman's health is determined by her maternal responsibilities is not necessarily restricted to the older age group. The findings of an American focus group study suggest that among women of various ages, there is a belief that a primary reason for a woman to maintain her health is to ensure her ability to care for her family (Dignan et al 1990).

**Influence of others**

The beliefs and attitudes of significant others may influence women's attitudes towards cervical screening. A Canadian study found that the attitudes of significant others was related to intention to have a Pap test (Burnett, Steakley & Tefft 1996). A slightly earlier focus group study of Latino males (Flores & Mata 1995) concluded that the health-related knowledge and attitudes held by these men towards their wives' health significantly influenced their wives' health-seeking behaviour. Given the strong patriarchal structure of many minority cultures within Australia, it is of interest to learn more about the impact of such influence on the screening behaviour of women in these cultures.

The GP has an integral role in promoting cervical screening behaviour among women who present to medical centres (Camirand, Potvin & Beland 1995; Clarke & Jones 1996). Two studies of screening behaviour conducted over the past eighteen months suggest that while the majority of both screened and under-screened Victorian women have a 'usual' GP (Clarke & Jones 1996; Jones & Clarke 1997b), screened women are more likely to report that their GP prompted their last Pap test (Jones & Clarke 1997b). Assuming that GPs will prompt all eligible women who attend their clinic to have a Pap test, this finding indicates that some under-screened women will refuse a prompt to test due to the presence of other barriers to screening. However, there is evidence to suggest that GPs differentially prompt women to have Pap tests, and may not invite women who are characteristic of under-screeners to have a Pap test as frequently as they invite women who are characteristic of screeners (Cockburn et al 1990; Market Access Consulting and Research 1996).

A recent qualitative focus group study of Victorian GPs indicated that a proportion of the GPs experienced personal barriers to inviting some groups of women (characteristic of under-screeners) to have a Pap test. Particular reference was made to the difficulty of approaching women who spoke little or no English, and older women, with a prompt to screen (Market Access Consulting and Research 1996). Other studies have noted that GPs may feel that older women would be embarrassed or offended if approached with a prompt to have a test (Cockburn et al 1990), and feel reluctant to ask older women to adopt physical positions that may be uncomfortable or even painful for them. Confusion about screening guidelines may also play a role in the failure to prompt all eligible women to have a Pap test (Terry 1994). For example, research findings indicate that under-screened women aged 55 years and over are less likely to receive information about Pap tests from their GP than are younger under-screened women (Clarke & Jones 1996). These findings suggest that women who demonstrate
characteristics that trigger GPs' personal barriers to prompting a Pap test may be at higher risk of being under-screened if they do not actively initiate their own screening behaviour. Despite the fact that most older women will have seen a GP for some reason over the past year (Smith 1995), the prevalence of cervical screening among this group remains relatively low (Camirand, Potvin & Beland 1995; Eardley et al 1985; Mitchell & Higgins 1995). There are several possible explanations for this apparent contradiction. Firstly, GPs may not provide older women with adequate information or prompts to screen (Cockburn et al 1990; Jones & Clarke 1997b). Secondly, some older women may be reluctant to accept a GP's invitation to have a Pap test (Eyres White 1995). Thirdly, older women may not identify themselves as being at risk of cervical cancer (Eyres White 1995), and therefore feel they are ineligible for screening. The potential impact of a GP's prompt on the screening behaviour of older women was highlighted in an intervention study conducted with older Australian women several years ago. Cockburn et al (1990) found that a GP's personal invitation to have a Pap test was a highly-effective method of recruiting older under-screened women to a screening program. Unfortunately, it is possible that as a woman's age increases, other health issues gain prominence, and are prioritised during time-limited GP consultations (Jones & Clarke 1997b). Women who feel even slightly uncomfortable with their GP are more likely to be under-screened than women who feel very comfortable about approaching their practitioner for a Pap test (Clarke & Jones 1996). A recent study investigating the cervical screening behaviour of Victorian women found that only 10% of the under-screened women involved in the study believed that feelings of discomfort with their GP would not stop them from having a Pap test (Clarke & Jones 1996).

The importance of feeling comfortable with a GP before a Pap test is conducted may explain why many women wait until the last minutes of a consultation to request a Pap test (Market Access Consulting and Research 1996). They may need to spend time with a doctor, discussing other health matters, so as to develop feelings of comfort that will enable them to request a Pap test. The relationship between comfort with that GP and screening behaviour may also underlie findings that women who have a usual GP are more likely to be adequately screened (Camirand, Potvin & Beland 1995; Clarke & Jones 1996; Jones & Clarke 1997b). Women who have the opportunity to develop a relationship with their GP, either through regular visits or the maintenance of one doctor over long periods of time, may experience levels of comfort that enable them to request a Pap test, or enhance the likelihood that they will respond positively to a GP prompt or reminder to have a test. Finally, the belief that female GPs will have an empathic understanding of women's need to feel comfortable may underlie the noted preference of some under-screened women for female Pap test service providers (Johnston et al 1996; Schwartz et al 1990).

Gender of the GP may influence women's intentions to have a Pap test and the degree to which they seek information about women's health (Clarke, Hill & Jones 1996; Jones & Clarke 1997b). Research findings indicate that under-screened women who have a usual GP who is female are more likely to intend to screen than under-screened women who have a usual GP who is male, and are more likely to indicate that their GP's surgery is a source of information about Pap tests (Jones & Clarke 1997b). There is also evidence to suggest that men and women tend to seek information about sex-related cancers from GPs of their own sex (Clarke, Hill & Jones 1996).
Summary

This review of literature related to cervical cancer, Pap tests and cervical screening behaviour identified several benefits and limitations of Pap tests.

Benefits

Having regular Pap tests every two years can:

- reduce mortality from cervical cancer
- detect 90% of the most common type of cervical cancer
- provide early detection of pre-cancerous changes in the cervix
- provide the opportunity for early intervention/treatment of abnormal changes in the cervix
- increase the likelihood of positive treatment outcomes (through the detection and treatment of the early stages of abnormal changes in the cells of the cervix)
- detect changes in the cervix before symptoms develop
- provide peace of mind.

Having regular Pap tests every two years is the most reliable way to detect cervical cancer, and pre-cancerous changes in the cervix.

The Pap test is highly accessible. It is provided by several types of health professionals, in several types of service locations.

Women can select and attend their preferred service provider.

Limitations

The Pap test is a screening test for cervical cancer. Like all screening tests, it is not 100% accurate. It has a false-negative error rate of approximately 20%, and a false-positive error rate of approximately 6%. Factors that contribute to the false error rate include inadequate cell sampling, service provider error, and reporting error.

The Pap test can cause physical discomfort or intense emotional discomfort. It is not a compulsory test and, as a result, women are responsible for their own cervical screening behaviour.

Factors that may influence a woman's decision to self-initiate cervical screening include:

- belief in the efficacy of the test
- knowledge of the primary benefits of the test
- knowledge that the test is conducted in the absence of symptoms
- knowledge of susceptibility
- knowledge of their eligibility for a cervical screening program
- recognition that their own health is important
- recognition that they are responsible for their own health
- the belief that the benefits of having regular Pap tests outweigh the limitations of the procedure.
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Chapter 2  An analysis of cervical screening messages in 1997  
Trudi Jones and Valerie Clarke  July 1997

Abstract
This project reviewed the Pap test messages that were available to Victorian women up until 1996. Through content analysis of five brochures and the Victorian Cervical Screening Radio Recruitment Campaign in 1996, assessment was made of the degree to which available messages covered the key points highlighted by the literature review (see Chapter 1). It was shown that the range of messages available was diverse, detailed, and relatively comprehensive, although some aspects of the cervical screening process were inadequately represented.

Introduction
The authors reviewed the Pap test messages available to Victorian women, established the degree to which the available messages provided coverage of the key points highlighted by the literature review, and provided a valuable insight into the nature and range of the messages provided by different sources.

An attempt was made to provide normative terms and definitions for different aspects of the cervical screening process, and to identify aspects of the cervical screening process that may have been under-represented by messages.

We also comment on the aspects of the cervical screening process that were inadequately represented by the Pap test messages available to Victorian women.

Method
Five pamphlets relating to Pap tests and the Victorian Cervical Screening Radio Recruitment Campaign were selected as representative sources of the Pap test messages available to Victorian women. The messages from each source were collated and organised according to topic. Differences in the messages provided by different sources were documented and described, evaluating the extent to which the Pap test messages covered the various aspects of the cervical screening process. The pamphlets were:

Pamphlet A: Every women should have a regular Pap test, Anti-Cancer Council of Victoria 1996
Pamphlet B: Pap smear information sheet for women, Victorian Cytology Service 1995
Pamphlet C: It's easy to forget your next Pap test, Victorian Cervical Cytology Registry 1995
Pamphlet D: What if my Pap test is abnormal?, Anti-Cancer Council of Victoria 1991
Pamphlet E: The 'Geraldine Doogue' pamphlet, Commonwealth of Australia 1994

Two booklets of substantial length were also available to Victorian women at this time, Cervical Cancer: A Guide for Women and their Families (1994), a 30-page booklet produced by the Anti-Cancer Council, provided detailed information about cancer of the cervix, Pap test screening, diagnostic procedures, different treatment options, recovery and follow-up after treatment, and the availability and importance of supportive care. The other booklet,
Pap Smear Test Results: a Guide for Women with an Abnormal Pap Smear Test (1995), a 23-page booklet from the Commonwealth Department of Human Services and Health, provided extensive information regarding Pap tests, different types of Pap test results, diagnostic procedures and treatment options. While the booklets provided a thorough overview of cervical screening, they were lengthy, and designed for women who were interested in more detailed knowledge about cervical cancer, screening, and the treatment of abnormalities. In contrast, the educational pamphlets provided a summary of essential information about cervical screening, in a form that could be easily read and digested. They were designed for women with a less particular interest in the area, women with little time, and women for whom English is difficult. Using relative accessibility of information as guide, the two lengthy booklets were not included in our assessment.

The Cervical Screening Radio Recruitment Program

In June 1996, the Anti-Cancer Council commenced a three-month, statewide cervical screening recruitment campaign on metropolitan and rural radio stations. The major goals of the initiative were to:

- motivate unscreened and under-screened Victorian women to have a Pap test
- reinforce the adequate screening behaviour of screened Victorian women
- evaluate the reach and impact of a cervical screening radio campaign

Five advertisements were developed for the campaign. Four of the advertisements were presented by Geraldine Doogue. The fifth message was presented by Dr Robert Rome. The five advertisements contained 18 messages related to cervical screening. A total of 344 cervical screening advertisements were aired on 10 radio stations across Victoria during the campaign.

The messages, ‘Early detection helps prevent cervical cancer’ and ‘Have a Pap test every two years’ were aired as part of the core text presented by Geraldine Doogue with each of the four message ‘tags’. This meant that four out of every five Pap test advertisements used in the campaign contained these messages.

The Cervical Screening Radio Recruitment Program was the only major recruitment/advertising campaign conducted in Victoria during 1996.

Results

The messages from the educational pamphlets and the Cervical Screening Radio Recruitment Program were collated and organised according to topic. Differences in the information provided by different pamphlets were documented and described.

Topics covered

Location of the cervix

Two of the five pamphlets provided information regarding the location of the cervix: Every woman should have a regular Pap test provided a written description of the location of the cervix, and a labelled diagram of the female reproductive organs; and the ‘Geraldine Doogue’ pamphlet provided a labelled diagram, but not a written description.

What is cervical cancer?

None of the pamphlets provided an explicit description of cervical cancer.

The Pap smear information sheet for women and the pamphlet It’s easy to forget your next
Pap test reported that squamous cell cancer is the most common type of cervical cancer, and that other more rare types of cervical cancer exist. Pamphlets A and E indicated that some abnormal changes in the cells of the cervix may develop into cervical cancer if left untreated.

Changes without symptoms
Pamphlets A and C reported that cervical changes can occur without any obvious symptoms or pain.

Unusual symptoms
Three pamphlets provided a brief definition, and recommended a course of action, for women who experience unusual gynaecological symptoms. Pamphlets A and B described unusual symptoms as ‘unexpected/unusual bleeding’ or ‘increased discharge’. Pamphlet E specified ‘irregular bleeding or discharge between periods or after sex’ and included pelvic pain as an unusual gynaecological symptom. The three pamphlets (A, B and E) recommended that women who experienced any of these symptoms should seek medical advice, even if they had had a Pap test recently.

What causes cervical cancer?
Pamphlet E was the only pamphlet that described some of the potential causes of cervical cancer. Sexual activity, some forms of the human papilloma virus (HPV), and smoking were cited as factors related to increased risk of developing cervical cancer.

How long does it take to develop?
Pamphlet E stated that cervical cancer can take up to 10 years to develop.

How can cervical cancer be prevented?
Pamphlet A stated that most cases of cervical cancer can be prevented through regular Pap tests. Pamphlet E indicated that cervical cancer can be prevented through the early detection and treatment of abnormal changes in the cervix.

The radio recruitment campaign contained the messages: ‘Early detection helps prevent cervical cancer’, ‘A test could save your life’, and ‘In Australia, Pap tests save 750 lives per annum’.

What is a Pap test?
Three of the pamphlets (A, B and E) described the mechanics of the Pap test in varying detail. The most detailed explanation of the process was in Pamphlet A, which described the instruments used during a Pap test, and the process through which the cervical cells are sampled and stored for analysis. Pamphlets A, B and E stated that the test involves the collection of a small number of cells from the cervix. These cells are then sent to a laboratory for testing. Pamphlet B specified that the analysis of the smear is conducted by a trained scientist. Pamphlet E described a Pap test as a simple, brief process and specified that it is not an operation, and that it does not require anaesthesia. Pamphlets A and E indicated that the test can be conducted by a GP or a nurse.

What does a Pap test detect?
Pamphlets A, B and E variously described the Pap test’s ability to detect changes in the cells of the cervix. Pamphlet A stated that some cell changes can become cancerous if not treated. Pamphlets A and B reported that the Pap test provides early detection of pre-cancerous changes. Pamphlet E stated that the Pap test detects early changes in the cells of the cervix,
and that these changes can be treated. It also specified that the Pap test does not detect reproductive cancers other than cervical cancer, or sexually transmitted diseases.

The accuracy of Pap tests

The radio recruitment campaign contained the message: ‘The test is not 100% accurate’.
Pamphlets A and B stated that the Pap test, like all screening tests, is not 100% accurate.
Pamphlets B and C were more specific, stating that the Pap test can prevent 90% of squamous cell cervical cancers. Pamphlet E stated that the Pap test can prevent 90% of cervical cancers, while Pamphlet A described the Pap test as the best test for the prevention of cervical cancer currently available. Pamphlet B described regular Pap tests as the best way to find pre-cancerous cell changes.
Pamphlets A and B provided three different explanations for the observed inaccuracy of the Pap test: the smear (cell sample) may not include abnormal cells that are present in the cervix; smears can be hard to interpret; and abnormal cells may be present that did not exist at the time the last cervical screen was conducted.

None of the pamphlets had a specific heading for the limitations of the Pap test. However, pamphlets A, B and C each described limitations of the test within the text. Pamphlets A and B stated that the Pap test, like all screening tests, is not 100% accurate. Pamphlets B and C stated that while the Pap test can detect 90% of squamous cell cancers, it is not usually able to detect the rarer types of cervical cancer.

Who needs to be tested?
Pamphlets A, B, C and E contained slight variations of statements related to women’s eligibility for cervical screening. Pamphlet A recommended that all women aged between 20 and 70 years, who have ever had sex, should have a Pap test every two years.
Pamphlets B, C, and E differed slightly in their specifications of age: all women aged up to 70 years; adult women aged up to 70 years; and women aged between 18 and 70 years, with screening to commence within one to two years of commencing sexual intercourse. Pamphlet E stated that testing is for all women.
The radio recruitment campaign contained the messages: ‘You are susceptible’, ‘You need a Pap test even if you are over fifty’, ‘At any stage of a woman’s life she needs a Pap smear’ and ‘You need a Pap test even if you are widowed or divorced’.
Pamphlets A, C and E specified the importance of regular Pap tests for women who have not had sex for long periods of time. They also specified the importance of regular Pap tests for women who no longer have periods. Pamphlet E highlighted this recommendation for menopausal women, stating that the risk of cervical cancer increases with age.

Who doesn’t need to have a Pap test?
Pamphlet E directly stated that women who have never had sex do not need to have a Pap test. Pamphlet A indicated this indirectly within the recommendation that women aged between 20 and 70 years who have ever had sex should have a Pap test every two years.
Pamphlet C stated that most women who have had a hysterecctomy will not need to be tested. Pamphlets A and E stated that women who have had a hysterecctomy may need to continue testing. Pamphlets A and E specified that women who have had partial hysterecctomies, where the cervix has been left intact, will need to continue testing every two years.
Pamphlet A further specified that women who have had a hysterecctomy due to a pre-cancerous or cancerous condition should continue testing every two years. Pamphlets A and E stated that women who have had a hysterecctomy that involved the removal of both the uterus and the cervix do not need to continue testing. Pamphlet A added the proviso that this
recommendation refers only to women who had their hysterectomy as a result of a benign condition. Pamphlets A, C and E recommended that women who have had hysterectomies should consult their doctor regarding their need for regular Pap tests.

**Regularity of Pap tests**

Pamphlets A, B, C and E recommended that women should have a Pap test every two years, and the radio recruitment campaign contained the message ‘Have a Pap test every two years’. Pamphlets A and E encouraged women to make an appointment with a GP or nurse if it has been longer than two years since their last Pap test. The radio recruitment campaign contained the message ‘Make an appointment today’.

The predominant rationale for regular Pap testing is the early detection of pre-cancerous changes. This theme was reflected in pamphlets A, B, C and E. Pamphlet C highlighted the fact that cell changes can occur without symptoms or pain. Pamphlet B cited the inaccuracy of Pap tests, and the fact that the cells of the cervix are regularly replaced by new cells, as reasons for regular screening. Pamphlets B and C noted that regular Pap tests can prevent 90% of squamous cell cancers.

**Best time to have a Pap test**

Pamphlet A stated that the best time for women who have periods to have a Pap test is midway between periods and that any time is suitable for women who are no longer menstruating.

**Pap test results**

Pamphlets A and E recommended that women ask the service provider when their results would be available after a Pap test. They indicated that Pap test results are usually available within one week.

Pamphlets A and E stated that most test results are normal. Pamphlet B stated that a ‘negative’ result means that there are no significant cell changes. Pamphlets B and D explained that an ‘unsatisfactory’ result means that the cells could not be properly examined by the laboratory staff. Pamphlet B reported that an ‘unsatisfactory’ result can occur for a lot of reasons out of the control of both the service provider and the laboratory.

Pamphlet D indicated that an additional Pap test will be required in the event of an ‘unsatisfactory’ result.

Pamphlet B suggested that an ‘inconclusive’ result means that the test was difficult to assess, the cell sample was too small, and a decision could not be made regarding the presence or absence of abnormal cells. This pamphlet informed women that additional testing may be required in the event of an ‘inconclusive’ result.

**Abnormal results**

Pamphlet E stated that occasionally a Pap test will detect the presence of abnormal cell changes. Pamphlets A and E indicated that not all detected abnormalities indicate the presence of cancer, or pre-cancerous change. Pamphlet B stated that ‘low grade’ abnormalities are common, and often ‘disappear’. Pamphlet C suggested that a small number of abnormal results will reflect the presence of cancer.

Pamphlets A and B indicated that women may require more frequent Pap tests following an abnormal result. Pamphlet B related this to results that reflect ‘low grade’ abnormalities. Pamphlets A and B indicated that further/different tests will be needed following the detection of abnormal cells in the cervix. Pamphlet B associated this with ‘high grade’ abnormalities.
E stated that some abnormal changes necessitate referral to a gynaecologist. It also assured women that the majority of abnormal cells detected can be successfully treated. Pamphlet D advised women to ask their GP for a detailed explanation of their abnormal test result.

Pamphlet D stated that infections, the wart virus, and dysplasia/cervical intra epithelial neoplasia (CIN) are the most common causes of cervical cell abnormalities. Pamphlet D defined dysplasia and CIN as medical terms for abnormal cells. Pamphlet D specified that while dysplasia is not cancer, it may become cancerous if left untreated.

Pamphlet D normalised feelings of concern regarding an abnormal test result and suggested that women try not to panic in the event of this result.

Pamphlets A and E informed women that abnormalities detected in the cervix need to be treated.

Pamphlet D provided an outline of procedures related to colposcopy, laser therapy, diathermy, cone biopsy, and the treatment of infection and cervical warts. Pamphlet D provided a brief description of some of the post treatment symptoms that can be experienced.

**Wart virus**

Pamphlet D described the wart virus as a common infection, that is largely asymptomatic and said it can cause small visible warts in some women. Pamphlet D also indicated that the presence of the wart virus can increase the risk of dysplasia.

**Emotional aspects of Pap tests**

Pamphlet A suggested that Pap tests can be a little uncomfortable, but not painful, and advised women to relax as much as they can. Pamphlet E advised women that a Pap test is nothing to feel nervous about.

The radio recruitment campaign contained the messages: ‘Some women are too embarrassed to have a Pap smear’ and ‘No one died of embarrassment’.

**Pap testing as a general health behaviour**

Pamphlets A and B described the Pap test as an important part of maintaining health. Pamphlet E referred to cervical screening as a procedure that is part of taking care of your health.

**Who is responsible for your health?**

Pamphlet E stated that women’s health is their responsibility. The radio recruitment campaign contained the messages: ‘Looking after your health is your responsibility’ and ‘Do it for yourself’. Pamphlets A and E directed women to take care of themselves by having regular Pap tests. Pamphlet E encouraged women to ‘Do it for you’.

Pamphlet E encouraged women to have Pap tests for the sake of people that love and need them. The radio recruitment campaign contained the message ‘Do it for those who love you’.

**Service providers**

Pamphlets A and E suggested that women select the type of service provider that they are most comfortable with. Pamphlet E reassured women that it is acceptable to request their preferred service provider.
Service locations

Pamphlets A, C and E: recommended women's own GP for service provision,
Pamphlets A and E: also suggested women could attend another GP, family planning clinic, community health centre or hospital, and
Pamphlet E: mentioned the existence of women's health nurses.
The radio recruitment campaign contained the message 'Go to your doctor or health centre'.

Cost of the test

Pamphlet E indicated that a Medicare rebate is available for a Pap test. It also indicated that costs can vary depending on the location of service provision, and that some GPs and clinics will provide this service free of charge.

Sources of information

Pamphlet A provided a telephone number for more information about Pap tests, Pamphlet C provided a number for more information about the Victorian Cervical Cytology Registry, and Pamphlet D provided a number for more information about abnormal Pap test results.

Reminders to have a Pap test

Pamphlet A advised interested women to tell their doctor that they would like the Pap Test Registry to remind them when their next test is due. Pamphlet C provided a detailed description of the Victorian Cervical Cytology Registry. Pamphlets A and C informed women that the registry would send them a reminder if they have not had a Pap test within three years of their last test, and that this reminder will come earlier for women who had an abnormal result on their last test. Pamphlets B and C reminded participating women to inform the registry of any change of address.

Messages by source

The general content pamphlets

The educational pamphlets varied in the type and detail of the information they provided. Pamphlets A, B and E provided an overview of essential information in a format that is easy to read and understand. They provided information related to cervical cancer, Pap tests, the changes that Pap tests detect, the accuracy of the Pap test, eligibility for screening, reasons for having regular Pap tests, service providers, and places to go for a Pap test in varying degrees of detail. While there was a high degree of overlap in the information provided by the three pamphlets, there were some differences.

Pamphlet A (Every woman should have …) was the only one that described factors that may reduce the accuracy of the Pap test, indicated that changes in the cervix can occur without symptoms or pain, described the best time to have a Pap test—with reference to the menstrual cycle, described the physical and emotional discomfort of having a Pap test, provided a telephone number for more information and referred to Pap test reminder systems.

Pamphlet B (Pap smear information …) was the only pamphlet to describe the different types of cervical cancer, state that squamous cell cancer is the most common type of cervical cancer, describe different types of abnormal test results, and indicate that the Pap test registry sends women a reminder when they are overdue for a Pap test.
Pamphlet E (‘Geraldine Doogue’) was the only pamphlet to discuss the factors that can increase the risk of cervical cancer, the cost of the test, the availability of Medicare rebates and free Pap tests, and suggest that women should have a test ‘for the people that love (them) and (need) them’.

Although the ‘Geraldine Doogue’ pamphlet was substantially longer than the other general information pamphlets, it did not contain a great deal of unique information. However, it provided more detailed explanations of different aspects of cervical screening, and contained several repetitions of key statements such as ‘have a Pap test every two years’. The pamphlet also contained a 10-point summary list of key points related to cervical cancer, Pap tests, eligibility for testing, and the benefits of having regular Pap tests. The general information pamphlets did not contain any information about the range of infections/changes that can result in an abnormal Pap test, or the techniques that are available to treat any abnormalities.

The specific content pamphlets
Primarily designed to provide women with information regarding the meaning and implications of an abnormal test result, What if my Pap test is abnormal? (Pamphlet D) contained detailed information about cervical infection, HPV and cervical dysplasia. It described the different treatments available, the types of abnormalities they treat, and the post-treatment symptoms women can expect to experience. The pamphlet also provided a list of questions that women may wish to ask their GP in the event of an abnormal Pap test result.

Pamphlet D did not provide any information about cervical cancer, the prevention of cervical cancer, the Pap test procedure, the accuracy of Pap tests, eligibility for testing, reasons for regular testing, service providers, service locations, or the emotional aspects of Pap tests. It briefly addressed the emotional aspects of receiving an abnormal test result, suggesting that it is ‘natural to feel concerned’, and that women should ‘try not to panic’.

It’s easy to forget your next Pap test ... (Pamphlet C) was primarily designed to inform women about the Victorian Cervical Cytology Registry. It contained detailed information about the purpose of the registry, the reminder service it provides, and the type of information it collects on each woman registered. The pamphlet also contained brief descriptions of the different types of cervical cancer that exist, the variable ability of the Pap test to prevent the rarer types of cervical cancer, the asymptomatic nature of changes in the cervix, eligibility for screening, and the rationale for having regular Pap tests.

The radio campaign
The radio campaign provided some messages that were not contained in any of the five educational pamphlets. These were:
Many women die from cervical cancer.
A test could save your life.
Pap tests save 750 lives per annum.
At any stage of a woman’s life she needs a Pap smear.
You need a Pap test even if you are widowed or divorced.
You need a Pap test even if you are over fifty.
You are susceptible.
No one died of embarrassment.

A significant feature of the radio campaign was that it informed women that cervical cancer was a potentially life-threatening disease.

While the educational pamphlets contained eligibility messages that were designed to encompass a broad range of women, the eligibility messages used in the radio campaign directly and personally targeted older women.
Discussion

The range of Pap test messages available to Victorian women was diverse, comprehensive, detailed and immense. Given the sheer number of messages conveyed within the educational pamphlets and the radio campaign, it was surprising to find that there were significant aspects of the cervical screening process that were inadequately represented. While women were being informed that the Pap test is not 100% accurate, little emphasis was placed on the fact that the Pap test is currently the best test available for the early detection of cervical cancer and pre-cancerous cell changes. There was an inadequate representation of messages related to the factors that may influence the accuracy of the Pap tests. None of the sources contained information about the false-negative and false-positive error rates associated with the Pap test. A primary advantage of having a Pap test every two years is that it minimises the impact of the false-negative error rate. Any abnormalities missed during an initial test will usually be identified during a subsequent test, while they are still relatively simple to treat effectively. The lack of available information regarding false result error rates suggested that the educational pamphlets were providing an incomplete rationale for having a Pap test every two years. There was a paucity of information related to the different types of cervical cancer, and the Pap test's variable ability to detect them. One problem created by this lack of information could be observed within the ‘Geraldine Doogue’ brochure, where the Pap test was inaccurately described as being able to prevent 90% of cervical cancer, rather than 90% of squamous cell cervical cancer, or ‘the most common type’ of cervical cancer. Little emphasis was placed on the fact that cervical cancer is largely asymptomatic during the pre-cancerous stages of development, and that women are unlikely to experience any symptoms until the disease is quite advanced.

The information given to women omitted the message that they should not wait until they have symptoms before they have a Pap test. In addition, there was little explanation of the factors that can increase women's risk of cervical cancer. It is interesting to note that while having regular Pap tests is commonly cited as a primary method of preventing cervical cancer within Pap test literature, not having Pap tests is rarely cited as a factor that increases the risk of cervical cancer.

Research findings consistently describe the emotional discomfort associated with Pap tests as a substantial deterrent to regular screening behaviour among under-screened women. However, very few of the messages that were available to Victorian women at this time directly addressed and normalised these feelings. Creating an awareness of the seriousness of cervical cancer has the potential to influence under-screened women in several ways:

1. It may make it more difficult for them to discount cervical screening as an unnecessary or unimportant procedure.
2. It may allow them to recognise that their inadequate screening behaviour puts them at increased risk of a potentially fatal disease that can be easily prevented.
3. It may motivate them to reassess the balance between the 'negative' aspects of having a Pap test, such as physical and emotional discomfort, and the potentially life-saving benefits of the test.

The information was predominantly formatted in question-and-answer style, with the questions forming the sub-headings within the text. The information was organised to reflect the topic raised by the question-heading. This format can help the reader to organise a mass of information into compact units of associated messages. Information organised in this manner is easier to read, comprehend, and recall. None of the educational pamphlets reviewed contained question-headings related to the limitations of Pap tests. In order to increase women’s awareness of both the benefits and limitations of Pap tests, it may be useful to organise the information into blocks of messages under relevant question-headings, ie ‘What
are the limitations of the Pap test? for presentation in posters and pamphlets. A potential advantage of using this format is that it is already familiar to many women.

The Cervical Screening Radio Recruitment Campaign provided Victorian women with unique messages related to the seriousness of cervical cancer. These messages had the potential to impact the screening behaviour of under-screened women.

Reference

Chapter 3  Barriers to cervical screening

Abstract
In order to examine the barriers women faced with respect to cervical screening, a two-part research project was developed. In the first part, 1,018 interviews were completed with women aged between 25 and 69 years, establishing their screening behaviour, and attitudes towards and difficulties associated with having Pap tests. Women who regularly screened were compared to those who did not have regular Pap tests. The main messages for women in general, under-screened women, young women, and women from non-English speaking backgrounds were isolated and are discussed at the end of Part 1. In Part 2 of the project, a subset of 41 under-screened women were interviewed at length via telephone. These women provided important attitudinal and behavioural information about why some women do not have regular Pap tests. The cervical screening process was divided into eight major stages, which provided a meaningful structure for excuses and barriers associated with having Pap tests.

Introduction
Cervical cancer is the eighth most prevalent form of cancer in women (Giles et al. 1998). In 1995 it was the cause of 76 deaths in Victoria (Giles et al. 1998). Through the effectiveness of targeted media campaigns, personalised letters of invitation, and community-based strategies in Victoria (Wain 1996), the two-yearly screening rate of women rose from 50% in 1988–89 (AIHW 1991) to 70% in 1996–97 (Mitchell, Higgins & Burrows 1998), and the corresponding rate of microinvasive cervical cancer incidence has decreased from 83% in 1994 to 42% in 1997 over this period (Mitchell, Higgins & Burrows 1998). Thus, cervical cancer is one of the most preventable forms of cancer in women.

However, up to 30% of women in the Victorian population have not had a Pap test in the last two years (Mitchell, Higgins & Burrows 1998). Given the increases in screening rates in the past ten to 15 years, it is of interest to discover why such a significant proportion of women are still under-screened. Past research indicates that there are a number of barriers which prevent or deter women from having Pap tests (Barnett, Steakley & Tefft 1995; Cockburn et al. 1991; Fox, Roetzheim & Kington 1997; Orbell et al. 1995), yet some work suggests that under-screened women are qualitatively different from screened women, differing on a range of attitudinal dimensions (Cockburn et al. 1991; Orbell et al. 1995). One theoretical approach attempts to integrate these two possibilities. The theory of planned behaviour (TPB) (Ajzen & Fishbein 1980) predicts that a number of factors, such as perceived behavioural control, attitudes, and subjective norms, are responsible for predicting intention to have a Pap test, and thus are associated with behaviour (Doll & Ajzen 1992). However, there have been studies which show that there is a poor association between intention and behaviour for some activities, especially with repetitive behaviours such as physical activity (Courneya 1994). It is possible that individuals may intend to have a Pap test but not actually have one. It is of interest to determine whether screened women, whose intention to have a Pap test is strongly associated with having a Pap test, are qualitatively different from women who do not have Pap tests. For example, do under-screened women intend to have Pap tests, but find barriers which prevent this being translated into action, or do under-screened women consciously decide against having a Pap test? It is important, therefore, to examine what happens between intention to have a Pap test and actually performing the behaviour: what are the barriers between intention and action that prevent some people from having a Pap test?
There have been a number of barriers to cervical screening identified in the literature. Cockburn et al (1991) reported that women who did not have Pap tests were more likely to have them if the doctor suggested it. Under-screened women in that study thought that Pap tests were unimportant, that there was no need to have a Pap test if they were healthy, and that being overdue for a Pap test by one year did not matter. Compared to women who had regular Pap tests, under-screened women were more likely to say that embarrassment stopped them from having Pap tests, that they were afraid of finding something wrong, and that they were too busy to have a Pap test. In a second study reported in their paper, under-screened women saw no reason to have a Pap test, perceived themselves to be too old or too busy to have a Pap test, or were too embarrassed to have one when offered an on-the-spot Pap test by their general practitioner (Cockburn et al 1990). Cockburn et al commented that ‘it is quite possible that the demands that were imposed by the consultation may have made the women reluctant to fully reveal all the issues that lay behind their refusal’ (p 194). This suggests that the excuses or barriers expressed by the under-screened women may be ‘peripheral’ or ‘surface’ barriers, under which the real barriers lie.

For Scottish women, Campbell, MacDonald and McKiernan (1996) established that beliefs and attitudes about cervical screening created barriers to having Pap tests, and that under-screened women had a lack of knowledge of the existence of clinics with female staff that operated outside working hours. Fox, Roetzheim and Kington (1997) found that the strongest predictor of patients having a mammogram, especially for those over 65 years, was that the physician mentioned mammograms to them. Barriers to screening they found included patients’ lack of awareness about risk factors for breast cancer, screening procedures, fear of a positive result, and the perception that they were less at risk of cancer than others. Particularly for older women, there was a reliance on symptomatic detection of abnormalities rather than asymptomatic, preventative screening. Orbell et al (1995) described difficulties with appointment times and access to a choice of screening sites as barriers to cervical screening uptake. They also cited fear of abnormal results, and perceived eligibility for the test as reasons for not screening. Further, compared to regular screeners, under-screened women perceived themselves to be at lower risk of cervical cancer than others, believed they didn’t need a Pap test, and had more embarrassment, anxiety, and fear of discovering early cervical changes than regular screeners. Thus it is clear that there are barriers to cervical and other screening behaviours, and these barriers are more important for under-screened than screened women.

In prior campaigns, the Anti-Cancer Council developed media intervention campaigns designed to challenge women’s barriers to cervical screening (Cockburn et al 1991; Jones & Clarke 1997), and also ran a practitioner-based intervention (Mills 1995). These intervention strategies yielded increases in screening behaviour as a result (Cockburn et al 1991; Jones & Clarke 1997). Thus it can be shown that interventions designed to target the barriers to cervical screening can work.

Stages in the cervical screening process

Given that there are still significant numbers of under-screened women, cervical screening intervention strategies are not as effective as they could be. It may be useful to categorise the barriers to cervical screening in some meaningful way, so that strategies can be targeted more specifically. In addition, it would be useful to understand the process of having a Pap test: making the link between intention and action. One useful way of doing this is by breaking the cervical screening process into stages.

There are a number of stage theories of behavioural intervention that have been used to describe screening behaviours. The first is an evaluation model recognising 11 elements of the cervical screening pathway. These elements are: recruitment, Pap test taking, Pap test reporting and notification of results, management of women with abnormal Pap tests, quality assurance and monitoring, accreditation, policy, coordination, funding, training, and research (Gijsbers 1998). However, only the first four relate directly to an individual’s experience of having a Pap test, and only the first two are associated with the individual’s decision to have a Pap test.
Similarly limited in scope is the Precaution Adoption Process Model (PAPM) (Weinstein, Rothman & Sutton 1998) which has a series of seven stages. These stages are: unaware of health issue; aware but not engaged in issue; considering one’s response (the decision-making stage); taking no action (the process ends); decision to adopt the precaution; initiation of behaviour; and maintenance of behaviour.

The trans-theoretical model (TTM) (Prochaska & DiClemente 1983) describes five stages of change: precontemplation, contemplation, preparation, action, and maintenance. Relapse and relapse risk were added to these stages when categorising women's mammography practices (Stoddard et al 1998), and this study concluded that it was important to remove specific barriers that were associated with each individual stage in order to encourage movement from one stage to the next. However, literature examining cervical screening with respect to the trans-theoretical model has not described the barriers that are associated with each stage. In addition, the key stage in the TTM—the action stage—consists of more than just ‘action’; it is possible to break this stage down into a series of sub-stages, or elements of action.

The above stage models for behaviour change deal with the cervical screening process from the theorist’s or evaluator’s perspective. However, it seems that having a Pap test involves more than merely ‘acting’: there are a number of procedures one must go through in order to achieve a completed Pap test. If one were to assess the process of having a Pap test from the perspective of the individual performing this action, it is possible to break down the process into more useful steps.

It is proposed here that there are eight steps to the cervical screening process:

- perceiving the self to be eligible
- choosing or remembering to have a Pap test
- choosing a practitioner
- making an appointment
- turning up to the appointment
- having a Pap test
- obtaining the results of the appointment
- repeating the process in two years’ time.

There are four defining properties of a stage theory of health behaviour (Weinstein, Rothman & Sutton 1998). It must have a classification system to define the stages (one), there must be an ordering of the stages (two), people in the same stage must face common barriers (three), and people in different stages must face different barriers (four). While there is no classification system developed yet to define the stages described here, it is clear that the stages mentioned above are ordered. Comparing the barriers that exist in each stage is a useful way of determining how appropriate the stages are to describe the screening process.

The first of the stages proposed in this report is perceiving the self to be eligible. Some barriers mentioned earlier indicated that some women perceive themselves to be too old, too young, or otherwise ineligible to have a Pap test. Secondly, one must choose to have a Pap test: to remember to have one if screening has occurred previously, or to actively decide to have one for the first time. Some barriers associated with this stage may include forgetting to have a Pap test, or avoiding it for some reason.

Thirdly, individuals must choose a practitioner. For some individuals this will mean their regular GP, gynaecologist, or nurse practitioner, for others it will mean finding an appropriate person. One barrier noted previously was the lack of female practitioners available after working hours: that barrier is specific to this third stage.

Fourth, an individual must make an appointment for a Pap test, and fifth, turn up to the appointment. It is possible that an appointment is easily made, but that participants find it
difficult to turn up to the appointment, or that once an appointment is made, turning up is easy. Barriers to these stages are unclear.

However, many individuals have indicated that having a Pap test is embarrassing or painful: stage six is the experience of having a Pap test.

Some individuals mention that a barrier for them is the fear of getting abnormal Pap test results: the seventh stage is obtaining the results of the Pap test. Finally, the eighth stage is to repeat the process in another two years, corresponding to the maintenance stage of both the PAPM, and the TTM.

To think of barriers to cervical screening in terms of these stages might enable more accurate pinpointing of issues that can be targeted through intervention campaigns: it will be possible to discover the point in the screening process at which individuals’ barriers occur.

Therefore, the present study is in two parts. The first is a large-scale cross-sectional study examining differences between screened and under-screened women in knowledge, attitudes, and behaviour. It is of interest to discover whether under-screened women are qualitatively different from screened women. Preliminary investigation of under-screened women’s barriers to cervical screening is also performed, establishing whether barriers can be categorised into the eight steps described above.

The second part of the study is an in-depth investigation of under-screened women’s barriers to cervical screening, testing the difficulty with which individuals perceive performing each stage of the cervical screening process, and the excuses they provide for not having regular Pap tests.

**Part 1: Women’s screening behaviour**

**Method**

**Participants**

In all, 1,018 valid five-minute interviews were performed over November and December 1998. Participants ranged in age from 25 to 69 years, with an average age of 44.04 years (SD = 11.81). There were 420 women between 25 and 39 years, 459 women between 40 and 59, and 139 women aged from 60 to 69 years, consistent with the distribution of the general population.

**Measures**

Seventeen questions were developed into a five-minute questionnaire. Four extracted demographic information, one established sun protection behaviour, and two extracted screening status. Two questions asked about contraceptive use and one extracted the reasons why under-screened women did not have regular Pap tests. Four questions related to women’s intention, access, and locus of control associated with having Pap tests. Another examined women’s perceived risk of contracting cervical and breast cancer, and of having a heart attack. The remaining four questions asked women’s opinions about cervical screening, their strategies for remembering, and their emotions associated with having a Pap test.

**Procedure**

Women were approached by trained female interviewers in shopping strips and centres in low-socio-economic status suburbs of Melbourne and were asked to participate in a five-minute women’s health questionnaire. Interviews were conducted on the spot and the interviewers were instructed to approach the next eligible woman (between 18 and 69) they saw, on completion of an interview. On completion, under-screened women were invited to participate in longer interviews via telephone for Part 2 of the study.
Results

Demographic information

There were 106 women who reported having had a hysterectomy, 122 who had not had a Pap test within the last two years (classified as women who were under-screened), and 784 participants who reported having had a Pap test in the last two years (classified as screened women). Six participants were not classified. Again, this is consistent with the distribution of the general population.

Ninety percent of women reported that English was the language spoken at home, and of the remaining 10%, the most frequently-reported languages were Italian, Greek, and Maltese.

Participants were asked if they took an oral contraceptive pill, and while 150 of the sample did, under a third had a Pap test when renewing their prescription (27.5%, n = 38).

Sun protection behaviours

Sun protection behaviours were included firstly as an easy, introductory question for the start of the interview, and secondly as a behavioural indicator of people's responsibility about their health. Use of sun protection behaviours was correlated with identification as a person who was responsible about her health (Pearson's r (914) = -.19, p<.001). In general, participants reported that they wore between two and three forms of sun protection when out in the sun for more than 15 minutes (M = 2.42, SD = 0.99). However, younger people (between 25 and 39 years) reported fewer sun protection behaviours than the other age groups (M = 2.27 for young people compared to the average). In addition, under-screened women reported performing less sun protection behaviours than women who regularly screened (M = 2.22; SD = 1.07 for under-screened, M = 2.45; SD = 0.96 for screened women). (Values ranged from 0 [no sun protection behaviours] to 4 [four sun protection behaviours]).

Pap screening behaviour

A total of 78% of participants (n = 794) reported having had a Pap test in the past two years, while the remainder did not. Of those who had had a Pap test, over half had had their test in 1998 (54%), while 41% had their Pap test in 1997, and only 5% of participants had their tests in late 1996. Of those who did not have a Pap test, the majority reported having had at least one Pap test in their lives (88%, n = 185).

One hundred and six women (10%) reported that they had had a hysterectomy, 122 were classified as under-screened (12%), and the remaining 78% were classified as screened. Of the under-screened participants, the most recent Pap test that participants had ranged from as early as 1978 through to 1996. The median year was 1995, where half of the under-screened women had their most recent Pap test before 1995, and half after this time.

Seventy-four women reported that they had no need for a Pap test, generally because of hysterectomies.

Pap screening attitudes

The majority of participants in the study (94.3%) said it was very likely or likely that they would have a Pap test in the next two years (M = 4.72, SD = 0.76). (Values for all items in this section have a scale of 1 = very difficult/unlikely to 5 = very easy/unlikely.)

Not surprisingly, under-screened women indicated they were less likely to have a Pap test in the next two years than women who regularly screened (M = 3.87, SD = 1.33 for under-screened, M = 4.87, SD = 0.45 for screened women).
Generally participants perceived it to be very easy to arrange a Pap test if they wanted to, with 97.7% of participants agreeing or strongly agreeing with the statement ‘If I wanted to, I could easily arrange to have a Pap test’ (M = 4.77, SD = 0.54). However, when asked whether it was up to them, or up to someone else (such as a GP or a partner) when to have a Pap test, there was more variation. Seventy-two and a half percent (72.6%) of participants said it was more up to them, or completely up to them, but 27.4% said it was either equally up to them and to someone else, or that it was more, or completely dependent on someone else.

Women believed it was easy to access Pap testing facilities in their area, with 93.5% of participants saying it was either very easy, or easy to get a Pap test in their area. For the majority of women, seeking a GP and arranging a Pap test (steps three and four of the cervical screening process) were relatively easy. However, under-screened women reported that it was more difficult to arrange to have a Pap test than women who regularly screened (M = 4.43, SD = 0.75 for under-screened; M = 4.84, SD = 0.46 for screened women), and under-screened women reported that it was more difficult to get a Pap test in their area than women who regularly screened (M = 4.40, SD = 0.89 for under-screened; M = 4.75, SD = 0.55 for screened women). Thus, access issues are important for under-screened women, and will be examined in more detail in the long interviews (Part 2).

Participants thought they were at relatively low risk of breast cancer (M = 2.41, SD = 1.08), and heart attack (M = 2.45, SD = 1.11), and at even lower risk for cervical cancer (M = 2.26, SD = 1.03). Under-screened women perceived they had lower susceptibility to breast cancer than women who had regular Pap tests (M = 2.25, SD = 1.04 for under-screened; M = 2.48, SD = 1.09 for screened women).

When asked if they agreed or disagreed with the statement ‘I am a person who is responsible about my health’, women in this sample generally agreed quite strongly (M = 4.49, SD = 0.75). However, women who did not have regular Pap tests perceived themselves to be less responsible about their health than those who did have regular Pap tests (M = 4.1, SD = 0.98 for under-screened; M = 4.54, SD = 0.70 for screened women).

Women in general thought that Pap testing for them personally was a very good thing (M = 4.58, SD = 0.66), but under-screened women thought, for them personally, that Pap testing was less of a good thing than women who regularly screened (M = 4.26, SD = 0.75 for under-screened; M = 4.65, SD = 0.60 for screened women).

In general, women reported they would feel either neutral (57.6%) or negative (38.7%) emotions if they were to have a Pap test tomorrow, however those who were not regular screeners reported more negative feelings associated with having a Pap test tomorrow than those who were (M = 1.53, SD = 0.62 for under-screened; M = 1.66, SD = 0.55 for screened women) (where 1 = negative comments, 2 = neutral comments and 3 = positive comments).

Women were asked what specific emotions they would feel if they were to have a Pap test tomorrow. This question was designed to establish whether the thought of turning up to an appointment—for example, tomorrow—would be likely to prevent women actually turning up to their appointment. The most common response participants gave was that they would feel not bad, OK, or similar, and then that they would feel comfortable or fine, or were philosophical. It is clear that the most common emotions are predominantly neutral ones, suggesting that turning up to the appointment is not a major barrier to cervical screening for most women. The remainder of the emotions women felt, being tense or nervous, dislike associated with the tests, uncomfortable, anxious, embarrassed, positive or happy, hatred associated with the tests, and reluctance, were mostly relatively mild in tone. Other responses, together with the frequencies of each, are given in Table 3.1.
Chi-square tests indicated that screened women were more likely than under-screened women to indicate they would not feel bad, while under-screened women reported more feelings of embarrassment, nervousness or tensesness, and feelings classified as 'other' than screened women.

Finally, participants were asked how they remembered to have a Pap test. This question relates to the second stage of the cervical screening process. Their responses could be categorised into a number of general categories, and frequencies of these are listed in Table 3.2. The majority of strategies reported by women depended on other people, such as general practitioners, or the Pap test registry.

Well-screened women were more likely than under-screened women to ‘just remember’, to have other people remind them, to have a reminder letter, to put it in their diary, or to do it at a specific time biennially. There was also a tendency for under-screened women to avoid the tests.

---

**Table 3.1: If you were having a Pap test tomorrow, how would you feel about it?**

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not bad</td>
<td>254</td>
<td>24</td>
</tr>
<tr>
<td>Comfortable</td>
<td>156</td>
<td>15</td>
</tr>
<tr>
<td>Philosophical</td>
<td>154</td>
<td>14</td>
</tr>
<tr>
<td>Tense or nervous</td>
<td>118</td>
<td>11</td>
</tr>
<tr>
<td>Dislike associated with the test</td>
<td>80</td>
<td>7</td>
</tr>
<tr>
<td>Uncomfortable</td>
<td>73</td>
<td>7</td>
</tr>
<tr>
<td>Anxious</td>
<td>69</td>
<td>6</td>
</tr>
<tr>
<td>Embarrassed</td>
<td>45</td>
<td>4</td>
</tr>
<tr>
<td>Positive, happy</td>
<td>44</td>
<td>4</td>
</tr>
<tr>
<td>Hatred associated with the test</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>Reluctance</td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>38</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td>1064</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table 3.2: Strategies for remembering Pap tests**

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have no system (just remember)</td>
<td>256</td>
<td>28</td>
</tr>
<tr>
<td>Other person (eg, GP) reminds me</td>
<td>226</td>
<td>24</td>
</tr>
<tr>
<td>I receive a reminder letter (registry, PSV, or GP)</td>
<td>220</td>
<td>23</td>
</tr>
<tr>
<td>I put it in my diary/calendar</td>
<td>100</td>
<td>11</td>
</tr>
<tr>
<td>I have it at a specific time of the year</td>
<td>98</td>
<td>11</td>
</tr>
<tr>
<td>(eg, Christmas, birthday)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I avoid the tests</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Another source reminds me (eg, newspaper articles, advertisements)</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td>922</td>
<td>100</td>
</tr>
</tbody>
</table>
Under-screened women

A subsample of the under-screened women consented to participate in an in-depth telephone interview, the details of which are reported in Part 2 of this chapter.

There were a number of reasons women gave for why they had not been screened in the past two years. The reasons given were: that it was not a priority or they could not be bothered to have one, dislike of the process, because they felt fine or would leave it up to fate, because of embarrassment, pain, discomfort or fear, or other responses (see Table 3.3). Note that the first of these relates to remembering or choosing to have a Pap test (stage two of the screening process), while the sense of feeling fine or leaving it up to fate is associated with the first stage (establishing one’s eligibility to have a Pap test). The rest of the reasons relate to stage six—the experience of having a Pap test.

Table 3.3: Excuses for not screening

<table>
<thead>
<tr>
<th>Excuse</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not a priority/can’t be bothered/forgot</td>
<td>62</td>
<td>51</td>
</tr>
<tr>
<td>Dislike of the process</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Feel fine/leave it up to fate</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>Embarrassment</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Pain/discomfort</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Fear</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Total responses</td>
<td>122</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 3.4: What would make you more likely to have a Pap test?

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>If I had health issues</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>Nothing</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>If I could find a good female general practitioner</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Don’t know what would</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>If my fear of the test was reduced</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>If the doctor suggested it</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>If I had more time</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>If I had more information</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>If the tests were not uncomfortable</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Total responses</td>
<td>117</td>
<td>100</td>
</tr>
</tbody>
</table>

When asked what would make them more likely to have a Pap test, the most frequent responses were: if the woman thought she had health issues (either problems or reasons), that nothing would make them more likely to have a Pap test, and if she could find a good female general practitioner. Other responses included that participants didn’t know what would make them more likely to have a Pap test, reducing their fear of the test, if the doctor suggested it, if they had more time or more information, and if the tests were not as uncomfortable (see Table 3.4). When these factors are categorised into the stages of the screening process, there are some eligibility issues—women who would have a Pap test if they had health issues such
as symptoms, and those who would do it if they had more information, are those who do not perceive themselves as eligible. Some women chose not to have Pap tests, corresponding to stage two of the cervical screening process. For these women, 'nothing' would make them have a Pap test, and they 'didn’t know what would' make them more likely to have one. Others would choose to have a Pap test if their doctor suggested it.

Stage three, choosing a practitioner, was applicable for those women who said that finding a good female general practitioner would make them more likely to have a Pap test. Women who state they would be more likely to have a Pap test if they had more time align with stage four (making an appointment). Stage six is the experience of having a Pap test, and this was the barrier for some women. They noted that they would be more likely to have a Pap test if the test was not so uncomfortable, or if they were not so afraid.

Table 3.5: What would make you more likely to have regular Pap tests?

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>If I had health issues</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>Nothing</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>Don't know what would</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>If my fear of the test was reduced</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>If I was given a reminder letter</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>If I could find a good female general practitioner</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>If the doctor suggested it</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>If I had more time</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>If the tests were not uncomfortable</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>If my conscience told me to</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>If I was sexually active</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Total responses</td>
<td>116</td>
<td>100</td>
</tr>
</tbody>
</table>

When asked what would make them more likely to have regular Pap tests, participants had similar responses: the five most common responses were: if they had health issues; nothing would make them more likely to have regular Pap tests; they did not know what would make them have regular Pap tests; if their fear of the test was reduced; and if they were given reminder letters.

Other reasons they gave included: if they found a good female general practitioner; if the doctor suggested it; if they had more time; if the tests were not so uncomfortable; if they were sexually active; and other reasons (see Table 3.5).

Correlations between attitudinal measures

Correlations were calculated to determine the relationship between the perceived ease of arranging a Pap test, the perception of individual responsibility to have a Pap test, access to Pap test facilities, cognitive attitudes (the perception that having a Pap test is a good thing), and affective attitudes (positive, negative, or neutral). People who thought that arranging a Pap test was easy also perceived that it was easy to access Pap test facilities, and thought that Pap tests were a good thing (see Table 3.6). Other significant associations were weaker. People who thought accessing Pap test facilities was easy also perceived that arranging a Pap test was more up to them, and that Pap testing was a good thing. Finally, those who thought Pap testing was a good thing had positive feelings towards Pap testing.
Table 3.6: Relationships between attitudinal measures

<table>
<thead>
<tr>
<th>Response</th>
<th>Ease of arranging Pap test</th>
<th>How much it is up to self to arrange test</th>
<th>Ease of access to Pap test facility</th>
<th>Cognitive attitudes to Pap tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease of arranging Pap test</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much it is up to self to arrange test</td>
<td>0.04</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ease of access to Pap test facility</td>
<td>0.32**</td>
<td>0.10*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Cognitive attitudes</td>
<td>0.33**</td>
<td>0.06</td>
<td>0.11*</td>
<td>1.00</td>
</tr>
<tr>
<td>Affective attitudes</td>
<td>0.02</td>
<td>0.03</td>
<td>0.03</td>
<td>0.10*</td>
</tr>
</tbody>
</table>

Note: High scores are easiest, most positive attitudes, a good thing, and have internal locus of control. Low scores indicate most difficulty, a bad thing, negative attitudes, and external locus of control. Higher correlations indicate stronger association between factors.

There were, however, strong correlations between perceived susceptibility to breast cancer, heart attack, and cervical cancer. The strongest relationship was between breast cancer and cervical cancer (Pearson’s r (857) = .55, p<.001), and between cervical cancer and heart attack (r (863) = .40, p<.001), but also a relatively strong association between heart attack and breast cancer (r (868) = .33, p<.001). Women who thought they were susceptible to cervical cancer also thought they were susceptible to breast cancer and heart attack. These relationships were slightly stronger for under-screened than screened women.

Regressions predicting intention to have a Pap test

As noted in the introduction, intention is a central part of the theory of planned behaviour. It rests at stage two of the cervical screening process, where individuals choose, or remember to have a Pap test. Thus it is important to establish the attitudes that may predict intention to screen. Three regression analyses were performed. The first was the prediction of intention to get a Pap test in the next two years (‘intention’) from other factors. These factors were: ease of arranging to have a Pap test, how much it is up to the self to have a Pap test, perceived ease of access to Pap tests, susceptibility to cervical cancer, breast cancer, and heart attack, the perception of being responsible about one’s health, cognitive and affective attitudes about Pap testing, and sun protection behaviour. Stepwise and simple regression analyses yielded identical results, and the simple regression is presented here.

Participants in this study were more likely to intend to have a Pap test if they thought Pap tests were a good thing for them personally ($\beta = .23$), if they thought arranging a Pap test was easy ($\beta = .15$), if they perceived themselves to be responsible about their health ($\beta = .13$), and to a lesser extent, if they felt positive about the prospect of having a Pap test ($\beta = .06$). This regression analysis explained 14% of the variance in responses.

The second and third analyses were the same as the first, except performed on under-screened women only, and screened women only, respectively.

Under-screened women were more likely to intend to have a Pap test if they thought Pap tests were a good thing for them personally ($\beta = .33$), and if they perceived themselves to be responsible about their health ($\beta = .23$). This regression analysis explained 23% of the variance in responses. Again, participants were more likely to intend to have a Pap test if they thought Pap tests were a good thing ($\beta = .16$), and also if they thought arranging a Pap test was easy ($\beta = .14$). It is clear that under-screened women and screened women had different predictors of their intention to screen.
Age and language differences

Two multivariate analyses of variance were performed, which indicated that:

- young women reported wearing less sun-protection than older women
- young women from non-English-speaking backgrounds believed it to be more difficult to get access to a Pap test in their area, compared to older and English-speaking women
- women from non-English-speaking backgrounds perceived it to be more difficult to get a Pap test in their area than women from English-speaking backgrounds
- women from non-English-speaking backgrounds had less intention to have a Pap test than those from English-speaking backgrounds
- English-speaking women perceived it to be easier to arrange a Pap test than women from non-English-speaking backgrounds
- the older a woman was, the less susceptible to cervical cancer she perceived herself to be
- the older a woman was, the more responsible she perceived herself to be with respect to her health: those in the youngest category reported least responsibility about their health.

Finally, chi-square tests indicated that:

- young women were more likely to remember to have a Pap test at a specific time of the year, compared with women between 40 and 59
- women between the ages of 40 and 59 were less likely to avoid tests, and older women were more likely to avoid tests, than one would expect
- English speakers were more likely to use reminder letters to remind them to have a Pap test compared with women from non-English-speaking backgrounds
- women from non-English-speaking backgrounds were more likely to rely on diaries or calendars to remind them to have a Pap test
- of the under-screened women, young women were more likely to say they would have a Pap test if they had more information about the tests, while those between the ages of 40 and 59 were unlikely to cite this as a reason, and
- of the under-screened women, those between the ages of 40 and 59 were more likely to say nothing would make them more likely to have a Pap test, compared to younger women.

The main messages about Pap screening attitudes

In general, women intended to have a Pap test in the next two years. They perceived that Pap tests were easy to arrange, and that it was easy to access appropriate services in their area. However, a substantial minority reported that having a Pap test was not solely up to them, but also was dependent on someone else.

Women generally felt fairly neutral emotions associated with getting a Pap test, but over a third reported negative emotions. This is unsurprising, given the nature of Pap testing.

Finally, women perceived that their risk of contracting cervical cancer tended to be lower than that of contracting breast cancer, or having a heart attack. This may be due to their knowledge of the role of Pap screening in cervical cancer prevention.
The main messages for under-screened women

Based on the results from this study, it is important to encourage under-screened women's belief that Pap testing is, personally, a good thing. This is one of the most important factors predicting whether women intend to have a Pap test in the next two years. The other factor was the perception that the individual is responsible about her health; this belief is also important.

Women aged between 40 and 59 appear to be strong-willed with respect to their intention to screen: if under-screened, they more often reported that nothing would make them more likely to have a Pap test compared to other age groups.

Under-screened women also reported fewer sun protection behaviours, less intention to have a Pap test, and perceived it to be more difficult to arrange Pap tests than women who had regular Pap tests. They also reported that it was more difficult to access Pap testing facilities. Finally, under-screened women perceived themselves to be less susceptible to breast cancer than regularly-screened women.

Of concern was the information that under-screened women said they would only have a Pap test if they showed symptoms (for example, cervical bleeding), or they reported that nothing would make them have a Pap test. Consistent with this, some women said they would leave their cervical health up to fate, or that cervical screening was not appropriate for them. These women, while they need to be targeted in terms of education, appear to be resistant to the Pap test message. The other women to focus on are those who are relatively apathetic about cervical screening. Over half of the under-screened women reported that Pap tests were not a priority, or that they could not be bothered having Pap tests. This may be a subsection of the under-screened population that might benefit from direct targeting with messages specific to their situation. Thus, under-screened women are not motivated to have Pap tests: the stages of the cervical screening process which provide barriers are the first (eligibility) and the second (intention). Clearly, these issues need further illumination and this in-depth analysis will be described in Part 2 of this chapter.

The main messages for young women

For young women (between the ages of 25 and 39), who report fewer sun protection behaviours and less perception of being responsible for their health than older women, it may be important to encourage education associated with the risks of not having Pap tests. They do, however, perceive themselves as being at higher risk of cervical cancer than the older age groups, suggesting that this is a possible focus for education campaigns. Finally, young women more than the older women reported that if they had more information about Pap testing they would be more likely to have Pap tests.

The main messages for NESB women

Women of non-English-speaking backgrounds (NESB) reported that it was more difficult to access Pap testing services in their area, and more difficult to arrange to have a Pap test. This appears to be a barrier associated with stage four of the screening process: making an appointment to have a Pap test. Compared with women of English-speaking background, NESB women were less likely to intend to have a Pap test in the next two years. Finally, women of non-English-speaking background used diaries and calendars more than the English-speaking population to remind themselves to have a Pap test. Note that this does not preclude their reliance on reminder letters, something that was important for the majority of the general population tested in this sample.
Part 2: Under-screened women’s barriers

Method

Participants
A total of 41 under-screened women, ranging in age from 25 to 69 years ($M = 41.27, SD = 13.04$), were interviewed at length in a 20-minute telephone interview. This makes the sample slightly younger than the main sample, although this difference was not significant. They were classified as under-screened if they had not had a Pap test in the last two years. Seventeen percent of participants reported that they were single, 73% were married, in a de facto relationship, or had a partner. 5% of participants were separated or divorced, and 5% were widowed. Participants ranged in education level from having attended primary school only (10%), having attended up to four years of secondary school (27%) or six years of secondary school (15%), to having undertaken some post-secondary studies (24%) or having completed a degree (24%).

Measures
Participants were asked a series of questions relating to their knowledge about cervical abnormalities and prevalence of cancer initially, and then a series of attitudinal items relating to screening. Familiarity with Pap test messages and media in which Pap test messages are disseminated was evaluated, together with a detailed examination of the stages of cervical screening at which participants perceived barriers. Establishing participants’ screening status followed, together with a qualitative, open-ended section ascertaining the main reasons why individuals did not have regular Pap tests. Finally, a series of items measured Wallston, Wallston and de Vellis’s (1978) Health Locus of Control dimension together with Brewin and Shapiro’s (1984) General Locus of Control measure for positive and negative events.

Procedure
Participants were recruited from the previous study and were telephoned by trained female interviewers. The interview was conducted via telephone. On completion women were thanked and debriefed if necessary.

Results

Screening behaviour
Of the 41 participants, five had never had a Pap test, and of the remaining 36, ten had had a Pap test within the last two years. Five of the 10 participants noted that their last Pap test was prompted by the five-minute interview they had in late 1998, while the other five appear to be adequately screened. While 10 of these women had recent Pap tests, they were overdue at the time of initial interview and were considered important to include in this sample. Twenty-five participants reported that they had regular Pap tests, and of these, 33% said they had their Pap tests two-yearly, 17% had them three-yearly, and 8% had them every five years. However, the majority described an interval other than between two and five years (42%, $n = 10$). Interestingly, the majority of participants agreed that having the 20-minute in-depth telephone interview would prompt them to have a Pap test in the next two years (71%), while a further 5% could not say whether or not it influenced them. This suggests that the telephone interview may serve as an intervention for under-screened participants, where they changed their beliefs consistent with social desirability (Green & Lewis 1986) and the Socratic effect (McGuire 1985). Indeed, many participants reported that it was very likely, or likely, that they would have a Pap test in the next two years (85%), while only 12% reported that it was unlikely or very unlikely.
Gender preference for practitioners

The majority of participants’ most recent Pap tests had been performed by women (53%), however a substantial number were performed by men (44%). One participant could not remember the gender of the person who performed her last Pap test. This tendency towards selecting female practitioners was replicated in women’s expressed preferences: 32% preferred female practitioners, while 10% preferred male practitioners, and 34% expressed no preference. However, a further 22% of women reported that they preferred female practitioners for Pap tests, but had no preference for other medical issues. Thus the total preference for female practitioners when considering a Pap test was 54%. Only one participant was unable to answer the question (2%).

Half of the participants reported that their regular doctor performed their last Pap test, but many went to another doctor for the Pap test (42%). Eight percent of participants went to someone else for their last Pap test.

Access issues

It was predicted that the under-screened women in this sample did not access doctors for their own problems, and hence had little opportunity to have a Pap test. However, 64% of women had been to the doctor in 1999, and a further 23% had attended a general practitioner in 1998. Thus, over 85% of the participants had access to a general practitioner within the recent past. These under-screened women accessed health services, but did not avail themselves of the opportunity to arrange for a Pap test.

Reasons for last Pap test

There were a number of reasons why participants said they had their last Pap test. These reasons are provided in Table 3.7. The most common reason mentioned was that their general practitioner suggested it, then because the Pap test was overdue, or due, and because the individual asked for it. Other responses included having a Pap test because of receiving a reminder letter, having symptoms, because family or friends suggested it, because the previous interview she had for this project prompted it, the media, or other reasons.

Table 3.7: Reasons why participants had their last Pap test

<table>
<thead>
<tr>
<th>Reason</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP suggested it</td>
<td>19</td>
<td>46</td>
</tr>
<tr>
<td>It was overdue</td>
<td>18</td>
<td>44</td>
</tr>
<tr>
<td>I requested it</td>
<td>17</td>
<td>42</td>
</tr>
<tr>
<td>It was due</td>
<td>17</td>
<td>42</td>
</tr>
<tr>
<td>Reminder letter</td>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td>I had symptoms</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Family/friends suggested it</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Previous interview prompted it</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Media</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Other reason</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td>103</td>
<td>–</td>
</tr>
</tbody>
</table>

Note: multiple responses possible.
**Media**

Only three participants (7%) reported that they had their last Pap test because they saw or heard an advertisement in the media. However, there was generally a high proportion of individuals who accessed magazines and newspapers, the media in which previous campaigns have been present. Table 3.8 provides the percentage of women in the total sample who read each magazine and newspaper. The *Herald Sun* and *The Age* were the most commonly-reported print media, followed by *Woman’s Day*, *New Idea*, and *Women’s Weekly*. *The Australian* was read by only a small percentage of participants, while other magazines, both general and women’s magazines, were read by many participants.

Table 3.8: Newspapers and magazines that women read

<table>
<thead>
<tr>
<th>Publication</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Herald Sun</em></td>
<td>25</td>
<td>61</td>
</tr>
<tr>
<td><em>The Age</em></td>
<td>15</td>
<td>37</td>
</tr>
<tr>
<td><em>Woman’s Day</em></td>
<td>13</td>
<td>29</td>
</tr>
<tr>
<td><em>New Idea</em></td>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td><em>Women’s Weekly</em></td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td><em>The Australian</em></td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Other general magazines</td>
<td>12</td>
<td>42</td>
</tr>
<tr>
<td>Other women’s magazines</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Total responses</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Note: multiple responses possible.

**Sources of Pap test information**

When asked about their main, or best source of information about Pap tests, over half reported that they obtained information from their doctor or a nurse (51%, n = 21). Only a small number of participants suggested that their main or best source of Pap test information was from television or magazines (7%, n = 3 for each), from friends and relatives (5%, n = 2), or newspapers, the Anti-Cancer Council, or community health centres (2%, n = 1 for each). The remainder either reported some other source of information about Pap tests (10%, n = 4), or did not answer the question (12%, n = 5).

Similarly, when asked about their main or best source of information about women’s health in general, the majority reported doctors or nurses (39%, n = 16). However a substantial number reported that their main source of information about women’s health was magazines (24%, n = 10). Other responses included pamphlets and community health centres (5%, n = 2 for each), friends and relatives, newspapers (2%, n = 1 for each), and other responses (15%, n = 6) or not answering the question (7%, n = 3).

**Pap test messages**

Participants reported high levels of exposure to Pap test messages in the media. When asked whether they had seen or heard Pap test messages in specified places, most participants reported they were aware of Pap test messages through their doctor or health worker, on television, and from the Anti-Cancer Council (see Table 3.9). Other places that participants reported, in decreasing order, were: pamphlets, posters, women’s magazines, radio, and newspapers.
Table 3.9: Exposure to Pap test messages in the media

<table>
<thead>
<tr>
<th>Source of message</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor/health worker</td>
<td>22</td>
<td>54</td>
</tr>
<tr>
<td>Television</td>
<td>21</td>
<td>51</td>
</tr>
<tr>
<td>Anti-Cancer Council</td>
<td>20</td>
<td>49</td>
</tr>
<tr>
<td>Pamphlets</td>
<td>19</td>
<td>46</td>
</tr>
<tr>
<td>Posters</td>
<td>13</td>
<td>32</td>
</tr>
<tr>
<td>Women's magazines</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>Radio</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Newspapers</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Total responses</td>
<td>118</td>
<td>–</td>
</tr>
</tbody>
</table>

Note: multiple responses possible.

Table 3.10: Pap test messages recalled by participants

<table>
<thead>
<tr>
<th>Message recalled</th>
<th>n</th>
<th>%</th>
<th>Message source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have regular Pap tests/every 2 years</td>
<td>14</td>
<td>34</td>
<td>Recent campaign</td>
</tr>
<tr>
<td>You are never too old to have a Pap test</td>
<td>4</td>
<td>10</td>
<td>Recent campaign</td>
</tr>
<tr>
<td>Don't make excuses, make an appointment</td>
<td>3</td>
<td>7</td>
<td>Recent campaign</td>
</tr>
<tr>
<td>All women need Pap tests</td>
<td>3</td>
<td>7</td>
<td>Brochures</td>
</tr>
<tr>
<td>A Pap test helps prevent cervical cancer</td>
<td>2</td>
<td>5</td>
<td>Recent campaign</td>
</tr>
<tr>
<td>A Pap test is fast/easy</td>
<td>1</td>
<td>2</td>
<td>None</td>
</tr>
<tr>
<td>You owe it to your family</td>
<td>1</td>
<td>2</td>
<td>Past campaign</td>
</tr>
<tr>
<td>People over 50 need Pap tests</td>
<td>1</td>
<td>2</td>
<td>Breast cancer message</td>
</tr>
<tr>
<td>You are foolish if you don't have a Pap test</td>
<td>1</td>
<td>2</td>
<td>Secondary message of all campaigns</td>
</tr>
<tr>
<td>When did you last have a Pap test?</td>
<td>1</td>
<td>2</td>
<td>Recent campaign</td>
</tr>
<tr>
<td>Still need a Pap test if not sexually active</td>
<td>1</td>
<td>2</td>
<td>Past campaign</td>
</tr>
<tr>
<td>Talk to your doctor about Pap tests</td>
<td>1</td>
<td>2</td>
<td>Brochures—past campaign</td>
</tr>
<tr>
<td>It is important for high-risk age groups</td>
<td>1</td>
<td>2</td>
<td>Past campaign</td>
</tr>
<tr>
<td>Don't be embarrassed</td>
<td>1</td>
<td>2</td>
<td>Past campaign</td>
</tr>
<tr>
<td>Don't put it off</td>
<td>1</td>
<td>2</td>
<td>Recent campaign</td>
</tr>
<tr>
<td>It is important to have a Pap test</td>
<td>1</td>
<td>2</td>
<td>Brochures</td>
</tr>
<tr>
<td>You should have Pap tests every year</td>
<td>1</td>
<td>2</td>
<td>None: incorrect message</td>
</tr>
</tbody>
</table>

Note: percentages are a proportion of 41 (total sample). Multiple responses possible.

When asked if they could recall any specific Pap test messages in the media, 25 participants (61%) responded affirmatively. The messages that they could recall are given in Table 3.10. The most commonly-recalled message was ‘Have regular Pap tests’, followed by ‘You're never too old to have a Pap test’, ‘Don't make excuses, make an appointment’, and ‘All women need Pap tests’. These messages were part of the recent cervical screening campaign and brochures.

**Reasons for not screening**

Participants were asked why they had not had a Pap test in the previous two years. They were able to provide multiple responses, and these are detailed in Table 3.11. The most common reasons for not screening were embarrassment and lack of an appropriate doctor, while
putting off making an appointment, perceiving that there was no need on account of being healthy, and being too busy were also very common responses.

Table 3.11: Reasons for not screening in the previous two years

<table>
<thead>
<tr>
<th>Reason</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embarrassment</td>
<td>12</td>
<td>29</td>
</tr>
<tr>
<td>No appropriate doctor</td>
<td>12</td>
<td>29</td>
</tr>
<tr>
<td>Put it off</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>Healthy — no need</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>Too busy</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Pap tests are uncomfortable</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Forgot about it</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Don’t like going to doctors</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Test results are inaccurate</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>I don’t think about it</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Worried about results</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Not sexually active</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Self-conscious about my body</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Pap tests are inconvenient</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Pap tests are invasive</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td><strong>87</strong></td>
<td><strong>–</strong></td>
</tr>
</tbody>
</table>

Note: multiple responses possible.

These reasons can be categorised according to the stages of the screening process (see Table 3.12), and they illuminate the stages at which there are most barriers to cervical screening (see Figure 3.1). It is clear that the stages at which participants’ reasons most commonly occur are the experience of having a Pap test (stage six), making an appointment (stage four), and choosing a practitioner (stage three). Interestingly, remembering, or choosing to have a Pap test does not appear to be a barrier to cervical screening, suggesting that people do tend to remember if they genuinely believe it is important.
Table 3.12: Reasons for not screening, classified into stages

<table>
<thead>
<tr>
<th>Stage of screening process</th>
<th>Reasons for not screening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1 Eligibility</td>
<td>Healthy—no need</td>
</tr>
<tr>
<td></td>
<td>I don’t think about it</td>
</tr>
<tr>
<td></td>
<td>Not sexually active</td>
</tr>
<tr>
<td></td>
<td>Other—haven’t heard about them</td>
</tr>
<tr>
<td></td>
<td>Other—too old</td>
</tr>
<tr>
<td>Stage 2 Remember/choose to have a Pap test</td>
<td>Forgot about it</td>
</tr>
<tr>
<td>Stage 3 Choose a suitable practitioner</td>
<td>No appropriate doctor</td>
</tr>
<tr>
<td></td>
<td>Don't like going to doctors</td>
</tr>
<tr>
<td></td>
<td>Other—doctor won't do it properly</td>
</tr>
<tr>
<td>Stage 4 Make an appointment</td>
<td>Put it off</td>
</tr>
<tr>
<td></td>
<td>Too busy</td>
</tr>
<tr>
<td></td>
<td>Pap tests are inconvenient</td>
</tr>
<tr>
<td>Stage 5 Turn up to appointment</td>
<td></td>
</tr>
<tr>
<td>Stage 6 The experience of having a Pap test</td>
<td>Embarrassment</td>
</tr>
<tr>
<td></td>
<td>Pap tests are uncomfortable</td>
</tr>
<tr>
<td></td>
<td>Self-conscious about my body</td>
</tr>
<tr>
<td></td>
<td>Pap tests are invasive</td>
</tr>
<tr>
<td>Stage 7 Getting results</td>
<td>Test results are inaccurate</td>
</tr>
<tr>
<td></td>
<td>Worried about results</td>
</tr>
<tr>
<td></td>
<td>Other—would rather not know</td>
</tr>
<tr>
<td>Stage 8 Repeat regularly</td>
<td></td>
</tr>
</tbody>
</table>

Participants were asked to expand on the reasons they provided for not having Pap tests, with the aim of establishing whether these reasons were genuine, or whether they were peripheral to other reasons that were more difficult to express. About half of the women’s reasons were consistent on examination, but the other half provided some interesting extensions to their barriers.

**Embarrassment**

Of the 12 participants who mentioned they were too embarrassed to have a Pap test, three of them elaborated by explaining the sense of vulnerability and sense of exposure they felt towards the doctor: the doctor could see everything, it was distasteful, and a previous experience was so embarrassing it discouraged one woman from having them. Another woman described the history of cervical abnormalities in her family, and that she didn’t want to find out that she had them too.

**Issues with doctor**

Twelve participants cited issues associated with GPs. One participant’s excuse—that she did not know a doctor—was translated into the discomfort she had when she thought about exposing herself to a stranger. This is a far more difficult barrier to address than selecting a practitioner. Another said she had a ‘bad experience with a doctor’, and on further questioning revealed that the doctor had discussed highly private and personal information with her in the reception area, where many people could hear.

**Getting around to it**

Seventeen participants used avoidance reasons for not screening in the last two years. One participant described her inability to ‘get around to’ arranging an appointment. On further inspection, she was worried about the accuracy of results of the cervical screening test, while another woman who described herself as hopeless at remembering, had a positive test before...
and was scared of having another. Two participants said they ‘didn’t think of it’, for different reasons. One felt she could not have her usual doctor perform the Pap test, and therefore arranging for another doctor to do it was a more complex action than merely ringing up to make an appointment. The other disliked the way she was treated in health centres, and described waiting for two hours for a 15-minute appointment. She felt as though the health centre ‘swept (her) out like a broom’.

No need to have Pap tests
While one of the nine individuals who said they had no need to have a Pap test admitted that she in fact put off going to have a Pap test, three others indicated that their perceived ineligibility was something more difficult to deal with. One said her experience had been so embarrassing and humiliating that she cannot do it again. Another said that if she thinks about having a Pap test, she panics—and therefore doesn’t think about it. The third, who described herself as ‘feeling healthy’, in fact cannot find a practitioner who doesn’t make her feel that the doctor ‘… just want(s) to experiment on us like guinea pigs or (as) if we were another grain of sand’. While they stated they had no need for Pap tests, in reality these participants are in need of guidance and gentle support.

Too busy
Two of the eight participants who described themselves as too busy extended their answers into more complex responses. One perceived a Pap test to be ‘a big deal’ and felt she needed to take a day off work to fit it into her schedule. Another had gained weight while ‘too busy with children’, and felt uncomfortable revealing her new body size to her doctor.

Other
There were three final reasons why participants had not had a Pap test in the last two years, that they elaborated with further prompting. Discomfort with the invasiveness of the procedure suggested deeper cultural issues associated with exposure and intrusiveness for one woman, and dislike of the procedure for another translated into a disinclination to actually make an appointment; she commented that if an experienced female doctor made an appointment for her, drove to her house, and performed the Pap test in a van outside her place she would do it, but not otherwise. The third participant’s reason was that she moved around a lot. However, on further examination, she described her belief that one should see a doctor when one is sick, not for preventative reasons.

Summary
It is clear that the reasons individuals initially give for a particular behaviour are not necessarily the true ones. It is important therefore not to assume that the reasons people provide for behaviour are the whole story. For participants in this study, the reasons they initially provided for not having a Pap test were those commonly identified in many studies. However, when probed further about these reasons, others emerged which seem to be more difficult to target: for example, traumatic past experience, cultural issues, belief structures which exclude the need for cervical screening, and laziness. It is unclear therefore what the best course of action is to target these barriers.

Screening knowledge
The under-screened women in this sample were asked a series of questions to establish their understanding and knowledge of issues associated with Pap tests and cervical cancer. In general, participants had an excellent knowledge of where the cervix was; when asked where in the body cervical cancer was found, 35 participants (83%) answered correctly that it was...
found in the female reproductive system: specifically, in the vagina, cervix, or uterus. Only four participants (10%) said other things (such as in the breasts as well as the uterus) while one participant did not know, and one provided no response.

When asked what a Pap test is for, participants mostly thought it was to detect cancer (61%, n = 25), however a substantial number believed it was to detect abnormal cells or precancerous cells (37%, n = 15). Only one person (2%) thought it was to check for diseases. Participants were asked if Pap tests tested for anything else, and only a small number thought they tested something else as well, such as sexually transmitted diseases (10%, n = 4), diseases generally (7%, n = 3), general health or bacterial levels (5%, n = 2), or fibroids (2%, n = 1). The remainder either could not answer the question, did not know what else they tested for, repeated that they detected cancer or abnormal cells, or said nothing else was tested.

Participants were asked who needs a Pap test, and most often responded that it was people who were over a specific (but unspecified) age. Other responses included women over 18, or over 21, or over 24, all of which were categorised as women over 18–24 years. Similarly, when women suggested that women over 40, or 50, or 55 need Pap tests, these were categorised as women over 40–59 years. Others noted that women who had ever had sex, or those who were sexually active, needed to have Pap tests. Table 3.13 provides percentages of women who selected each response.

Table 3.13: Who needs a Pap test?

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>People over a certain age</td>
<td>15</td>
<td>32</td>
</tr>
<tr>
<td>Sexually active/ever had sex</td>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td>Women over 18-24 years</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>Women over 25-39</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Women over 40-59</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>During pregnancy/early parenting</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total responses</td>
<td>41</td>
<td>100</td>
</tr>
</tbody>
</table>

When asked what an ‘abnormal Pap test result’ meant, participants gave multiple answers. The most common answer was that a retest was required, with abnormal or precancerous cells and possible cancer also being quite common (see Table 3.14).

Table 3.14: What does an abnormal Pap test result mean?

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A retest is required</td>
<td>15</td>
<td>27</td>
</tr>
<tr>
<td>Abnormal or precancerous cells</td>
<td>14</td>
<td>24</td>
</tr>
<tr>
<td>Possible cancer</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Something is wrong</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>The reading is false</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Other (eg, require treatment, need an operation, definitely cancer)</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Total responses</td>
<td>57</td>
<td></td>
</tr>
</tbody>
</table>

Note: multiple responses possible.

Consistent with current knowledge, 19 participants (46%) reported that they did not know what causes cervical cancer, while a further eight participants (20%) provided no response to the question. Two participants reported that nothing caused it, that it ‘just happens’ (5%), while a further four (10%) suggested there might be a genetic component. Other responses
included the herpes virus (n = 1), sexual intercourse (n = 2), poor diet or health (n = 1), smoking (n = 1), and other responses (n = 3).

When asked if there was anything they could do to prevent cervical cancer, participants suggested regular Pap tests (34%, n = 14), or reported that there was nothing that they could do to prevent it (27%, n = 11). Other responses included early detection (7%, n = 3), a healthy diet (7%, n = 3), a healthy life (5%, n = 2), safer sex (5%, n = 2), or not knowing what might prevent cervical cancer (7%, n = 3).

Participants generally were accurate about their estimations of how many women would get cervical cancer in their lives: 46% (n = 19) accurately estimated 1 in 100 women, while a further 27% (n = 11) thought one woman in 10 would develop cancer. Of the remainder, six (15%) thought the figure was closer to 1 in 1,000, three (7%) thought it was 1 in 10,000, and two participants (5%) had no idea.

However, when asked at what age women were most at risk of developing cervical cancer, more participants reported women in their 20s and 30s were most at risk (22%, n = 9), or 40s and 50s (73%, n = 30), than correctly identifying the 60s to 70s as being the most risky age group (2.5%, n = 1). Only one person (2.5%) had no idea.

Participants again were mistaken about the length of time cervical cancer takes to develop: no one selected the most accurate answer, 10 years, while only three (7%) selected five years. Far more participants believed that it took two years (27%, n = 11), one year (22%, n = 9), or six months (29%, n = 12) to develop. Six participants (15%) had no idea how long it took to develop.

Finally, participants were asked to decide whether two statements were true or false. The first statement, ‘Getting an abnormal Pap test result means you have cervical cancer’, was correctly designated as false by 32 participants (78%). Only seven participants (17%) thought it was true, and two participants (5%) did not know whether it was true or false. The second statement, ‘The majority of women who develop cervical cancer die of the disease’, was also false. Slightly fewer chose the correct option (71%, n = 29), one more thought the statement was true (20%, n = 8), and four participants were unable to decide (10%).

Thus, participants appeared to have a fairly good knowledge of cervical screening and abnormalities, however there were some misconceptions, particularly with respect to the length of time cervical cancer takes to develop and who is most at risk of developing the disease.

Screening attitudes

As part of a pretest of women’s attitudes toward cervical screening, it was of interest to establish whether participants were under-screened because of a holistic approach to health. There were three possible reasons put forward. The first, that it doesn’t matter much if you go an extra year or two between Pap tests, was something that participants generally disagreed with (M = 4.00 on a five-point scale, SD = 1.13)

Secondly, participants generally disagreed with the statement that ‘Some women feel that they are so in tune with their bodies that they do not need Pap tests’ (M = 4.22, SD = 1.24).

Finally, participants also disagreed with the statement ‘If I have a holistic approach to life, and engage in activities such as stress reduction, or take natural medicine, I don’t need to have Pap tests’ (M = 4.42, SD = 0.92). Given that all of these respondents were classified as under-screened, it is clear that the reasons for their screening status were not related to ideological reservations.

Participants almost unanimously believed it to be easy or very easy to arrange a Pap test if they wanted to (97.5%, n = 40), with only one participant being undecided about how easy it was (2.5%). Similarly, participants believed it to be very easy or easy to get a Pap test in their area (87.5%), with only four reporting it to be neither easy nor difficult (10%), and one perceiving it to be difficult to get a Pap test in her area (2.5%).

Thus, at least in this sample, attitudes towards Pap testing appeared to be more medically based, rather than tapping into alternative therapies. Given that participants thought it was
important not to miss a Pap test, it suggests that they are merely forgetting, or putting off Pap tests, rather than making a conscious decision not to have a Pap test. In the next section, the process of having a Pap test is broken down into a series of steps, and responses participants gave when asked whether these steps were difficult for them to achieve are reported.

It was of interest to examine the association between perceptions of control over women’s health, and perceptions of control over their lives generally. It was thought that these ‘locus of control’ dimensions might be related to attitudes toward cervical screening. The Health Locus of Control dimension (Wallston, Wallston & deVellis 1978) was calculated as the sum of six items such as ‘If I take care of myself I can avoid illness’ and ‘I am directly responsible for my health’. Higher scores on the health locus of control measure indicated more external locus of control, while lower scores indicated more internal locus of control. On a five-point scale, participants were close to the centre of the scale. They thought that external factors contributed to their health almost as much as those factors that were under their own control (M = 2.68, SD = 0.70). General control over participants lives was calculated using Brewin and Shapiro’s general locus of control measure (Brewin & Shapiro 1984), which includes two subscales: control over positive events (for example, ‘I have found that success in anything is built on hard work’), and control over negative events (for example, ‘My misfortunes have resulted mainly from the mistakes I’ve made’). Participants perceived themselves to have personal control over positive events (M = 2.17, SD = 0.62) but generally equal personal control and influence from external factors for negative events (M = 3.01, SD = 0.69).

Health locus of control was positively associated with locus of control over positive events, r(39) = .41, p < .01, but not negative events, r(39) = -.13, p > .10.

Participants with external health locus of control perceived choosing a GP to be more difficult than those with an internal locus of control, r(38) = .38, p < .05.

General locus of control for positive events was associated with perceived difficulty of getting a Pap test in the women’s residential area, where the perception that positive events were beyond the women’s control was related to finding it difficult to get a Pap test in their area, r(38) = .34, p = .05.

Next, the locus of control variables were divided into more external, and more internal locus of control through median splits, and these categorical variables were submitted to a chi-square test for significance with the categorical attitude variables. It was found that people with more external negative locus of control had more male GPs for their last Pap test, while those with more internal negative locus of control had more female practitioners, χ²(1) = 4.80, p < .05.

**Barriers to cervical screening**

As described in detail earlier, there are eight stages of the cervical screening process. Of these stages, six were selected to investigate the practical barriers to cervical screening: remembering to have a Pap test, choosing a practitioner, ringing up to make an appointment, turning up to the appointment, telephoning for the results, and having a Pap test every two years. Referring back to Figure 3.1, it was shown that a number of women did not perceive themselves as eligible to have Pap tests. Of these, almost half explained on further questioning that this was a convenient excuse for other issues more difficult to deal with. As all the women interviewed in this section were eligible for cervical screening, it was decided to omit this stage of the screening process so that they did not have the option to use this convenient, but inaccurate, excuse.

Further, it was shown in Figure 3.1 that the experience of actually having the test was the biggest barrier to cervical screening when women’s excuses for not screening were categorised. In this section it was important to discover if there were other clear barriers to cervical screening. It was thought that the presence of the ‘experience’ stage would create less variation in responses to the other stages of cervical screening. To this end, the experience of having Pap tests was omitted from the barriers to cervical screening examined in the longer interview of under-screened women.
Participants were asked firstly how difficult each stage was, and secondly whether each stage would stop them having a Pap test. The results of these questions are provided in Figures 3.2 and 3.3.

**Figure 3.2: Perceived difficulty of the stages of cervical screening**

From Figure 3.2, participants thought that choosing a practitioner was the most difficult of all the stages, followed by remembering to have a Pap test, and repeating the process every two years. The stage considered to be least difficult was to turn up to the appointment, followed by receiving the results. This pattern was replicated in Figure 3.3. The stage most commonly cited as most likely to stop participants from having a Pap test was choosing a practitioner, followed by repeating the process, remembering to have a Pap test, and making an appointment. The least likely to stop participants was turning up to the appointment, and getting the results. From Figures 3.1, 3.2 and 3.3, it is clear that turning up to an appointment was not a barrier for women.

Finally, participants were asked to comment about the stages of the screening process that they considered most difficult to do. Each of these will be discussed in turn.
Eligibility for Pap test
Participants who generally felt themselves to be ineligible believed that it was not appropriate to go to a doctor if they did not feel sick: they would wait until they had cervical symptoms and then go. This focus is on curative, rather than preventative behaviour. Secondly, some participants had little faith in the accuracy of the test, and suggested that if the results were guaranteed to be accurate, rather than diagnosing false positive or negative results, they would be more likely to attend cervical screening.

Remembering to have a Pap test
The majority of people for whom this stage was a problem experienced time constraints, or depended on external reminders. Participants said they lost track of time, were too busy, or didn’t think about having a Pap test. One participant said she did not want to remember to have a Pap test. Overwhelmingly the comments about this stage also focussed on the need to have a reminder, and even making a point of not going unless reminded: this indicates that, for some people, it is almost like a ritual which requires specific cooperation from the practitioner or registry before it is possible to proceed to the next stage.

Choosing a practitioner
This was the stage which was most cited as a problem for participants. There were financial issues, in that the bulk-billing practitioners were very busy, while the practitioners who were less busy were ones that required up-front payments. There was dissatisfaction with health centres, in which it was difficult to arrange an appointment with the same doctor each time, and even difficult to specify a male or a female doctor. There was the perception that health centres were ‘meat markets’ or ‘cattle runs’. (We believe this to be related to bulk billing ‘super clinics’ rather than community health centres or large group practices.) There was the attitude of the GPs, particularly the male doctors, who were said to be ‘sleazy’, embarrassing, unreceptive to women’s issues, and who made participants feel uncomfortable. A frequent comment was the need to find a female doctor who the woman is comfortable with, and who she can trust. Finally, there was the issue of ‘losing’ a practitioner, and having to find another suitable one. This may be because the participant moves suburb, or because the doctor moves practice.

Ringing up to arrange an appointment
Time commitments were the main focus of comments associated with arranging appointments. Either the women had too many other time commitments or little time, and low priority was given to Pap testing. Other comments included feeling too embarrassed about the procedure to make the appointment, dislike of having a Pap test, not wanting to do it, and perceiving that it was a complex process: not only attending a practitioner, but arranging for a referral to a gynaecologist as well.

Turning up to the appointment
Turning up to the appointment was an issue for those who found the process embarrassing, or were nervous about having a male practitioner. The other issue noted was the concern about the accuracy of the Pap test, with fear that a false positive result would be diagnosed, causing unnecessary worry.

Ringing up to get the result
Many participants were scared about the result, especially if the result was abnormal. However, this included mistrust about the reliability of Pap test results. Other participants commented that they assumed everything was clear unless contacted by their doctor, and hence felt no need to ring up to get a result. Finally, one participant commented that she would rather not know whether the Pap test was clear or not.
Having regular Pap tests

The barriers to having regular Pap tests were generally an amalgamation of the central themes associated with the previous stages of Pap testing. Getting around to the Pap test, time and child-minding constraints, remembering it, having to ring to make an appointment, and waiting until something was wrong before having a Pap test were all associated with the first two stages. Absence of a good practitioner was another reason mentioned by several participants. The nature of the procedure, being embarrassing, private, and painful, was a barrier. Fear of having an abnormality prevented other women from having regular Pap tests.

Discussion

There were three main themes to the barriers to cervical screening. The first was embarrassment about the procedure. This important issue discouraged women from selecting an appropriate practitioner, making an appointment, and turning up to the appointment. Secondly, there was the perception that cervical screening is inappropriate: either participants did not perceive the need to have preventative screening and would prefer to wait until something was wrong, or they distrusted the accuracy of the cervical screening process to the extent that they chose not to have it at all. Finally, the main emphasis of women's barriers to cervical screening centred around the provision of the Pap test service. General practitioners were difficult to access (especially females), and appear to be so busy as to appear preoccupied, 'sleazy', untrustworthy, and uncaring. It was noted by one participant that up-front payment doctors had fewer patients and were more able to provide the service that they had come to expect.

Key issues for under-screened women

From Part 2 of this chapter, it is clear that under-screened women have good access to general practitioners, and perceive it to be easy to access Pap test practitioners. However, compared with screened women, they perceived access to practitioners to be more difficult. This indicates that often, under-screened women perceive their usual GP to be inappropriate to perform Pap tests. These women obtained most of their information about Pap tests from their GP, and agreed that if their general practitioner suggested having a Pap test, they would have one. General practitioners, therefore, are an important influence in under-screened women’s decisions whether or not to undergo cervical screening.

Under-screened women are not only hearing the Pap test messages, but they have a good memory for specific campaign messages—even to the extent of remembering messages from past campaigns. These women are not acting on the messages, however. It appears that the messages are not meaningful enough for them: possibly new messages targeted at these women need to be developed.

Under-screened women understood about the nature of Pap tests, cervical screening, and abnormalities very well, and knew who was eligible for Pap tests. However, these women were less accurate about which groups were at risk for cervical cancer. Further, under-screened women tended to believe that cervical cancer took a very short time to develop, something that could be targeted in future strategies.

It was clear that under-screened women are not choosing to opt out of the cervical screening process due to ideological reasons: indeed, these women thought that having Pap tests was an important thing. However, under-screened women perceived Pap testing to be less important than well-screened women.

There is little question that breaking the cervical screening process into stages is a meaningful and useful way of categorising the barriers both under-screened and screened women have about cervical screening. This informs the way under-screened women can be targeted: if we realise that the major barriers to cervical screening relate to women's perceived ineligibility for the test, it is possible to educate them about who is eligible. If the barriers relate to choice of a practitioner, then strategies may target both the Pap test practitioners and the ways in which
women can negotiate a pleasant experience in the surgery. One of the major concerns women had was the perception that the Pap test itself was inaccurate: this is a simple matter to address, and will reduce barriers associated with the receipt of Pap test results. The strongest barrier in this study was, as with previous studies, the experience of having a Pap test. Embarrassment and the perception of discomfort during the test may be unavoidable, or may stem from deeper self-image issues which could be targeted in an intensive way with individual under-screened women. Finally, another barrier to cervical screening which is difficult to address is related to the stage in which women must make a Pap test appointment. Women were too busy, they put it off, and perceived Pap tests to be inconvenient. It is possible that encouraging these women to realise the importance of the test may overcome this barrier: or perhaps other more intensive strategies are required.

This report has examined the barriers that women have which prevent or reduce regular cervical screening. While some of the findings are common to many studies, the studies reported here have interpreted the barriers in a new and meaningful way. Through using the information in this report it is hoped that new strategies for recruiting under-screened women to the cervical screening process can be developed and implemented.

References


Abstract
Telephone interviews were conducted with 494 women aged 40 years and over to assess a) the impact of the media campaign, b) reactions to registry letters inviting unscreened women to be screened, and c) the differences between women who are screened and women who are not screened. Responses to the invitation letters were generally positive, with the negative responses indicating dislike of being reminded about something they saw as an unpleasant experience. The two major messages recalled and recognised from the media campaign were 1) ‘Even if you are no longer having sex you still need a Pap test’, and 2) ‘Yes, Pap tests are embarrassing’. There were no demographic differences between regular screeners and non-screeners. Screening frequency, use of a female service provider, and preferred source of Pap test information were different for each group. The campaign was successful in disseminating information designed to encourage screening rates. While it increased awareness and thoughts about having Pap tests, translating awareness of screening into screening behaviours remains a challenge.

Introduction
The PapScreen Victoria radio campaign in English was conducted between September and November, 1997. Four new 45-second radio advertisements were broadcast on selected metropolitan and regional radio stations. They featured two women in conversation about the importance of Pap tests. A number of key messages were included in each advertisement (see shaded section at end of chapter). Additionally, 3AW presenters read PapScreen Victoria messages from prepared scripts, and regional stations conducted interviews with PapScreen Victoria staff and community health nurses.

A separate campaign using invitation letters was conducted during the same period. Between August and December 1997, women whose records indicated that they had not had a Pap test in the past 48 months, and who were aged between 40 and 59 years, were sent a special invitation letter.

It was the aim of this study to assess the impact of mailing letters to under-screened women by assessing their reactions to receiving the letters, and their behavioural responses to the receipt of the letters.

In addition, the impact of the PapScreen Victoria radio recruitment campaign was assessed by determining the number of Pap test messages heard, which specific messages were heard, and the effect of hearing those messages on screening-related behaviours.

Finally, a comparison of women who were regularly screened and women who were under-screened was made in terms of demographic characteristics, exposure to the radio recruitment campaign, and Pap screening beliefs or behaviours.
Method

Recruitment of sample

Two separate methods were utilised to recruit and interview participants: questionnaires distributed to medical centres, with interviews conducted by the Anti-Cancer Council of Victoria; and a systematic probability sample of Victorian telephone numbers, with interviews conducted by a market research company.

Anti-Cancer Council sample

Brief questionnaires were distributed to doctors’ clinics and health centres. Receptionists were asked to request women aged between 40 and 70 years who were attending the clinic or health centre to complete the questionnaire. It asked about the woman’s practice of a number of cancer screening behaviours, and about sun protection behaviour. Women who completed the questionnaire were also asked if they would participate in future research. A database was created from information contained in the questionnaires. Women who had agreed to participate in a telephone interview were used in the present study.

Market research company sample

The market research company utilised a Computer Assisted Telephone Interviewing system. A systematic probability selection of telephone listings for private households was used, ensuring that 125 interviews were conducted in the Melbourne area, and 125 in rural Victoria. The market research company contacted each selected telephone number at varying delay intervals throughout the survey in order to maximise the opportunity of contact with each selected household. Only female interviewers were employed.

Interviews

The interview examined issues associated with the impact of the radio campaign and the registry letters campaign, together with demographic and cervical screening information.

Data analysis

The data were analysed using SPSS-X. Means and frequencies were used to describe the data. Chi-square tests, t-tests, and logistic regression were used to identify the differences between groups. As the primary goal was to detect group differences rather than to test hypotheses, alpha was set at 0.05.

Results and discussion

Description of the sample

A total of 494 women aged over 40 years were interviewed. (One case was deleted as the woman had had a hysterectomy and was ineligible for the study.) Most women were between 40 and 49 years of age (48%), 32% were between 50 and 59 years, 19% between 60 and 69 years, and less than 1% were aged 70 years or more. The majority of women interviewed were married or living in a de facto relationship (75%), 14% were separated or divorced, 6% widowed, and 5% never married. Thirty-two percent of participants reported that they had completed up to four years of secondary school, 21% had completed five or six years of secondary school, 23% had undertaken some post-secondary studies, 20% had completed a degree. Four percent reported having attended primary school only. Of the participants in the Anti-Cancer Council sample, 75% were from the metropolitan area and 25% were coded as rural.
Differences between samples
An examination of the data was conducted to identify any differences between the women inter-
viewed by the Anti-Cancer Council compared with those interviewed by the market research 
company. There was only one difference in the demographics of the two groups; the women 
interviewed by the Anti-Cancer Council were younger than those interviewed by the market research 
company.

Screening history
Only 3% of participants reported that they had never had a Pap test. One percent could not 
say when they had their last Pap test. The majority (71%) had a Pap test in the last two years, 
and thus can be described as adequately screened (see Table 4.1). Participants were asked why
they had their last Pap test, and responses are detailed in Table 4.2.

<table>
<thead>
<tr>
<th>Table 4.1: Self-reported Pap test behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>I've never had a Pap test</td>
</tr>
<tr>
<td>I had a Pap test in 1993 or before</td>
</tr>
<tr>
<td>I had a Pap test in 1994</td>
</tr>
<tr>
<td>I had a Pap test in 1995</td>
</tr>
<tr>
<td>I had a Pap test in 1996</td>
</tr>
<tr>
<td>I had a Pap test in 1997</td>
</tr>
</tbody>
</table>

Note: ACCV = Anti-Cancer Council of Victoria sample; MR = Market research company sample.

<table>
<thead>
<tr>
<th>Table 4.2: Reasons for having a Pap test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>It was due</td>
</tr>
<tr>
<td>I asked for it</td>
</tr>
<tr>
<td>My doctor suggested it</td>
</tr>
<tr>
<td>I received a reminder</td>
</tr>
<tr>
<td>I heard or read something</td>
</tr>
<tr>
<td>I had symptoms</td>
</tr>
</tbody>
</table>

Note: ACCV = Anti-Cancer Council of Victoria sample; MR = Market research company sample.
Multiple responses possible.

Women who had previously had a Pap test were asked how often they usually have Pap tests. Over half (55%) noted that they had Pap tests every two years, and a further 25% reported
having them yearly. The remaining 20% reported having Pap tests every three years (5%),
every four years (2%), or less frequently (13%).

Behavioural intentions
Almost all of the participants reported that they were very likely (86%) or likely (6%) to have
a Pap test in the next two years, with 4% stating that this was very unlikely, 1% somewhat
unlikely, and 3% either could not say or stated it was neither likely nor unlikely.
Reminder letters
When asked if they received reminder letters about Pap tests, 39% replied in the affirmative. Almost all of the women interviewed (98%) reported that they found reminder letters an acceptable way of reminding women to have a Pap test.

Doctors and Pap tests
The majority of participants (93%) reported having a doctor that they regularly visit. Most participants reported that their last Pap test was taken by their usual doctor (72%), although 21% reported it was taken by another doctor, and the remainder were taken by a gynaecologist, nurse, or someone else (7%). The person who conducted participants’ most recent Pap test was usually a male (52%). However, given that only 33% of Pap test practitioners are female, participants exhibited a substantial preference for female practitioners.

Feeling comfortable about asking for a Pap test
Most women said they were either very comfortable (60%) or somewhat comfortable (15%) with asking their regular doctor for a Pap test. Nine percent were somewhat uncomfortable, and 5% very uncomfortable doing this. The participants who stated that they felt uncomfortable asking for a Pap test (n = 68) were asked if this had ever prevented them from having a Pap test, and for 29% of this group (n = 20), it had.

Participants’ comfort in asking for a Pap test was significantly related to their screening status and to who took their last Pap test. Women who reported feeling uncomfortable about asking for a Pap test (n = 117) were more likely to be under-screened, and less likely to have had their last Pap test taken by their usual doctor than by another person.

How to make requests for a Pap test more comfortable
The women interviewed by the Anti-Cancer Council were asked what could make requesting a Pap test easier. The most common response was having a female doctor (n = 9). Others (n = 4) stated that it was the procedure itself that concerned them, for example:

> It’s getting into my mind that I need to have one; It’s not a pleasant process and it’s the process I put off.

Some participants (n = 4) reported that they would feel more comfortable if their doctor initiated the test:

> If a doctor showed more interest. He needs to be pro-active, then I would feel more comfortable.

For other participants (n = 3), having someone other than their usual doctor made the process easier:

> State of mind, personal thing; feel much more comfortable with a specialist because it's not such a personal relationship with a specialist.

Some participants suggested a clinic or centre specialising in Pap tests (n = 2), having more confidence in their doctor (n = 1), or being less overweight and arthritic (n = 1), while others were unable to offer any suggestions as to what would make them more comfortable (n = 3).

Impact of the invitation letters
Only 20% (n = 100) of the participants reported receiving the invitation letter sent to women due to have a Pap test. Of these women, 78% reported a positive initial reaction to the letter, 7% a negative reaction, and 15% gave a neutral or ambiguous response. The majority reported reading all (73%), or some of the letter (20%), while 4% read none of the letter. Three percent of participants could not answer this question. Of the women who reported a positive response
to the letter (n = 78), 77% said that they read all of the letter, compared with 43% of those who reported a negative response. More than half of the women who reported receiving the special invitation letter also reported receiving reminder letters (54%). It is possible that some participants confused the questions about the invitation letter with their usual reminder letter. Of the women who reported receiving the invitation letter, 97 had had a Pap test: 31% of women were very overdue for the test (most recent test in 1994 or earlier); 19% were overdue up to 12 months; and 50% were up to date with their Pap tests. Thus some of the invitation letters were sent to women who should not have received them.

Participants receiving the invitation letter were asked a series of questions about their reactions to the letter. Seventy-eight percent of women said the letter made them think about having a test, while 40% said they would actually have a test as a result of the letter. Similar proportions of the under-screened women said they thought about having a test as a result of the letter, but far fewer reported that they would actually have a test than the norm (26%). Twenty-seven percent said the letter prompted them to ask their doctor about the test, and several others said they would talk to family or friends about Pap tests (22%), look for more information (4%), or phone for more information (3%). Of the women who reported that receiving the invitation letter prompted them to have a test, 20 indicated that they had a Pap test in 1997. As the invitation letter was sent in August 1997 it was of interest to examine whether the letter actually did prompt women to have Pap tests. Of the women who indicated they had a Pap test in 1997, a similar number of women had their Pap test before August 1997 (n = 26) than after August 1997 (n = 23), suggesting that the intervention of an invitation letter had little immediate effect on women’s screening behaviour. This may have been affected by the reminder letters sent out routinely by the Victorian Cervical Cytology Registry throughout 1997.

Reactions to the letter

Women were asked about their reactions to the contents of the letter. Responses given by the women interviewed by the ACCV to this open-ended question were coded into six categories. The most common response (n = 16) was positive, and mentioned the value of being reminded, for example: ‘Good idea to be reminded’, ‘Great idea because people tend to forget’.

Other women (n = 10) indicated that the letter had prompted them to have the test, or at least to think about it, for example: ‘Felt guilty—decided to go to have one’, ‘Stirred me up enough to have (the test) done, so letter was relevant’.

Some responses (n = 7) were positive about the letter, but did not specifically indicate what was good about the letter: ‘Fine—good to receive’.

A smaller number of women (n = 2) expressed a more detailed and positive reaction to the letter, a neutral response (n = 2), or commented that they did not want the test (n = 2).

One woman who described her reaction to the letter as negative explained why she responded in this way:

Oh no, I don’t want to be reminded of this—no, I don’t want to know.

Sources of Pap test information

Participants were asked where they had heard or seen something about Pap tests in the last six months. The percentage of women who reported seeing something in each source is listed in Table 4.3. Twelve percent of women were not able to recall any source of Pap test messages. Thirty-three percent of women were able to cite one or two sources, and the remainder could recall between three and eight sources of Pap test messages (see Table 4.4).
Table 4.3: Sites where Pap test messages were seen or heard

<table>
<thead>
<tr>
<th>Sites</th>
<th>% participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pamphlet</td>
<td>46</td>
</tr>
<tr>
<td>Poster</td>
<td>43</td>
</tr>
<tr>
<td>Via doctor or health worker</td>
<td>40</td>
</tr>
<tr>
<td>Television</td>
<td>39</td>
</tr>
<tr>
<td>Via Anti-Cancer Council of Victoria</td>
<td>37</td>
</tr>
<tr>
<td>Women's magazines</td>
<td>32</td>
</tr>
<tr>
<td>Radio</td>
<td>30</td>
</tr>
<tr>
<td>Newspapers</td>
<td>27</td>
</tr>
</tbody>
</table>

Note: multiple responses possible.

Table 4.4: Sources of Pap test information recalled

<table>
<thead>
<tr>
<th>Number of sources</th>
<th>% participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>12</td>
</tr>
<tr>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: missing = 3%.

Table 4.5: Sources of Pap test information preferred

<table>
<thead>
<tr>
<th>Type of source</th>
<th>% participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor/nurse</td>
<td>59</td>
</tr>
<tr>
<td>Pamphlets</td>
<td>7</td>
</tr>
<tr>
<td>Radio</td>
<td>6</td>
</tr>
<tr>
<td>Television</td>
<td>6</td>
</tr>
<tr>
<td>Magazine/newspaper</td>
<td>6</td>
</tr>
<tr>
<td>Community health centre</td>
<td>3</td>
</tr>
<tr>
<td>Mail</td>
<td>3</td>
</tr>
<tr>
<td>Anti-Cancer Council</td>
<td>2</td>
</tr>
<tr>
<td>Reminder letters</td>
<td>2</td>
</tr>
<tr>
<td>Friends/relatives</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: percentages do not add to 100 due to rounding off.
Table 4.6: Sources of women’s health information preferred

<table>
<thead>
<tr>
<th>Type of source</th>
<th>% participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor/nurse</td>
<td>48</td>
</tr>
<tr>
<td>Magazines/newspapers</td>
<td>11</td>
</tr>
<tr>
<td>Pamphlets</td>
<td>7</td>
</tr>
<tr>
<td>Community health centre</td>
<td>7</td>
</tr>
<tr>
<td>Radio</td>
<td>5</td>
</tr>
<tr>
<td>Mail</td>
<td>3</td>
</tr>
<tr>
<td>TV</td>
<td>3</td>
</tr>
<tr>
<td>Friends/relatives</td>
<td>2</td>
</tr>
<tr>
<td>Work</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: missing = 6%.

Table 4.7: Magazines read

<table>
<thead>
<tr>
<th>Magazine</th>
<th>% participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Idea</td>
<td>96</td>
</tr>
<tr>
<td>Women’s Weekly</td>
<td>92</td>
</tr>
<tr>
<td>Woman’s Day</td>
<td>90</td>
</tr>
<tr>
<td>That’s Life</td>
<td>12</td>
</tr>
<tr>
<td>House and Garden</td>
<td>9</td>
</tr>
<tr>
<td>Better Homes and Gardens</td>
<td>7</td>
</tr>
<tr>
<td>Family Circle</td>
<td>7</td>
</tr>
<tr>
<td>Reader’s Digest</td>
<td>7</td>
</tr>
<tr>
<td>New Woman</td>
<td>6</td>
</tr>
<tr>
<td>Vogue</td>
<td>6</td>
</tr>
<tr>
<td>Marie Claire</td>
<td>6</td>
</tr>
<tr>
<td>Good Weekend</td>
<td>5</td>
</tr>
<tr>
<td>Who</td>
<td>3</td>
</tr>
<tr>
<td>Other general magazines</td>
<td>62</td>
</tr>
<tr>
<td>Other women’s magazines</td>
<td>23</td>
</tr>
</tbody>
</table>

Note: multiple responses possible.

Preferred sources of information

Sources of two types of information were of interest in the present study. They were information about Pap tests, and information about women’s health issues. Overwhelmingly participants nominated doctors or nurses as the best way to obtain both Pap test information (59%) and, to a lesser extent, women’s health information (48%). Pamphlets, radio, television and magazines or newspapers were also nominated as important sources of Pap test information (see Table 4.5).

While magazines or newspapers, pamphlets and radio were specified as good sources of women’s health information, television was not. In addition, community health centres were included as good sources of women’s health information (see Table 4.6).
Magazines as a medium for Pap test messages

A magazine Pap test message campaign was not run in conjunction with the present study. However, many women nominated magazines as sites where they had seen Pap test messages or information. Therefore it was of interest for future research to identify which magazines women read. Just over half (52%) indicated that they read magazines, over 90% of these read New Idea, Women's Weekly, and Woman's Day (see Table 4.7). It would be prudent for future magazine media campaigns to focus on at least one of these three specific magazines.

Radio as a medium for Pap test messages

Impact of the Pap test message radio campaign

A number of radio stations were used to disseminate Pap test information. These were:

- 3AW
- 3GG (Sale)
- 3MP & Magic 693
- 3SR (Shepparton)
- 3BA (Ballarat)
- 3MA (Mildura)
- 3HA (Hamilton)
- 3CV (Central Victoria)
- 3YB (Warrnambool)
- 3WM (Horsham)

It was therefore of interest to determine which radio stations participants listened to. From Table 4.8, the majority of participants (83%) indicated that they listened to radio stations, the most common being the ABC (32%), and 3AW (17%). While five of the 11 radio stations mentioned by participants included Pap test messages, over half of them did not.

Four radio advertisements were employed. Each advertisement combined two or more of the Pap test messages. For example, each advertisement concluded with information about the Cancer Helpline message (G). An evaluation of message recall must take into account the frequency with which each individual message was used, and the order in which individual messages were presented within the advertisements. This information is listed in Table 4.9 and the full advertisements are included at the end of this chapter.

So I’ll take care of myself for a change. I’ll make an appointment for a Pap test today. (A)

It doesn’t matter if you’re not having sex any more … if you’ve ever had sex you need to keep having Pap tests every 2 years until you’re over 70. (B)

Don’t take a chance with cervical cancer. Make an appointment with your doctor today. (C)

My dear, Pap tests can detect 90% of the most common type of cervical cancer. Early detection means treatment is usually easy and highly successful. (D)

The early stages of cervical cancer don’t have any symptoms. You can look healthy and feel healthy and still have abnormal cells in your cervix. (E)

Yes, Pap tests can be embarrassing, but they can save your life. Last year about 350 Australian women died of cervical cancer. No one ever dies of embarrassment. (F)

For more information about Pap tests, contact the Cancer Helpline on 13 11 20. (G)

It is said that by the time the average woman reaches 60 she has changed 14,000 dirty nappies, cooked 700,000 dinners and wiped about 4,000 runny noses. (H)
### Table 4.8: Radio stations nominated by participants

<table>
<thead>
<tr>
<th>Radio station</th>
<th>% participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC</td>
<td>32</td>
</tr>
<tr>
<td>3AW</td>
<td>17</td>
</tr>
<tr>
<td>3MP</td>
<td>10</td>
</tr>
<tr>
<td>GOLD</td>
<td>8</td>
</tr>
<tr>
<td>FOX</td>
<td>7</td>
</tr>
<tr>
<td>MAGIC</td>
<td>5</td>
</tr>
<tr>
<td>TTFM</td>
<td>5</td>
</tr>
<tr>
<td>TRIPLE M</td>
<td>4</td>
</tr>
<tr>
<td>3CS (Colac)</td>
<td>4</td>
</tr>
<tr>
<td>K-ROCK</td>
<td>2</td>
</tr>
<tr>
<td>3YB (Warrnambool)</td>
<td>2</td>
</tr>
<tr>
<td>Other stations</td>
<td>11</td>
</tr>
</tbody>
</table>

Note: multiple responses possible.

### Table 4.9: Pap test messages in four advertisements

<table>
<thead>
<tr>
<th>Advertisement number</th>
<th>Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertisement 1</td>
<td>(B) (G)</td>
</tr>
<tr>
<td>Advertisement 2</td>
<td>(C) (G)</td>
</tr>
<tr>
<td>Advertisement 3</td>
<td>(D) (E) (F) (G)</td>
</tr>
<tr>
<td>Advertisement 4</td>
<td>(H) (A) (G)</td>
</tr>
</tbody>
</table>

Note: See previous page for specific messages corresponding to each letter.

Of the 147 participants who stated that they had heard a message on the radio, 93 (63%) could recall Pap test messages. Most of these participants (n = 75, 81%) liked or found the radio messages helpful. The women said the messages acted as a reminder for Pap tests (n = 15), that they were clear and simple (n = 14), informative (n = 13), brought Pap tests to women's attention (n = 9) and helped them to identify their eligibility for Pap screening (n = 4). Only eight of the women interviewed reported disliking the radio messages about Pap tests.

### Table 4.10: Spontaneous recall of Pap test messages

<table>
<thead>
<tr>
<th>Message/advertisement</th>
<th>% participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>It doesn’t matter if you’re not having sex (B)</td>
<td>30</td>
</tr>
<tr>
<td>Yes, Pap tests can be embarrassing (F)</td>
<td>13</td>
</tr>
<tr>
<td>Don’t take a chance with cervical cancer (C)</td>
<td>4</td>
</tr>
<tr>
<td>General message</td>
<td>17</td>
</tr>
<tr>
<td>Other (eg talkback)</td>
<td>4</td>
</tr>
<tr>
<td>Advertisement 1 (B, G)</td>
<td>26</td>
</tr>
<tr>
<td>Advertisement 3 (D, E, F, G)</td>
<td>4</td>
</tr>
<tr>
<td>Advertisement 4 (H, A, G)</td>
<td>2</td>
</tr>
</tbody>
</table>

Total: 100
Participants in the Anti-Cancer Council group were asked what the main messages were that they recalled hearing about Pap tests on the radio over the last six months (n = 46). Their responses were recorded either as the individual message recalled, or the advertisement recalled. Twelve participants recalled advertisement 1, including messages B and G. Two participants recalled advertisement 3, consisting of messages D, E, F, and G. One participant recalled advertisement 4, including messages H, A, and G. The frequency of Pap test messages recalled (including those incorporated into advertisements) are detailed in Table 4.10.

All participants were asked if they recognised a number of specific messages promoting Pap tests when prompted with each of the eight messages (see Table 4.11).

The responses to these recognition questions validate the responses to the spontaneous recall question, as the two most frequently recalled messages (‘Yes, Pap tests can be embarrassing’ and ‘It doesn’t matter if you’re not having sex’) were also the most frequently recognised messages.

Table 4.11: Prompted recall of Pap test messages

<table>
<thead>
<tr>
<th>Pap test message</th>
<th>% participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>'Yes, Pap tests can be embarrassing'</td>
<td>53</td>
</tr>
<tr>
<td>'It doesn't matter if you're not having sex'</td>
<td>52</td>
</tr>
<tr>
<td>'Don't take a chance with cervical cancer'</td>
<td>50</td>
</tr>
<tr>
<td>'Pap tests can detect 90% of most common ...'</td>
<td>50</td>
</tr>
<tr>
<td>'Early stages don't have any symptoms'</td>
<td>44</td>
</tr>
<tr>
<td>'Contact the Cancer Helpline for more information'</td>
<td>44</td>
</tr>
<tr>
<td>'I'll take care of myself for a change'</td>
<td>40</td>
</tr>
<tr>
<td>'By the time the average women reaches 60 ...'</td>
<td>34</td>
</tr>
</tbody>
</table>

Note: multiple responses possible.

Table 4.12: Number of messages recognised

<table>
<thead>
<tr>
<th>Number of messages recognised</th>
<th>% participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

The mean number of messages recognised was 3.7. A fifth of respondents recognised one or two of the messages. However, 67% of participants recalled three or more of the messages, suggesting very good coverage of the media campaign (see Table 4.12). There were no differences between screened and under-screened women in the number of messages recognised.

As well as the number of messages recognised, women in the Anti-Cancer Council sample (n = 244) were asked about the frequency with which they had heard each message. Participants reported hearing each of the messages fairly often with more reporting having
heard the messages several times than once or twice (see Table 4.13). Results suggest that the radio campaign successfully exposed a high proportion of the eligible population to the Pap test messages. Each of the messages was also recalled at a high rate, indicating that there was adequate breadth of exposure of each message.

Table 4.13: Frequency of exposure to Pap test messages

<table>
<thead>
<tr>
<th>Message</th>
<th>Once or twice (%)</th>
<th>Several times (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>It doesn't matter if you're not having sex</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td>I'll take care of myself for a change</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>Yes, Pap tests can be embarrassing</td>
<td>19</td>
<td>32</td>
</tr>
<tr>
<td>Contact the Cancer Helpline for more information</td>
<td>16</td>
<td>29</td>
</tr>
<tr>
<td>Don't take a chance with cervical cancer</td>
<td>24</td>
<td>28</td>
</tr>
<tr>
<td>Pap tests can detect 90% of most common cancers</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>Early stages don't have any symptoms</td>
<td>16</td>
<td>23</td>
</tr>
<tr>
<td>By the time the average women reaches 60 ...</td>
<td>15</td>
<td>23</td>
</tr>
</tbody>
</table>

Note: multiple responses possible.

Factors associated with recognising individual radio messages

In order to examine the association between each of the specific radio messages and other factors, logistic regression analyses were performed for each Pap test message. Factors included as predictors of Pap test message recognition were: age, marital status, education, screening status, reported frequency of having Pap tests, number of hours per day listening to the radio, preferred source of Pap test information, and the number of sources of Pap test information mentioned. Each of these variables was dichotomised for simplicity.

As Table 4.14 shows, the variables associated with recognition of Pap test messages were: the number of sources of Pap test information noticed, and the number of hours spent listening to the radio. Women who reported noticing two or more sources of Pap test information were significantly more likely to recognise each of the Pap test messages. Women who reported listening to the radio for more than one hour each day were more likely to recognise five of the eight Pap test messages. Women who were regularly screened were more likely to recognise the ‘Don’t take a chance’ message than under-screened or less regularly screened women.

Participants who preferred to obtain their Pap test information from doctors or nurses were more likely to recognise two specific messages, ‘The early stages of cervical cancer don’t have any symptoms’ and ‘Yes, Pap tests can be embarrassing’. Finally there was an association between age of the participant and the ‘Helpline’ message: older women (aged 50 years or more) were more likely to recognise this message than younger women.
<table>
<thead>
<tr>
<th>Pap message</th>
<th>Age - younger (40+) vs older (50+)</th>
<th>Marital status</th>
<th>Education status</th>
<th>Screening status</th>
<th>Frequency of Pap tests (freq = ≤2 yrs)</th>
<th>Hours/day of radio</th>
<th>Preferred source of Pap test information</th>
<th>Sources of Pap test info mentioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take care of myself</td>
<td>More than 1 hour</td>
<td>2 + sources</td>
<td>Regular screeners</td>
<td>More than 1 hour</td>
<td>2 + sources</td>
<td>Doctor/nurse</td>
<td>2 + sources</td>
<td></td>
</tr>
<tr>
<td>Not having sex now</td>
<td>More than 1 hour</td>
<td>2 + sources</td>
<td>Regular screeners</td>
<td>More than 1 hour</td>
<td>2 + sources</td>
<td>Doctor/nurse</td>
<td>2 + sources</td>
<td></td>
</tr>
<tr>
<td>Don’t take a chance</td>
<td>More than 1 hour</td>
<td>2 + sources</td>
<td>Frequent Pap tests</td>
<td>Doctor/nurse</td>
<td>2 + sources</td>
<td>2 + sources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pap tests can detect</td>
<td>More than 1 hour</td>
<td>2 + sources</td>
<td>Doctor/nurse</td>
<td>2 + sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can be embarrassing</td>
<td>More than 1 hour</td>
<td>2 + sources</td>
<td>Older than average</td>
<td>2 + sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The average woman</td>
<td>More than 1 hour</td>
<td>2 + sources</td>
<td>Older than average</td>
<td>2 + sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: An empty cell indicates that there is no significant relationship between the two variables.
Differences between screeners and under-screeners

Two definitions were used to classify well-screened and under-screened women. For the first, more lenient definition, women who reported having their last Pap test in 1995 or later were classified as ‘screeners’, and all others as ‘under-screeners’. For the more stringent second definition, only women who reported having their last Pap test in 1996 or 1997 were classified as screeners, and all others as under-screeners. Two logistic regression analyses were conducted to identify variables which differentiated regular screeners from under-screeners.

The analyses were performed using both lenient and strict definitions of screening status incorporating those women who had had at least one Pap test (n = 480). (Fourteen women had never had a Pap test. These women were excluded from analyses as some predictors were dependent on having had a test.)

The same independent (predictor) variables were included in each analysis: age, marital status, education, the number of sources of Pap test information mentioned, the preferred source of Pap test information, reported frequency of having Pap tests, having a regular doctor, feeling comfortable asking for a Pap test, and receiving reminder letters.

Pap test frequency was associated with screening status, where screeners reported more frequent Pap tests than under-screeners. This was the only variable included in the regression equation for both analyses.

For the analysis involving the lenient definition of screening status, the sex of the practitioners was also significant. Women who were regular screeners were more likely to have female practitioners than were under-screeners. No other variables differed as a function of screening status. These results suggest that sex of Pap test practitioners is potentially an important factor associated with regular screening.

Barriers to screening

Evidence from previous studies suggested that there were two specific beliefs that were associated with low screening behaviour (Savage 1998). The first was the perception that women who were in tune with their bodies would not need regular Pap test screening, and the second was that engaging in alternative health activities removes the need for regular screening.

Participants were asked to what extent they personally agreed with the statement that ‘Some women feel that they are so in tune with their bodies that they do not need screening tests’. The majority of participants (93%), disagreed with this statement to some extent. Only 4% of participants agreed with it to some extent, 1% neither agreed nor disagreed.

When asked to what extent they agreed with the statement that ‘Some women feel that if they engage in alternative activities, such as stress reduction, meditation or taking tablets they do not need screening tests’, 97% disagreed to some extent. One percent of participants agreed with this statement and 2% neither agreed nor disagreed. Thus there appeared to be a low incidence of these beliefs as barriers to screening.

Conclusion

The 1997 program identified a number of barriers to having Pap tests, and developed multi-method campaigns (including targeted letters and radio) designed to overcome these barriers. These campaigns were well received, and reached the target populations. The reception to the invitation letters was positive, however they were better at prompting thought about Pap tests than prompting action. Perhaps follow-up of under-screened women using alternative incentives could be done in conjunction with existing campaign activities.

It was found that individuals who listen to more radio had higher recognition of Pap test messages, however the most commonly-reported radio station that participants listened to, the ABC, was not included in our radio campaign.
In addition, there was a high level of awareness of Pap test information through pamphlets, posters, and television. Doctors and nurses were the best source of information nominated by screened, but not under-screened women. The fact that there were few differences between screened and under-screened women in this study brings both good and bad news. The good news is that the under-screened women probably are not from a different population than the screened women: they responded to similar types of advertising in similar ways, and campaigns designed to reach screened women would also be relevant to under-screeners. Nonetheless, disseminating information about Pap testing more broadly than in doctors’ surgeries or nurse practitioner stations is an easy matter, and providing information about the availability of female practitioners is relatively straightforward.

What makes these findings bad news as well as good news is the realisation that, in spite of successful advertising and recruitment campaigns, a significant proportion of women remain under-screened (Mitchell, Higgins & Burrows 1997). This suggests that we have not identified all of the factors which are barriers to cervical screening. The barriers examined in the 1997 program were not shown to be very widespread, so it is important to identify the beliefs which are more likely to be barriers to cervical screening. This challenge is clearly a direction for future research.

Advertisements used in radio campaign

**Advertisement 1**
Hi, look I can’t make lunch on Wednesday. I’m having a Pap test.
Oh, but you’re divorced—surely you don’t need to bother with that any more.
Cervical cancer can affect anyone you know... married, single, divorced or widowed.
I never thought about it like that. I haven’t had a Pap test since Jim died … I just thought I was a bit past it ...
It doesn’t matter if you’re not having sex any more … if you’ve EVER had sex you need to keep having Pap tests every two years until you’re about 70. So, should I book you in?
I’ll make an appointment with my doctor today.
For more information about Pap tests contact the Cancer Helpline on 13 11 20.

**Advertisement 2**
Oh, I know you, you love a gamble don’t you?
Oh yeah, pokies, lotto, the Melbourne Cup, I can’t resist them. But I’d never take a really big risk.
What about your health? Do you have a Pap test every two years?
Oh no, I won’t get cervical cancer.
I bet most of the women who died of cervical cancer thought the same thing. You know not having a regular Pap test is the biggest risk factor for cervical cancer. Oh, that really is a gamble.
Don’t take a chance with cervical cancer. Make an appointment with your doctor today.
For more information about Pap tests contact the Cancer Helpline on 13 11 20.
**Advertisement 3**

There's no way I'm having a Pap test. You either get cancer or you don't and there's nothing anyone can do about it.

My dear, Pap tests can detect 90% of the most common type of cervical cancer. Early detection means treatment is usually easy and highly successful.

But I feel fine; I'd know if something was wrong with my body.

The early stages of cervical cancer don't have any symptoms. You can look healthy and feel healthy and still have abnormal cells in your cervix.

Just the thought of it is so embarrassing.

Yes, Pap tests can be embarrassing but they can save your life. Last year about 350 Australian women died of cervical cancer. No one ever died of embarrassment.

*For more information about Pap tests contact the Cancer Helpline on 13 11 20*

**Advertisement 4**

It says here that by the time the average woman reaches 60 she has changed 14,000 dirty nappies, cooked 700,000 dinners and wiped about 4,000 runny noses.

No wonder we never get any time for ourselves. Sometimes I feel guilty even having a cuppa.

Well there's one thing I always make time for and that's a Pap test every two years.

You know, most cases of cervical cancer occur in women over 40. So having a regular Pap test becomes even more important as we get older.

So I'll take care of myself for a change. I'll make an appointment for a Pap test today.

*For more information about Pap tests contact the Cancer Helpline on 13 11 20*

**References**


Chapter 5 The impact of the 1999 media campaign on cervical screening knowledge and self-efficacy

Madeline Fernbach  October 2000

Abstract
A three-phase cross-sectional study (n = 1,571) was conducted to investigate the impact of the PapScreen Victoria media campaign conducted in English, and the extent to which a media campaign can influence women's perceived self-efficacy associated with having a Pap test. Results revealed that women's awareness of Pap testing messages and priority of this health issue was greater at the first follow-up than at baseline, and was maintained at the second. It was perceived as more difficult to choose a practitioner and ring for results at the first follow-up, and perceived self-efficacy was lower than at baseline. Results suggest that the cognitive processes at work are more complex than can be explained by existing theoretical approaches.

Introduction
Victoria is the leading State in Australia for cervical screening (Australian Institute of Health and Welfare 1998). Two-yearly screening rates have improved in Victoria from 50% in 1988–89 (Mitchell, Higgins & Burrows 1999) to 75% in 1998–99 (Mitchell, Higgins & Burrows 2000). (Note that figure presented in text is converted from the rate calculated using Estimated Resident Population to that using census figures, to be consistent with screening rates for 1988–89.)

In addition, the cervical cancer mortality rate has almost halved in the past 15 years (Thursfield, Whitfield & van Winckel 1999). As screening rates have increased substantially over the past decade, further increases will be challenging to obtain. Under-screened women are often of low socioeconomic status, and are often from diverse cultures (Fernbach et al under review; Stoddard et al 1998; Suarez et al 1997). They also have more barriers to cervical screening (Orbell et al 1995), barriers strong enough to prevent women from presenting for a Pap test. Thus, reaching these women to encourage them to have Pap tests is also challenging.

Within PapScreen Victoria, a study of well-screened and under-screened women described a series of eight behavioural stages of cervical screening (Fernbach 1999). It suggested that the experience of having a Pap test, together with making an appointment, choosing a practitioner, and perceived eligibility, were the major barriers for under-screened women. The national and statewide ‘No excuses’ media campaign targeted many of these barriers.

Targeted media campaigns are one of the most effective ways of reaching a broad section of the population (Finnegan & Viswanath 1997; Marcus & Crane 1998), especially those who are under-screened (Murray 1999). Strategic messages serve to address and overcome barriers to action, such that individuals are able to act in healthy ways that they previously could not. Mass media is an important strategy that has been successful in previous years for the Victorian cervical screening program (Cockburn et al 1991).

One key predictor of behaviour or behavioural intention within the literature is self-efficacy, the belief that one is competent to perform a behaviour (Marteau 1995). For instance, within the Theory of Planned Behaviour (Ajzen & Fishbein 1980), evidence shows that self-efficacy (conceived variously as synonymous with, or separate from, perceived behavioural control), is related in many cases to both intention to perform an action, and actually performing the
action (Ajzen 1991; Conner & Armitage 1998). Previous work within the screening literature has had mixed success with the detection of such a relationship, however. A review of mammography screening reported a positive association between breast checks and perceived self-efficacy in one study, but no association in another (Carry & Emmons 1994). On the other hand, clear associations were found between self-efficacy and cervical screening (Sheeran & Orbell 2000). Similarly, within the Trans-Theoretical Model of behaviour change, self-efficacy plays a role in people’s confidence in their ability to maintain the healthy behaviour, and resist temptation (Prochaska, Redding & Evers 1997).

As targeted media messages are designed to reduce perceived barriers to action, it is reasonable to assume that they might increase self-efficacy associated with performing the target behaviour. The aim of the current study was to investigate both the impact of the media campaign, and the extent to which a mass media campaign can change women’s perceived self-efficacy associated with screening. It was expected that knowledge of Pap screening messages would increase after an initial phase of advertising, and that self-efficacy would increase after a sustained media campaign.

Method

Media campaign

The 1999 campaign consisted of a high-intensity (200 TARPs), short duration (three-weeks) phase; a break of two weeks; then a lower-intensity campaign (75–150 TARPs) over a longer time (12 weeks). TARP is the standard advertising industry measure of the weekly volume of television advertising weight, and is an estimate based on ratings surveys. One TARP represents 1% of the target audience who have had the opportunity to see a campaign advertisement on television. In the case of the 1999 PapScreen Victoria media campaign, the target audience varied but included women aged 18–54 years. The eight messages centred around women’s excuses associated with not having a Pap test (for example, ‘But I’m too busy to go to the doctor’, ‘Cervical cancer. Don’t make excuses, make an appointment’) and eligibility criteria (for example, ‘But I’m too old to need a Pap smear’, ‘But I don’t have any symptoms’).

Design

A cross-sectional exploratory study was performed, whereby a sample of women was interviewed before the campaign (baseline), another sample was interviewed during the break between phases (follow-up one), and then a further sample was interviewed at the end of the campaign (follow-up two).

Participants

In total, 1,571 women were interviewed, and after excluding women ineligible for medical reasons (hysterectomy, on doctors’ advice), the final sample consisted of 1,301 participants (431 in baseline; 430 in follow-up one; 440 in follow-up two). The women ranged in age between 25 and 69 years (M = 42.64; SD = 11.95) and did not differ in mean age from baseline to follow-up. The majority of interviewees (88%, n = 1,140) spoke English at home, with 9% speaking European languages, 2% Asian languages, 1% Middle Eastern languages, and a further 1% speaking other languages. Nineteen women (2%) were of Koori or Torres Strait Islander descent. Participants were selected from suburbs of Melbourne, Australia, known to have lower screening rates in order to adequately represent under-screened women in the sample.
Measures
The interview schedule consisted of 23 questions. Five examined the impact of the media campaign and unprompted and prompted recall of the eight cervical screening messages and two messages that were not included in the campaign, used as a manipulation check. One four-part question established women's cervical screening regularity ('screening status'), and two questions asked intention and perceived self-efficacy associated with having Pap tests on five-point Likert scales (for example, 'Is it likely or unlikely that you will have a Pap test in the next two years?', 1 = very likely, 5 = very unlikely). Nine questions explored the extent to which each step of the cervical screening process (for example, choosing a practitioner, or ringing to make an appointment) was easy or difficult. Seven of these questions were measured on five-point Likert scales (1 = very easy, 5 = very difficult), and two were dichotomous (for example, 'Are you supposed to have a Pap test?'). These questions tested perceived self-efficacy associated with performing the individual stages. Finally, the remaining questions identified demographic information (age, language spoken at home, postcode).

Procedure
Participants were approached at shopping areas of suburban Melbourne in postcodes with a high percentage of under-screened women (obtained via the Victorian Cervical Cytology Registry). Trained female interviewers introduced themselves as from the Anti-Cancer Council of Victoria and asked potential participants if they would answer a five-minute questionnaire about women's health. The interviews were completed on site. The same areas were sampled in April, June, and October of 1999. The interviewers were instructed, on completion of each interview or after a refusal, to approach the next eligible woman (ie from 18–69 years) they saw. Thus the recruitment criteria were being female and aged between 18 and 69 years.

Results
Screening status
Of the 1,301 women who reported their screening status, 1,056 (81%) said they had had a Pap test within the last two years, and the remaining 19% said they had not. After examining the relationship between self-reported screening status (whether or not women had had a Pap test in the last two years), and the year and date they cited for their last Pap test, there was an agreement of 96%. Thus it was considered accurate enough to use self-categorised screening status as the screening status variable. There were no differences in screening status from baseline to follow-up (81% well-screened at baseline, 81% at follow-up one, 82% at follow-up two), χ²(2) = 0.37, p>.05.

Impact of the media campaign
First, women's exposure to general health messages was examined, to examine the impact of the media campaign. Second, familiarity with campaign messages was examined, to see if the PapScreen Victoria media campaign influenced women in the predicted way. Finally, the outcomes of the media campaign in the form of changes in attitudes and behaviours were examined.

General health messages
Of the 1,077 women who reported having heard any health messages in the last six months, smoking messages were mentioned most often (49% overall, 50% baseline and follow-up one, 46% at follow-up two), followed by Pap test (38% overall, 21%, 48%, 44%), heart (20% overall, 23%, 20%, 16%), diet (18% overall, 19%, 20% 16%), and skin messages (13%
overall, 11%, 14%, 13%). Chi square tests examining recognition of health messages by screening status and testing stage revealed that Pap tests were reported more during follow-up one and two than at baseline, $\chi^2(2) = 64.14, p<.001$. Of the women who reported having heard any health messages, 72 women mentioned Pap tests at baseline, while 174 and 160 women reported they had heard Pap tests in the media at follow-up one and two respectively. No other health messages differed as a function of testing stage, nor did recognition of any health messages differ as a function of screening status.

To examine whether women recalled messages differently across the three testing periods, the frequency with which the health message was the first mentioned was compared from baseline to follow-up one and two. Chi square analyses revealed that only 4% of women mentioned Pap tests first at baseline, compared with 15% at both follow-up one and follow-up two, $\chi^2(2) = 35.12, p<.001$. First mention of smoking messages did not differ significantly over time (29% at baseline, 23% at follow-up one, 24% at follow-up two), nor did heart messages (6%, 8%, 5%), diet messages (4%, 6%, 3%), or skin cancer (2%, 3%, 3%).

### Pap screening messages

When asked where they had heard or seen anything about Pap tests in the last year, women across testing stages most often reported seeing Pap test messages on television (74% of all women), and at doctors’ surgeries (63%), in women’s magazines (34%), hearing them on the radio (22%), through the Anti-Cancer Council (21%), and in newspapers (15%). Only a small number saw or heard messages in other places (3%).

To examine whether source cited varied as a function of testing stage or screening status, logistic regression analyses were performed, including testing stage and screening status as predictors of sources of Pap tests in the media (see Table 5.1). Mention of television as a source of Pap test messages increased from baseline (58%) to follow-up one (83%) and two (82%), while mention of the Anti-Cancer Council increased from baseline (17%) to the first follow-up (28%). Mention of both women’s magazines and doctors/health workers decreased from baseline (39% for women’s magazines, 74% for doctors/health workers) to the first follow-up (32%, 64%) and second follow-up (32%, 53%), and also was lower for under-screened women (28%, 54%) than well-screened women (36%, 66%).

Prompted recall of Pap test messages was substantially higher than spontaneous recall (see Table 5.2). To examine changes in spontaneous and prompted recall of Pap test messages in the media, logistic regression analyses were performed, including screening status and testing stage as predictors of message recall. While screening status was not a predictor of message recall, spontaneous recall increased from baseline to follow-up one and two for the following messages: ‘But I’m too old to need a Pap smear’; ‘But I’m too busy to go to the doctor’; ‘But I’ve only ever had one partner’; ‘Cervical cancer. Don’t make excuses, make an appointment’; and ‘A Pap smear every two years can help prevent up to 90% of cervical cancer’. In addition, spontaneous recall of ‘But I don’t have any symptoms’, ‘When did you last have a Pap smear?’, and ‘If you are under 70 you need a Pap smear every two years’ increased from baseline to follow-up two (see Table 5.3).

Similarly, prompted recall increased from baseline to follow-up one and two for ‘But I’m too old to need a Pap smear’, ‘But I don’t have any symptoms’, ‘But I’m too busy to go to the doctor’, ‘But I don’t remember when I had my last Pap smear’, ‘But I’ve only ever had one partner’, ‘Cervical cancer. Don’t make excuses, make an appointment’, and ‘Symptoms only appear when cervical cancer is well advanced’ (see Table 5.4).
### Table 5.1: Summary of logistic regression predicting sources of Pap test messages

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Television OR (95% CI)</th>
<th>Women's magazines OR (95% CI)</th>
<th>Anti-Cancer Council OR (95% CI)</th>
<th>Doctors/health workers OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Follow-up 1</td>
<td>3.52 (2.57-4.82)</td>
<td>0.75 (0.57-0.99)</td>
<td>1.86 (1.36-2.58)</td>
<td>0.62 (0.47-0.84)</td>
</tr>
<tr>
<td>Follow-up 2</td>
<td>3.24 (2.38-4.44)</td>
<td>0.73 (0.56-0.97)</td>
<td>0.97 (0.68-1.38)</td>
<td>0.41 (0.31-0.54)</td>
</tr>
<tr>
<td>Well-screened</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Under-screened</td>
<td>1.05 (0.75-1.46)</td>
<td>0.68 (0.50-0.93)</td>
<td>0.53 (0.41-0.70)</td>
<td>0.60 (0.45-0.84)</td>
</tr>
</tbody>
</table>

Note: Newspapers and radio were not predicted by stage or screening status and are not reported here.

### Table 5.2: Spontaneous and prompted recall of Pap screen messages by testing stage

<table>
<thead>
<tr>
<th>Message</th>
<th>Baseline (%) spontaneous (N = 431) prompted (N = 431)</th>
<th>Follow-up 1 (%) spontaneous (N = 426) prompted (N = 430)</th>
<th>Follow-up 2 (%) spontaneous (N = 438) prompted (N = 440)</th>
</tr>
</thead>
<tbody>
<tr>
<td>But I'm too old to need a Pap smear</td>
<td>1 (8)</td>
<td>1 (11)</td>
<td>1 (15)</td>
</tr>
<tr>
<td>But I don't have any symptoms</td>
<td>1 (67)</td>
<td>1 (83)</td>
<td>1 (88)</td>
</tr>
<tr>
<td>But I'm too busy to go to the doctor</td>
<td>5 (55)</td>
<td>2 (74)</td>
<td>5 (83)</td>
</tr>
<tr>
<td>But I don't remember when I had my last Pap smear</td>
<td>0 (75)</td>
<td>2 (47)</td>
<td>4 (75)</td>
</tr>
<tr>
<td>But I've only ever had one partner</td>
<td>5 (69)</td>
<td>2 (82)</td>
<td>9 (84)</td>
</tr>
<tr>
<td>Cervical cancer. Don't make excuses, make an appoint</td>
<td>1 (65)</td>
<td>9 (83)</td>
<td>8 (80)</td>
</tr>
<tr>
<td>When did you last have a Pap smear?</td>
<td>1 (76)</td>
<td>1 (77)</td>
<td>4 (75)</td>
</tr>
<tr>
<td>A Pap smear every two years can help prevent up to 90% of cervical cancer</td>
<td>3 (81)</td>
<td>9 (81)</td>
<td>7 (86)</td>
</tr>
<tr>
<td>If you are under 70 you need a Pap smear every two years</td>
<td>4 (58)</td>
<td>5 (58)</td>
<td>8 (61)</td>
</tr>
<tr>
<td>Symptoms only appear when cervical cancer is well advanced</td>
<td>0 (25)</td>
<td>4 (46)</td>
<td>4 (56)</td>
</tr>
</tbody>
</table>

The cervical screening messages were categorised into those included in the media campaign, and those not included in the media campaign. Six of the eight campaign messages were recalled more when prompted by the end of the campaign, however two changed very little from baseline to follow-up. In general, however, those messages included within the campaign were recalled to a greater extent than those excluded (see Table 5.5).

Finally, the number of spontaneous messages recalled by women was significantly correlated with self-efficacy (Pearson’s r(1299) = −.10, p<.001), where those who recalled more messages decreased in perceived self-efficacy.
### Table 5.3: Logistic regression predicting unprompted recall of cervical screening messages

<table>
<thead>
<tr>
<th></th>
<th>Too old OR (95% CI)</th>
<th>No symptoms OR (95% CI)</th>
<th>Too busy OR (95% CI)</th>
<th>Partner OR (95% CI)</th>
<th>Excuse OR (95% CI)</th>
<th>Last Pap test OR (95% CI)</th>
<th>Prevent up to 90% OR (95% CI)</th>
<th>Under 70s need PT OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Follow-up 1</td>
<td>6.92 (2.67-17.94)</td>
<td>3.59 (0.74-17.36)</td>
<td>13.43 (5.32-33.84)</td>
<td>28.87 (7.03-118.56)</td>
<td>14.76 (4.53-48.05)</td>
<td>3.06 (0.62-15.27)</td>
<td>3.75 (0.73-19.73)</td>
<td>1.41 (0.00-9.23)</td>
</tr>
<tr>
<td>Follow-up 2</td>
<td>10.47 (4.13-26.57)</td>
<td>10.75 (2.50-46.14)</td>
<td>15.64 (6.34-39.19)</td>
<td>21.35 (5.16-88.31)</td>
<td>12.35 (3.77-40.43)</td>
<td>8.12 (1.86-35.56)</td>
<td>2.19 (0.15-4.20)</td>
<td>1.15 (1.15-3.91)</td>
</tr>
<tr>
<td>Well-screened</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Under-screened</td>
<td>0.87 (0.48-1.58)</td>
<td>0.49 (0.15-1.64)</td>
<td>0.88 (0.34-1.94)</td>
<td>1.07 (0.62-1.84)</td>
<td>0.82 (0.47-1.59)</td>
<td>0.80 (0.40-1.72)</td>
<td>1.01 (0.63-1.55)</td>
<td>1.20 (0.66-2.16)</td>
</tr>
</tbody>
</table>

Note: ‘Forgot’, ‘Symptoms’ were not predicted by stage or screening status and were not reported here.

### Table 5.4: Logistic regression predicting prompted recall of cervical screening messages

<table>
<thead>
<tr>
<th></th>
<th>Too old OR (95% CI)</th>
<th>No symptoms OR (95% CI)</th>
<th>Too busy OR (95% CI)</th>
<th>Forgot OR (95% CI)</th>
<th>Partner OR (95% CI)</th>
<th>Excuse OR (95% CI)</th>
<th>Symptomatic women advanced OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Follow-up 1</td>
<td>2.49 (1.80-3.44)</td>
<td>2.22 (1.74-3.10)</td>
<td>2.51</td>
<td>1.49 (1.09-2.00)</td>
<td>1.21</td>
<td>1.00 (1.27)</td>
<td>2.05 (1.49-2.83)</td>
</tr>
<tr>
<td>Follow-up 2</td>
<td>3.81 (2.92-5.42)</td>
<td>3.46 (2.55-4.69)</td>
<td>2.84</td>
<td>1.86 (1.40-2.43)</td>
<td>1.84</td>
<td>1.49 (2.43)</td>
<td>1.27 (1.55-2.88)</td>
</tr>
<tr>
<td>Well-screened</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Under-screened</td>
<td>0.93 (0.66-1.32)</td>
<td>0.82 (0.50-1.31)</td>
<td>0.90</td>
<td>0.62 (0.41-1.11)</td>
<td>0.75</td>
<td>0.57 (1.00)</td>
<td>0.87 (0.63-1.22)</td>
</tr>
</tbody>
</table>

Note: “When did you last have a Pap smear,” “Prevention of 90% of cancer,” and “Women under 70 need Pap tests” were not predicted by either variable and hence are not reported here.
Table 5.5: Change in prompted recall of cervical screening and dummy messages

<table>
<thead>
<tr>
<th>Prompted recall</th>
<th>Baseline (%)</th>
<th>% change from baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cervical screening (targeted) messages</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptoms only appear when cervical cancer is well advanced</td>
<td>25</td>
<td>+31</td>
</tr>
<tr>
<td>But I don’t have any symptoms</td>
<td>55</td>
<td>+26</td>
</tr>
<tr>
<td>But I’m too old to need a Pap smear</td>
<td>67</td>
<td>+21</td>
</tr>
<tr>
<td>But I’m too busy to go to the doctor</td>
<td>74</td>
<td>+15</td>
</tr>
<tr>
<td>But I’ve only ever had the one partner</td>
<td>69</td>
<td>+15</td>
</tr>
<tr>
<td>Cervical cancer. Don’t make excuses, make an appointment</td>
<td>65</td>
<td>+15</td>
</tr>
<tr>
<td>A Pap smear every two years prevents up to 90% of cervical cancer</td>
<td>81</td>
<td>+5</td>
</tr>
<tr>
<td>If you are under 70 you need a Pap smear every two years</td>
<td>58</td>
<td>+3</td>
</tr>
<tr>
<td><strong>Dummy (non-targeted) messages</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>But I don’t remember when I had my last Pap smear</td>
<td>47</td>
<td>+15</td>
</tr>
<tr>
<td>When did you last have a Pap smear?</td>
<td>26</td>
<td>-1</td>
</tr>
</tbody>
</table>

Changes in attitudes and behaviour

To investigate the impact of the media campaign on women’s cervical screening attitudes and behaviour, the process of cervical screening was divided into eight behavioural steps: perceiving the self to be eligible, remembering or choosing to have a Pap test, selecting a practitioner to perform the test, making an appointment, turning up to the appointment, the experience of having the Pap test, ringing to get the results, and repeating the test every two years.

The steps that were most often stated as stopping women from having Pap tests were the experience of having the Pap test (16%), remembering to have a Pap test (14%), and choosing a practitioner (14%). Other steps were mentioned less: making an appointment (7%), ringing to get the results (5%), repeating the test every two years (5%), and turning up to the appointment (3%).

Twenty eight percent of under-screened women said forgetting to have a Pap test was a barrier to screening, compared to 11% of well-screened women, $\chi^2(1) = 46.39, p < .001$. Similarly, 35% of under-screened women said difficulty in choosing a practitioner stopped them from having a Pap test, compared to only 9% of well-screened women, $\chi^2(1) = 108.91, p < .001$, and 19% of under-screened women said difficulty making an appointment was a barrier which stopped them from having Pap tests compared to 4% of well-screened women, $\chi^2(1) = 60.60, p < .001$.

Difficulty in turning up to a Pap test was not a big barrier to having Pap tests, however under-screened women reported this over four times as often (9%) as well-screened women (2%), $\chi^2(1) = 26.23, p < .001$. The unpleasant experience of having a Pap test was a significant barrier to screening for under-screened women, with 42% of these women reporting that it stopped them from having a Pap test, compared to only 10% of well-screened women, $\chi^2(1) = 151.90, p < .001$.

Having difficulty ringing to get the results of the Pap test was again more of a barrier for under-screened women (10%) than well-screened women (3%), $\chi^2(1) = 20.88, p < .001$, as was the prospect of repeating the test every two years (20% for under-screened women, 2% for well-screened women), $\chi^2(1) = 127.86, p < .001$. Unsurprisingly, under-screened women reported that more of these steps stopped them from having a Pap test ($M = 1.60, SD = 1.50$) than well-screened women ($M = 0.41, SD = 0.99$), $F(1,1295) = 228.41, p < .001$.

Women’s self-reported intention and perceived self-efficacy, together with the perceived difficulty women had completing each behavioural step, were examined as a function of testing stage and screening status using a multivariate analysis of variance. This yielded a main effect for each independent variable, but no interaction (see Table 5.6).

For intention to screen, well-screened women reported it was more likely they would have a Pap test in the next two years than under-screened women, however this variable did not
differ as a function of testing stage. Similarly, well-screened women perceived it as easier to arrange to have a Pap test than under-screened women (a measure of overall perceived self-efficacy). However, at follow-up one and two, women thought it was more difficult to arrange a Pap test than at baseline.

The first step of the screening process is eligibility. Almost all (1,270 of the 1,297 women who answered the question) believed that they themselves were supposed to have a Pap test. Two percent said that they were not eligible, while only three women (0.2%) said they did not know whether they were supposed to have a Pap test or not. Thus, in general, women were aware that they were eligible for Pap tests.

The second step of the screening process is remembering to have a Pap test. This did not differ as a function of testing stage, however under-screened women perceived remembering to have a Pap test as more difficult than well-screened women.

The third step of the screening process is choosing a practitioner. Women at follow-up two perceived choosing a practitioner to be more difficult than those at baseline. While under-screened women believed it was more difficult than well-screened women, there was a significant interaction effect, F(2,1279) = 3.04, p<.05, where under-screened women at follow-up two perceived choosing a practitioner to be most difficult, and well-screened women at baseline perceived it to be least difficult. Thus, the initial differences between screened and under-screened women became more marked over time.

The fourth step of the screening process is making an appointment, and the fifth is turning up to the appointment. Neither of these differed as a function of testing stage, however under-screened women perceived it to be more difficult to perform these steps than well-screened women.

A similar pattern was found with the sixth step of the screening process, the experience of having a Pap test. While there were no differences in perceived difficulty of the experience of having a Pap test as a function of testing stage, under-screened women perceived the experience as more difficult than well-screened women.

For the seventh step, ringing to get results, it was perceived as more difficult at follow-up two than either baseline or follow-up one to ring and get results. In addition, under-screened women perceived it as more difficult to get results than well-screened women.

Finally, the eighth step is to repeat the procedure every two years. This did not differ as a function of testing stage, however under-screened women perceived it as more difficult to repeat Pap tests every two years than well-screened women.

To investigate the role of these steps in the prediction of intention and self-efficacy, a series of simple regression analyses was performed for under-screened women. The first step, perceiving the self to be eligible, and the last step, repeating Pap testing every two years, were significant predictors of intention to screen for under-screened women, F(8,226) = 6.46, p<.001. This equation explained 16% of the variance in values. Women who perceived themselves as eligible to have a Pap test (β = .38), and who thought that it was easy to repeat Pap testing every two years (β = .24), had more intention to screen than those who thought it was more difficult, or who thought they were ineligible. Similarly, the barriers to Pap testing (women stating that particular steps stop them from having a Pap test) that significantly predicted intention were the same two steps as mentioned above—perceiving the self to be eligible (β = .28), and repeating the Pap test every two years (β = .17)—together with the sixth, the experience of having a Pap test (β = .22). Women who perceived these steps as barriers had less intention to have Pap tests, F(8,224) = 6.33, p<.001. This equation explained 15.5% of the variance.
<table>
<thead>
<tr>
<th>Table 5.6: Behavioural variables as a function of testing stage and screening status</th>
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<td><strong>Baseline</strong></td>
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<tr>
<td><strong>M (SD)</strong></td>
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<td><strong>Intention to screen</strong></td>
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<td><strong>Self-efficacy</strong></td>
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<td><strong>Remember to have a Pap test</strong></td>
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<td><strong>Experience of having a Pap test</strong></td>
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<tr>
<td><strong>Ring to get results</strong></td>
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<tr>
<td><strong>Repeat every 2 years</strong></td>
</tr>
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Note: For each dependent variable, different superscripts indicate significantly different means.

# Higher means indicate greater levels of variable.

^ Higher means indicate greater ease performing the stage.

* p < .01  ** p < .001

Self-efficacy was significantly predicted by the perceived difficulty of performing some of the steps of the cervical screening process, \( F(8,226) = 5.30, p < .001 \). Perceiving the self to be eligible to have a Pap test (\( \beta = .13 \)), finding it easy to choose a practitioner (\( \beta = -.15 \)), and to make an appointment (\( \beta = -.27 \)) were associated with increased self-efficacy. This equation explained 13\% of the variance. However, the barriers to cervical screening which were associated with decreased self-efficacy were those in the last few steps of the process. Turning up to the appointment (\( \beta = -.13 \)), the experience of having a Pap test (\( \beta = -.15 \)), and ringing to get results (\( \beta = -.14 \)) were the steps that stopped under-screened women from having Pap tests, and these were associated with reduced self-efficacy, \( F(8,224) = 2.90, p < .01 \). This equation explained only 6\% of the variance.

**Discussion**

Analysis of women’s recognition of health messages indicated that both well-screened and under-screened women recalled the same types of health messages. This is encouraging with respect to Pap test messages as the women most at risk for cervical cancer, under-screened women, were exposed to the PapScreen Victoria communication strategies.

Also encouraging is the fact that both women’s awareness of Pap testing messages and priority of this health issue were greater at follow-up one, and remained at the same level at the second follow-up. Research indicates that sustained exposure to a health message is more effective than short intensive periods for health programs (Jenkins et al 1999). As expected, awareness of other health messages did not change over time, indicating that the effects measured were a result of the media campaign.

Television and doctors’ surgeries were the most commonly-cited sources of Pap test information. As predicted, awareness of Pap testing messages on television increased as a result of the media campaigns. Of interest was the increase of the Anti-Cancer Council as a source of information at follow-up one and the decrease at follow-up two. This mirrors the level of community activity exhibited by PapScreen Victoria through the Anti-Cancer Council during this period.

There was a decrease over time of exposure to Pap test information through doctors’ surgeries and through women’s magazines, perhaps reflecting the emphasis on other media throughout the campaign, which most likely displaced women’s memory of these sources.

On examination of the spontaneous and prompted recall of Pap testing messages, it is clear that some messages were more difficult for women to remember. In particular, two of the eight messages were poorly recalled, especially in the unprompted form. The poorly-recalled messages were ‘A Pap smear every two years can help to prevent up to 90\% of cervical cancer’, and ‘If you are under 70 you need a Pap smear every two years’. These were quite complex messages and perhaps recall of these was affected because of this. Familiarity with cervical screening messages generally increased at follow-up one, and was maintained at the second follow-up. In addition, prompted recall of the two messages which were tested but not included in the campaign—the ‘dummy’ messages—did not improve to the same extent as the campaign messages.

Thus, consistent with previous research (Marcus & Crane 1998; Jenkins et al 1999), the media campaign was successful at reaching target women and maintaining their awareness of the cervical screening messages over time.

The psychological and behavioural outcomes of the media campaign were clearly evident. It was shown that there were few effects as a result of interactions between testing stage of the program and screening status. This indicates that under-screened women received the messages and responded to them in a similar way to well-screened women.

Under-screened women appeared to find most steps of the screening process difficult. Early and late steps (for example, perceiving the self to be eligible, and repeating the test every two years) affected their intention to screen, while decreased self-efficacy was influenced by the perceived difficulty of performing the middle steps of the process. It is possible that an initial resistance to screening was created when women contemplated the general screening process, as represented by eligibility and the thought of having to embark on regular screening.
may have reduced under-screened women’s intention to screen. A secondary resistance may have been developed when under-screened women contemplated the actual steps involved in having a Pap test: choosing a practitioner, making an appointment, the experience, and getting results. It may have been overwhelming for these women to imagine performing the steps, hence decreasing their belief in their ability to do the task.

Independent of this finding were clear effects on perceived difficulty of each cervical screening stage as a function of testing stage. It was perceived as more difficult to choose a practitioner and ring for results at follow-up. In addition, intention to screen and perceived self-efficacy were lower at the first follow-up than at baseline. These effects appear to be counter-intuitive and, at worst, appear to suggest that the campaign was detrimental to women’s screening attitudes. In a review of the Theory of Planned Behaviour, Conner and Armitage (1998) surmised that situations perceived as uncontrollable would be likely to reduce self-efficacy, whereas those which an individual could control would increase self-efficacy (Ajzen 1991). Clearly, a situation where women can choose to have or not to have a Pap test is a controllable situation, one in which women would be expected to increase in self-efficacy according to the theory of planned behaviour.

Nonetheless, similar results to those reported here were found for under-screened women in a mammography screening intervention in the US. This study reported that a media campaign appeared to inhibit first-time mammography screening (McCaul, Jacobson & Martinson 1998). These results suggest that the findings from the current paper are not merely an aberration, but legitimate data which cannot be explained by the theory of planned behaviour.

In addition, information on screening rates from the Victorian Cervical Cytology Registry indicated that the screening rate increased by 16% over the campaign period (Gilchrist 1999). Evidence suggests that the media campaign did influence people: the more unprompted messages women remembered, the lower was their perceived self-efficacy. Therefore, either screening rates, intention to screen, and perceived self-efficacy may be unrelated, or other cognitive processes are at work. If the former explanation is correct, the theory of planned behaviour must be called into question.

However, if the latter explanation is correct, a hypothesis about cognitive processes can be posited using the Transtheoretical Model of Behaviour change (Prochaska, Redding & Evers 1997). The Transtheoretical Model describes five steps or stages through which individuals move toward the ultimate goal of maintaining behaviour change. These are: Precontemplation (presently not doing the behaviour and not intending to start in a given time period), Contemplation (not doing the behaviour but considering starting in a given time period), Preparation (taking the first basic steps to change behaviour), Action (having initiated a change for a specified period of time), and Maintenance (having sustained the change beyond the Action period, indicating long-term commitment/ adherence) (Rakowski et al 1997).

It is possible that women at stage one in the current study were either at maintenance phase (well-screened women), or at a pre-contemplation or contemplation stage (under-screened women). The media campaign may have encouraged under-screened women’s movement to contemplation and preparation stages, while reminding them of the barriers to cervical screening. At contemplation and preparation stages, obstacles must be assessed and overcome in order for behaviour to occur. It is reasonable to assume that the barriers to behaviour (and transition to another stage) are more salient during this transition period, perhaps manifesting as decreases in perceived self-efficacy.

On the other hand, other evidence suggests that barriers to behaviour—‘cons’ compared to ‘pros’—decrease as women who are preparing to have a mammogram move from precontemplation to contemplation to action (Stoddard et al 1998). This movement to action would be consistent with an increase in perceived self-efficacy as the barriers to screening decrease.

Thus, neither the Transtheoretical Model nor the Theory of Planned Behaviour can provide a satisfactory explanation for the results in this paper. Clearly, further research is needed to illuminate the nature of these interesting effects.
In summary, the media campaign successfully changed women’s awareness of cervical screening, and improved recognition of cervical screening messages. However, perceived self-efficacy decreased over time in spite of an increase in screening reported by an external, reliable source. The reason why women in this study did not exhibit patterns consistent with existing theory will be addressed in future research.

References


Chapter 6  Young women's issues associated with Pap tests: a qualitative study of Victorian women

Abstract

Young women have been overlooked in educational campaigns promoting cervical screening. The aim of this study was to examine younger women's knowledge, attitudes, and behaviour associated with Pap tests to inform the development of such campaigns.

Ten qualitative focus group discussions were held with 57 women aged 15 to 44 years. Key themes within the interviews were extracted from audiotape recordings of each focus group. Despite a basic understanding of Pap tests and abnormal cervical cells, the young women from this sample were unclear about the purpose of Pap tests and had almost no knowledge of human papilloma virus. While the actual experience of Pap tests was quicker and less traumatic than the women expected, many described the procedure as embarrassing and inconvenient. The women suggested a number of improvements to the cervical screening process, including childcare facilities and better communication with practitioners during consultations. While the barriers that women under 40 years face are consistent with past research on older women, there are some issues that are unique to young women. Such issues should be addressed so that subsequent decisions about cervical screening are not about whether or not a woman will have a Pap test, but rather when she will have it. An increase in screening of younger women as a result of addressing the issues identified in this paper will increase early detection and treatment of cervical abnormalities before they become cervical cancer.

Introduction

In Victoria, the cervical cancer mortality rate has halved in the 15 years to 1997 (36 per 10,000 in 1982, 18 per 10,000 in 1997) (Thursfield, Whitfield & van Winckel 1999). Screening rates for Victorian women have increased from 50% for Australian women overall in 1988-9 (AIHW 1991) to 70% for Victorian women in 1996-7 (Mitchell, Higgins & Burrows 1999). Research examining women's attitudes and other issues associated with cervical screening has focussed on women over 40, and especially those over 50 years of age (Cockburn et al 1991; Mitchell et al 1991). Women in these age groups have a higher incidence of cervical cancer than women younger than 40 years (Giles et al 1998). The screening rates for each age group in Victoria reflect the emphasis of education campaigns on older women, where women over 40 have higher screening rates than younger women (under 40). Compared to other States of Australia, Victoria's screening rates are the highest or second-highest in Australia for women from 40 to 74 years of age, and fall to fourth and sixth for younger women (AIHW 1998). In 1997 and 1998, about 60% of women in their 20s had a Pap test, compared to more than 85% of women in their 50s. The lowest screening rates were recorded in the youngest women, with less than half of 20 to 24 year olds having a Pap test in a two year period (Mitchell, Higgins & Burrows 1999).

Younger women, however, are more likely to be diagnosed with high-grade cervical abnormalities than older women (AIHW 1998). Women who are diagnosed with cervical abnormalities are likely to experience a range of negative responses such as anxiety, depression, and a fear of developing cancer (Bell et al 1995; Gath et al 1993; Greenwald et al 1978; Lerman et al 1991; Summers 1998). Thus a greater proportion of younger women are likely to experience distress as a result of having a Pap test.
In addition, past experiences of Pap tests determine future screening behaviour (Seow et al 1995). Evidence suggests that up to a third of poorly-screened women (three years or longer between Pap tests) avoid Pap tests due to dislike of the process, fear, and embarrassment (Straton 1996). Negative experiences of the procedure as a young woman are therefore likely to decrease the likelihood of a woman having regular cervical screening in the future.

It is important to include women under 40 as well as older women in the development of educational campaigns about cervical screening. This study aimed to examine younger women's knowledge, attitudes, and behaviour with respect to Pap tests and cervical screening to inform campaigns designed to target them. Invasive cervical cancer is very rare for women under 25 years, while incidence increases substantially for those over 25 years (CDHFS 1998). It is possible then that women under 25 years have different issues associated with cervical screening than women over 25. Thus a conceptual distinction can be made between these groups. These were explored separately in this paper.

As little recent work has explored this issue, qualitative focus group discussions were held. Using this method, important themes can emerge spontaneously from detailed information, which can then be used to develop hypotheses (Schattner, Wellard & McGrath 1998).

Method

Recruitment of participants

Fifty-seven women were recruited into 10 focus groups from a broad range of socio-economic groups and ages (15 to 44 years). Five groups (28 women) were comprised of women under 25 years, and the remainder (29 women) consisted of women aged 25 years and over. Women were recruited from rural and urban areas across Victoria. Socio-economic groups represented ranged from disadvantaged job seekers and teen mothers, through to office workers, university graduates, and teachers. Socio-economic status differences were distributed evenly across age groups, ensuring representativeness of these women's opinions.

Topics explored in focus groups

Discussions centred around identifying women's attitudes, knowledge, and behaviour associated with Pap tests. The first questions encouraged participants to describe feelings associated with the words 'cervix' and 'Pap test'. The discussion moved on to establishing levels of knowledge about cervical screening and the role of the Pap test. Knowledge about causes of cervical cancer and beliefs about what it meant to be diagnosed with cervical cell abnormalities were also elicited.

The third section involved behavioural questions examining how women arrange to have Pap tests, the ease with which they obtain information about cervical screening, and the ways in which cervical screening messages might be disseminated to young women. The final series of questions related to issues that were important to the participants: what made having Pap tests difficult, and barriers that they faced.

Conduct of the groups

To ensure participants were comfortable with their surroundings, the discussions were held in rooms familiar to all participants: most often, the room in which participants regularly met for their usual group activities. All groups were facilitated by the investigator and were conducted during April and May of 1999.

Analysis

Audiotape recordings of each focus group were reviewed by the investigator to identify key themes. Responses were coded and filed according to these themes, and words, phrases and quotes which represented key themes within the interviews were extracted (Schattner, Wellard
Results and discussion

Attitudes

Attitudes to ‘cervix’
The word ‘cervix’ was treated with a fair amount of derision by the women under 25. It was noted that ‘cervix’ is a clinical term, not used in everyday conversation. It was typically used when talking to a doctor or gynaecologist, and was associated with boring lectures, or pictures of the female reproductive system. The cervix was also associated with sex, Pap tests, the speculum, periods and period cramps, and cancer.

In contrast, women aged 25 and over associated the cervix more with reproduction, childbirth, Pap tests, cancer, and STDs. It was agreed that it was a technical or medical term that was not used or thought about very much unless something was going wrong. However, some mentioned they knew very little about it:

I know it’s a female body part but I don’t think of it as being … you know, it’s just … there.

Attitudes to ‘Pap test’
The two youngest participants, aged 15 years, knew nothing at all about Pap tests—they had just heard the words before. Participants who recently had had their first Pap test commented on how different the experience was from what they expected:

It was nothing compared to what I thought it would be.

It’s just as bad as it sounds, but it’s quicker than you think.

While many participants of all ages noted that Pap tests were necessary and important, they also thought the procedure was scary, uncomfortable, embarrassing, and unpleasant. Women 25 and over thought Pap tests were inconvenient and intrusive. Some of these participants reported feeling embarrassed and tense, and experienced some pain or discomfort. While Pap tests were described as a nuisance—or worse—they were considered very much to be a part of life for most women.

Issues relevant to women under 25

Women with children noted that it was difficult to coordinate child care in order to have a Pap test, while others reported difficulties juggling work and health commitments. Some women under 25 had issues associated with disclosing their sexual activity to their doctor and/or family. In one case, the participant’s mother encouraged her to have a Pap test but she did not want to have one. Parents’ attitudes were an issue unique to the women under 25. More education about Pap tests at school was also considered necessary; it was important to know that ‘It’s not just something for when you’re 40’.

Issues relevant to women 25 and over

Many women 25 and over perceived that there were few barriers to screening that could not be overcome. However, ‘just getting there’ or getting around to making an appointment were difficulties. Some participants thought there was an element of tension associated with waiting for the results of a test, especially if they had a history of abnormalities. Some women...
said they were scared into having Pap tests because someone they knew had an abnormal Pap test result. One woman commented that she felt a moral obligation to have Pap tests:

_You overcome your fear, because it’s the right thing to do as a person._

Women 25 and over wanted to be more comfortable with their doctors, who were sometimes too blasé about their experience, particularly if they were shy or embarrassed:

_I’ve had one say to me ‘look, love, there’s nothing special about you, I’m looking at these all day,’ but look, you’re not looking at mine all day._

Another issue was that some women wished they could have a complete test for STDs at the same time as their Pap test. Some suggested a test of all reproductive organs for cancer and many wished that a Pap test involved a blood test rather than a smear of cervical cells:

_It’d be good if there was some sort of test where you could just have one for everything, and you didn’t have to go again._

Other barriers to screening that were mentioned included: access to a clinic, time factors, restricted work hours of some female doctors, and cold speculums.

Knowledge

Why do women have Pap tests?

Although some of the youngest women had little idea why women had Pap tests, the other focus group participants under 25 years reported that Pap tests detected abnormalities in cervical cells, diseases, cancer, or signs of cancer. Their emphasis was on cancer rather than abnormalities. In contrast, women 25 years and over emphasised the detection of abnormalities rather than cancer. They reported that Pap tests were to detect precancerous abnormalities, early intervention for cancer, to check ‘everything is OK’, or for ‘general health’. A number of women were unsure what Pap tests were for, suggesting that they might search for infections or test for other things. Some women were quite confident that Pap tests tested for thrush, vaginal warts, HIV, ‘and all that’. One woman reported that she’d been losing blood during her pregnancy and that her doctor performed a Pap test to investigate why this was happening. Women had a thorough understanding of cervical screening, although clearly some knew more than others.

What does abnormality mean?

Participants under 25 years generally understood that being diagnosed with cervical abnormalities did not necessarily mean cancer. Although some of these women had no idea what being diagnosed with abnormalities actually meant, participants within each focus group noted that it was important to return in six months for another Pap test.

Some women 25 years and over were more relaxed about cervical abnormalities and also had more understanding of what they were. However, others over 25 years were more worried, as they had had abnormalities themselves. These participants knew there were different stages of cervical intraepithelial neoplasia (CIN) and often were able to describe them.

Causes of cervical cancer

Most women of all ages had little idea of the causes of cervical cancer. Genetic and lifestyle factors were the most frequently-mentioned causes. The latter included the contraceptive Pill, taking drugs, smoking and drinking, sexual activity (although some thought this was related to ‘pressure’ or ‘inflammation’ rather than disease-related risk), having sex while menstruating, sexually transmissible diseases, presence of dirt in the vagina (including talcum powder, sand, chlorinated water), and not having babies young enough. It is clear that there was a substantial amount of misinformation about cervical cancer, which could be targeted easily in education campaigns. There was a discussion in one group about whether breast and cervical cancer were
becoming more common because women were having children later.

**Heard of the human papilloma virus (HPV, genital warts)?**

When asked what they knew about genital warts (the human papilloma virus, HPV), very few of the women under 25 had heard of the virus. Some of these participants confused HPV with herpes, and many had little notion of the link between HPV and cervical cancer. Some women 25 and over had heard of HPV but had no idea what it was, while others displayed some understanding of the virus:

*They can be treated and they're sexually transmitted but that's all I know.*

In general, participants of all ages lacked knowledge about HPV and its association with cervical cancer.

**How often do women have Pap tests?**

Women under 25 tended to report accurately the two-yearly screening message. Women 25 and over varied more in their understanding. These women reported the frequency of Pap tests to be every 12 months, or every two years, with some women being aware of the two-yearly message but having Pap tests yearly themselves. Some women were unsure whether Pap tests should be yearly or two yearly:

*I always thought if you had the same partner it was two years and if you changed partners, you should have it every year.*

Of concern were the mixed messages being received from the Pap test practitioners of women of all ages. One participant commented that 'most doctors' advise 18 months between Pap tests, while another reported that someone from her medical centre told her to have one every three years. Often the women's doctors insisted on them having Pap tests before their yearly Pill prescription was renewed. As the screening interval recommended by practitioners and pathology laboratories at times varies from the National Health and Medical Research Council guidelines (Blue Moon Research and Planning 1999), it is understandable that confusion associated with the screening interval exists. There are clear opportunities here to clarify the two-yearly screening message for women under 40, and also for their practitioners.

**Who should have Pap tests?**

The consensus among group members was that every woman should have a Pap test, particularly after they start to have sexual intercourse. However, on further prompting it became clear that women had different ideas about when they should start to have Pap tests. Some women commented that they should start after a particular age, for example, 19, 25, over 40, or 'Over a certain age or if you’ve had a baby'. Others noted that Pap tests should start six months or a year after intercourse has been initiated. However, participants under 25 from one rural group suggested strongly that Pap tests should occur as soon as they’ve had sex; these women thought that 16 years of age was too old, and that 14 was probably too young. In another group of women under 25, there appeared to be substantial misinformation; participants suggested women should have Pap tests as soon as they got their period, or when they started on the Pill. One woman under 25 years of age suggested Pap tests should cease after menopause, another indicating that women should have Pap tests until their death. A woman over 25 years of age asked why women had to stop having Pap tests at 70, hypothesising that it was because women couldn’t catch the genital wart virus after that age.
Behaviour

Where would you go to get a Pap test?

Participants understood that doctors performed Pap tests, and that they could be obtained through community health centres and doctors’ surgeries. Few participants were aware that nurse practitioners were available to perform Pap tests. Group participants under 25 expressed concern at the prospect of attending the local family doctor because their doctors had known them since birth.

What are Pap tests like?

Women, particularly those under 25 years, expected that Pap tests would be painful, terrifying, and scary:

I was supposed to have one, I’ve never had one, but just the thought of spreading your legs on a table to a total stranger is not very … does not appeal to me at all.

The doctor told me I should have one about two years ago but just the thought of lying (sic) on the table and spreading your legs is a real put off.

It’s kind of an ugly thing to be doing the first time.

The anticipation of having one’s first Pap test was particularly concerning if the women did not know what to expect. Two women under 25 commented that their doctors did not explain what was going on during the process, which made having a Pap test scary and threatening:

After that I thought I’m never going to have one again, but you are told to have them and you just get them done.

I had one when I was 17, I was really nervous, like what are they going to do to me?

Another woman under 25 said doctors were ‘butchers’ and that Pap tests were ‘terrible’, but would not elucidate her comments further.

Some women of 25 years and over described the experience as ‘cold, uncomfortable, and tense’. Many reported having a cold speculum, which made the process less pleasant, as did friends’ descriptions of the horrors of the process. For most women of all ages, however, recollections of their first Pap test were not negative.

The women reported that certain things made the experience more manageable. For example, some women 25 and over had had their Pap tests while lying on their side, which they said was more dignified and much less confronting than having their legs spread apart. Being covered by a blanket or sheet by their practitioner made these women feel less exposed and therefore more relaxed about having a Pap test. Similarly, when practitioners talked about the process, providing information at each stage of the process, it was a far more positive experience.

Conclusion

Focus group discussions revealed that young women, from their late teens to their late 30s, have some clear issues associated with cervical screening. There were differences in the women’s knowledge, thoughts, and feelings as a function of age group. Knowledge about cervical abnormalities, tolerance of the experience of having a Pap test, and knowledge of who is eligible to have Pap tests were lower for women under 25 years of age. Over-screening was more strongly associated with women 25 years and over. While Pap tests were quicker and less traumatic than women under 25 expected, many described Pap tests as embarrassing and inconvenient. Clearly, education campaigns need to target a number of emotional issues. The women in the study who were 25 years and over expressed the wish to have a complete STD and reproductive system check at the same time as a Pap test.
Many issues faced by women in the sample were common across age groups. Despite a basic understanding, the women from this sample were unclear about what Pap tests do and do not test for. They had almost no knowledge of human papilloma virus, or its association with cervical abnormalities. In addition, the women in this sample did not know about the causes of cervical cancer, something that could be targeted easily in education campaigns.

The reported barriers to cervical screening included time constraints, waiting for results, embarrassment, and access to appropriate practitioners. These barriers are the same as those that have been identified for older women (Bell et al 1995; Gath et al 1995; Greenwald et al 1978; Lerman et al 1991; Summers 1998). However, in the present study, women who had young children found it extremely difficult to arrange for child care in order to have a Pap test. Women under 25 had issues associated with privacy, finding it difficult to attend their regular family doctor, and to avoid disclosing Pap test activity to their parents if still dependent on them. These issues are unique to women under 40 years, and need to be addressed so that subsequent decisions about cervical screening are not about whether or not the woman will have a Pap test, but rather when she will have a Pap test.

However, it seems unwieldy at times to address these issues for two distinct age groups (ie under 25, and 25 and over). Rather, the themes extracted could be applied to women at particular stages of their lives: having their first Pap test, having children, being diagnosed with cervical abnormalities, being in full-time employment. Addressing these issues strategically will promote a consistently highly-screened, educated population.

Further research is clearly needed with this relatively unexplored population. These include whether the use of oral contraceptives leads to high screening rates among young women, whether women who know more about cervical screening have different attitudes to screening, and whether young women who have had children are more familiar with the procedure, screen more regularly, and have different attitudes toward cervical screening. In addition, it is timely to explore how knowledge of human papilloma virus is related to attitudes and behaviours associated with cervical screening. Finally, the subgroups of younger women, such as rural, lesbian, and multicultural groups, may differ from the general population. It would be useful to examine these groups in more detail in future studies.

References


Chapter 7
Vietnamese women, health concerns and cervical cancer screening: knowledge, beliefs and behaviours at two time periods
Madeline Fernbach, Judith Jones, Valerie Clarke and Sheila Hirst August 2000

Abstract
To examine the impact of a cervical screening program targeting Vietnamese women’s knowledge, attitudes, and behaviour associated with cervical screening, a randomised telephone survey was conducted with one sample of 242 Vietnamese women aged between 30 and 70 years in 1997, and a sample of 185 women in 1999. Women’s cancers (cervical and breast) became more important issues for Vietnamese women over time as awareness and understanding of Pap tests improved. However, screening rates did not change over time. Knowledge of the two-yearly screening interval was high at follow-up, with a commensurate decrease in women’s beliefs about the merit of more frequent screening. Doctors were shown to have a key role in cervical screening information and test provision, while radio was cited as an important source of information about cervical screening. A sustained media and community campaign improved Vietnamese women’s Pap test knowledge and attitudes, although some Vietnamese women still had little knowledge about Pap tests after the campaign. While results are promising, it is too early to conclude corresponding changes in Vietnamese women’s behaviour had occurred. Education campaigns can influence at-risk groups such as Vietnamese women, and continued efforts are likely to improve this community’s health-screening attitudes and knowledge. In time, these changes in attitudes may lead to increases in cervical screening and early detection of cervical abnormalities, and thereby to reduced incidence of cervical cancer and associated mortality.

Introduction
Cervical cancer is the fourth most commonly-occurring cancer in women aged 25 to 59 years in Victoria (Giles et al 1998). Cervical cancer incidence and mortality most often occur in women who have never been screened, or who have been screened irregularly (Mitchell 1990). In past research on Vietnamese women, screening rates were found to be very low compared to other women (Cheek et al 1999; Jenkins et al 1999; Pham & McPhee 1992; Schulmeister & Lifsey 1999; Yi 1998). Of concern is the significantly higher incidence of cervical cancer among Vietnamese-born women living in Western countries compared with other Western women (Jelfs 1995; Jenkins et al 1999; Thursfield, Whittington & van Winckel 1999; Yi 1998). Some evidence suggests that screening rates are low for Vietnamese women because of cultural barriers to cervical screening, such as reliance on doctor recommendations, traditional beliefs, or the use of the Pap test by Vietnamese doctors as a diagnostic rather than screening tool (Nguyen et al 1998; Pham & McPhee 1992; Schulmeister & Lifsey 1999; Yi 1998). In order to reduce the incidence of cervical cancer in the Vietnamese community, it is necessary to provide the population with information designed to address these barriers. A recent study reported the success of a media-based intervention on changing Vietnamese American women’s knowledge and attitudes towards cervical screening; however, their cervical screening rate did not improve (Jenkins et al 1999). Baseline data investigating self-reported factors associated with Vietnamese women’s participation in cervical screening have been obtained in South Australia, and further work by this team is underway investigating the impact of a media campaign on...
the screening behaviour of Vietnamese women living in Australia (Cheek et al 1999). Screening rates of Vietnamese-speaking women have also been obtained in Sydney (Lesjak, Hua & Ward 1999).

The primary aim of this research was to extend previous community work with Victorian Vietnamese women by examining changes in their cervical screening rates over time. Levels of knowledge about cervical screening and major sources of health information were established to identify the impact of the strategy on Vietnamese women’s knowledge, attitudes, and behaviour. Information gained from the first stage was used to develop the community strategy implemented between 1997 and 1999.

Method

Design

This cross-sectional study consisted of a sample of Vietnamese women interviewed in 1997 before the PapScreen Victoria media campaign, and another sample in 1999 after this intervention. The campaign consisted of a combination of media advertisements on community television, radio, and in print, combined with community and peer education, and other promotional activities.

Sample

Telephone numbers were randomly selected from the 20 most common Vietnamese names in the 1997 and 1999 Melbourne metropolitan telephone directories. Interviewers invited a woman in the house aged between 30 and 70 years to complete a 20-minute interview. For the first study (sample one), 260 eligible women were invited to participate (40% of households contacted) and only 10 declined to be interviewed, giving a response rate of 96%. Similarly for the second study (sample two), from 276 eligible women invited to participate, 26 declined, giving a response rate of 91%.

After removing incomplete and ineligible respondents, the final sample consisted of 427 women (242 women in 1997, 185 in 1999). Women ranged in age from 30 to 70 (M = 43.44, SD = 9.72) and the samples in 1997 and 1999 did not differ significantly in age. All interviews were conducted in Vietnamese during a four-and-a-half-week period in 1997, and a three-week period in 1999.

Interview schedule

The initial interview schedule was prepared in English, translated and then pilot-tested with 20 preliminary interviews in Vietnamese. Following the pilot testing, four bilingual workers independently translated the revised schedule from English into Vietnamese, then discussed issues of translation, linguistics and research objectives with the coordinator. This ensured the interviewing process was culturally acceptable and methodologically rigorous.

The interview schedule used for both phases consisted of 23 questions (18 open-ended and five requiring yes/no responses), which addressed knowledge, beliefs and behaviour in relation to cervical screening. The question ‘What is a Pap test?’ was asked twice, once using the term ‘Pap test’ and once using the Vietnamese words ‘thu nghiem co tu cung’ which mean ‘the test of the neck of the womb’. Responses were categorised into: ‘no idea’ (unable to describe a Pap test, all facts incorrect), ‘some idea’ (able to describe a Pap test in a simple way, some incorrect information), and ‘a fairly good idea’ (accurate and detailed description provided with at maximum one minor statement incorrect). Most questions had pre-coded categorical responses, with many allowing multiple responses. The interview concluded with eight demographic questions. A Vietnamese version of the interview schedule guided each telephone interview but the responses were recorded in English.
Data analysis

Data from the completed interviews were analysed using SPSS. The interviews for sample one and sample two were performed at different times of the year. As a result, well-screened women were classified as such if they had a Pap test within 2.5 years of the interview date for sample one, and within 2.75 years for sample two. These non-standard classifications were transformed into two-yearly screening rates to compare them to the general population.

Results

Demographics

Almost all of the women (99%) were born in Vietnam and 94% spoke Vietnamese at home. Most were married (88%). Four percent of women had no education, 20% had primary level education, 66% secondary education, and 10% had post-secondary education. Most of the women (47%) described themselves as unemployed or not in paid employment, while 53% were employed.

Health concerns and care

The interview opened with a general question about personal health concerns, to which most women (63%) responded that they did not have any. The responses of the remainder in 1997 and 1999 are provided in Table 7.1. Multiple responses were recorded. The most common personal health concerns were illness, blood pressure, and arthritis. Other health concerns, such as asthma, backache, general health, and mental health, were important also. Significantly more people cited cancer ($\chi^2(1) = 30.27, p<.05$), including breast ($\chi^2(1) = 17.36, p<.05$), and cervical cancer ($\chi^2(1) = 24.39, p<.05$), as personal health concerns in 1999 than in 1997. No other personal health concerns differed as a function of year tested ($p>.05$ for all).

Table 7.1: Personal health concerns in 1997 and 1999

<table>
<thead>
<tr>
<th>Health concern</th>
<th>1997 Sample one (N = 242)</th>
<th>%</th>
<th>1999 Sample two (N = 185)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illness</td>
<td>12</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast</td>
<td>1</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cervix</td>
<td>1</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stroke</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood pressure</td>
<td>5</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arthritis</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menopause</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illness of family members</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other health concerns</td>
<td>19</td>
<td>21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The second question asked what women did to look after their health (see Table 7.2). Multiple responses were recorded. The most common activities were going for tests (especially Pap and breast tests), exercise, eating well, and seeing a GP regularly. The proportion of people who cited going for tests significantly decreased over time ($\chi^2(1) = 17.23, p<.001$), including Pap tests ($\chi^2(1) = 16.73, p<.001$), breast tests ($\chi^2(1) = 53.98, p<.001$), cholesterol tests
(χ²(1) = 41.35, p<.001), and blood pressure tests (χ²(1) = 45.55, p<.001). Similar numbers of people in 1997 and 1999 said that they did nothing to look after their health (p>.05).

Table 7.2: Strategies to look after health in 1997 and 1999

<table>
<thead>
<tr>
<th>Health strategy</th>
<th>1997 Sample one (N = 242)</th>
<th>1999 Sample two (N = 185)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Exercise</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td>Eat well</td>
<td>40</td>
<td>38</td>
</tr>
<tr>
<td>See GP regularly</td>
<td>29</td>
<td>37</td>
</tr>
<tr>
<td>Go for tests</td>
<td>62</td>
<td>44</td>
</tr>
<tr>
<td>Pap tests</td>
<td>64</td>
<td>44</td>
</tr>
<tr>
<td>Breast tests</td>
<td>46</td>
<td>12</td>
</tr>
<tr>
<td>Cholesterol tests</td>
<td>36</td>
<td>9</td>
</tr>
<tr>
<td>Blood pressure tests</td>
<td>39</td>
<td>10</td>
</tr>
<tr>
<td>Other tests</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Nothing</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>11</td>
</tr>
</tbody>
</table>

Note: multiple responses possible.

Pap test knowledge

In response to the question, 'Have you heard of a Pap test?' using the English words 'Pap test', 35% of participants responded affirmatively in sample one, while 66% agreed in sample two. This difference was significant (χ²(2) = 41.84, p<.001). When asked 'What is a Pap test?' in English, participants in 1999 could describe it significantly more accurately than those in 1997 (χ²(2) = 36.02, p<.001). In 1999, 31.5% had some idea, while in 1997 only 19% had some idea. Twice as many women in 1999 (34%) had a good idea what a Pap test was compared to 1997 (17%). When asked 'What is a Pap test (thu nghiem co tu cung)' in Vietnamese, 28% of women in 1997 had a fairly good idea, 62.5% had some idea, and only 10% had no idea. In 1999, significantly more women had a better idea of what a Pap test was when the Vietnamese term was used (45% had a fairly good idea, 44.5% had some idea, 10.5% had no idea), χ²(2) = 14.81, p<.005. On closer examination, women with 'no idea' were less well educated and fewer were employed than the rest of the population. It is possible that women were not familiar with the English term 'Pap test', but understood the concept of cervical screening in general. Sample one responses to the question 'What can this test tell a woman about her health?' showed that 28% had a fairly good idea, 58% had some idea, and 14% had no idea, which improved significantly by sample two to 46% having a fairly good idea, 42% having some idea, and 12% having no idea, χ²(2) = 16.55, p<.001.

In both surveys, women most often reported a two-yearly interval when asked how often a woman should have a Pap test (sample 1 = 41%, sample 2 = 70%). However, a substantial number of women in the first sample reported yearly or half-yearly intervals (33.5%), which attenuated at follow-up (15.3%).

Pap test behaviour

Eighty-seven percent of the first sample reported they had ever had a Pap test, compared to 93% of the second sample. This difference was significant, χ²(2) = 7.60, p<.05, however the assumption of minimum expected cell count was once again violated. The screening rates for Vietnamese women were lower than the norm in both 1997 and 1999 for all age groups.
except the over-60 year age group (see Table 7.3). No significant change occurred over time ($p > 0.05$).

The women who said that they either did not have a Pap test (8% overall) or did not know if they had had one (2% overall) were asked what stopped them from having a Pap test. Using multiple responses, they reported never having heard of it (14%), being unmarried (12%), being unsure if they needed one (7%), not knowing where to go (5%), fear (5%), not being a priority (2%), or other reasons (84%), including being too busy, having no symptoms, and being too embarrassed. However, most did not specify a reason. There were no significant differences in these variables as a function of testing period.

Table 7.3: Two-yearly screening rates by age at 1997 and 1999

<table>
<thead>
<tr>
<th>Age</th>
<th>1997 Sample one (N = 237)</th>
<th>1999 Sample two (N = 177)</th>
<th>General population screening rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>30–39</td>
<td>62%</td>
<td>61%</td>
<td>73%</td>
</tr>
<tr>
<td>40–49</td>
<td>68%</td>
<td>68%</td>
<td>74%</td>
</tr>
<tr>
<td>50–59</td>
<td>68%</td>
<td>66%</td>
<td>75%</td>
</tr>
<tr>
<td>60+</td>
<td>58%</td>
<td>64%</td>
<td>55%</td>
</tr>
<tr>
<td>Overall</td>
<td>65%</td>
<td>65%</td>
<td>68%</td>
</tr>
</tbody>
</table>

Note: % = percentage of sample screened in two-year period.

Women listed a number of sources by which they were prompted to have their last Pap test (see Table 7.4). The most common sources for prompts were GPs, ethnic radio, hospital staff, friends, and family members. More women in 1999 cited ethnic radio as a source of prompts to have a Pap test than in 1997, consistent with the existence of an ethnic radio campaign in 1998, $\chi^2(1) = 13.51, p < .001$. Similarly, more women reported newspapers as a source for prompts in 1999 than in 1997, $\chi^2(1) = 7.63, p < .05$. No other prompts changed significantly over time ($p > 0.05$ for all).

Table 7.4: Prompts for last Pap test in 1997 and 1999

<table>
<thead>
<tr>
<th>Prompt source</th>
<th>1997 Sample one (N = 211)</th>
<th>1999 Sample two (N = 171)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP</td>
<td>44%</td>
<td>39%</td>
</tr>
<tr>
<td>Ethnic radio</td>
<td>15%</td>
<td>30%</td>
</tr>
<tr>
<td>Hospital staff (doctor/nurse)</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>Friend</td>
<td>13%</td>
<td>10%</td>
</tr>
<tr>
<td>Family member</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Pamphlet</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Magazines</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Had a test in Vietnam</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Newspaper</td>
<td>3%</td>
<td>9%</td>
</tr>
<tr>
<td>TV</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Books</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>28%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Note: % = percentage of total sample who ever had a Pap test.
Most women had their last Pap test conducted by a doctor (98% in 1997, 92% in 1999) rather than a nurse, but significantly fewer women in sample two than sample one did so, χ²(1) = 7.23, p<.05. Most Pap tests were performed by females rather than males (83%, 74%), yet the number of women having Pap tests done by females decreased by 1999, χ²(1) = 4.81, p<.05. Tests were generally conducted at GPs, surgeries (83%, 85%), with others conducted at hospitals (13%, 7.5%), health centres (2%, 6%), or elsewhere (4.5%, 0.5%). None of these sources of tests changed for women over time, p>.05.

Women were asked their sources of information about Pap tests, and most cited doctors or nurses, or the radio (see Table 7.5). Significantly fewer women cited pamphlets as a source of Pap test information in 1999 than in 1997, χ²(1) = 4.32, p<.05, while other sources remained constant over time, p>.05 for all.

Table 7.5: Sources of Pap test information in 1997 and 1999

<table>
<thead>
<tr>
<th>Source</th>
<th>1997</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sample one (N = 242)</td>
<td>Sample two (N = 185)</td>
</tr>
<tr>
<td>% total sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctors/nurses</td>
<td>46</td>
<td>50</td>
</tr>
<tr>
<td>Radio</td>
<td>43</td>
<td>46</td>
</tr>
<tr>
<td>Magazines/newspapers</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td>Pamphlets</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>TV</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Community health centres</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Women were asked about the best way to get information in the future, and revealed a strong preference for radio (71% in sample one, 72% in sample two), with fewer women mentioning magazines or newspapers (33%, 33%), community health centres (27%, 2%), doctors or nurses (14%, 33%), or pamphlets (6%, 12%). Mention of pamphlets significantly increased in sample two, χ²(1) = 5.23, p<.05, as did mention of doctors and nurses, χ²(1) = 22.33, p<.001. Participants reported community health centres as the best way to get information in the future less often in sample two than sample one, χ²(1) = 50.35, p<.001.

Encouraging cervical screening

Participants were asked about what would make it easier for them to have a Pap test, and suggested a female service provider (43% in 1997, 21% in 1999), no cost (36%, 16%), the provision of more information (25%, 10%), to be told by someone you can trust (15%, 21.5%), if it doesn’t take long (6.5%, 7%), and transport (4.5%, 3%). Fewer women in the second sample mentioned that a female service provider would make it easier to have a Pap test, χ²(1) = 18.01, p<.001. Similar decreases over time were found for no cost, χ²(1) = 18.58, p<.001, and the provision of more information, χ²(1) = 13.96, p<.001. However, more women in 1999 suggested that being told by someone they trusted would make it easier to have a Pap test, χ²(1) = 4.34, p<.05.

Women noted that they would prefer a female service provider, although this attenuated by 1999 (87%, 75.5%), χ²(1) = 6.45, p<.05. Women had a preference for a doctor (68%, 66%) rather than a nurse (2% overall preferred a nurse), and wanted the Pap test provider to speak Vietnamese (37%, 23%). However, significantly fewer women mentioned wanting a Vietnamese-speaking provider in 1999 than in 1997, χ²(1) = 9.44, p<.005. Finally, 8% did not mind who provided the service in sample one, increasing to 13% in sample two although this difference was not significant, p>.05.
Discussion

Health concerns and care

Most women said they did not have any personal health concerns. In the first sample, illness (not specified) was a concern for some women, but fewer mentioned this in the second sample. In 1999, a substantial number were concerned about cancer, and specifically, cervical and breast cancer. This increased from almost no concern in 1997, suggesting that the two years of focussing campaigns on the Vietnamese population did make an impression on these women.

More women tended to cite seeing GPs regularly, and exercise as strategies to look after health in 1999 than in 1997, while the number of women who cited decisions to go for tests as strategies to look after health decreased over time. It is possible that this may be explained by an increased reliance on GPs to remind women to have check-ups, which is a sign of appropriate use of health services.

Pap test knowledge

Awareness of the term ‘Pap test’ in English almost doubled from the first to the second sample, and descriptions of the process improved. More women had some idea or a good idea of what a Pap test was when referred to in Vietnamese, and this improved from the first to the second sample. However, the same proportion of women in both samples had no idea what a Pap test was; this suggests that some Vietnamese women are still not getting the cervical screening message.

It was reassuring to observe improved awareness of the two-yearly screening message. This almost doubled from 1997 to 1999, with the 1999 levels being quite high. In the 1997 sample, there was a proportion of women who believed in the need for half-yearly or yearly screening intervals, a misconception which was targeted in subsequent education campaigns.

As a result, the proportion of women who reported half-yearly or yearly screening to be the appropriate interval halved by 1999. This indicates that the cervical screening education strategy was successful at reducing perceived need for over-screening.

Pap test behaviour

While cervical screening rates did not increase over the two-year period, the number of women who had ever had a Pap test increased from the first to the second sample. If this difference had been a result of the screening campaign, the screening rate would have improved. It is possible therefore that this difference reflects a sampling error. In addition, the screening rates of the Vietnamese women were below the general population for all age groups except those over 60 years. These older women had screening rates which were similar to the norm in sample one, but higher than the general population in sample two. This result is encouraging since this age group generally tends to be under-screened.

The most common prompt to have a Pap test was a suggestion from a GP. In 1999, twice as many women cited ethnic radio as a prompt, and citing newspapers increased in 1999 also. All other prompts were similar across testing periods. This shows the impact a radio campaign can have on this population. Women stated that their sources of information were most often doctors or nurses, the radio, and magazines and newspapers. Women also reported a strong preference for radio (and, to a lesser extent, magazines and newspapers) as the best ways to get information in the future. While from sample one to sample two there was a strong decrease in the requests for information via friends and family and community health centres, there was an increase in requests for doctors or nurses, pamphlets, and direct mail. This result suggests that GPs still have a key role in providing information about cervical screening. In addition, it is clear that ethnic radio campaigns are not only accepted and effective at providing information about Pap testing to women, but also are effective prompts to women to have a test.
Encouraging cervical screening

The things that women said would make it easier to have a Pap test were similar to those found in other studies with different populations. The need for a female provider, cost issues, and need for more information were factors discouraging screening in 1997. However, simply being encouraged to screen by someone they trusted was the main factor by 1999. This indicates that Vietnamese women became more comfortable with the cervical screening process and that they were not as embarrassed about presenting for a Pap test to a male doctor. It also demonstrates that cost is not as significant an issue. Women know they can access free Pap testing or are able to afford to pay for it. They have enough information about cervical screening for ignorance not to be a barrier. Instead, the main barriers women face may well relate to actually requesting or initiating the test: they know they should have a Pap test, but may be too embarrassed to ask for one.

Conclusion

After two years of focused attention, there have been a number of improvements in Vietnamese women’s knowledge and attitudes towards cervical screening. Women’s cancers (cervical and breast) were more important issues for these women in the second study, and awareness and understanding of Pap tests improved. Knowledge of the two-yearly screening interval was high in 1999, with a commensurate decrease in women’s beliefs about the merit of yearly or six-monthly screening intervals.

In addition, doctors were shown to have a key role in providing information about cervical screening, as well as performing the Pap test. Of concern, however, was that many Vietnamese women could not adequately describe a Pap test. This indicates that there is still work required in order to reach all Vietnamese women with the cervical screening message. In addition, the screening rates of young and middle-aged women did not improve over time. While knowledge and attitudes have changed, it is too early to conclude that Vietnamese women’s behaviour had changed as well. This is consistent with previous research (Jenkins et al 1999), yet displays the importance of introducing a system for monitoring cervical screening rates as a function of ethnicity.

Overall, the achievements of PapScreen Victoria’s cervical screening communication and recruitment strategy have been significant with respect to the Vietnamese community. Continued efforts are likely to improve this community’s health screening attitudes and knowledge, and perhaps in time an improvement in cervical screening behaviour.

Acknowledgments

Our thanks go to the six Vietnamese community workers, Lan Vuong, Trang Dang, Bich Hoa, Minh Lam, Thuy Nguyen, and Dzung Nguyen for their contributions to this research project. This research was part of a joint Commonwealth-State funded program by the Department of Human Services through PapScreen Victoria.

References


Chapter 8  Exploration of factors linked with high cervical cancer rates in women from the former Yugoslavia in Victoria, Australia

Madeline Fernbach  December 2000

Abstract
The aim of the project was to identify the cervical screening rate and other factors that may be associated with high rates of cervical cancer in women from the former Yugoslavia compared to the general population in Victoria, Australia. A cross-sectional survey was conducted by structured personal interviews of 42 Bosnian, 56 Croatian, 49 Macedonian, and 35 Serbian women, and 39 women who identified as Yugoslav or of mixed background. Self-report data were collected on Pap testing behaviour, estimated screening rate of each community, stage-based barriers to cervical screening, and women’s theories about causes of cervical cancer within their community. Women in this study had an acceptable screening rate, but barriers to cervical screening were similar to those of other groups. While Macedonian women believed more of their community had Pap tests than the other cultural groups, just under half were under-screened themselves. Smoking rates were very high for women in this study. The most common causes of cervical cancer suggested by women in the study were: a low screening rate, lifestyle stress, and chemicals. However it is unlikely that the high cervical cancer rate in women from the former Yugoslavia is a result of under-screening, lifestyle stress, or chemicals. Smoking may well contribute to the cancer rate, but the most likely explanation is that cancers not previously detected in Yugoslavia are now being found, together with cervical abnormalities, within the systematic two-yearly PapScreen Victoria screening program.

Introduction
PapScreen Victoria’s main goals are to decrease the incidence and mortality rates of cervical cancer among Victorian women, and to encourage unscreened and under-screened women to have regular, two-yearly cervical screening (PapScreen Victoria 2000). It has been shown that incidence of cervical cancer is much higher in some cultural groups in Victoria, including women from Vietnam, and women from the former Yugoslavia (Thursfield, Whitfield & van Winckel 1999). Vietnamese-born women have over six times the incidence of cervical cancer compared to women born in Australia and New Zealand. Women born in the former Yugoslavia have almost five times the incidence of cervical cancer of the Australian-born population. Thus, birth in either of these countries is a cause for concern with respect to cervical health.

Previous recruitment and research strategies have targeted one of these groups—Vietnamese women—and found that their screening rates were below that of the general population of women living in Victoria (Fernbach et al 2000). Evidence suggests that media campaigns educating Vietnamese women are effective in changing knowledge about and attitudes towards cervical screening (Fernbach et al 2000).

However, little research has investigated the cervical screening behaviour of women from the former Yugoslavia, and it is unclear what factors affect their diagnoses of cervical cancer. It is unknown whether or not they have regular Pap tests, or whether other factors contribute to their increased risk of cervical cancer.

To this end, the aim of this project was to identify the screening rates and other factors that may be associated with diagnosis of cervical cancer in women from the former Yugoslavia.
Method

Participants
The study was a cross-sectional survey conducted by personal interviews in May 2000. Women between the ages of 18 and 69 living in Melbourne who were of Serbian, Bosnian, Croatian, or Macedonian background were selected as the target population. Women participating in the survey were given the option of conducting the interview in one of the above languages, or in English. A sample was obtained of 42 Bosnian, 56 Croatian, 49 Macedonian, and 35 Serbian women, and 39 women who identified as Yugoslav, of mixed background, or who did not specify their background. They ranged in age from 18 to 68 (M = 42.34, SD = 12.86) and none of the groups differed significantly in age. The distribution of ages within this sample was consistent with that of the general population (ABS 1999).

Measures
The questionnaire was a 36-item instrument that was professionally translated into Macedonian, Bosnian, Serbian, and Croatian and back-translated to ensure equivalence in meaning across languages. The measure was checked for cultural sensitivity through pilot testing. Thirty-one closed-ended questions were used to collect self-report data that covered Pap testing behaviour, intention to have a Pap test in the future, estimated screening rate of each woman’s community, stage-based barriers to cervical screening, and demographic details. Numerical scales for the stage-based barriers to screening and intention to have a Pap test in the future were given three-point scales (agree, not sure, disagree) to facilitate ease of response across cultural groups. Five open-ended questions collected information on women’s recall of health messages, ideas about causes of cervical cancer within the community, and specific barriers to cervical screening.

Procedure
Eight bilingual women with interviewing and research experience were selected from the target communities to be interviewers. These women recruited participants at community health centres, social clubs, and other venues where women from the former Yugoslavia meet. Participants were invited to take part, and were given the option of being interviewed face to face immediately, or via telephone at a mutually agreeable time.

Results
Demographic profile
The interviews were conducted in Bosnian (26%), Croatian (26%), Serbian (23%), Macedonian (18%), and English (7%). When asked what was the main language they spoke at home, 16% stated Bosnian, 21% stated Croatian, 16% spoke Serbian and another 16% spoke Macedonian. Nine percent said they spoke Serbo-Croatian, and only 3% said either Yugoslav or English. The remainder of women described a mixture of languages, such as Croatian/Bosnian, Croatian/Serbian, Macedonian/English, Serbo-Croatian/Bosnian, Serbian/Bosnian, Croatian/English, or German/Yugoslav.

Women were asked to nominate what cultural background they identified with, and a quarter (25%) specified Croatian, while 22% identified with Macedonian, 19% with Bosnian, and 16% with a Serbian background. The remainder (18%) described themselves as Yugoslav, of mixed background, or refused to specify their cultural background. It was this latter distinction, cultural background, that was used to differentiate cultural groups in the remainder of the study.

Only 6% of women were born in Australia, with 49% of the remainder born in Bosnia, 22% in Croatia, 21% in Macedonia, 3% in Yugoslavia, and 3% in Serbia. Only three people (2%)
specified other countries (Germany, Slovenia, Bulgaria). Length of time in Australia ranged from less than a year to over 50 years (median = 5 years). Croatian and Macedonian women reported being in Australia for a longer time than Serbian, Bosnian, and Yugoslav/other women, \( F(4,209) = 19.60, p < .001 \). Even for the Serbian women, who had arrived most recently, the average length of time in Australia was over four years (see Table 8.1).

### Table 8.1: Time in Australia by cultural group

<table>
<thead>
<tr>
<th>Cultural group</th>
<th>Mean (years)</th>
<th>Standard deviation (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macedonian</td>
<td>19.77</td>
<td>12.18</td>
</tr>
<tr>
<td>Croatian</td>
<td>18.28</td>
<td>13.87</td>
</tr>
<tr>
<td>Yugoslav/other</td>
<td>7.29</td>
<td>9.81</td>
</tr>
<tr>
<td>Bosnian</td>
<td>5.50</td>
<td>8.35</td>
</tr>
<tr>
<td>Serbian</td>
<td>4.37</td>
<td>7.90</td>
</tr>
</tbody>
</table>

Note: Different superscripts indicate different means at \( p < .001 \).

In general, women reported good to fair understanding of English, with 42% stating they had good English, and 41% neither good nor bad. Only 17% of women said their understanding of English was bad. There were no differences in understanding of English as a function of cultural group.

Women in the study were generally quite well educated. Thirty-five percent of women had completed secondary school, 17% completed some post-secondary studies or a trade, and 20% had completed a degree or higher degree. Only 28% of women had limited schooling: 11% had incomplete secondary schooling, 11% had completed primary school, and 6% had incomplete primary schooling. Level of education did not differ as a function of cultural group.

Over three-quarters of the women (79%) had a partner and those with partners were asked to specify the background of their partner. Eighty percent of women had partners with the same background, with 11% having partners of different Yugoslav background, and 7% having partners from a non-Yugoslav country. Only 1% (\( n = 2 \)) did not specify their partner’s background. The majority of women were Orthodox (44%), Catholic (31%), or Muslim (13%), with only 12% specifying other religions or no religion.

**Screening: behaviour**

The majority of women in the sample were familiar with cervical screening: 87% of respondents said they had had at least one Pap test, and 77% of the 192 women who answered the question said they had had a Pap test within the last two years. This translates as a two-yearly screening rate of 67% when calculated across all participants. As the two-yearly screening rate for the general population is 69%, the screening rate appears to be acceptable. Of concern, however, was that only 56% of Macedonian women reported being well-screened, a significantly lower screening rate than that of other cultural groups, \( \chi^2(4) = 15.36, p < .01 \).

Overall, 65% of women said they intended to have a Pap test within the next two years, 12% were unsure, and 23% of women said it was unlikely they would have one within this time. However, a large number of the latter group had had recent Pap tests (87.5%, \( n = 42 \)). A chi-square test revealed that Croatian women were less likely to intend to have a Pap test in the next two years than expected (only 18% said it was likely), while more Serbian and Yugoslav/other women reported intending to screen than expected (94% Serbian, 87% Yugoslav women said it was likely), \( \chi^2(4) = 81.26, p < .001 \).

In general, women underestimated the screening rate within their community. Fifty percent of women stated that either a quarter or a half of the women in their community would have Pap tests. Interestingly, 24% suggested that all women in their community had Pap tests.
There were no differences in estimation of the screening rate in the community as a function of screening status (p > .05). However, Macedonian women thought more women in their community had Pap tests than did women from other cultural groups. Macedonian women estimated that over three-quarters of women had Pap tests, while the other groups estimated that around half the women had Pap tests, F(4,191) = 14.51, p < .001.

**Screening: barriers**

The majority of women believed it was easy to arrange to have a Pap test (85.5%), with only 10.5% being unsure whether it was easy or not, and 4% believing it to be difficult to arrange a Pap test. Thus, most women had a sense of self-efficacy associated with cervical screening.

When asked how difficult it would be for the women to get to the doctor or health centre, most thought it would be easy (74%), some were unsure (10%), and the remainder thought it would be difficult (16%). Thus, access to cervical screening practitioners was perceived to be a barrier for a number of women.

The eight steps of the cervical screening process were examined in terms of which steps provided barriers to cervical screening in the sample as a whole. For the first step, perceived eligibility, it was explained to the women that ‘The government says that some types of women are supposed to have Pap tests and others are not’. When asked if they were supposed to have Pap tests, 80% knew they were, and 14% did not know whether or not they were supposed to have them. Six percent of women in the sample said they were ineligible to have Pap tests, even though all women interviewed in fact were eligible.

For the remaining seven steps of the cervical screening process, women were asked whether they thought performing each of the steps was easy (see Figure 8.1). The majority of women said it would be easy to remember when their Pap test was due, and to choose a practitioner to provide them with a Pap test. A higher percentage of women thought it would be easy to make an appointment, and to turn up for a Pap test once it was arranged. However, under a third said they would feel comfortable or OK during Pap tests, a similar number being unsure, and a larger proportion disagreeing. However, over two thirds of women said it would be easy to get the results of a Pap test, and to have Pap tests every two years—the same percentage of women who said they had a Pap test in the last two years.

Figure 8.1: Ease of performing seven steps of cervical screening
Finally, women were asked what might make having a Pap test difficult for them personally. The main difficulties women had were: that it is an uncomfortable procedure (20%), that it is embarrassing, shameful or degrading (13%), that they were afraid of the results, of cancer, or of the unknown (11%), that they were too busy or didn’t have time (6%), and that it is difficult to find a doctor who speaks the woman’s language (4%). The range of difficulties can be summarised according to the eight behavioural steps of cervical screening (see Table 8.2).

Table 8.2: What makes Pap tests difficult by cervical screening step

<table>
<thead>
<tr>
<th>Cervical screening steps</th>
<th>Difficulties/barriers (n)</th>
<th>Frequency (N = 221)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceiving self to be eligible</td>
<td>Not informed about Pap tests/lack of information (3); never had one but don’t think it’s difficult (2); too old to have a Pap test (1); I’ve only had one partner (1)</td>
<td>10</td>
</tr>
<tr>
<td>Remember/choose to have a Pap test</td>
<td>Tradition/social constraints (4); adapting to new environment first (1)</td>
<td>5</td>
</tr>
<tr>
<td>Choose a practitioner</td>
<td>Difficult having to find a specialist/doctor/gynaecologist (4); the service was expensive in my country (1); difficult to find a bilingual doctor (9); I prefer female doctors (5)</td>
<td>19</td>
</tr>
<tr>
<td>Make an appointment</td>
<td>Negligence/lazy (6); not enough time, too busy (2)</td>
<td>18</td>
</tr>
<tr>
<td>Turn up to the appointment</td>
<td>–</td>
<td>0</td>
</tr>
<tr>
<td>The experience of the Pap test</td>
<td>It is uncomfortable (43); I don’t like them (3); shame/embarrassment/ feeling degraded (27)</td>
<td>73</td>
</tr>
<tr>
<td>Getting the results</td>
<td>Fear of the unknown/results/cancer (24)</td>
<td>24</td>
</tr>
<tr>
<td>Repeat in two years</td>
<td>–</td>
<td>0</td>
</tr>
</tbody>
</table>

The stages of the screening process with the most barriers were the experience of the Pap test (33%), getting the results (11%), choosing a practitioner (9%), and making an appointment (8%).

Multivariate analyses of variance examining differences in these stages as a function of cultural group and screening status revealed significant differences in some stages as a function of these variables. Bosnian women thought it was more difficult than did Serbian women to remember when their Pap tests were due. Macedonian women believed they would feel more comfortable or OK during a Pap test than Croatian women. Macedonian women believed it to be more difficult to have Pap tests every two years than the other cultural groups. In addition, under-screened women thought it was more difficult to get to the doctor or health centre than well-screened women (see Table 8.3).
# Table 8.3: Cervical screening steps by cultural group and screening status

<table>
<thead>
<tr>
<th>Step</th>
<th>Bosnian M (SD)</th>
<th>Croat M (SD)</th>
<th>Macedonian M (SD)</th>
<th>Serbian M (SD)</th>
<th>Yugoslav/other M (SD)</th>
<th>F (4,181)</th>
<th>Well-screened M (SD)</th>
<th>Under-screened M (SD)</th>
<th>F (1,74)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy</td>
<td>1.06 (0.24)</td>
<td>1.18 (0.44)</td>
<td>1.26 (0.50)</td>
<td>1.16 (0.37)</td>
<td>1.11 (0.47)</td>
<td>0.63</td>
<td>1.14 (0.49)</td>
<td>1.26 (0.54)</td>
<td>0.56</td>
</tr>
<tr>
<td>Access to practitioner</td>
<td>2.56 (0.80)</td>
<td>2.50 (0.84)</td>
<td>2.48 (0.80)</td>
<td>2.52 (0.68)</td>
<td>2.77 (0.66)</td>
<td>0.56</td>
<td>2.65 (0.70)</td>
<td>2.23 (0.88)</td>
<td>7.17*</td>
</tr>
<tr>
<td>Remember when Pap test due</td>
<td>1.52 (0.45)</td>
<td>1.24 (0.56)</td>
<td>1.37 (0.66)</td>
<td>1.09 (0.18)</td>
<td>1.15 (0.50)</td>
<td>3.64*</td>
<td>1.24 (0.69)</td>
<td>1.26 (0.64)</td>
<td>0.65</td>
</tr>
<tr>
<td>Choose practitioner</td>
<td>1.58 (0.83)</td>
<td>1.16 (0.50)</td>
<td>1.37 (0.69)</td>
<td>1.05 (0.84)</td>
<td>1.40 (0.74)</td>
<td>3.37</td>
<td>1.41 (0.78)</td>
<td>1.39 (0.64)</td>
<td>0.23</td>
</tr>
<tr>
<td>Make appointment</td>
<td>1.32 (0.69)</td>
<td>1.02 (0.39)</td>
<td>1.36 (0.67)</td>
<td>1.26 (0.45)</td>
<td>1.23 (0.46)</td>
<td>0.46</td>
<td>1.20 (0.59)</td>
<td>1.34 (0.63)</td>
<td>0.35</td>
</tr>
<tr>
<td>Turn up to appointment</td>
<td>1.09 (0.29)</td>
<td>1.33 (0.72)</td>
<td>1.16 (0.48)</td>
<td>1.23 (0.56)</td>
<td>1.09 (0.37)</td>
<td>0.48</td>
<td>1.20 (0.56)</td>
<td>1.16 (0.47)</td>
<td>0.00</td>
</tr>
<tr>
<td>Experience of Pap test</td>
<td>1.97 (0.85)</td>
<td>2.38 (0.88)</td>
<td>1.81 (0.70)</td>
<td>2.39 (0.84)</td>
<td>1.91 (0.89)</td>
<td>3.64*</td>
<td>2.11 (0.90)</td>
<td>2.07 (0.73)</td>
<td>0.48</td>
</tr>
<tr>
<td>Get results</td>
<td>1.42 (0.73)</td>
<td>1.46 (0.81)</td>
<td>1.30 (0.67)</td>
<td>1.71 (0.67)</td>
<td>1.31 (0.90)</td>
<td>1.42</td>
<td>1.43 (0.70)</td>
<td>1.98 (0.82)</td>
<td>3.34</td>
</tr>
<tr>
<td>Repeat every 2 years</td>
<td>1.06 (0.33)</td>
<td>1.14 (0.56)</td>
<td>1.27 (0.68)</td>
<td>1.19 (0.54)</td>
<td>1.06 (0.24)</td>
<td>9.88**</td>
<td>1.21 (0.55)</td>
<td>1.55 (0.90)</td>
<td>1.87</td>
</tr>
</tbody>
</table>

Note: Different superscripts indicate significantly different means.

* p < 0.01 ** p < 0.001
Other factors: smoking

Almost 60% of women in this sample said they had smoked at least 100 cigarettes or equivalent over their lifetime (59%). Fifty-seven percent of the women said they had smoked daily in the past or at present, with 35% saying they currently smoked either daily (30%) or at least weekly (5%). Thus, smoking rates were substantially higher than for the general Victorian population (Trotter et al 1998).

Causes of cervical cancer

Women were asked what they thought might be the main causes of cervical cancer in women from their country. The majority thought that lifestyle stress was a factor (70%), together with low screening rates (63%). Over half of the respondents (53%) thought that chemicals might be a factor, and just under half of these (n = 56) described the nature of these chemicals. The chemical sources of cervical cancer these women mentioned included chemicals in food, car pollution or fuel, contraception, air pollution, drugs or medication, and toxic waste. Forty-six percent of women believed that moving country might cause cervical cancer. There was a range of other suggestions about the cause of cervical cancer, including because of war, or genetic/hereditary factors (each 8%), poor hygiene (4%), and insufficient knowledge or education (also 4%). Only four women (2%) thought diet was a factor, and three thought smoking might be a factor (1.5%).

Given that multiple responses to the above question were possible, factors mentioned first were explored to investigate the most important or most top-of-mind factors. The first mentioned causes of cervical cancer in this sample of women centred on low screening rate (36%) or lifestyle stress (34%), with the remaining 30% citing other factors such as chemicals, moving country, and war.

Health messages

Women were asked whether they had heard any health messages in the media recently. Seventy-one percent of participants said they had. The most common subject for health messages mentioned by respondents was Pap testing (43%), followed by breast cancer (40%), smoking (29%), skin cancer (15%), disease/nutrition (10%), and heart disease (9%). Other subjects for health messages mentioned included drugs/medicine, general cancer messages, and mental health (13% in total for all other messages). Macedonian women cited smoking messages more than expected (43%), $\chi^2(4) = 9.62, p<.05$, however there were no other differences as a function of cultural group.

When participants were prompted with whether they had seen or heard any Pap test messages, 76% answered in the affirmative. Forty-six percent of women received Pap test messages through their doctor or health worker, 44% saw them on television, 37.5% heard them on the radio, 18% saw them in newspapers, and 4% received them via the Anti-Cancer Council. Six and a half percent saw Pap test messages in women's magazines. A further 12.5% of women cited other places, such as community centres, friends, and in another country. There were no differences as a function of cultural group.

Sixty-nine percent of women could remember some Pap test messages, and spontaneous recall of the 10 cervical screening messages is given in Table 8.4. Fewer Croatian women than expected said they remembered messages about Pap tests (56%), while more Yugoslav/other women than expected said they remembered messages about Pap tests (81%), $\chi^2(4) = 13.39, p<.01$. This was the only difference in message recall as a function of cultural group.
Table 8.4: Spontaneous recall of cervical screening messages

<table>
<thead>
<tr>
<th>Messages</th>
<th>% of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you’re a woman aged between 18 and 70 years you should have a Pap smear every two years—even if you’re no longer having sex</td>
<td>44</td>
</tr>
<tr>
<td>Don’t make excuses. Make an appointment</td>
<td>19</td>
</tr>
<tr>
<td>By having regular Pap smears women can help prevent up to 90% of cervical cancer</td>
<td>18</td>
</tr>
<tr>
<td>When did you last have a Pap smear?</td>
<td>18</td>
</tr>
<tr>
<td>I’m busy: I don’t have time to go to my doctor right now</td>
<td>15</td>
</tr>
<tr>
<td>I’ve only ever had one partner</td>
<td>15</td>
</tr>
<tr>
<td>I don’t have any symptoms</td>
<td>13</td>
</tr>
<tr>
<td>Cervical screening? I’m too old to need a Pap smear</td>
<td>12</td>
</tr>
<tr>
<td>Each year in Australia more than 500 women die of cervical cancer</td>
<td>12</td>
</tr>
<tr>
<td>Cervical cancer is the most preventable of all cancers</td>
<td>11</td>
</tr>
</tbody>
</table>

Note: multiple answers possible.

Discussion

The first aim of the paper was to identify the screening rate of women from the former Yugoslavia. It was found that the women in this study had an acceptable screening rate, given that their rate was similar to the general population. Indeed, it was better than that of women from Vietnam (Fernbach et al 2000). However, the barriers to cervical screening were similar to those of other groups examined in previous studies (Fernbach under review; Fernbach 2000; Fernbach 1999), suggesting that lack of screening is not likely to be the explanation for the high incidence of cervical cancer in this population.

Women in this sample had a good awareness of health messages, particularly through television and other English language media. Therefore, English language media could be a useful vehicle through which to educate women from the former Yugoslavia, once the health messages associated with interventions preventing cervical cancer are developed.

It was interesting to observe the similarities and differences among the cultural groups within this study. While Croatian women admitted it was unlikely that they would screen in the next two years, they had a similar screening rate to the rest of the sample, and to the population. In spite of their relatively recent arrival to Australia, Serbian, Bosnian, and Yugoslav/other women were well-screened and recalled Pap test media messages to the same extent as the other groups. However, the cultural group with the lowest screening rate was Macedonians, with just over half being adequately-screened. These women believed it to be more difficult to have Pap tests every two years than other cultural groups. Unfortunately it is difficult to draw any meaningful conclusions about the role this might play in cervical abnormalities and cancer, given that data regarding the incidence of cervical cancer is not available for subgroups of women from Yugoslavia.

Macedonian women believed that a greater proportion of their community had Pap tests than the other cultural groups. On the one hand, Macedonian women may genuinely believe their community was very well screened. On the other hand, it is possible that Macedonian women interpreted ‘having Pap tests’ differently to the other women. Perhaps they assumed that ‘having Pap tests’ included anyone who has ever had a Pap test, while the other groups thought the same phrase implied two-yearly Pap tests. In retrospect, this term could have been defined more clearly in the study.
When taken together, the findings associated with Macedonian women are interesting. While they believe that the majority of their community "has Pap tests", just under half of these women were under-screened themselves. It appears that these Macedonian women had misconceptions about their community's screening behaviour which are not reflected in their own behaviour. It is unclear why this is the case, and this is a pattern that warrants further research.

The second aim of the study was to explore other factors that may be associated with a diagnosis of cervical cancer. The most obvious of these is smoking. The women in this study reported smoking at a much higher rate than do women in the general population (Trotter & Mullins 1998). Smoking is a factor known to be associated with cervical cancer (Becker et al 1994; Goodkin et al 1993; McElrath et al 1998), and therefore these high smoking rates are concerning.

The factors that the women suggested might be causes of cervical cancer in their population were examined. The most commonly suggested sources were low screening rate, lifestyle stress, and chemicals. As discussed above, with the exception of the Macedonian women, the screening rate appears to be comparable to the general population. Hence, low screening rate is unlikely to be a factor affecting incidence of cervical cancer. From the information gained through preliminary focus testing, lifestyle stress most probably referred to living in a new country with little English and major acculturation issues. In order for this to be a substantial contributor to cervical cancer, it would be necessary to show that women from the former Yugoslavia experience more or different stress than other cultural groups such as Russian, Polish, or Turkish. The women from these latter groups show cervical cancer incidence at the same rate as the general population (Thursfield et al 1999). The evidence, then, is not compelling: Yugoslav women are from similar backgrounds, with similar histories of emigration to Australia and similar treatment within Australia.

The third possible cause proposed by the women in this study is chemicals. If chemicals in Australia were causing cervical cancer in women from the former Yugoslavia, one might expect that these women would have high rates of other forms of cancer. This is not the case. The Victorian Cancer Registry (unpub) reports the rates of all cancer except cervix for Victorian women diagnosed 1995–97, born in the former Yugoslavia as 271.1 per 100,000 women (95% CI 242.4–303.1) and for women born in Australia/New Zealand as 247.3 per 100,000 (95% CI 243.5–251.1). As the confidence intervals for these populations overlap completely, it is unlikely that chemicals play a special role in cervical cancer incidence for women from the former Yugoslavia.

One final possible explanation for the higher rate of cervical cancer in the Yugoslav population is because they present for regular Pap tests. While cervical screening existed in the former Yugoslavia, it is likely that the more systematic, regular screening in Australia detects cancer that was not detected in their original country. Therefore, one might expect an initial peak of incidence of cervical cancer for a number of years, and then a relatively quick decline over time to 'normal' levels.

Of all the potential explanatory factors discussed here, the above is the most logical. Screening rates are generally in line with policy recommendations, women from the former Yugoslavia have good recognition of health messages, particularly cervical screening messages, and these did not differ as a function of cultural group. There were differences between Macedonians and the other cultural groups on a number of dimensions that lead us to be concerned about this group. However, cervical cancer incidence is not reported by subgroup and hence we cannot know if these differences are important for cervical health. If we could examine differences in cervical cancer incidence as a function of cultural group, we could be closer to an explanation of why women from the former Yugoslavia have such high cervical cancer rates. If detection of cancer through regular screening were the reason for high incidence of cervical cancer now, patterns of cervical cancer incidence would be expected to decline over the next couple of decades.
References


Victorian Cancer Registry (unpublished material, December 2000).
Chapter 9 Uptake of cervical screening messages by Macedonian and Spanish-speaking women: an evaluation of the PapScreen Victoria multicultural media campaign, 1999
Madeline Fernbach March 2000

Abstract
An evaluation of the 1999 PapScreen Victoria multicultural media campaign aimed to examine whether length of exposure to cervical screening media influenced women’s familiarity with cervical screening related messages. To this end, a cross-sectional survey compared demographically similar groups: 94 Macedonian-speaking women (exposed to a shorter campaign), and 96 Spanish-speaking women (exposed to a longer campaign). Macedonian women were found to utilise the media differently to Spanish-speaking women, and were better able to recall and recognise cervical screening messages than Spanish-speaking women. Differences were also found in media awareness as a function of demographic variables (standard of English, years spent in Australia, and age), and in barriers to cervical screening as a function of screening status. This study highlights the need for culturally appropriate health campaigns targeted at ethnic groups, and for using a combination of the media that these groups access most often.

Introduction
Victorian cervical screening rates for culturally diverse populations are unavailable except via self-report. However, some communities have higher incidence of cervical cancer than other Victorian women (Thursfield, Whittfield & van Winckel 1999). Strategies designed to target women from culturally-diverse backgrounds have been developed and implemented by PapScreen Victoria, focusing on different ethnic groups each year for the last three years. Emphasis has been placed on disseminating culturally-appropriate messages to these communities. This paper reports the evaluation of the multicultural media campaign in 1999 in conjunction with the National Cervical Screening Program by comparing the effects of differential exposure to Pap test messages on two ethnic groups. It was the aim of the evaluation to examine whether the length of time the groups were exposed to the advertising campaign influenced the nature and/or extent of women’s familiarity with the cervical screening-related messages.

Macedonian and Spanish-speaking populations are of equivalent size in Victoria (National Cervical Screening Program 1998). It was of interest to observe whether there were any differences in uptake of messages between these ostensibly similar groups.
Method

Participants
The study was a cross-sectional ex post facto survey conducted by personal interviews in October 1999. Women between the ages of 18 and 69 living in Melbourne who were either Spanish-speaking or Macedonian were selected as the target population. Women participating in the survey were given the option of conducting the interview in Macedonian, Spanish, or English. A sample of 94 Macedonian-speaking and 96 Spanish-speaking women was obtained by a combination of recruitment from community health centres, social clubs, and other venues where the Spanish-speaking and Macedonian communities met, and through snowballing techniques. Four bilingual women (two Macedonian and two Spanish-speaking) with interviewing and research experience were recruited to be interviewers. Participants were given the option of being interviewed face-to-face immediately, or via telephone at a mutually agreeable time.

Pap test messages
There were two phases of the media campaign. The initial, nationally-funded phase occurred over six weeks in May/June of 1999. The campaign messages were disseminated in 25 languages. The second phase of the campaign was held over five weeks in June/July 1999, was funded by PapScreen Victoria, and concentrated on only seven languages (Croatian, Spanish, Italian, Greek, Polish, Khmer, and Russian). The media campaign messages in each phase were the same and focussed on excuses women have which prevent them from having Pap tests. The campaigns were intensive and were maintained over a long period of time. Macedonian-speaking women were exposed to the nationally-funded media campaign focussing on excuses women have about avoiding Pap tests, while the Spanish-speaking women were exposed to both the national and the state-funded media campaigns.

Measures
The questionnaire was a 49-item instrument which was professionally translated and back-translated to ensure equivalence in meaning across languages, and checked for cultural sensitivity through pilot testing. Closed-ended questions were used almost exclusively to collect self-report data that covered Pap testing behaviour, amount of media exposure in both English and their own language, intention to have a Pap test in the future, recall of health messages and Pap test messages, impact of the media campaign on attitudes and behaviour, stage-based barriers to cervical screening, and demographic details.

Data analysis
The data were entered into the Statistical Package for the Social Sciences (SPSS) and were analysed descriptively using cross tabulations. Unless indicated otherwise, the findings are reported at this descriptive level. However, chi-square tests were used to analyse the data further, and where significant, findings were reported. As this resulted in the use of a large number of tests, a conservative level of statistical significance was used to reduce the number of type I errors. Hence, significance is reported at p<.01. The variables used for analysis were as follows: language group (Macedonian/Spanish-speaking), screening status (screened in September 1997 or earlier/screened in October 1997 or more recently), standard of English (good/in-between and bad), years in Australia (15 or less/more than 15 years), and age (42 years and younger/over 42 years).
Results

Demographic and screening profile

Participants ranged in age from 18 to 69 years (M = 42.84, SD = 13.87). There were no differences in age or screening status by ethnic group. Of the Macedonian women, 71% specified they spoke Macedonian at home, 18% specified both Macedonian and English, and 11% reported speaking solely English at home. Similarly, 74% of the Spanish-speaking women reported that they spoke Spanish at home, 23% spoke both Spanish and English, and 3% specified they spoke solely English at home.

The women had been in Australia for a relatively long period of time (M = 18.07 years, SD = 9.20). However, the Macedonian women had been in Australia significantly longer than the Spanish-speaking women (M = 22.63, SD = 9.98 cf. M = 13.60, SD = 5.52). There were no differences in women's self-reported standard of English as a function of ethnic group. Fifty-two percent of women said their English was 'good', 33% 'in between', with only 15% saying it was 'bad'. More younger women described their English as good, with older women describing their English as either 'in between' or 'bad', χ²(2) = 47.54, p<.001.

Eight percent of participants elected to conduct their interviews in English rather than their own language.

Seventy-three percent of women were well-screened (they had had a Pap test in October 1997 or more recently), 18% were under-screened, and 9% had never had a Pap test. There were no differences in screening status for the Spanish-speaking women compared to the Macedonians. The women were asked if it were likely that they were going to have a Pap test in the next two years, and while 88% of women said it was likely, 10% said they were unsure, and 2% commented that it was unlikely they would have a Pap test. There were no differences by ethnic group, standard of English, years in Australia, or age. Unsurprisingly, well-screened women reported being more likely than under-screened women to intend have a Pap test in the next two years, χ²(2) = 32.87, p<.001.

Media usage

Women on average listened to the radio more than they watched television or read magazines (see Table 9.1). This effect appears to be influenced primarily by the Spanish-speaking women's activities. However, Spanish-speaking women reported reading magazines for more time F(1,148) = 8.00, p<.01, and watching more television in their own language, F(1,187) = 13.78, p<.001.

Older women (over 42 years) read more non-English magazines and listened to more non-English radio than younger women, [F(1,100) = 15.33, p<.001 for magazines, and F(1,123) = 33.76, p<.001 for radio]. Similarly, women who had been in Australia for a long time (more than 15 years) listened to more radio in their own language than those who had been in Australia for less time, F(1,123) = 7.49, p<.01. However, those in Australia for 15 years or
less read more magazines and newspapers in general than those here for more time, \( F(1,148) = 8.40, p<.01 \). Women who reported that their English was poor (either ‘in-between’ or ‘bad’ when asked how good their English was), chose a higher proportion of all media in their own language: television, \( F(1,104) = 17.33, p<.001 \); radio, \( F(1,123) = 30.35, p<.001 \); and magazines and newspapers, \( F(1,100) = 17.14, p<.001 \).

Women were asked whether they had seen any health messages in the media in the past six months. Ninety-four percent of women reported in the affirmative, and most commonly recalled Pap test messages (69% of women), smoking messages (52%), breast messages (48%), diet messages (40%), heart messages (23%), and skin messages (17%). No other messages were mentioned by more than 10% of women. More Macedonian than Spanish-speaking women had heard Pap test messages, \( \chi^2(1) = 25.78, p<.001 \), and details of which types of messages they recalled are provided in Table 9.2. There were no differences by years in Australia, screening status, standard of English, or age.

<table>
<thead>
<tr>
<th>Message</th>
<th>Macedonian (n)</th>
<th>Spanish-speaking (n)</th>
<th>( \chi^2(1) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pap test</td>
<td>81</td>
<td>50</td>
<td>25.78**</td>
</tr>
<tr>
<td>Smoking</td>
<td>53</td>
<td>45</td>
<td>6.72</td>
</tr>
<tr>
<td>Breast</td>
<td>58</td>
<td>36</td>
<td>9.27**</td>
</tr>
<tr>
<td>Diet</td>
<td>49</td>
<td>26</td>
<td>12.47**</td>
</tr>
<tr>
<td>Heart</td>
<td>33</td>
<td>10</td>
<td>16.54**</td>
</tr>
<tr>
<td>Skin</td>
<td>26</td>
<td>6</td>
<td>15.54**</td>
</tr>
</tbody>
</table>

\* \( p<.01 \) \* \* \( p<.001 \)

When asked about the sources of the Pap test messages they had become aware of, the primary source was television (70.5%), with radio (60%) and newspapers (30%) being the next most commonly-cited sources. Others included via a general practitioner (21%), from the Anti-Cancer Council (19%), and in women’s magazines (11%). Macedonian women more frequently heard Pap test messages on the radio than Spanish-speaking women, \( \chi^2(1) = 28.60, p<.001 \). More women who had been in Australia for longer than 15 years heard Pap test messages on the radio than those who had been in Australia for less time, \( \chi^2(1) = 7.88, p<.01 \). Women with good English more often saw Pap test messages on television than those with a lower standard of English, \( \chi^2(1) = 15.05, p<.001 \). This is unsurprising, given the paucity of Pap test messages in women’s own languages on television compared to those in English.

There were no differences in source of Pap test messages as a function of screening status.

The women were asked to recall the Pap test messages they had seen or heard. These messages are provided in both spontaneous and prompted recall formats in Table 9.3, and the frequency with which each prompted message was heard is provided in Table 9.4. Macedonian women spontaneously recalled more Pap test messages than Spanish-speaking women (see Table 9.5). Spontaneous and prompted recall of messages did not differ as a function of the other variables (standard of English, length of time in Australia, screening status, and age). When prompted, Macedonian women remembered two messages more than Spanish-speaking women. These were: ‘I’m busy, I don’t have time to go to my doctor right now’, \( \chi^2(1) = 7.87, p<.01 \), and ‘Each year in Australia more than 300 women die of cervical cancer’, \( \chi^2(1) = 6.91, p<.01 \). When prompted, more people reported hearing the Pap test messages several times rather than just once or twice.
Table 9.3: Prompted and spontaneous recall of Pap test media messages

<table>
<thead>
<tr>
<th>Message</th>
<th>Spontaneous recall</th>
<th>Prompted recall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>When did you last have a Pap smear?</td>
<td>37</td>
<td>20</td>
</tr>
<tr>
<td>Don't make excuses. Make an appointment</td>
<td>75</td>
<td>40</td>
</tr>
<tr>
<td>Cervical screening? I'm too old to need a Pap smear</td>
<td>62</td>
<td>33</td>
</tr>
<tr>
<td>I've only ever had one partner</td>
<td>67</td>
<td>25</td>
</tr>
<tr>
<td>I don't have any symptoms</td>
<td>49</td>
<td>26</td>
</tr>
<tr>
<td>I'm busy: I don't have time to go to my doctor right now</td>
<td>69</td>
<td>36</td>
</tr>
<tr>
<td>Each year in Australia more than 300 women die of cervical cancer</td>
<td>43</td>
<td>23</td>
</tr>
<tr>
<td>Cervical cancer is the most preventable of all cancers</td>
<td>49</td>
<td>26</td>
</tr>
<tr>
<td>By having regular Pap smears women can help prevent up to 90% of cervical cancer</td>
<td>61</td>
<td>32</td>
</tr>
<tr>
<td>If you're a woman aged between 18 and 70 years you should have a Pap smear every two years—even if you're no longer having sex</td>
<td>122</td>
<td>64</td>
</tr>
</tbody>
</table>

Note: % denotes percentage of respondents.

Table 9.4: Extent of prompted recall of Pap test media messages

<table>
<thead>
<tr>
<th>Message</th>
<th>Heard once or twice</th>
<th>Heard three or more times</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>When did you last have a Pap smear?</td>
<td>28</td>
<td>21</td>
</tr>
<tr>
<td>Don't make excuses. Make an appointment</td>
<td>24</td>
<td>15</td>
</tr>
<tr>
<td>Cervical screening? I'm too old to need a Pap smear</td>
<td>36</td>
<td>24</td>
</tr>
<tr>
<td>I've only ever had one partner</td>
<td>33</td>
<td>25</td>
</tr>
<tr>
<td>I don't have any symptoms</td>
<td>37</td>
<td>25</td>
</tr>
<tr>
<td>I'm busy: I don't have time to go to my doctor right now</td>
<td>27</td>
<td>17</td>
</tr>
<tr>
<td>Each year in Australia more than 300 women die of cervical cancer</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>Cervical cancer is the most preventable of all cancers</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>By having regular Pap smears women can help prevent up to 90% of cervical cancer</td>
<td>31</td>
<td>20</td>
</tr>
<tr>
<td>If you're a woman aged between 18 and 70 years you should have a Pap smear every two years—even if you're no longer having sex</td>
<td>29</td>
<td>17</td>
</tr>
</tbody>
</table>

Note: % denotes percentage of respondents.
Table 9.5: Spontaneous recall of Pap test messages by culture

<table>
<thead>
<tr>
<th>Message</th>
<th>Macedonian (n)</th>
<th>Spanish-speaking (n)</th>
<th>(\chi^2(1))</th>
</tr>
</thead>
<tbody>
<tr>
<td>When did you last have a Pap smear?</td>
<td>35</td>
<td>2</td>
<td>37.42**</td>
</tr>
<tr>
<td>Don’t make excuses. Make an appointment</td>
<td>51</td>
<td>24</td>
<td>72.08**</td>
</tr>
<tr>
<td>Cervical screening? I’m too old to need a Pap smear</td>
<td>44</td>
<td>4</td>
<td>72.08**</td>
</tr>
<tr>
<td>I’ve only ever had one partner</td>
<td>40</td>
<td>7</td>
<td>31.72**</td>
</tr>
<tr>
<td>I don’t have any symptoms</td>
<td>40</td>
<td>9</td>
<td>27.32**</td>
</tr>
<tr>
<td>I’m busy; I don’t have time to go to my doctor right now</td>
<td>54</td>
<td>15</td>
<td>35.92**</td>
</tr>
<tr>
<td>Each year in Australia more than 300 women die of cervical cancer</td>
<td>37</td>
<td>6</td>
<td>29.24**</td>
</tr>
<tr>
<td>Cervical cancer is the most preventable of all cancers</td>
<td>44</td>
<td>8</td>
<td>30.90**</td>
</tr>
<tr>
<td>By having regular Pap smears women can help prevent up to 90% of cervical cancer</td>
<td>39</td>
<td>6</td>
<td>227.52*</td>
</tr>
<tr>
<td>If you’re a woman aged between 18 and 70 years you should have a Pap smear every two years—even if you’re no longer having sex</td>
<td>69</td>
<td>53</td>
<td>6.8a*</td>
</tr>
</tbody>
</table>

* \(p<.01\)   ** \(p<.001\)

Participants were asked whether they remembered the newspaper advertisement and the radio advertisement, and the impact these had on their attitudes and behaviour. Participants were asked whether the advertisement made them think about Pap tests, whether they believed the information in the advertisement, whether they felt the advertisement was intended for them, and whether the advertisement encouraged them to have a Pap test (see Table 9.6). Women who were older, \(\chi^2(1) = 7.14, p<.01\), who had spent longer in Australia, \(\chi^2(1) = 8.32, p<.01\), and who were Macedonian, \(\chi^2(1) = 21.16, p<.001\), more frequently remembered the radio advertisement. However, more Spanish-speaking women than expected said the radio advertisement made them think about Pap tests, compared to Macedonian women, \(\chi^2(1) = 10.31, p<.002\). There were no differences in these variables as a function of screening status.

Table 9.6: Impact of print and radio advertisements

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Newspaper (n)</th>
<th>Newspaper %</th>
<th>Radio (n)</th>
<th>Radio %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you remember the (newspaper/radio) advertisement containing Pap test messages? (yes)</td>
<td>64</td>
<td>34</td>
<td>123</td>
<td>65</td>
</tr>
<tr>
<td>Did the (newspaper/radio) advertisement make you think about Pap tests? (yes)</td>
<td>52</td>
<td>83</td>
<td>102</td>
<td>83</td>
</tr>
<tr>
<td>Did you believe the information in the (newspaper/radio) advertisement? (yes)</td>
<td>62</td>
<td>98</td>
<td>122</td>
<td>99</td>
</tr>
<tr>
<td>The (newspaper/radio) advertisement was intended for women like you. Did you feel that it was intended for you? (yes)</td>
<td>55</td>
<td>87</td>
<td>113</td>
<td>92</td>
</tr>
<tr>
<td>Did the (newspaper/radio) advertisement encourage you to have a Pap test? (yes)</td>
<td>43</td>
<td>66</td>
<td>71</td>
<td>58</td>
</tr>
</tbody>
</table>

Note: % denotes percentage of respondents.

Finally, participants were asked if they had had a Pap test, or made an appointment to have a Pap test, as a result of the advertising campaign. Fifty-three percent of respondents said they had. However, Spanish-speaking women were more likely than expected to have had a Pap test as a result of the campaign, compared to Macedonian women, \(\chi^2(1) = 14.66, p<.001\).
There were no differences in this behaviour as a function of age, length of time in Australia, screening status, or standard of English.

Women's barriers to cervical screening

Women were asked a series of questions designed to establish whether there were any barriers to cervical screening for them, and if so, at which point in the cervical screening process these occurred. One hundred and seventy women agreed that they could easily arrange to have a Pap test (90%), with only six being unsure (3%), and 14 disagreeing (7%). Similarly, only 21% (n = 39) of women agreed that it was difficult to access a practitioner in their area, 4% (n = 7) being unsure, and the majority disagreeing (76%, n = 144). No differences in these items occurred as a function of ethnic group, standard of English, screening status, age, or length of time in Australia.

The next questions examined whether women agreed or disagreed with statements associated with how easy it was to undertake each stage of the cervical screening process. Participants generally perceived themselves to be eligible to have Pap tests, and found it was easy to turn up to appointments, easy to have regular Pap tests, and easy to get results. The majority also believed the other steps were easy to perform (ring to make an appointment, choose a practitioner, and remember a Pap test), however only half of the women thought the experience of having a Pap test was ‘OK’ (see Table 9.7). More well-screened women than expected said the experience of having a Pap test was manageable or ‘OK’, while fewer under-screened women than expected said it was ‘OK’: more of these women said they were ‘unsure’ whether the experience was ‘OK’, $\chi^2(2) = 17.38, p<.001$. More Macedonian women thought it was easier to remember to have a Pap test, $\chi^2(2) = 35.39, p<.001$, and more reported the experience as ‘OK’ or tolerable than Spanish-speaking women, $\chi^2(2) = 24.75, p<.001$. More women who had been in Australia for a longer time also thought it was easy to have a Pap test compared to those who had been in Australia for a shorter amount of time, $\chi^2(2) = 18.84, p<.001$. No differences in these items occurred as a function of standard of English, or age.

Table 9.7: Ease of performing each step of the cervical screening process

<table>
<thead>
<tr>
<th>Step</th>
<th>Agree</th>
<th>Unsure</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>I am eligible to have Pap tests</td>
<td>180</td>
<td>96</td>
<td>–</td>
</tr>
<tr>
<td>It is easy to: Remember to have a Pap test</td>
<td>133</td>
<td>70</td>
<td>12</td>
</tr>
<tr>
<td>It is easy to: Choose a practitioner</td>
<td>146</td>
<td>77</td>
<td>12</td>
</tr>
<tr>
<td>It is easy to: Ring to make an appointment</td>
<td>144</td>
<td>86</td>
<td>5</td>
</tr>
<tr>
<td>It is easy to: Turn up to the appointment</td>
<td>179</td>
<td>94</td>
<td>8</td>
</tr>
<tr>
<td>The experience of having a Pap test is OK</td>
<td>95</td>
<td>50</td>
<td>46</td>
</tr>
<tr>
<td>It is easy to: Get results of the Pap test</td>
<td>170</td>
<td>90</td>
<td>9</td>
</tr>
<tr>
<td>It is easy to: Have regular Pap tests</td>
<td>172</td>
<td>91</td>
<td>10</td>
</tr>
</tbody>
</table>

The biggest barriers to cervical screening were the experience of having a Pap test, remembering to have a Pap test, and choosing a practitioner (see Figure 9.1). More Macedonian women thought it was easy to remember a Pap test than Spanish-speaking women, $\chi^2(2) = 33.39, p<.001$, and more Macedonian women thought the experience of having a Pap test was ‘OK’ than Spanish-speaking women, $\chi^2(2) = 27.75, p<.001$. 

When asked what might make having a Pap test difficult, the majority of responses related to the eight stages of the cervical screening process. The responses are provided in Table 9.8 and Figure 9.2. The most common issues mentioned that made Pap tests difficult were practitioner issues, including choosing a practitioner, and pain, discomfort, or embarrassment. Many women said nothing would make it difficult to have a Pap test. Examination of the frequencies revealed that more Macedonian women than Spanish-speaking women thought nothing would make it difficult to have a Pap test, while more Spanish-speaking women cited doctor issues and discomfort of past Pap tests.

Table 9.8: Issues that might make it difficult to have a Pap test

<table>
<thead>
<tr>
<th>Issue</th>
<th>Macedonian n</th>
<th>Spanish n</th>
<th>Total n</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practitioner</td>
<td>9</td>
<td>30</td>
<td>39</td>
<td>29</td>
</tr>
<tr>
<td>Nothing would make it difficult</td>
<td>26</td>
<td>8</td>
<td>34</td>
<td>26</td>
</tr>
<tr>
<td>Pain/discomfort of previous Pap test</td>
<td>0</td>
<td>14</td>
<td>14</td>
<td>10.5</td>
</tr>
<tr>
<td>Embarrassed</td>
<td>7</td>
<td>7</td>
<td>14</td>
<td>10.5</td>
</tr>
<tr>
<td>Too busy</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>No need/no symptoms</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>4.5</td>
</tr>
<tr>
<td>Poor English</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Self-conscious/ashamed</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>8</td>
<td>11</td>
<td>8.5</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>77</td>
<td>133</td>
<td>100</td>
</tr>
</tbody>
</table>
Discussion

There were few effects as a function of the demographic variables. Recognition of Pap test messages and general media usage differed to varying degrees as a function of standard of English, years spent in Australia, and age. These are all factors which generally affect access to health and other resources. However, the screening rates of Macedonian and Spanish-speaking women approximated those of the general population (Mitchell, Higgins & Burrows 1999). Differences as a function of screening status lay in intention to screen and barriers to screening (specifically, the experience of having a Pap test). These have also been found in previous studies (Cockburn et al 1991). It is likely that under-screened women’s uncertainty about the experience of having a Pap test is a result of having fewer Pap tests.

A substantial number of media and screening-related dimensions varied as a function of language group. It was shown in this study that Macedonian women had spent longer in Australia. This difference may have influenced the women’s message uptake, in that one would expect Macedonians to have received more health messages over the years than the Spanish-speaking women. While unplanned, this difference may possibly account for some results noted in this paper. In that case, one would expect the effects of length of time in Australia to be stronger across the variables that differ as a function of language group. This is not the case, and as such it is reasonable to discount length of time in Australia as a significant factor.

It is noteworthy that the Macedonian sample had better knowledge and recognition of cervical screening messages than the Spanish-speaking sample, in spite of the fact that the Spanish-speaking population received the media campaign for a longer amount of time. The Spanish-speaking women may have started with a lower initial exposure or understanding of the cervical screening messages, perhaps because of their poorer standard of English than the Macedonian women, or perhaps because of the shorter time they had been in Australia, on average, compared to the Macedonian women. Secondly, the Spanish-speaking women did not report receiving the messages to the same degree as the Macedonian women: this suggests that further work needs to be done to improve the strategies by which education campaigns are disseminated into this population. In addition, the Macedonian women perceived it to be easier to remember to have a Pap test, and viewed the experience of having a Pap test more positively than the Spanish-speaking women. It is possible that these attitudes are associated with recognition of specific Pap test messages: alternative messages may have more effect on the Spanish-speaking women. Further research is clearly needed to examine this hypothesis.

It is difficult to gain an accurate picture of the impact of this campaign on women of different cultural backgrounds. Without experimental study design, the results of this study are necessarily descriptive. Consequently, there are some results which are worth discussing further. More Macedonian women recalled that they had seen or heard Pap test messages than Spanish-speaking women, in spite of their lower exposure to the cervical screening media campaigns. This may

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**Figure 9.2: Issues making Pap testing difficult by stage**

- Nothing would make it difficult
- I am not eligible to have Pap tests
- Remember to have a Pap test
- Choose a practitioner
- Ring to make an appointment
- Turn up to the appointment
- Get results of the Pap test
- Have regular Pap tests
- Other

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- Macedonian
- Spanish-speaking
have been a result of their differing media usage: Spanish-speaking women read more newspapers and magazines than Macedonian women, but these were in their own language to a lesser degree than for Macedonian women. As print media was a substantial conduit for the campaign, it is reasonable to assume that Macedonians were exposed to the print media advertisements to a similar, if not greater extent.

To complicate matters, the most commonly-cited source of Pap test messages was the television, a medium that was not used for the multicultural cervical screening campaign. All messages via television were presented in English as a part of a different campaign. Further, far more Macedonian women spontaneously recalled cervical screening messages than Spanish-speaking women. However, while there were no differences in amount of time spent listening to the radio or the proportion of radio in their own language, Macedonian women more frequently heard Pap test messages on the radio than Spanish-speaking women. This suggests that exposure to the campaign was greater for them than the Spanish-speaking women.

On the other hand, it appears that the impact of the campaign was greater for Spanish-speaking women. More Spanish-speaking women than expected said the radio advertisement made them think about Pap tests, compared to Macedonian women. Spanish-speaking women were also more likely than expected to have had a Pap test as a result of the campaign, compared to Macedonian women. Therefore, while Macedonian women received the cervical screening messages more than Spanish-speaking women, the Spanish-speaking women reported being more influenced by the campaign. It is possible this is a cultural difference, either in actual response to the campaign, or in response to being interviewed.

Some illumination of this issue is provided by a comparison of the two groups with respect to barriers to cervical screening. More Macedonian women thought it was easy to remember to have a Pap test, and more reported the experience as tolerable, than Spanish-speaking women. Indeed, more Macedonian women than Spanish-speaking women said nothing would make it difficult to have a Pap test, while more Spanish-speaking women cited doctor issues and discomfort of past Pap tests as barriers to Pap testing. Thus Macedonian women appear more empowered to have Pap tests than Spanish-speaking women. They were more informed about cervical screening messages and believed it to be easier to have a Pap test than Spanish-speaking women. In spite of this, there were no differences in screening behaviour for the two groups. This is the key to the paradox. It is possible that Spanish-speaking women had a lower baseline screening rate which increased as a result of the campaign, while Macedonian women had higher screening rates which were maintained over the campaign period. This has implications for future media strategies which could focus on ethnic groups with lower baseline in terms of improving screening rates, but should also maintain screening rates in those groups with already high baseline levels of screening.

On the other hand, it is possible that the differences in self-reported impact of the campaign (ie having a Pap test as a result of the campaign) are an artefact either of cultural, social demand characteristics, or of measurement issues. For Spanish-speaking women, perhaps the cultural norm is to agree with the interviewer in this type of situation. Further experimental work is needed to generate baseline data, and to determine the real impact of the cervical screening ethnic media campaign. Following on from this, it is possible that the sorts of questions we ask in terms of self-report measures may not be useful in describing the modifiable predictors of screening behaviour. It is probable that there are processes going on which could not be assessed in this study.

Finally, it is possible that there may be issues associated with the homogeneity of the Spanish-speaking population in Victoria. While the Macedonian women are classified as such on the basis of their nationality, there are many nationalities which comprise Victoria’s Spanish-speaking population. It may become necessary to target specific countries, such as Chile, Colombia, or Peru, rather than assume that an advertisement written or spoken in Spanish will be culturally appropriate to all Spanish-speaking groups.
Conclusion

It was not possible to report with confidence the effects of differential exposure to Pap test messages. The two language groups examined were not equivalent, as we had originally hoped. Each group used the media differently, yet Macedonian women, in spite of their reduced exposure to Pap test messages, were better able to recall and recognise these messages. It was heartening to discover that the effects of the campaign were positive for those Spanish-speaking women who were aware of it. This study highlights the need for culturally appropriate health campaigns targeted specifically at particular ethnic groups, and most importantly, using a combination of media that these groups access most often. This profile of media use appears to be different for different ethnic groups. While these suggestions are time-consuming, costly, and often difficult to implement, it is probably the only way we can increase the exposure of our health campaigns without ethnicity data being recorded by cervical cytology registries.

References


Chapter 10 The responses of women with abnormal cervical smears: a literature review

Catherine Hodgson September 1999

Introduction

In Australia, cervical cancer accounted for the deaths of 302 women in 1996, with the lifetime risk of a woman developing cervical cancer being 1:101 (AIHW 1998). In Victoria alone, about 250 women are diagnosed with cervical cancer annually, which in 1995, led to 76 deaths (AIHW 1998).

Cervical cancer is one of the few cancers where screening detects pre-cancerous lesions, thereby rendering a large proportion of these cancers preventable. The Pap test (originally developed by Dr George Papanicolaou in 1943) detects pre-cancerous changes and abnormalities in cervical cells. There are two levels of severity in pre-cancerous lesions—low grade and high-grade abnormalities—with the higher-grade abnormalities more likely to go on to become cancerous. These abnormalities are usually graded from warty atypia (HPV effect), atypia, equivocal cervical intraepithelial neoplasia (CIN), possible CIN, endocervical dysplasia not otherwise specified (NOS), CIN 1, CIN 2, CIN 3 and carcinoma in situ (AIHW 1998).

The Pap test has the potential to reduce cervical cancer by up to 90% through population screening. This potential led to the introduction of the National Cervical Screening Program in Australia in 1991. The program recommends all women who have been sexually active at any stage in their lifetime to be screened for cervical abnormalities once every two years until the age of 70 years at which time screening can cease (AIHW 1998). The screening program effectively works towards reducing the morbidity and mortality from cervical cancer by:

- maximizing participation of eligible women by routine, two-yearly screening
- ensuring that cervical smears contain adequate samples of cervical cells
- instituting a uniform and reliable system
- developing appropriate evaluation and management protocols for women with screen-detected abnormalities, and
- ensuring effective treatment and follow-up of women with screen-detected abnormalities of significant malignant potential (AIHW 1998; Pritchard 1996).

The greatest concern women have with cervical screening, is the fear of finding cancer (Beresford & Gervaize 1986; Jones, Singer & Jenkins 1996; McDonald et al 1989; McKie 1993; Posner & Vessey 1988; Wardle, Pernet & Stephens 1995). There are many misconceptions about cervical screening, but the literature suggests that women with a result other than normal often assume they have cancer, and consistently want more information about their result (Foxwell & Alder 1993; Kavanagh & Broom 1997; Palmer et al 1993). It is the responsibility of health care professionals to deal in advance with women’s concerns and fears (Marshall 1996; Posner & Vessey 1988; Thomson 1994) and provide them with the information they seek when given an abnormal Pap test result.

For screening to achieve its goal of reducing mortality, appropriate and prompt follow-up of the detected abnormalities must occur. Ensuring adequate follow-up involves the following processes:
notification of the women
obtaining the recommended treatments and diagnostic tests
tracking the women with reported abnormal test results.

At each of these stages, women with abnormal results may have psychological, psychosocial and psychosexual reactions that must be addressed in order to gain compliance with follow-up, future screening and treatment.

**Psychological responses**

Women receiving notification of an abnormal cervical smear result experience an array of psychological responses ranging from anxiety and depression to an absolute fear of developing cancer (Bell et al 1995; Beresford & Gervaize 1986; Garth et al 1995; Greenwald, Becker & Nevitt 1978; Lerman et al 1991; Reelick, de Haes & Schuurman 1984; Summers 1998). One of the main problems women face is that although abnormal smear results are quite common (Kavanagh, Santow & Mitchell 1996), most women do not realise they have symptoms and unlike most other health conditions, they have no way to recognise and monitor their condition (Kavanagh & Broom 1997).

The earliest reports of the psychological distress women suffer after receiving an abnormal screening result came from Greenwald in 1978. This study surveyed the psychological distress experienced by 300 women after receiving an abnormal cervical or breast cancer screening result in a public health clinic. The study reported women feeling both anxious and fearful of developing cancer following their abnormal results. Two additional surveys investigating the emotional reactions of 224 women from a public family planning clinic (Lerman et al 1991) and 50 women from a public hospital dysplasia clinic (Beresford & Gervaize 1986), reported similar emotional effects. Women receiving abnormal smear results experienced a fear of cancer, a noticeable reduction in daily living activities, mood swings, depression, sleep disturbance, sexual dysfunction and weight changes.

An intervention study of 418 women with abnormal cervical smear results in a public health clinic found women experienced mood swings and depression as well as a fear of having cancer while they were waiting for definitive screening results (Reelick, de Haes & Schuurman 1984). This study also investigated the psychological effects of women having a smear repeated because the specimen was inadequate, and found this had no emotional impact on the women. Two studies have looked closely at women with mild abnormalities that do not need colposcopy. The first shows that one week after women receive their abnormal result, there was no increase in anxiety levels or the probability of women developing a psychiatric disorder, however the women expressed negative feelings about their health or with their bodies (Wardle, Pernet & Stephens 1995). The second study by Bell et al (1995), found that women receiving follow-up for their mildly abnormal smear for an average of 22 months had significantly more problems in social adjustment and higher anxiety levels compared to women with negative smears. These studies both showed that even with mild abnormalities, women still experience negative psychological health effects when receiving abnormal cervical smear results.

In a study examining 114 women attending a colposcopy clinic for investigation of an abnormal smear (Garth et al 1995), over half recalled reactions such as shock, horror or panic in the first week after receiving the result, with 90% experiencing fear and worry, 67% depressed mood, 44% poor concentration, 43% irritability, 33% lack of usual interests and 29% sleep disturbance. However, after receiving the abnormal result, further investigation by colposcopy was generally associated with low levels of anxiety and depression, satisfaction with the colposcopy service and some dissatisfaction with delays.

An Australian qualitative interview study of 29 women with cervical abnormalities who attended a gynaecological clinic showed the women felt confused, afraid and found it difficult to get the information they required (Kavanagh & Broom 1997). An abnormal smear left
the women feeling that they actually ‘had cancer’ as they did not know the screening test detected pre-cancerous lesions. Varying degrees of information were sought by women about their abnormalities, and most wanted to participate in decisions about their care, but again found it difficult to get the information they required. This was primarily due to confusion about what their doctors had told them and not feeling able to ask questions during the consultation. Medical terms were often deemed ‘too technical’ and difficult to understand when the women were distressed by their abnormality and could not fully take in the material during the consultation. The relationship between the patient and the doctor is extremely important and practitioners who spent time, answered questions and enabled women to make their own decisions were highly commended. So too were doctors that the patients trusted, and for some it was important that their doctor did not tell them too much information. Dissatisfaction was expressed when their doctor rushed the consultation, or the patients found they did not understand the information, did not have their questions answered, were told ‘not to worry’, or felt like they were in a production line. Women also found it difficult to deal with their abnormal cervical smear result because they were not able to see their cervix. This made it difficult for women to understand what their abnormality meant and what treatment entailed.

Two independent measures of the psychological and psychosocial effects of an abnormal cervical smear result have been developed. The first, ‘The Abnormal Smears Questionnaire’ is a useful tool for standardising both the degree of distress and for evaluating the effect of information provision and counselling aimed at reducing distress for women (Doherty et al 1991). In a study of 80 patients with abnormal cervical smear results, 97% of patients reported some degree of distress associated with the cause of the condition, outcome of treatment, perceived severity of the condition, and consequences of the condition. The second questionnaire, the ‘Psychosocial Effects of Abnormal Pap Smears Questionnaire (PEAPS-Q)’, measures the distress experienced by women undergoing follow-up investigation after an abnormal Pap test result (Bennetts et al 1995). The questionnaire was tested on 350 women with cervical abnormalities attending a Family Planning New South Wales clinic. Four dimensions of distress emerged: experience of medical procedures, beliefs/feelings about cervical abnormality and changes in perception of oneself, worry about infectivity, and effect on sexual relationships. The questionnaire was found to be a valid, reliable and multi-dimensional instrument for quantifying the distress experienced by women with abnormal Pap test result.

The medical debate continues over the best management of women with abnormal smears, taking into account the emotional trauma they endure during this difficult period. A review by Gearhart, Davey-Sullivan and Fulton (1991) discusses management of the abnormal smear and the quest for consensus through knowledge gained from improved reporting. The Bethesda System of reporting was introduced to produce a uniform reporting system and a national system of quality control to provide more guidance with the management of abnormal smears (Gearhart, Davey-Sullivan & Fulton 1991). This review however, fails to take into consideration the psychological effects of the clinical management of the abnormal smear. A study investigating the clinical management of abnormal cervical smears measured the anxiety generated retrospectively in two groups of women, one referred for prompt colposcopy (n = 182) and the other kept under cytological review (repeat smears) with recourse to colposcopy if the abnormality persisted (n = 163) (Jones, Singer & Jenkins 1996). The study found colposcopy caused more anxiety than cytological surveillance. In women informed of their abnormal smear result and immediately referred to colposcopy, 47% thought they had cancer compared to only 33% of women who undertook cytological surveillance. There was a small percentage of women in each group (7% and 17% respectively) who believed they suffered a loss in libido and resentment of their partners (18% and 32% respectively). Nonetheless, both groups of women (84%) preferred immediate colposcopy (Jones, Singer & Jenkins 1996). Whichever clinical management strategy is adopted for women with abnormal cervical smears, it is clear that better patient information will help women cope better with psychological distress.
Psychosocial responses

The most important time to address and reduce the psychosocial symptoms of women receiving abnormal smear results is at the point of notification. Central to women's concerns about screening is the fear of finding cancer (Posner & Vesney 1988; Wardle, Pernet & Stephens 1995; Jones, Singer & Jenkins 1996; Stewart et al 1993), and as a result of this, as soon as the screening test is complete, women become anxious (McKie 1993; Schofield et al 1994). To overcome this anxiety, women should be promptly notified of the test results by the physician or health care provider who performed the Pap test. For women with normal results, prompt notification will a) help reduce anxiety about possible abnormal results, b) provide positive reinforcement for deciding to have the screening procedure, and c) provide an opportunity to encourage future screening. For women with abnormal results, the notification will serve to encourage women to obtain recommendations about follow-up tests and/or treatment (Paskett & Michielutte 1997).

Methods for test result notification

The method of notification is varied and can also impact on a woman's response to receiving abnormal test results. Notification may occur in several ways and may include a telephone call, a letter or a personal explanation of the test results from the physician or health care provider. Ideally, multiple forms of notification should be used to ensure an accurate message has been received (Paskett & Rimer 1995).

Telephone calls are an effective way to notify women of their abnormal screening results. A phone call enables a personal interaction to be established between the patient and the provider and the opportunity to clarify the information being received, reinforce the importance of follow-up and respond to the patient's queries and concerns. The disadvantages of using a telephone to convey information is that a very small proportion of the lowest income population does not have a telephone, and a physicians' office usually contacts patients during daytime hours when the majority of working people are not home. These points were demonstrated in a Chicago study in which 23% of patients with abnormal Pap test results could not be contacted by telephone (Manfredi, Lacey & Warnecke 1990).

Written information is one effective strategy to help overcome women's fears and concerns associated with receiving an abnormal smear result, however the quality of the information and the form it arrives in is extremely important for achieving these outcomes. Women with abnormal smear results prefer verbal information from a health professional, supplemented by written information (Leigh, Walker & Janaganathan 1977; Ley 1977; Marteau 1993). By supplementing one-to-one verbal communication with written material, women are able to absorb detail about their health condition, remember and act on the information provided. Davey, Austoker and Jansen (1998) used a systematic review of the literature to develop evidence-based criteria for the content of letters and leaflets at each stage of the cervical screening process, from the initial invitation for the smear to treatment. The study found that letters or leaflets informing women of abnormal results should include the following: an explanation of the meaning and causes of the results, the outcome of the abnormality, the importance of follow-up, how to obtain results, appointment information, the nature of further investigation, inclusion of a results leaflet, an explanation of how to get more information, and sexual advice.

Written forms of notification, usually letters or postcards, are not always ideal methods of communication as the use of technical terms may be foreign and/or the reading level of the message may not be suitable for all women (Paskett et al 1990). For example, women with dysplasia who were interviewed in a pilot study described their frustration at being instructed to have a colposcopy examination without being given any information or description of what a colposcopy actually involves (Paskett et al 1990). Written material about abnormal test results may also communicate multiple and sometimes mixed messages. Women with atypia may be informed they have 'cervical abnormalities' but that they do not need to return for up to six months. Mixed messages may reduce the perceived importance of proper follow-up and treatment. Letters should always include instructions to call a specific person in the office as soon as possible to clarify these points (Paskett & Michielutte 1997).
A personal explanation of abnormal test results also has its strengths and limitations. The advantages of using this form of communication over the use of letters or a telephone call is that the potential exists to tailor the information to the specific needs of the patient and to be able to offer reassurance. The provider can obtain feedback to verify the women's comprehension and ensure the information received is accurate. Family members may also be present during the process to support and to assist with language difficulties and comprehension of information. The limitations of personal communication include the communication skills of the physician or provider, and the financial and time costs associated with the extra visit (Shapiro al 1992).

Compliance rates and attitudes to follow-up: the problems

The compliance rates for follow-up of women with abnormal cervical smears are summarised in a review by Paskett and Rimer (1995). Overall, the compliance rates in special intervention clinics (33–95%) are higher than those in the usual clinical setting (20–74%). The increase may be a result of the notification techniques employed by the two clinics, whereby special intervention clinics use telephone calls or in-person visits to find and remind women to return for follow-up whereas normal clinics rely heavily on written notification of results (Frish 1986; Lane 1983; Marcus et al 1992; Paskett et al 1990, Richart et al 1980; Rome, Cahen & Pagano 1987).

The reasons identified for not complying with follow-up are varied, but predominantly relate to beliefs and facilitating conditions surrounding treatment (Paskett & Michieulutte 1997). Identifiable issues include the values of the doctor's opinion, the perception of the accuracy or seriousness of the test result, the belief in the importance of early detection, familiarity with the procedure, fear of loss of femininity, fear of treatment effects, perceived risk of cervical cancer, and the fear of developing cervical cancer (Paskett et al 1990). Other studies have shown women default from the management of abnormal Pap smears if pregnant or if seeking care elsewhere (Mitchell et al 1992). Studies have also shown women diagnosed with cervical intraepithelial neoplasia report concern about cancer, loss of attractiveness, loss of sexual functioning and anxiety. All of these above concerns contribute to non-compliance with treatment recommendations and follow-up.

Improving compliance rates and attitudes to follow-up

There are many factors that can be employed to encourage women with abnormal Pap test results to return for follow-up and treatment. These include the use of personal telephone counselling, educational brochures and resources, travel incentives, and community or clinical-based educational programs. A study assessing anxiety in women with dysplasia who were referred to a colposcopy clinic for further investigation found women who received telephone counselling prior to attending the clinic were more likely to comply with the colposcopy referrals and less likely to report fear or misunderstanding of the procedure than those who did not (Lerman et al 1991). Similarly, a study testing three intervention methods showed that compliance rates of women to follow-up could be improved and anxiety rates reduced if the women were given transportation incentives and a combination of a personalised follow-up on Pap smears (Marcus et al 1992; Stewart et al (1993; 1994) investigated the effectiveness of a mailed education brochure about abnormal Pap smears on reducing psychological distress and concerns about cancer. Women who received the brochure were less distressed and anxious about having their abnormal results and more likely (75.4%) to have completed treatment and follow-up than those not receiving the brochure (45.8%).

Community and clinical-based education programs are also effective tools that can be used to increase compliance rates in minority populations. The Forsyth County Cervical Cancer Prevention Program was designed to increase cervical screening and knowledge of abnormalities among Black women through both clinical and community-based education programs (Michelutte et al 1994). An analysis of trends prior to and after implementation of the educational programs found the percentage of Black women who returned for follow-up and treatment of an abnormal cervical smear significantly increased during the time the program
was in effect. Interestingly however, although the education programs were equally available and attended by White women, there was no significant change in the percentage of White women who returned (Michielutte et al 1994). Although it is difficult to determine why there was no significant change in the percentage of White women who returned, it is likely that it may be because of a lack of knowledge of cervical cancer and/or knowledge of how to access the medical care system, especially for women in difficult social and economic circumstances or with psychological dysfunction (Michielutte et al 1994).

Several researchers have made suggestions to health care workers to help them reach women with abnormal Pap smear results. These recommendations include the use of letter reminders rather than telephone calls to contact women, as letters were found to be more cost-effective and several attempts were usually required with the telephone (Shepard & Moseley 1976). A study from McDowell et al (1989) found that after the initial investment was made, automated reminder systems supported by computerised medical records were more cost-effective than manual methods. However, as discussed by Roth, Caron and His (1971), the effectiveness of any system depends on the elapsed time between the scheduled appointment and the point of contact, with prompt responses being the more desired action.

Psychosexual responses

The diagnosis and treatment of women presenting with cervical abnormalities can create a mixed bevy of psychosexual emotions, ranging from no change in sexual activity and desire, to significant psychosexual trauma in sexually-active women (Reed et al 1999; Lamont 1994; Schover, Fife & Gershenson 1989; Anderson et al 1986). Human papilloma virus (HPV) infections also play a role in psychosexual responses as HPV, the most common of all the sexually transmitted diseases, may contribute to cervical cancer (Stone 1989).

The trauma associated with an abnormal smear can adversely affect the daily functioning, behaviour and sexuality of a woman (Schover, Fife & Gershenson 1989; Campion et al 1988; Posner & Vessey 1988). The sexual frequency, function and behaviour of 61 women with early stage cervical cancer at diagnosis were investigated (Schover, Fife & Gershenson 1989). The frequency of sexual activity with a partner and range of sexual practices decreased in these women from the time of diagnosis to follow-up after treatment. Similarly, Posner and Vessey (1988) found 43% of women with abnormal cervical smears reporting sexual disturbance around the time of investigation and treatment. A study by Campion et al (1988) investigated the psychosexual trauma of 30 women referred to a colposcopy clinic with an abnormal smear, 30 women who were sexual partners of HPV infected men (26 found to have abnormal smear results and 24 with no such evidence) and 25 women with normal cervical smear results as controls. Women were given questionnaires assessing six aspects of psychosexuality before their cervical atypia diagnosis and again six months after treatment. This study produced similar findings to Schover, Fife & Gershenson (1989) and Posner and Vessey (1988) in that women with cervical abnormalities experienced significant decreases in spontaneous sexual interest, frequency of sexual intercourse, arousal and orgasm, and increased discomfort and negative feelings towards intercourse after diagnosis and treatment compared to before diagnosis. Women without abnormalities experienced no such changes (Campion et al 1988).

In addition to studies reporting psychosexual trauma in women diagnosed with, and after treatment for cervical abnormalities, the psychosexual reactions of 41 women presenting with symptoms of gynaecological cancer were investigated (Anderson et al 1986). This report found women suffered psychosexual trauma upon presentation of symptoms before they are diagnosed with the abnormality. This trauma manifested itself in 75% of women tested, in a variety of symptoms indicative of sexual dysfunction, such as a lack of interest in either initiating or responding to their partner’s initiations for sexual activity. The women reported having little loss of desire for non-sexual, affectionate kissing, yet a substantial loss of desire for sexual intercourse.

However, not all aspects of psychosexual reactions are effected in women with abnormal cervical smears (for example, Schover, Fife & Gershenson 1989; Reed et al 1999). The sexual
satisfaction, capacity to orgasm and frequency of masturbation in HPV-infected women remained unchanged in women with early stage cervical cancer from the time of diagnosis to follow-up after treatment (Schover et al 1989). A recent cross-sectional study of sexually active women aged 18-60 years found that women with a current sexual partner and a known cervical HPV infection had the same psychosexual characteristics as women without an infection (Reed et al 1999). There were no significant differences in the percentage of women with an HPV infection and those without HPV infection reporting physical intimacy, frequency of sexual thoughts, emotions and sexual activity. These results did not change due to the presence of a vaginal infection at the time of study enrolment, household income level, ethnic background, age, marital status or sexual history. From this study it was concluded that knowledge of a HPV cervical infection does not alter a women’s psychosexual activity immediately after diagnosis or subsequent to follow-up treatment (Reed et al 1999).

It would appear that psychosexual distress in women with cervical abnormalities could be either avoided or minimised by the provision of adequate information. A recent prospective randomised study by Howells et al (1999) found that the distribution of an information leaflet to women with cervical abnormalities undergoing colposcopy was not beneficial. The study assessed the usefulness of a specially-designed leaflet distributed to women before colposcopy to reduce their anxiety and psychosexual morbidity by providing information. Although the leaflet was well received, there were no statistical differences in anxiety and psychosexual reactions of women receiving the leaflet compared to those who did not, either before the women’s first visit to a colposcopy clinic, or after their six-month follow-up visit. However, the overall responses to anxiety and psychosexual reactions in both groups decreased after their second visit to the clinic. This study suggests that the provision of sending an information leaflet prior to colposcopy is not beneficial on its own and other approaches to supplying information need to be considered (Howells et al 1999).

Conclusion

Studies have shown that women receiving abnormal cervical Pap smear results can experience psychological, psychosocial and psychosexual reactions. Whether these occur on the initial presentation of symptoms, at diagnosis, as a result of treatment and follow-up, indirectly from the effects of anxiety, depression and anger, or as a combination of all these factors, it is vitally important that health professionals recognise these reactions by acknowledging them when they occur, and consider ways of minimising the likelihood of such emotional problems by the provision of information at the earliest possible stage.

References


Chapter 11  
Attitudes and beliefs of women diagnosed with cervical abnormalities

Madeline Fernbach, Cheryl Remedios and Rita Faelli  October 2000

Abstract

Sixty women diagnosed with mildly abnormal cervical smears (CIN I) were interviewed at length to examine the impact of diagnosis on women’s perceptions and feelings. The study also explored women's experiences after diagnosis, either before colposcopy, after colposcopy, or after treatment. The interviews were analysed qualitatively and the following themes were extracted: women's receipt of test results, adequacy of information, the procedure, understanding of abnormalities, causes of abnormalities, thoughts, feelings, behaviours, stress, self-perceptions, partners, and friends and family. Information received prior to colposcopy was a key factor in effective coping for women at all stages.

Introduction

In Australia, cervical cancer accounts for the deaths of 269 women annually. Cervical cancer is one of the few cancers where screening detects pre-cancerous lesions (AIHW 2000). The Pap test detects pre-cancerous changes and abnormalities in cervical cells and has the potential to reduce cervical cancer by up to 90% through population screening (AIHW 1998). This potential led to the introduction of the National Cervical Screening Program in Australia in 1991. The program recommends all women who have been sexually active at any stage in their lifetime to be screened for cervical abnormalities once every two years until the age of 70 years, at which time screening can cease (AIHW 1998).

While the majority of women who are screened receive a negative result, many women only have a limited understanding of the test (Matteau 1993). In a survey of 600 women in London, only 11% understood that the purpose of cervical screening was to prevent cancer while the majority thought that it was to detect cancer (Schwartz et al 1989). As well as having a poor understanding of the purpose of cervical screening, most women are not aware that there is a likelihood of being recalled on routine testing. Therefore, most women undergoing a routine Pap test think that they are being tested for signs of cancer and have a low expectation of being recalled. It is not surprising, then, that receipt of an abnormal result can have a psychologically negative impact on women (Matteau 1993).

The detection of abnormal cell changes and the treatment of pre-cancerous abnormalities can be a highly threatening event, provoking anxiety and distress in women (Posner & Vessey 1988). The impact of anxiety is not only immediately harmful to women, but can be detrimental to follow-up of the result, treatment and subsequent re-attendance for regular cervical screening (Matteau et al 1990). The literature suggests that women with a result other than normal often assume they have cancer and consistently want more information about their result (Foxwell & Alder 1993; Kavanagh & Broom 1997; Palmer et al 1993). The way in which women are notified of an abnormal smear result and the information that they receive throughout each stage of the medical process are important factors in women’s psychological response to this event (Matteau et al 1996).
Psychological responses

Positive results on cervical screening are associated with significant psychological impact, including a range of specific concerns about gynaecological health and cancer, increased anxiety, and impaired well-being (Wardle, Pernet & Stephens 1995). One of the most common problems women face is that although abnormal smear results are quite common, women have no way to recognise and monitor their condition (Kavanagh & Broom 1997).

In a study evaluating the psychological impact of receiving an abnormal smear result, findings showed that 79% of women said they were more concerned than usual about cervical cancer and 86% described themselves as seriously worried. Over a third reported more than usual concern about their control over their body and their fertility and over 40% felt more negative about their bodies (Wardle, Pernet & Stephens 1995).

Women have reported being distressed by the association with promiscuity, and have felt unable to have sex with their partners because of their sense of ‘contamination’ (Posner & Vessey 1988). Women have also reported being concerned about loss of attractiveness and sexual function (McDonald et al 1989). In a study of women undergoing colposcopy and laser treatment, the most frequently cited concerns were about the causes of an abnormal smear and concerns about whether the treatment would cure them (Wardle, Pernet & Stephens 1995).

In a prospective study of women participating in a cervical screening program in The Netherlands, those who received a positive result felt more ill and became moodyer than they were before the test (Reelick, de Haes & Schuurman 1984). Sixty percent of women reported that their immediate reaction was one of fright and half remained frightened or nervous even after having contacted their general practitioners about the results.

Recent evidence suggests that women experience both general and specific stresses at all stages of the medical process associated with abnormal smears (Posner & Vessey 1998; Quillam 1989). Attending hospital and undergoing investigative and therapeutic procedures all contribute to making patients anxious (Weinman & Johnston 1988). Marteau (1993) found that distress and anxiety experienced by women diagnosed with abnormal smear results were due to anticipation of further medical procedures as well as concern about the outcome. In a later study which measured levels of distress in women recommended to have a colposcopy, extremely high levels of distress were associated more strongly with anticipation of the procedure rather than the outcome (Marteau et al 1990).

Psychological preparation

Psychological preparation of patients undergoing medical or surgical procedures facilitates coping and recovery (Contrada, Leventhal & Anderson 1994). Recent theoretical frameworks regarding the positive effects of psychological preparation have focused on the role of information, emotional support, and training in coping strategies in recovering from these procedures (Contrada, Leventhal & Anderson 1994; Johnston & Vogele 1993).

Women have registered extremely high levels of anxiety at all stages of the process of detection and treatment of cervical abnormalities (Posner & Vessey 1988; Quillam 1989). This anxiety is due both to concern about the outcome—in particular fears about cancer (Wilkinson, Jones & McBride 1990)—and concern about the subsequent investigative procedures (Marteau et al 1990). However, studies have shown that women’s experiences following an abnormal cervical smear result can be improved by providing appropriate information at relevant stages of the medical process (Lauver & Rubin 1991; Marteau 1993; Marteau et al 1996; Wilkinson, Jones & McBride 1990).

The provision of information

The most important time to address and reduce the psychological symptoms of women receiving abnormal smear results is at the point of notification (Wardle, Pernet & Stephens 1995). Central to women’s concerns about screening is the fear of finding cancer (Wilkinson, Jones & McBride
1990), and as a result, women become anxious as soon as the screening test is complete (McKie 1993; Schofield et al 1994). To overcome this anxiety, women should be notified of the test results promptly and should be given appropriate information (Stewart et al 1993).

While it is important to provide information when the abnormality is detected, it is equally important to provide appropriate information at all stages of the screening process (Marteau 1993). For example, if referred for colposcopy or treatment, women should be given detailed information about the nature of the procedure, the likely treatment options and the outcomes. Information can be delivered orally and in written form and there is evidence to suggest that it is most effective when given orally by health professionals and supplemented by written material (Ley 1977). Written information allows patients to absorb details of their condition and treatment at their own pace. This is particularly important for women with high levels of anxiety which may adversely affect their ability to understand and recall oral information (Marteau 1993). Written information also enables women to inform those close to them, who will provide emotional support to help them through this potentially threatening event (Marteau 1993).

Written information is one effective strategy to allay women’s fears and concerns about their abnormal smear results but it varies in its effectiveness to reduce anxiety. In some cases, more information can negatively impact on the situation and even increase levels of anxiety (Davey, Austoker & Jansen 1998). Anecdotal evidence suggests that high levels of distress associated with the detection and treatment of cervical abnormalities can be reduced by providing easy to read, brief information booklets (Marteau 1993). This proposition was substantiated in a study which compared the effectiveness of two information booklets in reducing anxiety in women referred for colposcopy for the first time following cervical smears (Marteau et al 1996). One booklet provided brief, simply written information including procedural information, behavioural instructions and outcome information. The other booklet was longer and more complex, focusing largely on procedural and outcome information. Patients who received the more complex booklet indicated that their knowledge increased, however, so did their anxiety level. Anxiety reduction was evident only in women who received the simple booklet. These women also left their doctor’s consultation more reassured than women who did not receive the booklet.

A systematic review of the literature on written cervical screening information (Davey, Austoker & Jansen 1998) revealed that there are significant inconsistencies in the quality and content of written information given to women. The authors suggested that appropriate information on understanding pre-cancerous changes, including providing advance warning of the possibility of recall, should be provided at the initial stage of screening. Information on sexuality and fertility should be addressed at every stage of the screening process to dispel the misconception that only promiscuous women get pre-cancerous changes.

Literature suggests that women prefer to have written information before they attend colposcopy (Foxwell & Alder 1993; Posner & Vessey 1988). Procedural information, including what is felt and seen during the colposcopy and/or treatment, assists the woman to familiarise herself with the investigation, before formulating questions about the outcome. Explaining what will happen after colposcopy and/or treatment is also important preparatory information (Davey, Austoker & Jansen 1998).

Preparatory information can help address women’s understanding and concerns about cervical screening (Bhopal et al 1990; Meredith, Emberton & Wood 1995). Providing effective reading material requires attention to content, readability and presentation (Davey, Austoker & Jansen 1998).

Quality of letters and leaflets cannot, however, replace a consultation (Smith 1995). Information is most effectively communicated verbally by the health professional, and then supplemented by written information (Davey, Austoker & Jansen 1998). Health professionals, therefore, have a critical role to play in allaying women’s concerns and fears about cervical screening, particularly where the results are abnormal (Marteau 1993).
The present study examines the impact of being diagnosed with cervical abnormalities on women’s perceptions and feelings. It also explores women’s experiences after diagnosis at three stages of the treatment process: before colposcopy, after colposcopy but before treatment, and after treatment. The aim of the study was to investigate how women receive the notification of a cervical abnormality diagnosis, their understanding of cervical abnormalities, and the impact their diagnosis has on women’s relationships with significant others. Obtaining this information will assist in the development of effective protocols for the provision of information and services to minimise the stress experienced by women diagnosed with cervical abnormalities.

**Method**

**Participants**

Participants were outpatients of the Royal Women’s Hospital Dysplasia Clinic. The sample consisted of 60 women aged 19–56 (M = 30.05, SD = 8.19) who had been diagnosed with cervical intraepithelial neoplasia (CIN) 1. Of the 60 women, 20 had received abnormal Pap results and were interviewed before colposcopy, 20 had undergone a colposcopy and were interviewed before having any treatment, and 20 had undergone laser treatment before being interviewed. Six of the women spoke a language other than English at home, 22 had completed a university degree or postgraduate degree, eight had completed diploma or trade qualifications, 16 had completed high school qualifications, 11 some high school, and five did not respond.

**Study design**

Participants were recruited by the nursing staff from the Dysplasia Clinic at the Royal Women’s Hospital. Women who consented were interviewed by trained interviewers from the Centre for Behavioural Research in Cancer at the Anti-Cancer Council. The interview was semi-structured and took 20–40 minutes to complete.

**Interview schedule**

The interview schedule consisted of 20 questions (19 open-ended and one requiring a yes/no response). Participants were asked questions relating to their experiences as a patient, knowledge of cervical abnormalities, thoughts and feelings associated with the diagnosis and the impact it had on significant relationships. Seven questions addressed women’s experiences as a patient in the treatment process and the information they received from health providers, for example, ‘You went for a Pap smear, could you tell me what happened after that?’. Two questions addressed women’s knowledge of cervical abnormalities, one being, ‘What do you think an abnormal test result means?’ Five questions addressed women’s thoughts and feelings associated with the diagnosis, for example, ‘Has the diagnosis changed the way you think about yourself?’ The final six questions related to the impact the diagnosis had on personal relationships, in particular, the partner relationship. An example question was ‘What was your partner’s reaction to your results?’ At the end of the formal interview, participants were given the opportunity to discuss anything that was particularly important to them. The interview concluded with seven demographic questions.

**Results**

**Women’s receipt of test results**

There were three main methods that women mentioned regarding receipt of test results. These included being told about the diagnosis by the doctor face to face, being informed about the
diagnosis via a letter, and being telephoned by either the doctor or receptionist. Twenty-seven women reported receiving the diagnosis face to face, ten were informed by telephone and nine were informed by letter.

**Face to face**

There were a number of positive and negative aspects about being given the information face to face. On the positive side, women said that it gave them the opportunity to ask questions, to receive more detailed explanations about their condition (for example, diagrams, books) and to get information immediately. However, many women said that the most important issue was the way the information was conveyed to them. Some women said that the information was conveyed in a caring and sensitive manner and this helped to put the situation into perspective:

*She talked about a colposcopy. I was scared but she put it in perspective for me quite quickly.*

This helped prevent them from jumping to conclusions about their condition. Some women reported feeling particularly comfortable if they had known their general practitioner (GP) for a long time. Another important issue mentioned was the ability of the GP to normalise women's symptoms and experiences: This had a great impact on some women as it made them feel that they were not abnormal:

*My doctor was really good. She went through everything with me, she explained what happened and that it was quite common.*

On the negative side, some women said that the most frightening experience was having to wait for the appointment with their GP. Other women reported that meeting their GP face to face was too confronting. Some women said that their GPs were not reassuring or sensitive to their situation. One woman said that her doctor created more fear by mentioning the word cancer too often:

*She was talking a lot about pre-cancerous and that haunted me. I went home in tears actually.*

Some women said that the GP was too blunt in conveying the information. A few women said that it was a daunting experience because the information given was too technical. Other women said that there was not enough information given, especially in the case of women who wanted to know how they got the abnormality in the first place. Other comments included that GPs did not take the time to fully discuss issues and implications of cervical abnormalities.

**Letter**

Receiving the diagnosis via a letter was also associated with positive and negative feedback. Positive comments included that a letter gave women the time to sit down and think about the situation, and it gave them time to compose questions for their doctor. Interestingly, some women said that they preferred the impersonal nature of the letter as it enabled them to react in whatever way they felt most comfortable: other women said that it was less confronting and made them less nervous:

*No, I would probably prefer a letter anyway so I can deal with it that way. Over the phone is a bit too confronting anyway.*

Some women reported that receiving a letter is impersonal, while other women had difficulty in understanding the information and how to follow-up the information. Other women said that they wanted to ask questions immediately, something they could not do with a letter. Other comments included that letters lacked any form of reassurance or further information:

*I just received this letter that I needed another appointment and I was very worried so I called up the secretary up here and talked to her ... but I was still worried because the way the letter was written didn’t tell me anything.*
Telephone

Being told over the phone by a GP was for some women the best way of receiving this information. Women were told immediately and didn’t have to wait for an appointment and they could get information from their doctor there and then:

*She was really, really good on the phone and very reassuring. She was quite sure it was only minimal and not to worry, that sort of thing.*

On the other hand, some women said that although the GP or receptionist rang them, they were not given the test results and were made to wait for their results:

*They rang me up and said you’d better come in and talk to us. I said, What’s the problem and then they said, Oh I don’t think I want to tell you over the phone, which I wasn’t happy about of course. I’m in a panic—What’s wrong, what’s wrong? She wouldn’t tell me so I had to make an appointment and go back. Then she said, Oh we’ve had an irregular result, you have to go to the Royal Women’s Hospital, I’m like, Is that it? You could have told me on the phone and saved me all this panic.*

For other women, receiving a call from their doctor was too frightening and made them think of the worst case scenario:

*As soon as my doctor was on the phone my reaction was, Oh God, my doctor never rings me.*

Other women said that getting information over the phone did not give them enough time to ask questions and to get detailed information.

Adequacy of information

Most women received some form of written information, either a brochure or pamphlet about cervical abnormalities. However, some women indicated that they were not given any written information. The majority of women were satisfied with the written information received but some women felt that the information was inadequate or unsatisfactory. On the positive side, it was reported that the information received was adequate, informative, straight to the point and clearly explained the condition:

*Oh yes, the book was really good. A couple of paragraphs on what I had and why I had it and how I probably got it.*

Others said that the information answered their questions and offered clear information about what to expect. One woman said that she felt more comfortable reading a booklet given to her at the Royal Women’s Hospital, and another commented that information must be given before the medical procedures.

On the negative side, some women felt that the information was inadequate and that it lacked specific information about the individual’s experience. Some women found the information too technical and hard to understand:

*I got a book from the Royal Women’s Hospital. I had a read of that … but with the hard words and everything it was a bit daunting.*

Many women reported that there was a serious lack of information regarding recurrence of abnormalities and the long-term implications of the diagnosis:

*But I’m a bit confused now at this point, because no one’s really explained to me what happens if it recurs and if I get abnormalities again.*

One woman said that the pictures in the book were frightening. Another woman reported that the booklet did not have step-by-step explanations of what was happening. Another comment was that there needs to be more information regarding human papilloma virus and lifestyle issues such as the impact on sexual practices.
The procedure

Of the women who described the procedure that they went through, a clear theme emerged about the importance of having the procedure explained, and another related to relief after the procedure was completed.

Some women expressed the distress and uncertainty associated with not being told what was happening, and others described the relief and calmness they felt after being told what to expect. One woman’s comments epitomised the former experience:

> Coming in today, I thought, I didn’t know what I was having, whether I was having a colposcopy or what procedure I was having today, I had no idea … it’s all been quite concerning.

Another woman felt confused as to what was going to happen to her in the first stages of the management of her abnormalities:

> I’m feeling a lot more relaxed about it because I know what to expect, whereas the first time I came in I was in panic stations because I didn’t know what to expect. I’m more relaxed now and I think, well, if it’s still there, I’ve got to have laser again, but I’m more relaxed about it now because I know what to expect.

On the other hand, those women for whom the process had been described were far more relaxed:

> I guess the booklet was pretty good … for me it helped to put me at ease about coming in and having this done. You’re in the room and the screens are there and they’re having a look at the television screen, they’re talking to you about what’s happening. I didn’t feel uncomfortable with that.

One final theme that emerged was the sense of relief that the process was doing something to remove the abnormalities:

> The whole having it physically cut out was good. And you actually get to see it which is pretty gross. And it was quite big, it was pretty gross. All those sorts of things, they’re good, you sort of go, Well that’s great, it’s out. I was happy that I had done it, it was good to have it over and done with.

Understanding of abnormalities

Women were asked to explain what they thought an abnormal test result meant. In general, their knowledge was good, with 40 women correctly describing cell changes, 13 believing the result indicated cancer, 10 thinking it involved a virus or infection, and 10 having little idea what it meant. Each of these beliefs will be examined in turn.

Cell changes

Women’s understanding ranged from a rudimentary knowledge that there were differences in the cells compared to normal cells, through to a detailed understanding of dysplasia. Some women thought these changes were aggravation or inflammation of the cervix, and that the appearance of the cells was different:

> I imagine the top lining of my cervix or the top lining of the tissue being inflamed somehow.

Another commented that the cells look different because they are a different colour to the normal cells. Other women believed that abnormalities were growths of cells on the cervix:

> Well, there are changes in your normal cells and they’re starting to multiply.
Women’s descriptions of the actual cell changes varied in detail and understanding. Fourteen women were non-specific, such as:

- *Something’s not quite right and the cells are rebelling against whatever’s going on in the general vicinity.*
- *There’s some sort of change in the make-up of the cells in the cervix.*

However, understanding of the differences in severity of abnormalities, particularly including different stages of abnormalities, was also common. These could be quite specific:

- *I know there are three levels and I’m on number one.*
- *It just means that the cells have changed and there’s a degree of change and that’s measured by CIN 1 to CIN 3 or 4. CIN 1 is the slowest grade.*

or general:

- *It means that there are some cells that are developing in an irregular way and there are degrees of severity.*
- *They’re not cancerous cells but they’re at the stage before that and possibly, without treatment, they can turn into something else.*

The people who understood cervical abnormalities to be cell changes understood and articulated strongly that abnormalities did not mean cancer:

- *It’s obviously not normal but that doesn’t mean that it’s life threatening at all.*
- *Abnormality of any cell can eventually lead to cancer.*
- *There’s some form of growth although not specifically cancer that is abnormal and that is unhealthy and that you have to monitor.*

In addition, there was the sense that these changes were treatable:

- *… something that you can do an easy little laser treatment with now …*
- *It means that there’s something that’s not quite right and they can fix it up to make everything right.*

**Cancer**

Fewer women believed cervical abnormalities meant that they had cancer. The way they described this, as well, implied that they initially thought it was cancer, but since had developed a greater understanding of what abnormalities involved:

- *I did think automatically cancer, that’s the first thing you think of, you don’t think of all those other things.*
- *Probably the initial time that I got it 1 thought that abnormal would mean being cancerous … a lot of people don’t know that if you have an abnormal Pap smear it doesn’t necessarily mean that it’s going to be cancerous but it could be something else.*

Only two of the women who associated cervical abnormalities with cancer were anxious about this: one ‘freaked out thinking I had cancer’, and the other noted that it was ‘pretty dangerous’. However, more women were pragmatic or calm about it:

- *I thought irregular results meant you had something cancerous there that you probably had to have removed.*
Virus/infection

There were two major conceptions for those women mentioning abnormalities in association with virus or infection. The first was the belief that an abnormality was a virus-like or infection-like affliction. One woman's comments epitomised this perspective:

*I just assumed that it was like a warty kind of thing, not actually a wart but that kind of thing.*

Another commented that it was ‘like you’ve caught some bad disease’.

The second approach was that the diagnosis of cervical abnormalities either meant that women believed they genuinely had abnormalities, or that the Pap test detected non-normal cells in the form of infections, virus, or sexually transmitted diseases. For these women, presenting for colposcopy was a way of determining which of these alternatives—abnormalities or infection—the woman’s cervix had. Typical comments were:

*I guess that may be due to some kind of infection or it might actually be a change in the cells themselves.*

*Either you’ve got some sort of an infection or maybe it’s cancerous but other than that I don’t know what else it could be.*

No idea

Of the women who said they did not know what abnormalities meant, many could not elaborate further:

*There’s something wrong with you … I don’t know much about the woman’s body.*

*I don’t know really, obviously it’s not normal.*

Others had attempted to seek further knowledge or knew they should do so, while one woman did not want to know any more than she already knew. There was a belief that cervical abnormalities were contagious, particularly involving transfer to a male sexual partner. Other women did not understand what the doctor was saying: ‘They kept mentioning some CIN levels; I’m not sure what that is’, and wanted to know more information.

Causes of abnormalities

The currently accepted causes of cervical abnormalities are unclear, with the exception that the human papilloma virus is present in all cases of abnormal cervical cells (Goodkin et al 1993a), and that it is likely both smoking and diet are contributing factors (Goodkin et al 1993b). Women reported a range of causes of abnormalities, comprising genetic or hereditary factors (seven women), environmental factors (47 women), and physiological factors (five women). Many, however, did not know (11 women) and would not even guess the causes of cervical abnormalities. Each of these responses will be taken in turn.

Genetic factors

Many women believed that heredity contributed to cervical abnormalities. Some had family histories of cervical abnormalities:

*I suppose maybe family history. Two of my sisters have had it as well, that would be the only thing I would think, maybe predisposed in some way genetically.*

Others guessed that the cause of cervical abnormalities might be genetic, but also suggested other factors which were equally likely:

*I don’t know whether it could be as to how clean you are or dirty you are, your partner or partners, hereditary. I don’t know whether it’s passed on.*

*Yes, I think hereditary too and maybe sex with people who aren’t clean.*

Environmental factors

Environmental factors are things such as pollution, stress, sex, smoking, and diet. Many women offered a number of possible environmental causes of cervical abnormalities. The majority of women (47) believed that there were environmental causes for cervical abnormalities, attributing them to sexual factors, smoking, chemicals, having children, and stress. The women who thought sex played a role either thought sex itself or something sexually transmitted was responsible for cervical abnormalities:

That’s your first thought, maybe I’ve got this through normal sexual activity … it says in the literature that even condoms aren’t an insurance.

I’m probably susceptible I don’t know, I’ve got something down there already waiting to be batched and with the intercourse it provokes it.

Twelve women mentioned smoking as a cause, and described the mechanisms by which they thought smoking affected the cervix:

It would be like poisoning, the chemicals in the cigarettes, sending something to your cervix.

I guess it would go through your bloodstream basically, smoking, all the tar. It can be a cause … I don’t know. Your lungs are the main part but surely it would have to spread somehow through to other parts.

Sixteen women thought chemicals, either through food, or the contraceptive Pill, or other sources, were responsible:

I would think internally it might be diet more than anything, preservatives or something. I’m not too sure but because it’s inside I don’t think it’s something I’m getting so much from sun or anything like that. I think it might be something that we’re putting into our bodies more than anything else.

I thought maybe the Pill had something to do with it, too.

Four women believed that having children ‘triggered’ the cervical abnormalities:

The thing I can’t understand, there’s a lot of talk about smoking and I am a smoker and a few other things, but I’ve never had children and so to me it did seem a bit strange.

Stress, either mental or physical, was also thought to be a factor by several women.

For example, one woman commented:

I think any pressure or mutilation of the cervix in any degree—the cells not having a chance to recover basically… I just think it’s cells saying give us a break, we’ve had enough.

Another noted that:

I was divorced and did stress. I’ve been under a lot of stress over the last two years.

Finally, other environmental factors mentioned were tampons and non-specific lifestyle factors. Of concern was one woman who was either misinformed by her practitioner, or misinterpreted the information she was given:

One doctor told me I could have caught it off my boyfriend or the public toilets so I would not have a clue… I’m really edgy sitting on toilets now, I squat, I don’t sit, if I go to public places.

It is reasonable to assume this woman was told how HPV could be caught and misunderstood the information received.
Physiological factors

Physiological factors relate to impacts on the body such as bacteria, infection, viruses, and other factors which relate to the way the body functions. Of the 15 women who cited physiological factors as causes of cervical abnormalities, seven thought HPV was responsible. One woman commented:

> With mine, I’m under the impression that the reason I was being monitored was because I had a wart virus and the wart virus was what was active. So somehow my body for a long time must have been … keeping the wart virus at a low level and then through whatever reason the wart virus became stronger so that’s caused the inflammation.

Other woman thought abnormalities were a result of hormonal or other changes within the body, for example, having children:

> I never had anything until after I had my children … My last child came down very quickly, turned and spun and all sorts of lovely things on her way down, ripped me to shreds basically.

Another woman described health issues as a possible cause:

> My age, I’m going for 50, I’ve got diabetes badly, My health’s not really good … I really couldn’t tell you what it was.

Finally, infection was cited as a cause of cervical abnormalities:

> Maybe the normal cells don’t develop as they normally should because of some presence of something extra obstructing the normal cells, they damage them. They become infectious or whatever.

Unsure

Many women did not know what the causes of cervical abnormalities were. Many did not make a guess:

> I wasn’t quite sure how these things come around, whether it’s something that’s developed over a few years, I wasn’t too sure.’

When prompted to make a guess, one woman described her lack of interest in what was going on for her:

> No, I don’t want to think about it either, I don’t want to know. Because I don’t want to do this (treatment), I want to go home.

Thoughts

The diagnosis of a cervical abnormality seemed to impact on women’s thoughts. Women’s thoughts about the diagnosis fell into four main areas: frequency of thoughts about the diagnosis, thoughts on life, fatalistic thoughts, and confusion.

Frequency of thoughts about the diagnosis

When asked how often they thought about the diagnosis, women’s responses varied enormously. Some women reported thinking about it all the time and some reported not thinking about it at all. Other women said they only thought about it when they had to have another Pap test.

Seventeen women said that they did not think about it at all. Some of the reasons women gave for not thinking about the diagnosis were not having time to think about it, having faith in the doctors and procedures and having bigger, more important problems to deal with:

> I’ve got a very full life, kept busy, involved … I don’t give myself time to worry about these sorts of issues, I just deal with it.
Fourteen women reported thinking about the diagnosis frequently or all the time. Comments from women suggested that for these participants, the diagnosis was either constantly on their mind or at the back of their mind all the time:

- When I'm going out or doing things I've probably got it in the back of my head there so I don't enjoy doing things as much. Well it's always there.

Thirteen women said they thought about the diagnosis only prior to receiving notification of the next hospital visit but otherwise it was mostly out of their mind. Comments included:

- I forgot about it for a while until they sent another letter saying you have to come back here.
- No, I pretty much forgot about it quite soon after. I probably started rethinking about it when I got the letter in the mail saying that I had to come in today for a Pap smear.

Five women said that they thought about it when they were initially diagnosed but did not think about it as much now. Some of the explanations women gave for this included not knowing what to expect the first time, not fully knowing the diagnosis and being depressed:

- At first yes, it was always on my mind, whether it was pre-cancerous or not but I think once I knew it wasn't pre-cancerous it took a lot off my mind and I didn't worry about it. It's still on your mind but you just get on with life and just take it as it comes.

**Thoughts on life**

A large number of women said that the receipt of an abnormal Pap result had not influenced the way they perceived things in general. A second group of women highlighted a variety of issues in their lives that had clearly been affected by their diagnosis.

Of these latter women, the majority were concerned about their ability to have children and related issues. Several women (especially younger women) commented that the results made them think about having children and some mentioned worrying about whether they would be able to have children, especially after the procedure:

- It weakens the lining of the cervix or something and you have to have stitches before you can actually have children because it causes miscarriages.

Pregnant women in particular were worried whether everything would be normal:

- Then I worried about having a baby, whether it would be normal, that it won't spread to my baby like cancerous cells.

Several women said that their diagnosis made them more aware of cervical abnormalities in general, and made them better able to reassure other women who are going through the situation. Some women said that it made them realise the importance of having a regular Pap test so that abnormalities could be detected as soon as possible:

- Early detection is better than no detection because you can die from it.

The diagnosis made some women think about the brevity of life. Some comments made were:

- You think, oh life's too short.
- I just thought just stop and look at the flowers a bit more ... Take time out a little bit more to relax, sit back and enjoy things a bit more.

One participant said the results made her think about taking more risks in life:

- You tend to think well maybe I should take a risk in doing this or something because the opportunity might not come past again ... if you don't do something now and don't take this opportunity now, you might be gone before it arises.
Some women mentioned realising their vulnerability as the abnormality occurred quickly and without them knowing:

"It's still on your mind how easy it can happen. I suppose because I didn't have any symptoms either, I didn't feel sick or I didn't feel any pain or anything like that."

Another woman said:

"It shows that this can happen and it can happen to anyone and it can happen to you."

Other thoughts about life mentioned by one or two women included thoughts about cancer, lifestyle (food, exercise, etc) and the future. Two women reported being concerned about where the abnormality came from and the possibility that their partners may have been responsible.

Fatalistic thoughts
Seven women expressed fatalistic thoughts that predominantly centred on having to wait for results and having no control of the situation. Some of these women felt that there was no point worrying about the diagnosis because the outcome was out of their hands. The lack of control of the situation seemed to be a reason not to worry.

"And I can't do anything about it. I've got no control over what it does. It's only really wait and see and there's no point worrying.

"If it's going to happen, it's going to happen and I'm upset for months on end. It's not going to help what's going on."

Confusion
Seven women reported being confused about the diagnosis. Three women described the early stages of the diagnosis as confusing:

"I'm still at the 'unsure wondering what's going to happen' stage.

"I wasn't sure whether it was cancer and thought, really, what's going on."

Two women were confused and perplexed about the cause of the abnormal results and wondered how they came about:

"There's nothing to say that because you did this, you've got that. There's nothing you can say oh well, I would never have done that again."

One woman mentioned the uncertainty associated with the longer-term process of treatment and the chance of recurrence. Another woman reported being confused as to whether she could have sex with her partner and whether the diagnosis meant that she was contagious.

Feelings
It was evident from the findings that cervical abnormalities generated a spectrum of emotions with underlying themes. Twenty-one women reported experiencing fear, 34 women reported anxiety, three mentioned feeling dirty, three felt stigmatised and 14 women reported feeling normal. The underlying themes identified by the women are discussed below.

Fear
A number of women indicated a definite fear that the abnormality was cancer or could lead to cancer:

"But at first I was very upset, edgy and so forth because all I could think was cancer, cancer."
Some women mentioned this fear developing from explanations given by their doctor:

*The doctor talked a lot about cancer and that haunted me.*

One woman mentioned a fear of cancer due to family history:

*I was upset because previously I’d lost my sister to cancer and I’m still very scared.*

Fear of medical procedures was also an issue for some women and this included fear of pain, fear of being in hospital and fear of the actual procedure:

*I’m really scared today because I hate going through all this pain.*

Some women said that they feared the unknown because of a lack of knowledge and information about how the abnormality occurred:

*The health providers didn’t explain properly what it was all about and how I could have caught it.*

For several women the abnormality was even more perplexing as they reported having only been with the one partner for many years and were at a loss to explain how this could have happened:

*I’ve been with one partner for ages and all of a sudden I’ve got this, it was pretty scary.*

Some women indicated that they felt fear regarding the ongoing nature of the abnormality and potential changes to their health:

*I was probably more frightened the second time I went back when I had to come back in three months as something was changing and happening.*

A small number of women indicated that the abnormality did not cause them fear because they rationalised it was pointless worrying about it and they had become desensitised to the experience of continuous check-ups. In addition, a common fear highlighted by a number of women was their concern about their fertility.

**Anxiety**

Feelings of anxiety were more prevalent in the early stages of diagnosis, particularly when waiting for results:

*I was waiting, waiting, waiting for that call. Now that was why I was anxious, it was not so much about the news, it was just what’s going on—I just want to know now.*

For other women, receiving a letter in the mail was anxiety-provoking as the letter did not contain sufficient information:

*That day when I got the letter ... I thought is this cancerous or normal or what is it, I didn’t know what it was. I was an emotional wreck.*

A few mentioned feeling more anxious after speaking to their doctors due to the way the diagnosis was explained to them:

*I was just worried for the whole time because she (the doctor) made it sound really bad. She said it was something so bad that I can’t tell you over the phone.*

Another common theme described by several women was their feelings of anxiety over the unknown aspects regarding their diagnosis:

*Obviously when you come in to have a test done, you’re sort of like, it’s the unknown, it’s worrying about the unknown.*

This was underpinned by the lack of knowledge that women had about their condition:

*From that time of receiving the notification there is the point of anxiety starting but I think it’s ignorance, I became anxious because I didn’t know what was going on.*
Some women expressed anxiety over the medical procedure/treatment; however, prior experience of having undergone colposcopy or laser treatment mitigated these feelings:

I hate Pap smears in the first instance but this was a bit more intense than a Pap smear, I’m still feeling nervous.

Dirty

Some women reported feeling dirty and unclean after the diagnosis:

When I actually got the laser treatment done and even before then, I felt unclean.

One woman commented that these feelings triggered a compulsive obsession and fear of starring intimate relationships:

I would have to say when I got the laser treatment done I showered probably eight times a day trying to feel clean. I felt dirty, I felt incredibly dirty. I think there seems to be some shame but I really felt that dirty ... a lot of these feelings of not feeling good about myself came up. I didn’t feel lovable.

Stigma

Women reported feeling stigmatised following the diagnosis and this stemmed from issues regarding sexual promiscuity:

That’s what all my friends said. I’ve had more sexual partners than them all.

One woman believed that people equate the abnormalities with shameful behaviour:

Sex and things to do with my genitals should be hidden away.

One woman reported the stigma of being a lesbian and stated that some lesbians are not comfortable revealing their sexual identity to the medical profession.

Normal

There were two major conceptions for those women who indicated feeling no different to usual. The first was rationalising the situation. Women felt that they had no control over the outcome and therefore there was no point worrying:

My philosophy is until you know exactly what it is don’t worry about something that may not happen.

The second was normalising the experience. Women felt less anxious because they knew that it was not only happening to them:

I know it’s not something that’s only happening to me so I don’t see it as being that abnormal.

Behaviours

Altered lifestyle

Of the 44 women who responded to the question, ‘Have any areas in your daily life been affected by your diagnosis?’, 28 responded unhesitantly that no areas in their daily lives had been affected by the diagnosis. Of the 16 women who indicated that areas of their lives had been affected, seven said that the biggest inconvenience was taking time off work to attend hospital appointments. This was seen as bothersome largely because the women had to explain to staff the reason why they needed time off, especially for some women who worked in male-dominated industries:
Little things like I work in a male dominated industry and I had to ask—unfortunately my manager was on leave and I had to actually ask the whole unit manager. He’s an old bloke and he said, Oh what do you need it for?

Two women reported giving up smoking after being diagnosed. One woman said she no longer smokes and partly chose to give it up because of the diagnosis:

It was the time for me to give up smoking but it was also I wonder whether this has got anything to do with it.

Another woman said she gave up smoking as a response to the diagnosis but started again. When asked why she started again, she replied:

Because it was such a stressful time since I had the last procedure done and I started again three weeks ago.

The changes in lifestyle behaviours shared by women included greater stress, lack of concentration at school and work, a more frequent need to go to the toilet and more pain and discomfort during sex. One woman who was particularly anxious about her condition had to take time off from work and also stopped going out.

Vigilance

Several women indicated that they had become much more aware of having regular Pap tests but they were also advocating the importance of regular checks to their friends. Many women said that they were more careful with their health in general but in particular, with having regular smears:

I’d had a Pap smear and at my age I am being more careful about it. Now I’m relieved that I wasn’t being silly and thinking, Oh, I don’t need to do Pap smears.

One woman said that it was important for lesbians to be aware that they also needed regular checks.

Stress

Women were asked how stressful they found the experience of being diagnosed with cervical abnormalities and to rate their experience on a scale from 0–10 (0 = no stress, 10 = most stress ever experienced). Fifteen women reported experiencing low amounts of stress, seven reported experiencing moderate stress and 21 reported experiencing high stress associated with the diagnosis. Only three women said that the experience was not stressful.

Women were also asked how stressful the experience was compared to other major life events, such as, moving house, having a baby and splitting up with your partner. Only 23 women answered this question clearly and directly. Of these women, 12 said that it was less stressful than these major life events, three said it was more stressful, two said it was in-between and two said the same amount of stress was experienced in these life events. Four women said that the experience was completely different to other life events and they could not make a comparison.

Women mentioned a range of issues that made their experience stressful. The majority of women felt that the degree of stress experienced was related to the stages of diagnosis and treatment. Other issues raised by women were the uncontrollability of the situation, fear of the unknown and the threat to their health.

Stage of diagnosis and treatment

Eight women reported that the stage they were at in the process of diagnosis or treatment determined the amount of stress experienced. For some, the initial stages were more stressful and for others they were less stressful:

I’d say that on the day that I found out that it was an abnormal Pap smear probably a 9.
At this stage it's not that stressful as that. The information that I've been given makes me think it's going to be OK.

Some of the women who were further on in the treatment process recalled that they were more stressed at certain times:

Now towards the end of it probably a 4–6 on the day. I've got to admit I was like an 8 the very first time I went in. The second time there were other issues and I was very stressed that time too.

**Uncontrollability of the situation**

Five women felt that the lack of control in the situation determined how stressful it was for them. Some felt that it made the situation more stressful and some felt that it made them worry less because it was out of their hands. Those who felt that low control made the situation more stressful, compared it to other situations where an individual can do something to minimise the stress:

Breaking up with your partner is in your control ... and therefore easier. You know ... you feel as though it's in your power ... For me, control—that's where I get my strength from.

Women who felt less stress due to a lack of control seemed to resign themselves to accepting the situation:

It's not all that stressful because it's not something that I can control. I'm a stress head anyway, but there's nothing I can do about it, I can't change it, I just have to go with the flow.

**Fear of the unknown**

Four women spoke of the unknown quality of being diagnosed with a cervical abnormality and how this made it uniquely stressful for them. They seemed to feel as though the experience was different to any other stressful experience because they didn't know exactly what was going on inside them:

It's just a mystery. All of those things you can say we've split up because we didn't get along or we're moving because I've got a new job or I've got to go and have an education so I've got to move away from my family. You make these decisions for reasons and you can rationalise them but I think it's this unknown quality about it and the unseen aspects because you can't see it ... Whereas feeling sad, or lonely or upset or any of those things, they're different emotions completely. This is just a nagging kind of unknown quality. You sort of think, I wish I had one of those so I could see how it's healing, all those things, you just want to know.

**Threat to their health**

Six women reported that the situation was stressful because it was a health concern. These women mentioned that the diagnosis was fairly stressful because it had to do with their health and:

It's always ahead of anything else.

I'd still rate it fairly high ... concerned about your health more than anything else ... I only worry because it's my body but also I know in the back of my head I'm very young to get it.

Three women mentioned being stressed by the possibility of cancer:

I don't think it's any worse but obviously in the back of your mind there's a possibility that there's cancer.
Some of the other issues that women reported as stressful were the long-term nature of the problem, the treatment procedure, lack of support, and the presence of other stressful life events. One woman claimed that the ongoing nature of the treatment was stressful:

*I think no matter what, in years to come it will always play on my mind that it might come back. I think it's just an ongoing thought of continual worry.*

Two women felt the procedure was stressful:

*It's hard to put it behind you but if you had asked me this question either after the colposcopy where I actually fainted or after the laser where I was probably in some sort of shock, I was very distressed.*

One woman discussed the impact of other life events:

*I was also coming to terms with the fact that a very important person in my life wasn't around any more ... The operation itself probably 6 or 7 but with the added stress I'd probably say 10.*

Finally, one woman spoke of lack of support:

*Probably because you don't talk about things like that ... I didn't tell any of my family. I spoke to my friends for an outlet but I didn't get the support I wanted.*

**Self-perceptions**

Twenty-eight women said that being diagnosed with a cervical abnormality changed the way they thought about themselves and 28 said that it did not. Of the women who felt that the diagnosis changed the way they felt about themselves, the following themes were identified:

*sense of vulnerability, femininity/womanhood, the long-term nature of the problem, health vigilance, sex, feeling dirty, and feeling guilty.*

**Sense of vulnerability**

Nine women spoke about feeling vulnerable in terms of their health and well-being. For these women, the diagnosis made them come to terms with not being completely healthy, what this meant for them, and the realisation that they were not as invulnerable as they had thought:

*I probably wasn't as perfect as I thought I was ... that there was actually something wrong because I've never broken a limb, never done anything like that before, never been to hospital before and then all of a sudden OK, I'm not as invincible as I probably thought I was.*

*You visualise your body and you think it’s healthy and then when you find out something like that it's hard to come to terms with it but I did.*

**Femininity/womanhood**

Three women mentioned a change in their perception of their femininity or that the diagnosis made them more aware of what it means to be a woman:

*Even if you're not sick, you're not fully a woman. You know that you've got something that's not really normal.*

They also mentioned that the abnormality is something only women experience and feel that women get a poor deal:

*I look at my partner and I see that he's got no problems. I seem to have had all these things like I've got ... wants there and then I get this. It kind of feels a bit sordid honestly but it's not. It's kind of a society taboo. As a woman you get trashed and you get all these complaints and they don't have to do anything ... It makes me think how unfair is that.*
The long-term nature of the problem

Three women mentioned the impact of the ongoing or long-term nature of the diagnosis and the possible threat of cancer developing. They reported being concerned about whether it was going to get worse and how long it would be a problem:

In a way I suppose I don’t really think much about this at all and then you realise that it’s something that can lead to cancer.

Maybe because you think, when it’s not fixed … you are aware that there is a worst possible case scenario.

Health vigilance

Three women reported being more conscious of their own health and more vigilant in their check-ups:

As I said, more health conscious … I’m not normally sick and to have something like that. If I hadn’t gone to the doctors, it’d be undetected. I’m aware.

One woman said that it made her realise that she took care of her children’s health needs but not her own:

I’ve done everything for my son and he gets everything that he needs like needles but I’ve never really looked after myself, but if I don’t look after myself no one’s going to look after him.

Sex

Two women commented that the diagnosis brought up issues of safe sex and how this related to their situation. For one woman, it made her even more aware of the importance of practising safe sex:

It can be transmitted in most cases through sexual intercourse or sexual relations. That puts a terrible taste in your mouth but other than that everyone’s up against those issues—wear protection the whole time. Even then it’s not safe.

For the other woman, having sex after the diagnosis was something she was still dealing with:

I’m still yet to come to grips with deciding how I would actually negotiate sex with someone. So yes, I’m still working out my perception. I know that I’m worthy of love but I still haven’t got to the mechanics of it. I think that’s very important. I’m wondering how I’m going to work that one out.

Feeling dirty and feeling guilty

Two women implied that guilt or issues related to guilt arose in their self-perception as a result of the abnormality:

Yes, I have a bit of that guilty thinking of my God … Am I going to be punished?

Two women reported perceiving themselves as dirty after being diagnosed with cervical abnormalities:

It sounds stupid but I felt dirty, just because there is something wrong.
Partners

Women were asked about the impact of being diagnosed with cervical abnormalities on their relationships with their partners. Their responses were themed by the effects on the relationship, and the reaction of their partners.

Effects on the relationship

The majority of women (28 of 39 respondents) noted their relationships had not changed as a result of being diagnosed with cervical abnormalities. Of those that did report changes, five were negative:

When I found out that I had dysplasia I was with someone that I was with for a long time and I wouldn’t let him touch me, I just wanted to be by myself.

Another woman described how her partner disagreed with her attending follow-up clinics such as for colposcopy or treatment:

It’s not that he’s put me against coming here but he tries to stop me coming. He sort of suggested it and that has affected the way I think about (the relationship).

Six women said their relationship had improved:

It’s made it stronger actually.

He was with me when he could and offered to pick me up and drop me off. He’s very supportive.

Partner’s response

Women’s partners’ responses varied widely. One partner blamed the woman for contracting cervical abnormalities:

It said in the book if you’ve got warty dysplasia it’s likely to be as a result of sexual activity. He was a bit finger pointing and saying, well but … if you hadn’t done all that you probably wouldn’t be in this situation.

Three were insensitive:

He just sort of went, oh, will you be OK, and I’ve gone, well, yes … He didn’t understand what I was saying … and probably wanted to leave it like that.

Three partners were neutral about the women’s diagnoses, while five partners blamed themselves for the abnormalities:

He was just worried whether it was him or whether he was doing something wrong. So he’s thinking, Oh, my God, have I given it to you? Am I the cause of all this? That sort of thing.

Many more partners were worried: fourteen women reported their partners were concerned or worried:

He did all the worrying and I just let him do the worrying I suppose, which was helpful. He was really concerned, didn’t know much about it but he wanted to know everything about it ... he was pretty worried.

However, by far the majority of partners were supportive. Eighteen women reported having supportive partners:

He said make sure that you follow up on everything and get everything done that you have to. He was quite good and quite supportive.

He’s always been very supportive, willing to listen and understand.
Friends and family

Women were asked about the role of friends and family in coping with their abnormalities. A number of key themes emerged: whom they told, family and friends as an information source, a method of sharing experiences, and emotional support. Of the 16 women who described who they told, a quarter told no one, a quarter told a friend only, and the remainder told friends, parents, and other family.

Friends and family were told because they were a source of support and information:

- It's been good because they probably do all the worrying or they take a bit of pressure off you. You know you can talk to them and they can relay information to you.
- My girlfriends have basically been helpful and supportive, also telling me not to worry about it, it's OK and that I suppose has probably been better than even the doctor probably telling me that it's OK … because they've gone through it.

One woman suggested it was not necessarily a helpful thing talking to others about the abnormality:

- No, not really. I just prefer to just do it. It's something that I'd prefer not to talk about to a lot of people.

Another agreed, explaining why she did not get appropriate support from her friends:

- Because it was so unknown to them, they couldn't really appreciate it. It's not their world.

It was important and helpful to the majority of women, however, to share their experiences with others. This helped them to normalise the event, especially if others had similar experiences:

- I found that once I'd started talking to people about it, I found out a lot of my close friends had had similar, not necessarily the same thing, but similar things happened to them and I found talking to them a lot easier.
- It's good, it reassures you, you don't feel like you're the only one that's got this. It's like many hands make light work and the same emotionally.

Discussion

After diagnosis

The women who knew what to expect during their colposcopy or treatment were calm or relaxed, while those who had not been told what to expect were more anxious. Strategies described by the women that put them at ease included a booklet prior to their appointment, and a commentary during the procedure. There was relief when the procedure was completed, as the cervical abnormalities had been treated.

The diagnosis of an abnormality seemed to impact on women’s thoughts in four main ways: frequency of thoughts, thoughts on life, fatalistic thoughts and confusing thoughts. Most women reported not thinking about the diagnosis at all, some reported thinking about it all the time, others only thought about it prior to their hospital visit and a few reported only thinking about it when they were initially diagnosed. A large number of women asserted that the diagnosis had not influenced their perception of life, while for others it had raised significant issues, such as fertility, the importance of Pap tests, the brevity of life, their vulnerability and lifestyle factors.

The overwhelming emotional responses for women diagnosed with a cervical abnormality were fear and anxiety. Women reported feeling fearful of the abnormality developing into cancer, medical procedures, the unknown aspects of the diagnosis, the ongoing nature of treatment and infertility. Feelings of anxiety were more prevalent in the early stages of diagnosis, particularly...
when women were waiting for results or had just received the diagnosis. Anxiety was differen-
tiated from fear by women’s reports of the ‘worrying’ and ongoing nature of this emotional
reaction. Women mentioned also being anxious about medical procedures and the unknown
quality of their diagnosis. A small number of women reported feeling dirty after the diagnosis
and treatment and a few women felt stigmatised by others’ reactions to their diagnosis.
Quite a few women reported feeling normal and no different to usual. They seemed to cope by
rationalising and normalising the situation for themselves.

The majority of women did not feel that the diagnosis affected any areas of their daily lives.
Of those who did report a change in behaviours, most spoke of the inconvenience of taking
time off work. Some of the other changes in lifestyle reported were giving up smoking,
increased stress levels, poorer levels of concentration, a more frequent need to go to the
toilet, and discomfort during sex. Also reported by many women was an increased vigilance
in health behaviours. The findings suggest that because cervical abnormalities usually do not
debilitate women physically, having a cervical abnormality may not impact on lifestyle in
any major way. Instead, a diagnosis of cervical abnormalities may affect women on a more
emotional and psychological level.

The majority of women reported experiencing high to moderate stress as a result of being
diagnosed with a cervical abnormality. Some women reported low stress, while very few
reported experiencing no stress. Most women felt that the degree of stress experienced was
related to the stage of diagnosis and treatment they were at. Other aspects of the situation that
made it stressful were the uncontrollability of the situation, fear of the unknown and the
threat to women’s health. In comparing the situation to other major life events, such as, moving
house, having a baby and splitting up with a partner, most women felt that an abnormality
diagnosis was less stressful.

Receipt of test results

The findings indicate that the majority of women received their test results face to face from
their GP. There were positive and negative attitudes towards all methods of notification but
generally most women were happy with the way they received their results. Women’s main
concerns with receipt of test results included having to wait to speak to doctors after receiv-
ing an abnormal result, not understanding what the result meant, and not being given enough
information at the time of notification.

Most women received some form of written information, either a brochure or pamphlet about
cervical abnormalities. Women generally preferred to have two sources of information:
the doctor (face to face) and written information (for example, a booklet). Most women were
satisfied with the information received but some indicated that it lacked some important
information, or was too technical. Another important finding was that the information should
be given prior to the hospital visit so that patients can familiarise themselves with the
procedure and formulate questions for medical staff.

Understanding of cervical abnormalities

The majority of women had adequate to good understanding of the nature of cervical abnor-
malities. Some women, however, misunderstood the nature of a Pap test and believed the
diagnosis of cervical abnormalities indicated the presence of a sexually transmitted disease.
Such women may require continued explanation of the nature of their condition at each stage
of the colposcopy/treatment process.

Clearly, the majority of women believed environmental factors, especially sexual and chemical
factors, might be responsible for causing cervical abnormalities. Others were aware of the role
of physiological factors, such as human papilloma virus. Interestingly, there was a large
number of women who had no idea of the causes of cervical abnormalities, perhaps reflecting
the fact that little is known or publicised of the causes.
Impact on relationships

About half the women felt that the diagnosis changed the way they felt about themselves. Most women felt that the diagnosis made them feel vulnerable in terms of their health and well-being. Some women mentioned a change in their sense of femininity and womanhood, an awareness of the possibility of cancer, and an increased vigilance in health behaviours. A small number of women reported feeling dirty, and a sense of guilt and concern about sexual practice.

In general, women's relationships with their partners did not change as a result of being diagnosed with cervical abnormalities. However, similar numbers of women reported that their relationships either improved, or became worse. Partners were reported as being blaming, insensitive, neutral, and worried. The majority of women, however, noted their partners were supportive.

Despite the fact that the women interviewed had been diagnosed with the mildest form of cervical abnormalities, the psychological impact on them was, in general, quite marked. It affected their relationships with partners, sometimes negatively, but often positively. It was clear that being able to share their experiences and fears with friends, family, and others who had been through similar situations relieved much distress, as did receiving information from supportive friends and family.

Conclusion

The receipt of an abnormal Pap test result can have a substantial emotional impact on a woman where issues about mortality, sexuality and fertility may be confronted (Quillam 1989). The screening process is fraught with potentially anxiety-provoking situations. These include long delays in receiving smear results and attending colposcopy and/or treatment, the way in which women are informed of an abnormal result, and the quality and quantity of information that women receive throughout the process (Wardle, Pernet & Stephens 1995). Women may also experience general and specific stresses at all stages of the medical process associated with the diagnosis of an abnormal smear (Posner & Vessey 1998; Quillam 1989). Attending hospital and undergoing investigative and therapeutic procedures all contribute to making patients anxious (Weinman & Johnston 1988).

It is important that health professionals become aware of the many and varied factors which can provoke anxiety and distress in women during the screening process. Health professionals need to consider ways of minimising the likelihood of emotional upheaval by providing appropriate information as early as possible and improving communication methods.

The range of opinions expressed in these interviews indicates that women have different informational needs. There are two possible methods to ensure that information delivery is matched to each individual's needs. Firstly, during a routine cervical screening test, the practitioner might ask women ‘If your result was not all-clear, how would you prefer to be informed?’ In this way, the method of notification could be tailored to each woman's requirements so that undue distress is not stimulated by this difficult task.

Secondly, some women wanted more information about their condition, while others wanted less. A simple question, asked of women when they are diagnosed with cervical abnormalities (such as “Would you prefer to receive detailed or general information about cervical abnormalities?”), could help clarify such needs and ensure women are provided with appropriate amounts of information.

Research investigating the effectiveness of such strategies on women’s anxiety is needed, and will be considered for further research within PapScreen Victoria. The study reported here has gone some way towards illuminating the nature of women's experiences when diagnosed with and treated for cervical abnormalities. It is clear that such a diagnosis can affect all facets of a woman's life.
References


Chapter 12  Communicating the benefits and limitations of Pap tests

Trudi Jones and Valerie Clarke  July 1997

Abstract
The aim of this project was to develop a series of messages that educate women about the benefits and limitations associated with having regular Pap tests. After a literature review (see Chapter 1) and an analysis of cervical screening messages (see Chapter 2), a series of qualitative interviews was performed to gain an understanding of the issues associated with cervical screening for women. Next, a comprehensive series of educational and recruitment messages was developed. These were tested through focus groups, then a final set of messages was extracted. The interviews, focus groups, and message development are reported in this chapter.

Introduction
National and State implementation of cervical screening recruitment and education strategies has produced a diverse and comprehensive range of Pap test messages for Australian women (Jones & Clarke 1997b). These messages have raised women’s awareness of various aspects of the cervical screening process, including the function, availability, implementation and necessity of Pap tests, and have been crucial to the success of organised cervical screening programs.

However, recent medico-legal events have highlighted a lack of public knowledge of the limitations of the Pap test, related in part to the under-representation of this information within the educational material that is available (Jones & Clarke 1997b). Specifically, the success of legal suits against pathology laboratories for failure to detect cancerous or pre-cancerous cells in cervical smears, and public response to media exposure of the limitations of the Pap test, have revealed a widespread belief that the Pap test is, or should be, infallible (Robb 1993; Vidovich 1994).

In order to create realistic expectations of the accuracy of the Pap test, health and legal professionals and the wider community need to be educated about the function and purpose of screening tests, the error rates associated with the Pap test, and the factors that contribute to these errors (Robb 1993; Vidovich 1994; Yeoh & Russell 1994). National and State cervical screening programs have prioritised the dissemination of information about the limitations and benefits of regular Pap tests (Dwyer 1996).

Increasing public awareness of the error rates associated with the Pap test has the potential to negatively affect the screening behaviour of both screened and under-screened women. There is evidence to suggest that some adequately-screened women will feel the need to increase the frequency of their Pap tests, while some under-screened women, feeling that their doubts have been confirmed, will become more resolute in their decision to avoid screening (Jones & Clarke 1997a; Medley 1995). Encouraging each of these groups to comply with current screening guidelines following the provision of information about Pap test accuracy may require the development of distinctly different messages.
Communicating the benefits and limitations of Pap tests

The primary aim of this project was to develop a series of messages that educate women about the benefits and limitations associated with having regular Pap tests. Emphasis was also placed on the importance of developing messages that reinforce the efficacy of regular cervical screening, and encourage both screened and under-screened women to comply with current screening guidelines.

The project was conducted in four phases: a literature review (see Chapter 1), a messages review (see Chapter 2), a qualitative interview study, and message development and focus group testing. Separate reports were developed; details of the reports are:


This chapter contains summaries of the two investigative reports, a list of the 80 Pap test messages that were developed, and recommendations for the application of the messages.

Interview report

Our objectives were to:

- determine Victorian women’s understanding of cancer screening procedures
- determine the factors that influence the cervical screening behaviour of Victorian women
- document perceptions of the benefits and limitations of Pap smears
- document expectations related to the accuracy and efficacy of Pap smears
- assess the impact of factual information about the accuracy of Pap smears on intention to screen
- provide common terms, meanings and expressions to increase the relevance and specificity of messages that communicate the benefits and limitations of Pap smears
- investigate women's perceptions of a subset of the Pap test education pamphlets that are currently available to Victorian women
- determine the factors that influence the readability of Pap test education pamphlets
- investigate women's ability to interpret proportional statistics—as used in the description of the accuracy of the Pap test
- determine whether screened women and under-screened women differ in any of these areas.
Sample

Twenty women aged between 25 and 52 years, who were sufficiently fluent in English to participate in a substantial verbal interview, were sampled from metropolitan Melbourne and the Bellarine Peninsula. The sample was selected to ensure an over-representation of under-screened women.

Procedure

Interviews

Semi-structured, face-to-face interviews were conducted in locations selected by the interviewees. Within the interviews, the women were also presented with two A4 pages of factual information about the accuracy of the Pap smear test, and were asked to explain their understanding of this material. The interviews varied in approximate length from 25 minutes to over one hour, and were recorded for later transcription. Each participant was paid $20 in recognition of her contribution to the research.

Surveys

Following the interviews, each participant was presented with three pamphlets that were available to Victorian women at this time, and a brief survey. The pamphlets were: Every woman should have a regular Pap test, Pap smear information sheet for women, and the ‘Geraldine Doogue’ brochure.

The women were asked to indicate the pamphlet they preferred, and why; describe what they liked most and least about each of the pamphlets; describe any information that they felt was missing from the pamphlets; rate the degree to which the pamphlets were informative, easy to understand, and easy to read; describe factors that increased their readability; and interpret two different types of statistical expressions.

The participants were given the option of completing the survey while the interviewer was present, or completing it at a later time, and returning it to the Anti-Cancer Council. Completed surveys were received from 18 of the 20 interview participants. The interviews were transcribed and coded. The survey responses were collated and tabled according to topic, type of response, and screening behaviour.

Screening history

Nineteen of the 20 women interviewed had had at least one Pap test. Nine had had a Pap test between January 1994 and August 1996, and were considered to be adequately screened. However, two had a history of inadequate screening before their most recent Pap test.

Results: interviews

Knowledge of cancer screening

Screened women were more likely to describe the function of screening tests in terms of early detection and early intervention of cancer, and pre-cancerous change. Under-screened women were more likely to define it in terms of detection and/or diagnosis of cancer. This may reflect a lack of differentiation between early detection and detection of cancer, possibly due to a lack of knowledge that cancer can be more successfully treated when identified in the early stage, and/or due to fatalistic beliefs about any form or stage of cancer. Under-screened women were more likely than screened women to describe the provision of ‘peace of mind’ as a function of cancer screening tests.
Screening versus diagnostic tests
Over half of screened and under-screened women appeared to have substantial knowledge of the function of diagnostic tests. Two themes emerged:

1. The diagnostic test is conducted in response to the experience of symptoms, or feelings that ‘all is not well’. Several under-screened women noted a reduced motivation to have regular screening tests when they felt healthy, or had no symptoms.

2. The diagnostic test is able to confirm the presence, absence and status of the cancer.

Knowledge of Pap tests
The predominant response of screened women was that screening was a good or excellent idea. Under-screened women were slightly more reserved in their recommendation. The women demonstrated a reasonably high level of knowledge related to the basic elements of the Pap test procedure. A key factor differentiating screened and under-screened women in their description of a Pap test was the more graphic, emotive nature of the language used by under-screened women. Both screened and under-screened women recognised the ability of the Pap test to detect abnormal cells in the cervix. Under-screened women were more likely to place additional focus on the ability of the test to detect cancer.

Factors that influence screening behaviour
Emphasis was placed on the role played by GPs in encouraging women to be screened, and reminding them when their Pap test was due. Participation in a regular cervical screening program was viewed as an opportunity for women to take active responsibility for their health. Persistent encouragement from peers was highlighted as a factor motivating screening. This may deserve consideration in the development of health messages related to Pap tests. Advising women to encourage under-screened friends and loved ones to have a Pap test may provide under-screened women with a specific, personal motivation to be tested.

The physical and emotional discomfort associated with Pap tests was a substantial deterrent to regular screening behaviour among under-screened women. These women stated quite specifically that it was these factors, rather than a lack of knowledge regarding the importance and potential benefits of Pap tests, that prevented them from screening. Approaches that specifically address the emotional obstacles to screening described by under-screened women may be more effective than the presentation of detailed factual information.

A holistic view of health, and the prevention of cancer, may negatively affect the screening behaviour of some under-screened women. Women who held these beliefs felt that cancer occurs as a result of unresolved emotional issues, stress, and an unhealthy diet/lifestyle, and that a healthy lifestyle, the resolution of emotional issues, and the reduction of stress would reduce the risk of cancer, and therefore the need to have Pap tests. While many of these women acknowledged the importance of Pap tests, they tended to view them as being more important and beneficial for women who—because of lifestyle, family health history, or low levels of emotional or mental self-awareness—were perceived to be at higher risk of cervical cancer than themselves.

Over half of the under-screened women indicated that negative experiences with male GPs and difficulty in locating a sensitive female GP were obstacles to having a Pap test.

Minimising the risk of cervical cancer
The participants demonstrated a reasonable level of knowledge of strategies to reduce their risk of cervical cancer. These included: having Pap tests (the predominant response), safe sex, no smoking, and maintaining a healthy physical and emotional lifestyle.
More than one third of the under-screened women expressed fatalistic views, e.g. ‘I don’t think that anything you do will prevent you from developing cancer’ and ‘If you’re going to get it, you’re going to get it and that’s it’.

**Benefits and limitations of Pap tests**

Peace of mind was one of the strongest perceived benefits of having regular Pap tests, particularly among under-screened women. This suggests that these women believe the test is effective. While women recognised that the Pap test detects cervical abnormalities and cancer, the early detection of cancer is less recognised. The emotional and physical discomfort associated with a Pap test emerged as its main limitation. Only one woman said the Pap test was limited by its inaccuracy.

**Expectations of accuracy**

Almost half of the respondents expected cancer screening tests to be 99% accurate or better. Substantial emphasis was placed on the need for screening tests to leave ‘no room for doubt’. When asked to consider a minimum level of acceptable accuracy, under-screened women appeared to consider accuracy rates of 90% or better to be reasonably acceptable. Screened women were more likely to feel that much lower levels of accuracy were acceptable.

Expectations of Pap tests appeared to be slightly lower than of cancer screening tests in general. Only three women estimated that the accuracy of the Pap test was 98% or better. Four women correctly estimated the accuracy of the Pap test to be approximately 90%. Screened women were more likely to indicate lower levels of expected accuracy than under-screened women. Relatively few women freely recalled having heard about the inaccuracy of the Pap test from the media.

**Factors that influence accuracy**

Together, the women demonstrated a comprehensive knowledge of the factors that influence the accuracy of Pap tests. However, several of the participants were surprised at the number of factors outlined in the fact sheets, suggesting that individual women did not know about all factors.

Nearly half of the respondents described human error among service providers and persons analysing the smear as factors that may influence the accuracy of the test. Four women suggested that the inadequate sampling of cervical cells, including abnormal cells, contributed to inaccuracy in a smear.

Three under-screened women, and one woman who had a history of inadequate screening, believed that the time of their menstrual cycle could influence the accuracy of the test. This may suggest that some women are confused about the best time to have a Pap test, and may believe that the ‘window’ of time in their cycle during which it is appropriate to have a Pap test is quite narrow.

The factual information on the accuracy of Pap tests challenged the women’s beliefs about the infallibility of the Pap test. The false-negative error rate had the strongest impact on the women. The frequency of the error created interest and concern among seven women, five of whom were under-screened. The women were largely unaware that there were three main types of cervical cancer (rather than one) and were concerned to read that the Pap test was not as effective in detecting adenocarcinomas and adenosquamous carcinomas.

Over one-third of the under-screened women expressed surprise at the number of factors that can influence the accuracy of the Pap test.

Three under-screened women, and one woman who had a history of inadequate screening, indicated the information helped them understand why two-yearly Pap tests are important.
Impact of accuracy on intention
The overwhelming response from the screened women was that the information regarding the accuracy of the Pap test would not influence their screening behaviour. They believed that the Pap test was still worthwhile, even though it was not 100% accurate.

The under-screened women were less consistent. Some indicated that the information had motivated them to consider having a Pap test. For others, it confirmed their belief that the test was not worthwhile, and further reduced their motivation to be screened. Great care needs to be taken in developing messages that communicate information regarding the accuracy of the Pap test.

Telling women about Pap test accuracy
The participants provided several suggestions for messages about the accuracy of the Pap test. Emphasis was placed on the need to provide women with accurate estimates of its efficacy.

Women need to be informed that a 90% level of accuracy is actually 'very high', and reassured that this reflects a highly-effective procedure.

There is a need to inform women of the ways in which they can minimise the impact of error rates. Primarily, women need to be informed that by having Pap tests every two years, they can detect any changes that may have been missed in a previous smear while they are still relatively simple to treat.

Conclusions related to the development of Pap test messages
Emphasis should be placed on the benefits of early detection: the simple, effective management of pre-cancerous and cancerous changes. 'Peace of mind' is a term strongly associated with regular Pap tests.

Distinctive, easily-recalled terms need to establish the difference between screening and diagnostic tests.

Women need to be informed:
- that the Pap test is not 100% accurate, but that the 90% accuracy rate means it is highly effective
- of false-positive and false-negative error rates, and the factors that influence the accuracy of the screening tests
- that they can take personal action to minimise the impact of inaccuracy in the Pap test, by ensuring that they have a Pap test every two years. This may also involve encouraging women to use available reminder systems.

There is a need to directly address the emotional factors that deter under-screened women from having Pap tests.

There is some support for the development of messages that describe having Pap tests as an integral part of maintaining a healthy lifestyle, and an important preventive health measure. In order to grab attention, it may be worth considering a message that suggests that a woman’s lifestyle cannot be entirely healthy if she is not having Pap tests.

Emphasis should be placed on the relevance of cervical screening for ALL women. These messages should be inclusive, specific, and highly personal.

Advising women to encourage under-screened friends and loved ones to have a Pap test may provide under-screened women with a specific, personal motivation to be tested.
Results: surveys

Preferred pamphlet

The most commonly-preferred pamphlet of screened women was ‘Geraldine Doogue’ and the most commonly-preferred pamphlet of under-screened women was ‘Every woman’.

Positive features of the pamphlets

‘Geraldine Doogue’ was liked for its visual appeal, the extensive information it provided, its memory checklist and the fact that it was easy to read and understand.

‘Every woman’ was liked because it provided extensive information, used simple terms, had a good layout, was concise and easy to read and included telephone numbers for further information.

The Pap smear information sheet for women was liked because it was concise and informative.

What is a positive feature?

Differences between screened and under-screened women

Screened women emphasised the quality and readability of the information, while under-screened women emphasised the pamphlets’ visual presentation and brevity.

Negative features of the pamphlets

The ‘Geraldine Doogue’ pamphlet was disliked because of its length and the repetition of information.

‘Every woman’ was disliked for the use of directive terms and expressions and its low visual appeal.

The Pap smear information sheet for women was disliked for its low visual appeal, insufficient information, appearance of being ‘clinical’ and the absence of headings and dot points.

Under-screened women were more likely to place emphasis on low visual appeal and the length of a pamphlet when describing negative features.

Information that is ‘missing’ from the pamphlets

It was felt that the ‘Geraldine Doogue’ pamphlet should have included the location and telephone numbers of service providers; that ‘Every woman’ should have discussed the relationship between sexual activity and the risk of cervical cancer; while the Pap smear information sheet for women needed to include basic information about Pap smears and answers to commonly-asked questions.

Responses common to two or more pamphlets included:

- there was inadequate information about service providers, and service locations
- there was a lack of specific information regarding the screening requirements of pregnant or menopausal women.

What screened and under-screened women thought was missing

Under-screened women were more likely to comment on the lack of adequate information regarding available service providers and service locations.
Comparing the pamphlets: information and readability

'Every woman' and 'Geraldine Doogue' were rated as being more informative, easier to understand, and easier to read than the Pap smear information sheet for women, with 'Every woman' rated slightly more highly.

'Geraldine Doogue' was rated as being slightly easier to read than 'Every woman', while the two pamphlets were rated as being equally easy to understand.

What makes a pamphlet easier to read and understand?

The women emphasised the use of colour, large bold type, common terms, diagrams, summary points, and a well-defined layout.

Screened women emphasised the use of colour, and simple terms, while under-screened women emphasised the use of colour, large bold type, defined layout, diagrams, and simple terms.

For a pamphlet to be easy to understand, it needed simple terms, diagrams and summary points, and a well-defined layout.

Screened women emphasised the use of simple terms and diagrams, while under-screened women emphasised the use of simple terms, diagrams, and summary points.

The meaning of statistics: 1 in 5 versus 20%

The responses of the women were largely shaped by their knowledge of the accuracy of the Pap test.

Although the majority of the women recognised that there was no difference in the size of the error rate when it was described as either a percentage or a ratio, there was a marked preference for the ratio statistic over the percentage.

Recommendations for future Pap test education pamphlets

Emphasis should be placed on:
- visual appeal
- simple terms and diagrams
- a question-answer format, with questions in bold or differently-coloured type
- limiting the use of paragraph-style blocks of information
- bullet points to separate different messages in the text
- the provision of local information and telephone numbers for service providers and locations.

Message development and focus group report

Drawing from the findings of the literature review, messages review and the qualitative interviews, a comprehensive series of educational and recruitment messages was developed.

Eleven Pap test messages were selected from this series for further evaluation within a focus group setting. It was envisaged that these messages would form a set of ‘headline’ statements that could be used for posters, Pamphlet headings and various media campaigns.
Our objectives were to:

- explore Victorian women’s understanding of a set of 11 Pap test messages
- document and investigate Victorian women’s emotional and cognitive responses to the messages
- determine the relevance and readability of the messages
- document women’s suggestions for modifications that may improve the relevance, readability and understanding of the messages
- develop a set of relevant and effective attention-seeking Pap test messages, for use in posters, pamphlet headings and various media advertising and recruitment campaigns.

Sample

Twenty-two women aged between 25 and 60 years, who were sufficiently fluent in English to participate in a group discussion, were sampled from three medical centres in three different areas of metropolitan Melbourne. The sample was selected to ensure a substantial representation of under-screened women, and women from low socioeconomic backgrounds. Each participant was given $30 in recognition of her contribution to the research.

Procedure

Four focus group discussions were conducted in locations selected for their proximity to the medical centres from which the group participants were drawn. Two of the focus groups consisted of well-screened women, and two consisted of under-screened women. The discussion groups varied in approximate length from one and a half to two hours, and were recorded for later transcription.

Eleven messages were selected from a comprehensive series of Pap test messages for evaluation within the focus group setting:

1. You can look healthy and feel healthy, and still have abnormal cells in your cervix.
2. You can’t feel the early stages of cervical cancer. Don’t wait until you feel something to have a Pap test.
3. If changes in the cells of the cervix are caught early they are simple to treat.
4. Your health is in your hands. Ask for a Pap test.
5. A Pap test every two years will give you peace of mind.
6. It is important to feel comfortable with the person who is giving you your Pap test. If you don’t feel comfortable with your doctor, it’s okay to go to someone else for your Pap test.
7. Having a Pap test every two years is the most reliable way to prevent cervical cancer.
8. Pap test results will be accurate 90% of the time.
9. Yes, Pap tests can be uncomfortable, but they can prevent 90% of the most common type of cervical cancer.
10. Yes, Pap tests can be embarrassing, but they can save your life.
11. All women need to have regular Pap tests. Tell your friends about them.

The women were asked to reflect on the meaning, relevance and importance of the messages, and to consider ways in which the messages could be modified to increase their clarity and impact.
Rating the messages

Immediately prior to commencement of the focus group discussion, each participant was given a list of the 11 messages that would be discussed within the focus group. The women were requested to circle the six messages that ‘stood out’ to them the most, and rate them in order of preference. Following the focus group discussion, each participant was given a second sheet of the 11 messages, and requested to complete the exercise a second time.

Analyses

The focus group discussions were transcribed and coded. Summaries of the responses, and response types were drafted, and emergent themes and concepts were highlighted.

The two sets of ratings provided by each woman were paired, and collated according to screening behaviour. Message preferences were counted and ordered from the most commonly-preferred message to the least commonly-preferred message, for both screened and under-screened women. Differences between the message preferences of the two groups of women, and changes in preferences following the focus group discussions within each group, were highlighted.

Results

The modified messages

On the basis of the evaluations provided by the participants of the four focus groups, the following set of 18 messages was developed.

- You can look healthy and feel healthy, and still have abnormal cells in your cervix.
- Don’t wait until you feel something to have a Pap test.
- If changes in the cells of the cervix are caught early they are easy to treat.
- Your health is in your hands. Ask for a Pap test.
- Your health is important. Ask for a Pap test.
- A Pap test every two years can give you peace of mind.
- It is important to feel comfortable with the person who is giving you your Pap test. Choose the person who feels right for you.
- Have a Pap test every two years. It is the most reliable way to detect cervical cancer.
- Have a Pap test every two years. It could save your life.
- Yes, Pap tests can be uncomfortable, but they can detect 90% of the most common type of cervical cancer.
- Yes, Pap tests can be embarrassing, but they can save your life.
- All women need to have regular Pap tests.
- If you have ever had sex, you need to have a Pap test every two years.
- Pap tests are important. Talk to your friends about them.
- Pap tests are important. Pass this pamphlet on to a friend.
- Nine out of ten Pap test results are accurate.
- That’s why it is important to have a Pap test every two years.
- Pap tests have a 90% chance of detecting cervical cancer.
As a result of the evaluation process, five of the final messages were accompanied by recommendations stipulating the conditions under which they should be applied.

The message ‘Don’t wait until you feel something to have a Pap test’ should be used in conjunction with ‘You can look healthy and feel healthy, and still have abnormal cells in your cervix’, when providing information related to the asymptomatic nature of abnormal changes in the cervix.

The message ‘You can look healthy and feel healthy, and still have abnormal cells in your cervix’ should be used both on its own, as a headline, advertising or recruitment message, or in conjunction with other messages.

The message ‘It is important that you feel comfortable with the person who is giving you your Pap test. Choose the person who feels right for you’ should be used in conjunction with a series of content messages describing the different service providers and service locations that are available to Victorian women.

The message ‘Nine out of ten Pap test results are accurate’ should be used as a heading for subtext that defines and explains false-negative errors in Pap test results. ‘That’s why it is important to have a Pap test every two years’ was developed as an accessory message that could be used to close this subtext.

The message ‘All women need to have regular Pap tests’ should be used in conjunction with additional information that allows women to recognise their eligibility for a regular screening program.

**Ratings: the message preferences of screened and under-screened women**

The messages that were most preferred by screened women were:

- You can look healthy and feel healthy, and still have abnormal cells in your cervix
- If changes in the cells of the cervix are caught early they are easy to treat.

The message that was most preferred by under-screened women was:

- You can look healthy and feel healthy, and still have abnormal cells in your cervix.

There were some changes in the message preferences of both screened and under-screened women following the focus group discussions.

Screened women’s preference for the message ‘You can look healthy and feel healthy, and still have abnormal cells in your cervix’ increased following the focus group. Their preference for the message ‘Yes, Pap tests can be uncomfortable, but they can detect 90% of the most common type of cervical cancer’, decreased considerably.

Under-screened women’s preference for the message ‘You can look healthy and feel healthy, and still have abnormal cells in your cervix’ increased following the focus group. Their preference for the message ‘All women need to have regular Pap tests. Tell your friends about them’ decreased substantially.

**Headline and content messages**

In order to be successful, educational messages about Pap tests need to draw the attention of eligible women, and provide necessary information about Pap tests in a manner that is accessible to a wide range of women.

Two different types of Pap test messages were developed to meet these needs: headline and content messages.

Eighteen brief, attention-seeking messages were developed as headline statements, that can be used for posters, pamphlet headings and various media advertising and recruitment campaigns. These messages are preceded by an ‘H’ within the following list of the messages that were developed.
Sixty-two messages were developed primarily as content messages for pamphlets and other educational material about Pap tests. These messages present more complex information about the benefits and limitations of Pap tests in a form that is easy to read and understand. These messages are preceded by a ‘C’ within the following list of the messages that were developed.

The ‘benefits’ messages

Mortality
   H  Have a Pap test every two years. It could save your life.
   C  Many women die of cervical cancer.
   C  A Pap test is a simple test that takes a few minutes to complete. A few minutes, once every two years, can save your life.
   C  Cervical cancer is still a leading cause of cancer-related deaths in countries that do not have organised Pap testing programs.

The most reliable method of detection
   H  Have a Pap test every two years. It is the most reliable way to detect cervical cancer.
   C  Have a Pap test every two years. It is the best thing you can do to reduce your risk of cervical cancer.
   C  If you are not having regular Pap tests, you are increasing your risk of developing cervical cancer.

What does a Pap test detect?
   C  Cervical cancer is the last stage of a disease that begins as abnormal cells in the cervix.
   C  A Pap test can detect abnormal changes in the cells of your cervix. In a very small number of cases, these abnormal changes can develop into cancer.
   C  Abnormal changes in the cervix can occur for a variety of reasons. Infections such as thrush, genital warts and herpes can all cause abnormal changes in these cells.
   C  Some abnormal changes will progress so that the cells of the cervix become more, and more abnormal. In a small number of cases these abnormal changes will become cancerous if they are not treated.

How effective is the Pap test?
   H  Yes, Pap tests can be uncomfortable, but they can detect 90% of the most common type of cervical cancer.
   C  There are three main types of cervical cancer: squamous cell carcinoma, adenocarcinoma, and adenosquamous carcinoma. Squamous cell carcinoma is the most common type, and accounts for 85% of reported cases of cervical cancer.
   C  The most common type of cervical cancer is called squamous cell cancer, and makes up 85% of all cervical cancers. The other two types of cervical cancer are rare, and make up the other 15% of cervical cancers.
   C  Regular Pap tests can prevent 90% of the most common type of cervical cancer.
   C  The Pap test is less likely to detect the two rare types of cervical cancer, because they often develop in areas that cannot be reached by a Pap test. (A diagram may be of benefit when presenting this information.)
Why is the Pap test so effective?

H If changes in the cells of the cervix are caught early they are easy to treat.
C Most cervical cancer progresses very slowly. The cells in the cervix pass through several stages of increasing abnormality before they become cancerous. Cervical cancer can be prevented if these early changes are detected and treated.
C Most cervical cancer progresses very slowly. The cells in the cervix will gradually become more and more abnormal, until they become cancerous. Cervical cancer can be prevented if these early changes are detected and treated.
C If abnormal changes in the cells are detected before they become cancerous, they are quite simple to treat.
C Treatment for early changes in the cells of the cervix is simple and highly successful.

The Pap test detects changes in the cervix before symptoms develop

H You can look healthy and feel healthy, and still have abnormal cells in your cervix.
H Don't wait until you feel something to have a Pap test.
C The early stages of cervical cancer do not have any symptoms.
C Most women will not be able to feel abnormal changes in the cells of their cervix.
C Having a Pap test is the only way you can find out if the cells in your cervix are healthy.
C Most women will not notice any symptoms until the cells of their cervix have become very abnormal.
C Some women will not notice any symptoms until the abnormal cells in their cervix have become cancerous.
C If you have any symptoms, such as increased vaginal discharge, or bleeding between periods or after sex, see your doctor immediately.
C Even if you had your last Pap test quite recently, see your doctor if you notice any unusual symptoms.

Emotional benefit

H A Pap test every two years can give you peace of mind.
H Have a Pap test every two years. It can give you peace of mind.

Accessibility

H It is important to feel comfortable with the person who is giving you your Pap test. Choose the person who feels right for you.
C Your doctor is not the only person who can give you your Pap test.
C You can also go to another doctor, a women's health nurse, a family planning clinic, a community health centre or a hospital for your Pap test.
C If you don't feel comfortable with your own doctor, it is OK to go to someone else for your Pap test.
C It is your choice. Choose the person who feels right for you.
The ‘limitations’ messages

H The Pap test is not 100% accurate.

H Pap tests have a 90% chance of detecting cervical cancer.

C Like all tests, the Pap test is not 100% accurate.

C Regular Pap tests can prevent 90% of the most common type of cervical cancer.

False-negative and false-positive errors

H Nine out of ten Pap test results are accurate.

C The Pap test is not 100% accurate. This means that some women will receive Pap test results that are not correct.

C Sometimes a Pap test will not detect abnormal cells that are present in your cervix. This means that you will be told that you do not have abnormal cells in your cervix, when you really do. This is called a false-negative result.

C Any abnormal changes that were not detected in your last Pap test will usually be found in your next test.

C The best way to catch any abnormal changes in your cervix before they become cancerous is to have regular Pap tests, every two years.

Or

C If you have regular Pap tests every two years, any abnormal changes that were missed during your last test, can be detected before they have progressed too much further.

H That’s why it is important to have a Pap test every two years.

C Sometimes your Pap test result will tell you that you have abnormal cells in your cervix when you really haven’t. This is called a false-positive result.

C False-positive results are very uncommon. If you receive an abnormal Pap test result, you will usually be asked to have another Pap test in six months. If this test result is clear, it is very likely that your first abnormal result was a false alarm.

C Only 1 in 16 abnormal Pap test results are false alarms. It is very important that you follow your doctor’s advice if you receive an abnormal Pap test result.

Why are Pap tests inaccurate?

C Because abnormal changes in the cervix can be very small, the abnormal cells that are present in your cervix may not be collected when you have your Pap test. This means that you will be told that you do not have abnormal cells in your cervix, even though you do.

C The cells taken from your cervix during your Pap test are sent to a laboratory to be checked. The cells are placed on a glass slide, and looked at under a microscope. Sometimes these cells are hard to see clearly. In a very small number of cases, abnormal cells that are present on the slide are not detected. This means that some women will be told that they do not have abnormal cells in their cervix, when in fact, they do.

C This can happen the other way too. Sometimes normal cells from the cervix can appear to be abnormal when they are looked at under a microscope. This means that some women will receive an abnormal test result, even though they do not have any abnormal cells in their cervix.
This type of error is very uncommon. It is very important that you see your doctor if you receive an abnormal Pap test result.

**Improving the accuracy of the Pap test**

- New methods are being used to look at cells collected from your cervix during your Pap test. These methods will make Pap test results even more accurate.
- New methods are being used to make Pap tests even more accurate.

**The physical discomfort of Pap tests**

- Yes, Pap tests can be uncomfortable, but they can detect 90% of the most common type of cervical cancer.
- It is important that you feel comfortable with the person who is giving you your Pap test. Choose the person who feels right for you.
- If your last Pap test was a bad experience, talk to your doctor about it. Ask if anything can be done to make your next Pap test more comfortable for you.
- It is important to feel comfortable with the person who is giving you your Pap test. If you don’t feel comfortable going to your own doctor, it is OK to go to someone else for your test.
- It is your body, it is your right. Choose the person who feels right for you.

**The emotional discomfort of Pap tests**

- Yes, Pap tests can be embarrassing, but they can save your life.
- Having a Pap test can be very embarrassing. Some women say that the only reason they have their Pap test every two years is because it could save their life.
- Having a Pap test can be uncomfortable. Some women say that the only reason they have their Pap test every two years is because it can prevent 90% of the most common type of cervical cancer.

**Messages related to self-initiation of cervical screening**

- All women are eligible to have regular Pap tests.
- If you have ever had sex, you need to have a Pap test every two years.
- All women aged between 20 and 70, who have ever had sex, need to have a Pap test every two years.
- All women should begin having regular Pap tests within 12 months of their first experience of sexual intercourse.
- You need to have regular Pap tests, even if you have not had sex for a long time.
- It is important that you keep having regular Pap tests right up until you are 70.
- Some women who have had a hysterectomy still need to have regular Pap tests. If you have had a hysterectomy, ask your doctor if you still need to have Pap tests.
- Women who have had a hysterectomy that did not involve the removal of their cervix, still need to have regular Pap tests.
C Women who have had a hysterectomy because they had cervical, ovarian or uterine cancer, need to have regular Pap tests—even if they have had their cervix removed.

C Women who have had a hysterectomy that did involve the removal of the cervix, and did not have their operation because they had cancer, do not need to have a Pap test.

The importance of health

H Your health is important. Ask for a Pap test.

C Your health is important. Do it for those who love you, and above all, do it for you.

The responsibility of health

H Your health is in your hands. Ask for a Pap test.

C Having regular Pap tests is your choice. So is your health.

C Regular Pap tests are an important part of a healthy lifestyle.

C Some women feel that they do not need to have a Pap test because they have a healthy lifestyle. If you are not having regular Pap tests, your lifestyle is not as healthy as it could be.

C Do not wait for your doctor to suggest a Pap test. Take your health into your own hands.

Promoting informal recruitment

H Pap tests are important. Tell your friends about them.

H Pap tests are important. Pass this pamphlet on to a friend.

Recommendations for use of five headline messages

As a result of the qualitative evaluation process, five of the final ‘headline’ messages were accompanied with recommendations regarding the manner in which they were to be applied:

- It was recommended that the message ‘Don’t wait until you feel something to have a Pap test’ should be used in conjunction with ‘You can look healthy and feel healthy, and still have abnormal cells in your cervix’, when providing information related to the asymptomatic nature of abnormal changes in the cervix.

- It was recommended that the message ‘You can look healthy and feel healthy, and still have abnormal cells in your cervix’ should be used both on its own, as a headline, advertising or recruitment message, or in conjunction with other messages, in the manner outlined above.

- It was recommended that the message ‘It is important that you feel comfortable with the person who is giving you your Pap test. Choose the person who feels right for you’ should be used in conjunction with a series of content messages describing the different service providers and service locations that are available to Victorian women.

- It was recommended that ‘Nine out of ten Pap test results are accurate’ be used as a heading for subtext that defines and explains false-negative errors in Pap test results. ‘That’s why it is important to have a Pap test every two years’ was developed as an accessory message that could be used to close this subtext.
It was recommended that the message 'All women need to have regular Pap tests' should be used in conjunction with additional information that allows women to recognise their eligibility for a regular screening program.

References


Chapter 13

Responses to a Pap test recruitment letter, 1997

Judith Jones

Abstract

The aim of this project was to assess the acceptability of using a direct mail recruitment strategy for encouraging under-screened women to have Pap tests. To this end, the nature of 1,592 calls made to the dedicated toll-free telephone number, mentioned in 163,400 recruitment letters, was assessed. In addition, 136 evaluation forms returned were examined. Age-specific inquiries were made to the telephone line. In general, the purpose of the calls was to request information rather than to make a complaint. The survey revealed that the majority of respondents were positive about the personalised letter of invitation, and over half reported that the letter would prompt some action. However, the high proportion of women with hysterectomies responding to either the evaluation form or the toll-free telephone line must be taken into account with respect to results obtained. In general, the direct mail strategy was considered to be an effective way of reaching women not on the Victorian Cervical Cytology Registry.

Introduction

PapScreen Victoria, as documented in its 1996–99 Recruitment Strategy, is committed to the development of strategies aimed at encouraging previously unscreened and under-screened women into the cervical screening program (ACCV 1996).

In 1997 a recruitment strategy was developed targeting individual women who were identified as being unscreened or under-screened. Victorian women whose names and addresses had been extracted from the Victorian Electoral Roll, at the request of PapScreen Victoria, were matched against the Pap test screening information held at the Victorian Cervical Cytology Registry. Between August and December of 1997, letters of invitation were mailed from the registry, in weekly batches, to women who had no identifiable screening history in the previous four years.

The letters were accompanied by an information brochure and a message in 10 languages in addition to English. In accordance with Commonwealth guidelines the letter included information on how women’s names were accessed, plus information about a toll-free telephone line, which was provided to deal with enquiries specific to this project. This telephone line was answered by staff of the Anti-Cancer Council’s Cancer Helpline in accordance with established protocols, and information was recorded on a record sheet.

The aim was to assess the acceptability of using a direct mail recruitment strategy for encouraging under-screened women to have Pap tests. To this end, the nature of calls made to the dedicated toll-free telephone number was examined, and data from an evaluation form enclosed with a portion of the letters was analysed.

Method

A total of 163,400 letters were mailed out to under-screened women: 160,900 to women aged 40–59 years and 2,500 to women aged 25–39 years. Women were classified as under-screened if they had no record of Pap testing with the Victorian Cervical Cytology Registry in the previous 48 months (four years). One thousand letters containing an evaluation form plus
reply-paid envelope were mailed to women aged 40–59 years. Only 2.7% of the letters (n = 4,413) were returned as undeliverable.

Results

Study one: telephone enquiries

- 1% (n = 1,592) of women who received letters telephoned the toll-free 1800 line, made available to women in the invitation letter. (All figures are rounded to the nearest 0.5%, except those for women aged 25–39 years.)
- 98.5% of the callers were women.
- 90% of calls were made by the woman herself; 2% were via an interpreter, and the remaining calls were made by family, friends, and GPs.
- For 87% of callers, English was their first language; for 3.3% Greek was the first language, and for 2.5% it was Italian. A total of 26 languages other than English were identified as the callers’ first language.
- 90% of women who called were aged 40–59 years. Further details are shown in Table 13.1.
- 8% of callers were aged over 60 years.

Table 13.1: Age of all female telephone callers

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>25–29</td>
<td>7</td>
</tr>
<tr>
<td>30–39</td>
<td>20</td>
</tr>
<tr>
<td>40–49</td>
<td>356</td>
</tr>
<tr>
<td>50–59</td>
<td>1050</td>
</tr>
<tr>
<td>60–69</td>
<td>120</td>
</tr>
<tr>
<td>70+</td>
<td>7</td>
</tr>
</tbody>
</table>

Reasons for calling the toll-free line:

- 61% of all callers enquired for information relating to hysterectomy, particularly the need for a Pap test after a hysterectomy.
- 27.5% wanted information about Pap testing services.
- 10.5% of callers wanted to know how their name and contact details had been obtained. Of these callers, 27% were angry (see section below).
- 4% of all women wanted their names removed from the list of women receiving personalised letters of invitation.
- 3% thought that receipt of the letter indicated that they had a problem, such as cancer or an abnormality.
- Some women had more than one reason for calling.
Assessment of callers' emotions

- 4% were to some degree angry when they telephoned; and of these, 41.5% were ‘fairly’ or ‘very angry’.
- 71% of these women wanted to know how their name had been obtained.
- 27% of all women who wanted to know how their name had been obtained were to some degree angry about their names having been accessed.
- 26% of all angry women mentioned or enquired about hysterectomy.
- The remaining women were angry for other reasons.

Outcome of call

- 72% of callers were referred elsewhere, in that they were given information about appropriate services or service providers, most frequently their own doctor (44%), or community health centre (18%).
- Of all women who called expressing some degree of anger, 66% indicated at the end of the call that they were reassured and that their anger was significantly reduced. Another 24.5% of these angry callers indicated no change in their expressed anger by the end of the call. Only one woman expressed increased anger at the termination of the call.
- The requests of the 64 women who wanted their names removed from the list of women receiving personalised letters of invitation were referred to the Victorian Electoral Commission.

25–39-year-old callers

Only 27 of all calls were from younger women, representing 1.7% of callers, and 1.1% of the number of 25–39 year olds who were mailed letters. Their age frequencies are shown in Table 13.2.

Table 13.2: Age of younger telephone callers

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>25–29 yrs</td>
<td>7</td>
</tr>
<tr>
<td>30–39 yrs</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
</tr>
</tbody>
</table>

Compared with callers aged 40–70+ years, younger women calling the 1800 line differed in a number of respects, as shown in Table 13.3. There was a much larger percentage of young women wanting information about the Pap test and Pap test services than older women, contrasting with the older women’s enquiries relating to hysterectomy. These differences are age-appropriate, and should be borne in mind when developing resources about recruitment and cervical health which are specifically targeted at one or other of these groups. The other apparent difference is the younger women’s proportionally higher interest in how their names had been obtained.
Table 13.3: Differences between callers by age

<table>
<thead>
<tr>
<th>Caller/issue</th>
<th>25–39 years</th>
<th></th>
<th>40–70+ years</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Woman herself called</td>
<td>23</td>
<td>85</td>
<td>1404</td>
<td>49</td>
</tr>
<tr>
<td>NESB</td>
<td>1</td>
<td>4</td>
<td>206</td>
<td>43</td>
</tr>
<tr>
<td>How name obtained?</td>
<td>5</td>
<td>20</td>
<td>150</td>
<td>60</td>
</tr>
<tr>
<td>Information re Pap test services</td>
<td>17</td>
<td>63</td>
<td>425</td>
<td>27</td>
</tr>
<tr>
<td>Hysterectomy query</td>
<td>4</td>
<td>15</td>
<td>974</td>
<td>62</td>
</tr>
<tr>
<td>Wanted more information</td>
<td>3</td>
<td>11</td>
<td>112</td>
<td>7</td>
</tr>
<tr>
<td>Refer to service provider</td>
<td>24</td>
<td>89</td>
<td>1128</td>
<td>72</td>
</tr>
<tr>
<td>Letter implied cancer</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Implied abnormality</td>
<td>0</td>
<td>0</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Implied other problem</td>
<td>1</td>
<td>4</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Angry callers</td>
<td>1</td>
<td>4</td>
<td>55</td>
<td>4</td>
</tr>
<tr>
<td>Want name removed</td>
<td>2</td>
<td>7</td>
<td>61</td>
<td>4</td>
</tr>
</tbody>
</table>

Study two: evaluation survey

A total of 136 completed evaluation forms were returned to the PapScreen Victoria Program, representing a 14% response to this survey. Of the respondents, 80% (n = 109) were married/had a partner, 14% (n = 19) were separated/divorced, and 3% (n = 4) were widowed. Ninety percent (n = 122) had a general practitioner. Almost half (42%; n = 57) of the women returning the evaluation form indicated that they had had a hysterectomy. The majority of respondents were positive about the personalised letter of invitation (see Table 13.4).

Table 13.4: Responses to receiving a letter

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial response to letter positive</td>
<td>106</td>
<td>78</td>
</tr>
<tr>
<td>Read all/some of letter</td>
<td>134</td>
<td>99</td>
</tr>
<tr>
<td>Reaction re letter contents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>action plan</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>positive comment</td>
<td>94</td>
<td>69</td>
</tr>
<tr>
<td>negative comment</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Reminder letters acceptable</td>
<td>131</td>
<td>96</td>
</tr>
<tr>
<td>Letter will prompt some action</td>
<td>73</td>
<td>54</td>
</tr>
</tbody>
</table>

Hysterectomies as a concern and a confounder

In analysing this data, the issue of hysterectomy needs to be addressed. While the Victorian Cervical Cytology Registry can identify a proportion of women who have had a hysterectomy (and who consequently do not need to be further screened), they are unable to identify all women with hysterectomies. A surprisingly big minority of women returning the survey forms indicated that they had had a hysterectomy; the 1800 call data is insufficiently precise to know if the 61% of callers enquiring about hysterectomy had, in fact, had one. It is possible that a high proportion of women who appear, from registry data, to be unscreened, are women who have had hysterectomies.
Discussion

Consideration of the data derived from the 1800 telephone line made available to women indicates a high level of acceptability for an invitation letter. The 169 women who called to ask how their names had been accessed represent approximately one woman per thousand letters sent. A similar level of acceptability in the 25–39 year olds is suggested by the younger women who phoned to ask how their names had been obtained, who represented two women per thousand letters sent. It can be concluded that the strategy of collaboration between the Victorian Electoral Commission and the Victorian Cervical Cytology Registry in matching names of women in order to identify a specific health need is one that is acceptable to the vast majority of women receiving invitation letters.

The majority of the 169 women who asked how their names had been obtained were not anxious or angry. Just over one-third of them did not wish to receive similar letters in the future, from either this program or from other health initiatives. The Victorian Electoral Commission is now developing a system whereby women’s names on the electoral roll can be ‘flagged’ so that they are no longer accessible for such health initiatives in the future.

Another measure of the acceptability of the registry letter strategy derives from a consideration of the negativity expressed by callers. The women requesting that their names not be accessed from the Electoral Roll in future, and the women who were angry when they called, together represented 8% of all callers, and approximately one woman per 1,266 letters sent. This suggests a low level of offence to women as a result of this particular strategy, indicating that unsolicited invitation letters are acceptable to both younger and older women.

Data from the acceptability survey confirm the 1800 line data. The reported positive response to receipt of the letter and positive reaction to the letter contents indicate a high level of acceptability. It is also noted that a comprehensive assessment of acceptability should include a calculation of cost per eligible woman contacted/recruited, although this was not done here.

The outcomes of this registry letter strategy have yet to be completely assessed. The ‘gold standard’ measure of screening behaviour changes is represented by the records of the Victorian Cervical Cytology Registry. Registry data for the period during and immediately following the mailout indicated little change in overall screening rates, compared with previous months, and previous years. The question of the extent to which invitation letters persuade unscreened or under-screened women to seek a Pap test is uncertain. Although a large majority of callers were given specific information about service providers/provision, it is not possible to know if women acted on this information. This is also true of the majority of women who indicated on their returned survey forms that the letter would act as a prompt to action. In these considerations it is important to note that a letter strategy such as this may result in the recruitment of unscreened women only after a period of time, during which women might reconsider the value of screening in their personal health care regimes. In addition, a recruitment strategy can effect changes in community norms and understandings relating to screening and prevention; and the consequences of these changes may not be evidenced through increased screening rates for some considerable time after a specific strategy.

Reference

Chapter 14  
Evaluation of the impact of the  
1997 Amcal Stickers project  
Judith Jones  April 1998

Abstract
To evaluate the impact of using health promotion stickers in pharmacies as a complement to broader strategies, 126 women aged between 17 and 75 years were approached within Amcal pharmacies to complete a questionnaire. While there was poor spontaneous awareness of the stickers, most women thought they looked appealing and supported the role of this type of strategy for health promotion. Many said seeing such stickers might encourage them to consider having a Pap test, and as such, use of this strategy may contribute to the breadth of an integrated media campaign.

Introduction
As part of its comprehensive recruitment strategy, PapScreen Victoria supports a variety of health promotion activities targeted at the general population of women, and uses a range of communication approaches. Many of these are low-budget, imaginative strategies and are part of a comprehensive media campaign using mainly regional and ethnic press and radio. Between August and November 1997, PapScreen Victoria’s recruitment program conducted a major media campaign for the target audience of women aged 40–69 years. It involved radio advertising, interviews, and community service announcements, accompanied by gift-pack give-aways, articles, interviews in local press, and a complementary, low-budget innovative strategy named the Amcal Stickers Project.

The Amcal Stickers Project
Given that most of the customers of local pharmacies are women, and that most middle-aged women visit a pharmacy at least a few times each year, a pharmacy-based screening promotion strategy was designed, with the aim of opportunistically ‘flagging’ Pap testing to female customers via brightly-coloured circular stickers and an information pamphlet. A month-long campaign was planned, from mid-September to mid-October 1997, during which one of three different stickers would be used to seal the paper bag containing items purchased by women. A cervical screening pamphlet was included in the bags.

PapScreen Victoria collaborated with the State Coordinator of Amcal (Allied Master Chemists of Australia Limited), to seek the cooperation of Amcal pharmacies in different locations around Melbourne and in rural Victoria that were willing to participate in the project. Evaluation of the impact of this initiative was via customer survey in each participating pharmacy. The evaluation aimed to assess the impact of the stickers as a health promotion tool, and to determine women’s awareness of and response to radio advertisements promoting Pap testing, which were being aired at the time.
Method

Participants
A total of 126 women from 50 different postcode areas took part in this survey, with between eight and 13 women at each pharmacy agreeing to answer the questionnaire. Women interviewed were aged between 17 and 75 years, in decade groupings as shown in Table 14.1.

Table 14.1: Age of respondents

<table>
<thead>
<tr>
<th>17–20 yrs</th>
<th>21–30 yrs</th>
<th>31–40 yrs</th>
<th>41–50 yrs</th>
<th>51–60 yrs</th>
<th>61–70 yrs</th>
<th>71–75 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>21</td>
<td>29</td>
<td>21</td>
<td>24</td>
<td>22</td>
<td>5</td>
</tr>
</tbody>
</table>

Measures
Questions assessed the visual impact of the sticker, its visual appeal, and which of the three sticker versions was considered to be 'the best'. Women were asked if the sticker prompted them to have a Pap test, and what else may prompt them to have a Pap test. Finally, women were asked about the impact of the radio campaign (running concurrently), and their attitudes towards using pharmacies for health promotion.

Procedure
_PapScreen Victoria_ organised the design, selection and production of three stickers, each with a Pap test message. Twelve pharmacies in 12 different postcode areas agreed to take part, representing a range of metropolitan and rural businesses and serving socio-economically diverse populations. Amcal's State Coordinator, Maureen Marsh, supplied these pharmacies with background information about the project, stickers and pamphlets provided by _PapScreen Victoria_, and organised the schedule for the evaluation period in early October 1997. The evaluation surveys were conducted over a nine-day period by an Anti-Cancer Council interviewer who spent approximately 30 minutes in each of the participating pharmacies requesting randomly-selected female customers to respond to a short questionnaire as they left the premises.

Results

Visual impact of sticker
Of 125 women who had previously visited the pharmacy that month, only 18 women (14%) had noticed the sticker. The remaining 107 women (86%) had not noticed the sticker. One woman (0.8%) had not visited the pharmacy in the last month.

Assessment of sticker
The response to the sticker was overwhelmingly positive, as shown in the following table. Those women who had not previously noticed one were shown the stickers and asked what they thought (see Table 14.2):
Table 14.2: Responses to Amcal stickers

<table>
<thead>
<tr>
<th>Response</th>
<th>Women who noticed stickers before</th>
<th>Women seeing stickers for the first time</th>
<th>Total women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Great</td>
<td>5</td>
<td>28</td>
<td>19</td>
</tr>
<tr>
<td>Good</td>
<td>8</td>
<td>67</td>
<td>72</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Not appealing</td>
<td>1</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>108</td>
<td>126</td>
</tr>
</tbody>
</table>

Best sticker

Of the 126 women surveyed, 100 volunteered their preferences when shown the three stickers, as percentages of women nominating a 'best sticker' (see Table 14.3).

Table 14.3: Which was the best sticker?

<table>
<thead>
<tr>
<th>Best sticker</th>
<th>Women who noticed stickers spontaneously</th>
<th>Women who were shown the stickers</th>
<th>Women voting for a 'best sticker'</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Green</td>
<td>1</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Pink</td>
<td>9</td>
<td>60</td>
<td>71</td>
</tr>
<tr>
<td>Yellow</td>
<td>5</td>
<td>33</td>
<td>12</td>
</tr>
<tr>
<td>Total numbers</td>
<td>15</td>
<td>85</td>
<td>100</td>
</tr>
</tbody>
</table>

Pap test prompts

Women were asked if the sticker, or some other nominated prompt, might encourage them to consider a Pap test. Some named more than one possible prompt. Of 124 women answering this question, 52.4% (n = 65) reported that they have regular Pap tests (see Table 14.4).

Table 14.4: Prompts to have Pap tests

<table>
<thead>
<tr>
<th>Prompt</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sticker</td>
<td>43</td>
<td>35</td>
</tr>
<tr>
<td>GP</td>
<td>38</td>
<td>31</td>
</tr>
<tr>
<td>Registry letter</td>
<td>28</td>
<td>23</td>
</tr>
<tr>
<td>Friend</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Radio</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>TV advertisement</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Symptoms</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Prevention</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Fear of cancer</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Not applicable</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Don’t know/nothing</td>
<td>7</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: multiple responses were possible.
Impact of radio advertisements

Of the total sample of 126 women surveyed, 30.2% (n = 38) had heard at least one more of the advertisements that were being played on radio at the time of the project and made judgments about them (see Table 14.5). Only one of the women had heard these in a language other than English, and that language was Spanish.

Table 14.5: Responses to radio campaign

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great</td>
<td>14</td>
<td>37</td>
</tr>
<tr>
<td>Good</td>
<td>16</td>
<td>42</td>
</tr>
<tr>
<td>Neutral</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Not appealing</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total numbers</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Pharmacies and health promotion

A final question asked all 126 women their opinion of pharmacies being involved in health promotion. There was overwhelming support for this concept, with 97.6% (n = 123) saying this was a ‘good idea’, and only three women (2%) being neutral.

Discussion

Consistent with the evaluation of the impact of the 1997 media campaign described in Chapter 4, a substantial proportion of women were familiar with the radio campaign encouraging women to have regular Pap tests. In addition, there was strong support in this study for the inclusion of pharmacies in health promotion activities. However, the impact of the strategy of using stickers to close pharmacy packaging was equivocal. There was relatively poor initial impact of stickers inviting women to have Pap tests every two years, with fewer than a fifth of women interviewed having noticed the stickers in the past month. Once shown the stickers, women reported them as being appealing, with the pink stickers favoured in preference to yellow or green versions.

Many women agreed that the sticker might encourage them to consider a Pap test. However, there is no way of knowing the screening status of the women who stated that the sticker would prompt them to have a test. Nor is there any way to determine if they would, in reality, seek a test as a result of being exposed to the sticker prompt. Nonetheless, the fact that the sticker was viewed positively by a large majority of women indicates that women in general are not resistant to being unexpectedly reminded of a health issue such as Pap tests.

Given the poor initial awareness of the stickers, it is questionable whether the existence of the stickers would perform this function in isolation. The Amcal Stickers Project investigated the impact of using stickers to remind women to have Pap tests: it was not intended to be a strategy to be used in isolation, but to contribute to the breadth of a systematic, integrated media campaign. The contributions of initiatives such as this Amcal Stickers Project to the collective community awareness of, and commitment to, Pap testing for all eligible women cannot be underestimated.