


Barriers and facilitators to participation in breast, bowel and cervical cancer screening in rural Victoria: A qualitative study

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Abstract

Issue addressed: Population cancer screening rates are around 50% for the general population and even lower in rural areas. This study aimed to explore knowledge, attitudes, behaviours, motivators and barriers to breast, bowel and cervical screening participation in under-screened men and women.

Methods: We used a qualitative research design. Focus groups were segmented by age, sex and screening participation. Participants were under-screened in at least one of the cancer screening programs, with separate groups for each of the programs. The discussion guides were designed around the Health Belief Model and group discussions were coded using a thematic content analysis approach.

Results: Fourteen focus groups were held with 80 participants. Key themes were that the concept of cancer screening was not well understood, a low priority for preventive health behaviours, issues relating to local general practitioners (GP) and screening was unpleasant, embarrassing and/or inconvenient. A key determinant of participation in cancer screening was exposure to prompts to action, and it was evident that participants often required multiple prompts before they took action.

Conclusions: Opportunities that develop attitudes to health that place disease prevention as a high priority; improve understanding of the benefit of screening in terms of early detection and treatment; improve GP availability and the patient-practitioner relationship; and the development of messages for each of the screening programs should be further explored as factors that may influence rural population screening rates.

So what?: Addressing health attitudes, beliefs, knowledge, health practitioner and test-related barriers and improving messaging may increase cancer screening participation in under-screened rural populations.

KEYWORDS

cancer, health behaviours, qualitative methods, rural and regional health

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1 | BACKGROUND

Australia currently has three national population-based cancer screening programs to detect breast,¹ bowel² (or colorectal) and cervical cancer.³ Each program is free to access and aims to detect cancers in asymptomatic individuals. The success of population screening programs is dependent on high participation rates; however, current participation rates across the three Australian National Cancer Screening Programs are around 50% of eligible individuals.⁴ Furthermore, participation rates are less desirable in hard-to-reach communities⁵ with a general trend for lower participation with increasing remoteness.⁶ The Early Detection and Screening including Tobacco Program is an initiative of the Latrobe Health Innovation Zone⁷ and was established to improve participation in cancer screening programs. Latrobe City is located approximately 150 km southeast of Melbourne, Victoria, Australia and its four major towns are categorised as large rural towns.⁸ With a population of 73 257,⁹ Latrobe City consists of various vulnerable population groups such as people experiencing social disadvantage, people with disabilities, Aboriginal and Torres Strait Islander peoples and culturally and linguistically diverse communities (CALD). Participation rates for breast, bowel and cervical cancer screening programs in these vulnerable groups are lower in Latrobe City compared to the state average.⁴ As Aranda And Currow⁵ posit, a risk-stratified approach to screening rather than the current one-size-fits-all approach allows tailoring to individuals' risk factors. The inclusion of self-collection in never- and under-screened women in the NCSP is one example of this while options for risk-based screening protocols for breast screening have also been proposed.¹⁰

The Health Belief Model (HBM) has been widely used to measure and explain preventative health behaviours and health beliefs, including early detection screening of cancers.¹¹⁻¹³ The HBM consists of a range of socio-behavioural factors that can predict a person's health-related behaviour: perceived susceptibility to the health condition, perceived seriousness of contracting a disease, perceived benefits of and barriers to undertaking the behaviour and the presence of cues to action (eg interpersonal interactions and recommendations from health professionals).¹³ Understanding how the HBM constructs influence cancer screening behaviour in under-screened rural populations can inform the development of interventions to increase cancer screening uptake in these groups, particularly in the identification of the barriers that these groups face.

A review of barriers to bowel cancer screening¹⁴ found that uptake of screening is reduced by several factors, including lack of awareness of bowel cancer and the purpose of screening, low perceived susceptibility, lack of knowledge about the effectiveness and the procedure itself, dislike of the test and fatalistic beliefs about bowel cancer. Involvement of a health professional and the use of informational resources were important determinants of increased screening participation, factors which have also been confirmed to be important among cultural subgroups in Australia.¹⁵ Studies have also shown that bowel cancer screening mass media campaigns can improve bowel cancer screening rates.^{16,17} The IARC¹⁸ reviewed the breast cancer

screening literature, finding that having a regular doctor, adequate social support and networks, greater worry about breast cancer and fewer health problems were all associated with uptake of screening. In a study with culturally diverse women from Victoria, a higher number of emotional barriers and not receiving a screening invitation from BreastScreen Victoria were associated with lower uptake of screening.¹⁹ A review of Australian studies²⁰ found that self-reported barriers to cervical screening vary across studies; however, the most common barriers include lack of time, feelings of embarrassment, fear of results, lack of symptoms and male health professionals. In addition, under-screened and never-screened women were more likely to identify barriers to participate in cervical screening than their screened counterparts.²¹⁻²³ One of these studies compared self-reported barriers to cervical screening among urban, rural and remote women and between women who have and have not screened.²⁴ The authors found few differences in the rank order of barriers and not wanting to have the test done by a male doctor was the most commonly reported barrier by all groups. There was strong support for clinics run by women's health nurses among under-screened and rural/remote women.

Moreover, across all three cancer screening programs, structural barriers to access cancer screening services have also been identified, specifically within socio-economic disadvantaged communities. These include, difficulty in navigating the health system, lack of transport to services and distance to screening services.^{24,25} Gaining a deeper understanding of the barriers and facilitators in the rural Australian context is warranted, and in particular, the perceptions of under-screened rural populations. Studying all three screening programs provides the opportunity to identify any common factors that exist and enable broader approaches that serve to increase screening across the population-based programs. The overall aim of this study was to apply the HBM theoretical constructs to explore knowledge, attitudes, behaviours, motivators and barriers with respect to each of the cancer screening programs in under-screened people.

2 | METHODS

2.1 | Participants

This study was a qualitative research program comprising of 14 focus groups, with a total of 80 participants. Focus groups were conducted in Latrobe City between March and April 2019. In determining the most appropriate approach for this research, we were mindful of the fact that there were essentially three separate programs of research (one for each of the screening programs), each of which had a different target audience. The only stratum that overlapped these programs were women aged 50-74, for whom all three screening programs were relevant, hence a substantial emphasis of the sampling was on this group. Focus groups were stratified by age, sex and screening program (Table 1). In total, 22 participants were male and 58 were female. Between six and eight participants were recruited to each group, with attendance ranging from four to seven participants per group. The researchers were guided by the

Age (y)	Males	Females		
	Bowel	Bowel	Breast	Cervical
25-34				2 groups (7, 6)
35-49				2 groups (7, 6)
50-59	2 groups (4, 6)	1 group (7)	1 group (5)	1 group (6)
60-74	2 groups (6, 6)	1 group (5)	1 group (5)	1 group (4)

TABLE 1 Age, sex and screening program structure of the focus groups (number of participants in parentheses)

concept of 'information power' rather than the widely used 'saturation' concept to determine sample size.²⁶ In brief, information power suggests that the more information the sample yields and the higher quality of information, the fewer participants are required. The focus groups were conducted by two facilitators (MM and AF) who had extensive experience conducting group discussions on the topic of cancer screening. Their experience coupled with a thorough knowledge of the topic area enabled focused and robust dialogues with participants such that more groups per stratum would have provided little additional benefit.²⁶

Recruited participants were 'under-screened' for the cancer screening program of relevance to their age/sex segment. Under-screened included: never screened (ie invited, but not participated in the screening program) and lapsed screeners. Lapsed screeners had participated at least once in the nominated screening program but were overdue for their next participation. For breast and cervical, we defined this as being at least a year overdue; for bowel, overdue was defined as having received their most recent kit at least 3 months ago.

2.2 | Procedure

Recruitment was coordinated by a professional research recruitment agency. An email was sent to a sample of the agency's database of people who live in Latrobe City, and who had previously expressed their interest in participating in market and social research. The topic of the research was stated as 'exploring issues related to health and prevention of disease'. This was supplemented through advertising (local media and social media) and snowballing techniques. A copy of the screening questions that was used to select eligible participants is shown in the Supplementary Material S1A. The issues identified as important for exploration in this research were based on the HBM, including knowledge of each of the cancers; perceptions of severity and personal susceptibility to these cancers; awareness of the screening programs; barriers to participation; perceptions of the efficacy of the screening programs; and prompts to action. The focus group discussions were semi-structured and the discussion topics were designed around the factors that feed into this model of health behaviour (Supplementary Material S1B). Each stratum discussed the cancer screening issues that were relevant for them, so that the male groups discussed bowel cancer screening only; the 25-34 and 35-59 year old female groups discussed cervical screening only; and the 50-59 and 60-74 year old female groups discussed all three cancer screening programs.

2.3 | Data analysis

The duration of the groups was approximately 90 minutes and with the permission of participants, all discussions were audio recorded. The recordings were transcribed and analysed using a thematic analysis approach,²⁷ with themes developed from the research objectives and emergent trends from the data. The thematic content analysis approach was conducted by one of the authors (MM). This process involved reading a sample of transcriptions to identify key themes and subthemes and then the preparation of a coding guide based on these topics. Each transcript was then read and coded according to themes and subthemes. A sample of quotes has been included for illustration purposes, with a reference to the participant's sex, age group and the screening program that they were recruited to (Bo = under-screened for bowel cancer, Br = under-screened for breast cancer, Cx = under-screened for cervical cancer). The study was granted ethics approval by the Latrobe Regional Hospital Human Research Ethics Committee (2018-22).

3 | RESULTS

Considering the findings across all three of the screening programs, factors that affected participation included a combination of: knowledge and awareness of cancer; the screening procedures, health attitudes and beliefs; and being reminded to screen.

3.1 | Cancer knowledge and awareness

Screening participation was related to perceptions of incidence, severity and personal susceptibility to each of the cancers. Bowel cancer was thought to be reasonably common, partly due to the presence of the National Bowel Cancer Screening Program (NBCSP), although it appeared that unless one experienced symptoms, it was a disease for others to worry about. To some degree, this was because the effects of bowel cancer were thought to be so severe that people were reluctant to find out that they might have the disease. Breast cancer was also known to be common, and this was a reason to screen, although not having a family history of breast cancer was a common reason for those who wanted to avoid screening. By contrast, cervical cancer was believed as rare, and, therefore, was not a source of concern.

A consistent theme from the discussions was that perceptions of personal susceptibility to a particular cancer contributed to screening for that cancer, but only for those who understood the value of early detection. However, this did not necessarily translate into screening for other cancers.

My impression is that it is not that common, because I've not seen it and I've got an extended family and circle of friends.

(M, 60-74, Bo)

I know that I am slack and I know that I should do it and my father is Stage 4 cancer now, abdominal cancer ... he didn't screen and that is why he is Stage 4, so yeah. I have done the bowel test though ... I just haven't done the mammogram ... I have had the Pap smears and stuff I just haven't done the mammogram.

(F, 50-59, Br)

Definitely [up to date with breast screening], because both the grandmothers died from breast cancer. So, I keep it up.

(F, 60-74, Cx)

3.2 | The procedure

3.2.1 | Unpleasant and uncomfortable

For bowel screening, the top of mind barrier was that the sample process was distasteful for those who had not screened and for those who rejected the kit straight away. They regarded storing their faeces sample in the fridge as particularly off-putting.

It's just, the embarrassing part is like, pooing into a little cup thing, you know.

(M, 50-59, Bo)

And it's in the fridge, that is terrifying.

(F, 50-59, Bo)

A common barrier to breast and cervical screening was that the procedure was unpleasant and painful, with participants referring to past experiences as deterring them from further participation in the program. Some mentioned that they had heard the breast screen procedure was painful from others and this discouraged them from having a mammogram themselves. Several women reported negative experiences that occurred many years ago (20 or more) and had not returned since then. Additionally, for cervical screening, there were concerns associated with feelings of embarrassment and vulnerability, which were more prominent for younger women.

And I think the experience I had at x all those years ago it was pretty painful, and I was just like ... surely there is another way other than squashing you all up?

(F, 50-59, Br)

An issue that arose unprompted across all of the age groups was the notion of self-testing for cervical screening. Participants felt that it could be possible to perform their own swab test, and that this would overcome many of the barriers they experienced to participating in the cervical screening program. Some reasoned that they did this for bowel cancer screening, and therefore believed that it should also be available for cervical screening.

Why can't they ... send out packages for Pap smears to women like they do for bowel cancer.

(F, 60-74, Br)

I would rather do that ... something that you could do at home, in your own private home, no doctors looking up you.

(F, 50-59, Cx)

3.2.2 | The health practitioner

Women noted that the breast and cervical screening experience depended a great deal on the person doing the procedure, and that the difference between the skills of practitioners was substantial.

The last doctor I had one with, she didn't seem to know what she was doing. And she had to re-do it straight away. I really didn't feel confident in her abilities.

(F, 35-49, Cx)

A common theme regarding cervical screening was that barriers related to embarrassment and unpleasantness of the procedure were exacerbated by not having a regular general practitioner (GP). Several women noted that, given the intimacy of the procedure, they would prefer to have it done by someone they had developed a level of trust with, which required a long-term relationship with a GP. However, participants felt that this had become increasingly difficult in the provision of health care in the local area. A small number of participants differed, claiming that they felt more comfortable having a cervical screening test done by a doctor who they did not know.

The issue of the doctor's gender was discussed, with the more common attitude being a reluctance to have a test done by male doctor, although a small number disagreed, commenting that they had experienced male doctors as being gentler with the procedure than female doctors. Some felt that their doctors were reluctant to perform the procedure and believed they did not raise the issue for this reason.

I don't think they like doing them, to be honest. From my doctor I got the impression he was just no. I think he wanted to set it up with a female doctor.

(F, 35-49, Cx)

It was apparent that the intimacy of the procedure created a range of quite complex challenges. Some women mentioned that they were reluctant to have a cervical screening test if it was suggested at the time of an appointment for a separate issue, as they felt it was something they needed to be prepared for. This was especially in cases where it was the first time they had been to that GP.

I've had a few occasions, where I'm at the doctor and they say, you haven't had a pap smear, can we do it now, and I'm not ready, or I'm seeing a male doctor for the first time, so I'm like, no, I'm fine, and I have to awkwardly exit the doctor.

(F, 25-34, Cx)

3.2.3 | Inconvenience

A substantial barrier to participation in the breast and cervical screening programs was factors associated with convenience, including attributes of the procedure itself and the venues for undergoing the procedure. For some, the main convenience factor was about fitting it into their lives, especially in the context of work, children, other health issues and caring for other people.

Convenience ... where it is, where you have got to go ... you got to take time out of your day, you have to have the money to pay to get there, is the train close no its not close and then you have to take the car.

(F, 60-74, Br)

Some talked about the difficulty of having to attend a specific breast screening clinic, while some noted the difficulties of booking and waiting times at the venues. Several participants mentioned the BreastScreen Victoria mobile unit, with some questioning whether this still visited the region, and some not having known about it. They felt that if the mobile unit was more available, this would help overcome some of their convenience-related barriers. Several of the groups raised the idea of a women's clinic, noting that many of their convenience and discomfort barriers to cervical screening would be overcome if such a facility was available to them.

3.2.4 | Other barriers

Several participants claimed that the bowel screening instructions were too long and difficult to understand. Some had an immediate reaction to seeing the collection materials (swabs, test tubes, etc) and instructions, believing that this was too complicated for their abilities.

Several of the participants who experienced complexity as a barrier reported that that they would rather go to their GP for the test.

I just found them so complicated and because I suffer from ... rheumatoid arthritis and just trying to comprehend everything that was just written in it. (F, 50-59, Bo)

Yeah because I can't read or write, and I've got no one there to help me. If it was in hospital, I'd say yes I'd do it.

(M, 60-74, Bo)

For a small number of participants, the main barrier to undergoing a breast screen was related to concerns about radiation. While these attitudes were not widely held, they tended to be strongly held and voiced by those who did have them.

3.3 | Health attitudes

3.3.1 | Priority and perceived susceptibility

A range of health attitudes acted as barriers to taking part in the three screening programs, which included issues around low perceived susceptibility (due to the absence of family history and/or lack of symptoms), the priority of different health issues, caring for others and perceptions of low urgency and importance.

It just felt like you're too young. I felt I was too young for it; that was the view that I had. Nah, everything's right, you're fit and healthy, those sorts of things.

(M, 50-59, Bo)

I sort of make excuses. I am busy, I am doing this and being a woman and a mum and caring, you are always caring about everyone else, and sometimes you forget about yourself.

(F, 50-59, Br)

In relation to cervical screening, several mentioned that following many years of negative results, they saw no reason to continue with the process. These women felt that cervical cancer was no longer a sufficient risk for them. There was some belief among those who had had the human papillomavirus (HPV) vaccine, that they were less likely to develop cervical cancer, contributing to a belief that screening tests were unnecessary.

3.3.2 | Avoidance and fatalism

Participants also identified barriers associated with their general beliefs about health, cancer and treatments for cancer. This included

those who reported that they would prefer not to know if they had bowel or breast cancer as they did not want their life to be affected by the diagnosis and subsequent treatment. For bowel cancer, participants believed that there was little point screening because they did not think anything could be done if bowel cancer was detected.

If I don't know it doesn't matter, I can just get on with my life.

(F, 60-74, Br)

If I got told I had cancer and had to have treatment or anything, blinkers go on, I don't want to know.

(F, 35-49, Cx)

Because once you get it, you've got a time limit. Well they give you a time limit.

(M, 60-74, Bo)

3.4 | Screening beliefs: poor appreciation of screening and its benefits

For several participants, the barrier to participation was simply a poor understanding of screening and its role in preventive health. These people believed that taking a health or disease-related test was part of a diagnosis process, and, if they did not have presenting symptoms that suggested they might have the disease, they were not convinced of the need to be tested. Associated with this, there was limited knowledge about the specifics of the immunochemical faecal occult blood test (iFOBT) as a screening test. Some did not understand that the iFOBT could find microscopic blood that was not observable by the naked eye and had believed that they would notice blood in their stool if they had a problem that needed to be tested. Some did not complete the kit because they believed they were already being tested for bowel cancer in regular health checks with their GPs.

With that men's health stuff, so you go, they like you to go to the doctor every couple of years to get checked right out, and that's the whole lot done.

(M, 60-74, Bo)

There was some misunderstanding of the purpose of a cervical screening test in terms of what it was testing for. A reasonably common belief was that the test was for a range of gynaecological issues, and not just cervical cancer, with this perception being reinforced because they were commonly prompted to undergo a cervical test when they presented as pregnant. Very few women were confident in their knowledge of issues related to HPV, the HPV vaccine and how this was related to cervical cancer and screening. Several women expressed a considerable degree of confusion during these components of the discussions, and some made references that were factually incorrect.

I didn't really realise that cervical cancer had anything to do with sexual activity to be quite honest.

(F, 60-74, Cx)

From what I know, genital herpes can cause HPV, or something along them lines.

(F, 35-49, Cx)

Actually, I thought that too (that the cervical test was a general gynaecological test), like just like your whole inside, like your whole, everything to do with your vagina.

(F, 25-34, Cx)

Few were aware that the cervical cancer screening program had changed to HPV testing, or that this meant the screening regime changed to 5 yearly. During the groups it became apparent that communication of these changes was quite complex and resulted in some doubt and confusion, with some suggesting that this confusion was detracting from perceptions of the importance of maintaining a screening regime. Some were concerned that a 5-yearly regime would be insufficient for finding problems, while others were relieved that they would not need to test as often.

Everyone gets told different information when it's supposed to be something that's solid. I'm wondering why aren't we all getting the same message?

(F, 35-49, Cx)

[My 25-year-old daughter] ... went to the doctor a while ago ... the doctor said, "No, you don't need one because you've had the HPV vaccination."

(F, 35-49, Cx)

Yeah. It's too long. It's not as safe now if they're going to stretch it out to five years, and if you've had multiple partners in that five years, then you've got more risk.

(F, 25-34, Cx)

3.5 | Prompts to action

It was evident throughout the discussions that a key determinant of participation in cancer screening was exposure to 'prompts to action', including invitation and reminder letters; mention and referrals by GPs and other health professionals; social marketing campaigns, including mass media and targeted local and social media; and discussions with friends and family. A one-off prompt was not considered effective to pursue screening; however, multiple calls to action appeared to have a greater impact.

When I got the test, I just thought ugh, yeah, like I said, I'll just put it away and I'll do it one day. But just never got around to it. But I had to go to the doctors for something and that's when they said. You need to do this, so I did it.

(F, 50-59, Cx)

A common theme from the discussions with women was the belief that invitation and reminder letters for breast and cervical screening programs were not received to the same extent as they had been in the past, with several commenting that they no longer received any reminders. Another common theme from these discussions was that GPs were not promoting cancer screening programs, but when they did, the reminder encouraged them to screen. The discussions suggested that the reasons might be different for each of the screening programs. Participants reported that bowel cancer screening was seldom mentioned by GPs, except possibly for those who were in high-risk categories, such as having family history or related conditions. While some women suggested that their GPs were reminding them about breast screening, this did not seem to be consistent. Participants talked about a range of factors that they felt acted as barriers to their GPs consistently and regularly promoting cervical screening.

But to be honest the only reason I had this screen today was because my doctor ... said 'you are going, I am going to book you in to have this done', all the blood tests which I have regularly and also she wants to do a cervical, so it was her, it was because of her that I had it.

(F, 60-74, Br)

It's been about 8 years since I've had a reminder ... It was my GP clinic that used to send them ... I think they gave up 'cos I used to throw them in the bin and just not respond.

(F, 35-49, Cx)

I don't think the doctors push it enough ... Clearly, I'm in the bracket of say from 50 on, so but he's never discussed it.

(M, 60-74, Bo)

A consistent theme of this research was that participants believed they were not exposed to advertising campaigns that promote cancer screening as much as they had been in the past. There was some awareness of the recent Cancer Council Victoria (CCV) campaign promoting the NBCSP, which was on air during the study, but there was little recall of other recent campaigns through either mass media, local media or social media. Some recalled previous campaigns for breast screening and cervical screening programs that have not aired for many years. Across the groups, participants felt that social marketing campaigns did affect their participation in cancer screening as they

brought the issues to the front of their mind, educated them about the cancers and the programs, left them feeling that these cancers were common and that they might be susceptible and reminded them of the benefits of screening. Without social marketing prompts to action, other reminders (such as letters and GP recommendations) were experienced in isolation, while advertising campaigns told them that the cancer screening programs were for all people, creating a sense of screening being the norm.

They advertise breast cancer, they advertise bowel cancer, but they don't advertise cervical cancer.

(F, 50-59, Cx)

...in a waiting room. She's got the stockings on, she's like uncomfortable, and they're saying that 5 minutes of uncomfortable is worth whatever, and they're all crossing their legs, that, it's staying in my head.

(F, 35-49, Cx)

Associated with the notion of normalising cancer screening, a common theme of this research was that people did not talk much about these cancer screening programs, except in the context of discussing negative aspects of the programs, such as their dislike, distaste or embarrassment with the procedures. On the other hand, it was apparent during this research that the more participants talked about the screening programs, the more they overcame some of these barriers. Finding out that others were doing the tests went some way to encouraging people to overcome their own resistance and to prioritise their own health needs over their reluctance to test. The women's groups frequently talked about the impact that knowing friends were having their breast screens and cervical screening tests had on their own motivation to screen.

I spoke to my wife ... she said to me, "Look, do it." She encouraged me to do it. She did.

(M, 50-59, Bo)

It's not really something that comes up in conversation, other than, like I said, I got the letter.

(F, 60-74, Bo)

Yeah, people don't talk about it. I have lots and lots and lots of friends who have had issues, but it's not something that we talk about.

(F, 35-49, Cx)

4 | DISCUSSION

This study was designed to explore the factors that contribute to under-screened individual's participation in the national screening programs for breast, bowel and cervical cancer in rural Victoria. An

overarching theme was that the concept of cancer screening was not well understood or sufficiently appreciated to overcome the barriers to participation and supports previous research.^{14,18} The concept of population screening was found to be quite complex and somewhat antithetical to many people's approach to their personal health. Participants reported that they usually acted on their health if they believed they were at risk of a disease and/or if they were experiencing symptoms. Consistent with other research, this is compounded by the tests themselves being experienced as unpleasant, uncomfortable, embarrassing and/or inconvenient.^{20,25,28} These findings suggest that strategies that increase health literacy relating to population screening may be necessary. There should be an emphasis on developing attitudes to health that place disease prevention as a high priority (in the context of existing illnesses and caring for others) and as per the HBM, promote the message that the long-term benefits of screening outweigh the short-term discomfort of the procedures.

It is noted that several of the findings were more relevant for female cancer screening programs, most likely due to the majority of respondents being female participants. However, it may also be attributed to other factors such as the invasiveness of breast and cervical screening procedures and that the tests involve health practitioners and appointments which meant that more discussion was had about these topics. The preference for a self-collected cervical test sample was expressed by women of all ages as a means to overcome the embarrassment and discomfort they associate with the test. While our study did not have a control group for comparison purposes, other research suggests that under- and never-screened women prefer self-collection compared to well-screened women.²⁹ As observed in our study, women would prefer to perform a self-collected sample at home³⁰; however, currently, the screening program only allows self-collection to be performed at a medical or health care clinic.³¹ While women aged 30 and over and who have never screened or are under-screened are eligible to collect their own vaginal sample, and if HPV is found in their sample they may require another sample collected by their health care provider.³⁰ This information appears to be unknown by this cohort and needs to be appropriately conveyed by the health care provider to allow women to make an informed decision, particularly for women who have had previous adverse experiences such as sexual assault.³²

A consistent theme from the focus groups was that personal susceptibility was perceived to be low for reasons such as a lack of family history. Addressing perceptions of susceptibility will require different messages for each of the cancers. Similar to previous Australian research,²⁸ our findings indicated that there is a need to increase understanding of how common bowel cancer is compared to breast and prostate cancer. For breast cancer, a focus should be on educating women that not having a family history is not a reason to go unscreened as they are still at risk of developing breast cancer.¹⁸ Regarding cervical cancer, it was apparent that under-screened women need to be made aware about who needs to be screened, how often and the purpose of the test, especially in the context of the changes to HPV testing. Indeed, a review of the renewed cervical screening program in Australia indicated that adequate and early education of

health professionals was lacking and contributed to community concerns and limited understanding about the transition.³³

To overcome test-related barriers to bowel screening, the development and promotion of simpler instructions may be required to ensure the test is completed promptly and not forgotten about. The misconception that faeces are handled also needs to be addressed. Dawson et al²⁸ noted that barriers, such as knowledge gaps and confusion, may be overcome simply by provision of clear information that enables one to form strong reasoning for screening participation. Breast screening participation may benefit from communicating advances in the screening test technology since the early days of mammograms. For cervical screening, the confusion around the test suggests that there is a substantial need for more detailed and effective communication about this issue and its impact on the cervical screening program.

It was evident that a key perceived facilitator to participate in cancer screening was exposure to prompts to action, and that participants often required several prompts before they took action. Calls to participate in cancer screening included invitation and reminder letters, mention and referrals by GPs and other health professionals, social marketing campaigns (eg mass media and targeted local and social media) and discussions with friends and family. While participants were adamant that receiving messages through any one of these channels of influence might not make a difference to whether they screened or not, the findings highlighted that when they received similar prompts across several different channels, they were likely to pay attention and consider the priority they placed on screening. Our observations suggest that there is a need to evaluate the existing letter systems to determine the effectiveness of reminder letters for gaining attention and communicating the importance of screening. Robust evaluation on the effectiveness of other behavioural interventions (eg text messaging³⁴) to promote cancer screening among rural communities should also be undertaken.

Similar to previous research,^{14,18,20} a lack of discussions instigated by GPs encouraging participation in the screening programs was reported, unless they sat in high-risk categories. In addition, the perceived shortage of GPs in the local area appears to have impacted on the ability of the participants to develop a trusting and long-term relationship with a GP. It was apparent that some of these issues were systemic, in that they were related to the availability of appointments, time available in consultations and the tendency to deal with presenting issues rather than preventive health. Similarly, a mixed-methods Canadian study on the three cancer screening programs found that health care providers play a central role in cancer screening participation.²⁵ The prevalence odds of the doctor or nurse practitioner not suggesting cancer screening were significantly higher for under-screened compared to well-screened individuals. Other research³⁵ indicates that women rely on their GP for information about cervical screening and they want the information prior to the screening consultation so that they can be prepared physically and emotionally. Systemic barriers associated with GP shortages are common to rural areas and require long-term workforce strategies such as investment in local regional training. In the shorter term, consideration needs to be given to GPs' experiences

of the promotion of these cancer screening programs, to build their knowledge about screening and to develop approaches that will assist GPs to talk about screening with their patients in a timely and comfortable manner.

In general, advertising campaigns promoting cancer screening were perceived as an important vehicle to highlight screening as a normative behaviour. This study confirms previous research^{16,17,36,37} that there is still a need to develop population-wide social marketing campaigns, using mass media, local media and social media, to promote cancer screening and encourage participation in under-screened populations. Similarly, social networks may play a key role in influencing screening participation³⁸ as discussions with peers around screening experiences or aspects about the tests appeared to provide motivation to screen in future. This suggests that consideration should be given to approaches that encourage conversations of screening among peer groups to normalise participation in the screening programs.

Our groups expressed a strong desire for the establishment of a women's clinic, and this may be one solution to overcome many barriers related to discomforts associated with male GPs administering cervical screening and inconvenience of appointments. A recent study found that a greater number of women visiting a female physician were up-to-date for both breast and cervical screening, compared to women visiting a male physician.³⁹ Furthermore, there is evidence of a spill-over effect from one screening to the other⁴⁰ thus, there may be additional advantages to integrating delivery of breast and cervical screening tests, particularly in rural and remote areas where transport and access to GPs are more challenging.

While this report is an accurate reflection of the attitudes of participants, the limitations for generalising qualitative research should be acknowledged. Due to budget constraints, only one researcher coded and analysed the data. Despite their extensive experience in facilitating and analysing qualitative cancer screening research, there is a risk that the researcher's personal biases may have influenced the findings. One method of recruitment was through a research recruitment agency which may have included individuals with an interest in health research; however, this bias may be alleviated by recruiting people who are under-screened for one or more of the screening programs. Despite the relatively high number of participants in this study, it is acknowledged that the findings do not represent the views of all under-screened people living in rural areas. While this research intended to incorporate all vulnerable population groups, it is acknowledged that Aboriginal and Torres Strait Islander peoples and CALD communities may be underrepresented in the final cohort. Future research should validate the findings specifically in these population groups living in rural areas.

5 | CONCLUSION

There are opportunities to influence behaviours across all three screening programs by addressing health attitudes and beliefs that affect how people balance their decisions with respect to the barriers and benefits of screening. Approaches that more effectively

and simultaneously prompt and remind people about the screening programs should be developed and then assessed. Finally, factors related to the health practitioner and test itself that affect participation, such as misconceptions about the tests, limited GP availability and consultation time for discussions about preventative health programs and the quality of care provided, should all be considered when addressing screening rates in rural communities. Further research is recommended to inform the development of social marketing campaign messages that more effectively prompt people about and describe the screening programs, with an aim to normalise participation through stimulating conversations about cancer screening.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

ETHICS STATEMENT

The study was granted ethics approval by the Latrobe Regional Hospital Human Research Ethics Committee.

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SUPPORTING INFORMATION

Additional Supporting Information may be found online in the Supporting Information section.

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