

Why would a woman screen? Facilitators and barriers for women least likely to participate in cervical screening in Australia

Helen M Achat^{a,d}, Nina M Hartcher^a, Kate Lamb^b, Joanne Stubbs^a and Holger Möeller^c

^a Epidemiology and Health Analytics, Research & Education Network, Western Sydney Local Health District, NSW, Australia

^b Health Promotion, Centre for Population Health, Western Sydney Local Health District, NSW, Australia

^c Injury Program, The George Institute for Global Health, Sydney, NSW, Australia

^d Corresponding author: helen.achat@health.nsw.gov.au

Article history

Publication date: September 2021

Citation: Achat HM, Hartcher NM, Lamb K, Stubbs J, Möeller H. Why would a woman screen? Facilitators and barriers for women least likely to participate in cervical screening in Australia. *Public Health Res Pract.* 2021;31(3):e3132113. <https://doi.org/10.17061/phrp3132113>

Background

The cervical screening test, which detects potential and existing high-risk lesions to prevent invasive cervical carcinomas, is provided at no cost to eligible women in Australia. Nonetheless, national cervical screening participation has been gradually declining from 63.7% in 1998–1999 to approximately 55%.¹ An estimated 238 cervical cancer deaths were expected in 2020.²

The uptake of cervical and breast cancer screening services internationally has been associated with multilevel factors related to the individual, (age, knowledge, attitude and perception, language, health status, ethnicity, migration background, education, socioeconomic status), health service (gender of treating doctor, distance to service, cost and availability of service) and local area (remoteness, socioeconomic status).^{3–5} Although barriers and facilitators to screening participation have been identified in international studies, there is limited evidence from Australian studies.

We aimed to gain insight into factors influencing cervical screening among women from an area characterised by disadvantage and ethnic diversity. The Western Sydney Local Health District human research ethics committee approved the study, (HREC: AU RED LNR/18/WMEAD/77) which was part of a larger project aimed at improving screening awareness and participation, coinciding with changes introduced 6 months earlier by the National Cervical Screening Program.

Methods

Trained staff approached women entering a supermarket located in a Western Sydney suburb characterised by high proportions of disadvantaged populations, migrant and Indigenous communities and low uptake of cancer screening services. Eligible participants were women aged 18 years

and older who, after reviewing the information sheet, consented to participate in our survey.

The survey was conducted from mid-June to early July 2018 on five occasions that included weekdays, a weekend, and mornings and afternoons, and utilised convenience sampling. Researchers administered the questionnaire in English. It sought information about the participant's age, country of birth, knowledge of and participation in cervical screening and used open-ended questions to elicit all reasons women would undergo, delay or avoid screening. The full questionnaire is available as a supplementary file from: figshare.com/articles/online_resource/Cervical_screening_survey_pdf/16418790. We used the Australian Bureau of Statistics Standard Australian Classification of Countries to group women's country of birth.

Calculations using an alpha of 0.05 and power of 85% identified the sample size. Researchers undertook ongoing reviews of participants' responses to ensure the sample size was sufficient to report on women's screening behaviour, specifically if the incidence of screening was higher than estimated for the sampling calculations. We applied 95% confidence intervals for comparisons between younger and older women.

All female and male shoppers who were interested were offered information about the cervical screening test in multiple languages and a brochure detailing local general practices with female providers.

Results

Over approximately 4 weeks, three interviewers surveyed 127 women in the vicinity of a local supermarket. Most respondents were in the 25–74 year age range (89%), with 8% aged 18–25. About two-fifths were born in Australia (36%) or New Zealand (5%), and when combined with women from Polynesia (Fiji, the Cook Islands and Samoa) accounted for almost half of all respondents. The second- and third-largest groups by country of birth were women from Maritime South-East Asia and Southern Asia (mainly from India and Pakistan).

Respondents' most common reasons for delaying or avoiding (hereafter referred to as delaying) screening were embarrassment or discomfort (Table 1). A 'lack of knowledge', comprising responses of no knowledge of the cervical screening test and no knowledge about its purpose, was more common among younger women than those aged 50 years and older ('lack of knowledge': 30.9% vs 15.3%). Overall, the issue of lack of time ranked lower than the need for education (11% versus 14%).

Reassurance of no illness was given as a main reason to screen (expressed by 63.8% of respondents), irrespective of respondents' country of birth or age group. Other reasons to screen were to ensure timely detection (37.8%) and being encouraged by one's doctor/nurse (21.3%). Promotional material and telephone/mail reminders were less common reasons for undergoing screening, accounting for 5.4% of responses when combined.

Table 1. Cervical screening status, by respondent age group (N = 127)

Screening status	Time since last screening test	Age range, years						Total	% of eligible women n = 119 ^a
		< 25	25–34	35–49	50–64	65–74	≥ 75		
Current	Within past 12 months	2	8	12	15	3	0	40	45.4
	12–24 months	0	4	3	3	3	1	14	
Due	About 2 years	1	3	7	5	0	1	17	23.5
	2–3 years	1	1	3	5	1	0	11	
Overdue	3–5 years	0	1	3	3	0	0	7	31.1
	>5 years	0	0	5	5	1	0	11	
	Don't know/never had test	6	6	2	4	1	0	19	
Subtotal		10	23	35	40	9	2	119	100
Ineligible	Stopped screening/hysterectomy	0	0	0	3	3	2	8	n/a
Total		10	23	35	43	12	4	127	

n/a = not applicable

^a Defined as women who had not had a hysterectomy or had not stopped screening

Table 2. Reasons for women delaying or undergoing a cervical screening test (*N* = 127)

	Frequency	Proportion of respondents, %	Proportion of all responses (frequency), %
Reasons for delaying/avoiding screening^a			
Embarrassed	49	38.6	19.3
Uncomfortable	48	37.8	18.9
Afraid	33	26.0	13.0
Lack of knowledge:	35	27.5	13.8
- Don't know about the test	22	17.3	8.7
- Don't know the importance	13	10.2	5.1
No time	28	22.0	11.0
Don't want to know if cancer	17	13.4	6.7
Cultural reasons	15	11.8	5.9
Not a priority	12	9.4	4.7
Lazy	10	7.9	3.9
No support with kids	4	3.1	1.6
No female doctor	3	2.4	1.2
Total	254		100
Reasons for undergoing screening^a			
Reassurance	81	63.8	37.0
Early detection	48	37.8	21.9
Doctor/nurse encouragement	27	21.3	12.3
Family history of cancer	23	18.1	10.5
Friends/family encouragement	16	12.6	7.3
Be with/around for family	8	6.3	3.7
Saw a promotion	6	4.7	2.7
Received an invitation	6	4.7	2.7
Symptoms	4	3.1	1.8
Total	219		100

^a Respondents could give more than one reason for delaying or participating in screening

Among women eligible for cervical screening (*n* = 119), 45% were on schedule (screened in the past 12–24 months) and 55% were due or late. In general, respondents who had never been tested (*n* = 19) were aware of cervical screening (*n* = 16).

Discussion

We undertook the survey in an area that has one of the lowest participation rates in the National Cervical Screening Program^{6,7} to identify local women's reasons for having or not having a screening test.

Women most commonly identified negative emotions and physical discomfort as reasons for delaying or not attending for a cervical screening test. Emotional (or psychological) barriers⁸, namely embarrassment, discomfort and fear, were greater inhibitors than the practical barrier of lack of time; practical barriers such as

the time required to have a screen have been identified elsewhere as the stronger type of predictor of women's screening status.^{9,10} The association between emotional barriers and screening is consistent with previous studies examining different ages and screening status.^{9,11} Reassurance of no cervical cancer, early detection and a recommendation from the woman's clinician were the most common reasons given for screening.

Notably, women lacked knowledge about the cervical screening test and its importance to their efforts to prevent cervical cancer, suggesting that inadequate knowledge is at least as strongly linked to under-screening as the historically well documented 'lack of time'. Knowledge about screening guidelines is fundamental to participation but is evidently lacking for women who do not know when they should have their first screen¹² and the purpose of screening¹³, i.e., to detect pre-cancerous changes not cancer. Strategies for ongoing cervical screening education are particularly

important in areas with growing migrant populations^{14,15} who are most likely to be unfamiliar with publicly funded accessible preventive health care.¹⁶ We took the opportunity to provide information about cervical screening and the new cervical screening test at the survey venue; in turn, women enquired about the rationale for the increased time interval between screens, and, albeit mostly overseas-born women, about the benefits of the cervical screening test.

Cervical screening participation is known to differ by locality and be strongly influenced by socioeconomic status.¹⁷ Our study was undertaken in a suburb where residents experience higher-than-average unemployment and lower-than-average median weekly personal income compared to the state.¹⁸ General practitioners have a central role¹⁹ in addressing practical facilitators – flexible appointment times²⁰ and supportive²¹, female clinicians¹¹ – as they encourage opportunistic screening²² in disadvantaged communities with strong migrant representation.²³ Self-sampling can alleviate some emotional and practical barriers²⁴ to ease the concentrated responsibility on general practitioners.

Researchers estimated that one in four women declined to participate in the survey, and less than 10% of the refusals were because of language difficulties. The 55% of respondents found to be due or late for a cervical screening test suggests either a slightly above average participation²⁵ or that respondents provided what they believed to be a desired response, i.e., social desirability bias.²⁶ The survey questions reflected no assumptions, with an early item questioning whether the respondent knew about cervical screening.

A larger sample size would have allowed investigation of barriers and facilitators by women's characteristics, such as age group and region of birth – a factor that would provide the potential to investigate the role of culture in non-participation. However, tackling the inherent complexities of culture²⁷ was beyond the scope of our study.

Conclusion

Efforts to ameliorate the seemingly immutable low uptake of cervical screening in disadvantaged and migrant communities must tackle emotional barriers, within a framework of sustainable educational strategies and supportive primary health care.

Acknowledgements

This paper was supported by a grant from Cancer Institute NSW. We thank Leendert Moerkerken and Suzanne Schindeler for assistance with data management and analysis respectively, Margie Drake for support via WentWest, Western Sydney Primary Health Network, and Aldi Australia for its support by providing us physical space within its premises.

Peer review and provenance

Externally peer reviewed, not commissioned.

Competing interests

None declared.

Author contributions

KL and HA conceived the study. All authors contributed to the drafting of the manuscript or revising it for intellectual content.

References

1. Australian Institute of Health and Welfare. Cervical screening in Australia 2019. Canberra: AIHW; 2019 [cited 2019 October]. Available from: www.aihw.gov.au/getmedia/6a9ffb2c-0c3b-45a1-b7b5-0c259bde634c/aihw-can-124.pdf.aspx?inline=true
2. Australian Government: Cancer Australia. Sydney: Cancer Australia; 2021. Cervical cancer in Australia statistics; 2020 Oct 20 [cited 2021 Aug 26]. Available from: www.canceraustralia.gov.au/cancer-types/cervical-cancer/statistics
3. Marlow LAV, Chorley AJ, Haddrell J, Ferrer R, Waller J. Understanding the heterogeneity of cervical cancer screening non-participants: data from a national sample of British women. *Eur J Cancer*. 2017;80:30–8.
4. Leinonen MK, Campbell S, Klungsoyr O, Lonnberg S, Hansen BT, Nygard M. Personal and provider level factors influence participation to cervical cancer screening: a retrospective register-based study of 1.3 million women in Norway. *Prev Med*. 2017;94:31–9.
5. Araujo M, Franck JE, Cadot E, Gautier A, Chauvin P, Rigal L, et al. Contextual determinants of participation in cervical cancer screening in France, 2010. *Cancer Epidemiol*. 2017;48:117–23.
6. Australian Institute of Health and Welfare. Participation in Australian cancer screening programs in 2014–2015. Canberra: AIHW; 2017 [cited 2021 Aug 25]. Available from: web.archive.org.au/awa/20171112235100mp_/http://www.myhealthycommunities.gov.au/Content/downloads/datasheets/datasheet-report-hc31.xlsx?t=1510530660410
7. Australian Institute of Health and Welfare. Cancer screening programs: quarterly data. Canberra: AIHW; 2021 [cited 2021 Aug 23]. Available from: www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation/contents/national-cervical-screening-program/participation
8. Marlow LAV, Waller J, Wardle J. Barriers to cervical cancer screening among ethnic minority women: a qualitative study. *J Fam Plann Reprod Health Care*. 2015;41:248–54.

9. Waller J, Bartoszek M, Marlow L, Wardle J. Barriers to cervical cancer screening attendance in England: a population-based survey. *J Med Screen*. 2009;16:199–204.
10. Catarino RR, Vassilakos PP, Royannez Drevard II, Guillot CC, Alzuphar SS, Fehlmann AA, et al. Barriers to cervical cancer screening in Geneva (DEPIST study). *J Low Genit Tract Dis*. 2016;20:135–8.
11. Brown RF, Muller TR, Olsen A. Australian women's cervical cancer screening attendance as a function of screening barriers and facilitators. *Soc Sci Med*. 2019;220:396–402.
12. Mather T, McCaffery K, Juraskova I. Does HPV vaccination affect women's attitudes to cervical cancer screening and safe sexual behaviour? *Vaccine*. 2012;30:3196–201.
13. Lovell B, Wetherell M, Shepherd L. Barriers to cervical screening participation in high-risk women. *J Public Health*. 2015;23:57–61.
14. Musa J, Achenbach CJ, O'Dwyer LC, Evans CT, McHugh M, Hou L, et al. Effect of cervical cancer education and provider recommendation for screening on screening rates: a systematic review and meta-analysis. *PLoS One*. 2017;12:e0183924.
15. Akinlotan M, Bolin JN, Helduser J, Ojinnaka C, Lichorad A, McClellan D. Cervical Cancer screening barriers and risk factor knowledge among uninsured women. *J community Health*. 2017;42:770–8.
16. Di J, Rutherford S, Chu C. Review of the cervical cancer burden and population-based cervical cancer screening in China. *Asia Pac J Cancer Prev*. 2015;16:7401–7.
17. Australian Institute of Health and Welfare. Cervical screening in Australia 2010–2011. Canberra: AIHW; 2013 [cited 2021 Aug 11]. Available from: www.aihw.gov.au/getmedia/6b20985d-8e63-4285-96b9-c1a076b7b328/15698.pdf.aspx?inline=true
18. Australian Bureau of Statistics. 2016 Census community profiles: general community profile. Canberra: ABS; 2018 [cited 2021 Aug 11]. Available from: quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/communityprofile/036?opendocument
19. Møen KA, Kumar B, Igland J, Diaz E. Effect of an intervention in general practice to increase the participation of immigrants in cervical cancer screening: a cluster randomized clinical trial. *JAMA Netw Open*. 2020;3:e201903.
20. Plourde N, Brown HK, Vigod S, Cobigo V. Contextual factors associated with uptake of breast and cervical cancer screening: a systematic review of the literature. *Women Health*. 2016;56:906–25.
21. Byrd TL, Chavez R, Wilson KM. Barriers and facilitators of cervical cancer screening among Hispanic women. *Ethn Dis*. 2007;17:129–34.
22. Gyulai A, Nagy A, Pataki V, Tonté D, Ádány R, Vokó Z. General practitioners can increase participation in cervical cancer screening – a model program in Hungary. *BMC Fam Pract*. 2018;19:67.
23. Ferdous M, Lee S, Goopy S, Yang H, Rumana N, Abedin T, et al. Barriers to cervical cancer screening faced by immigrant women in Canada: a systematic scoping review. *BMC Womens Health*. 2018;18:165.
24. Yeh PT, Kennedy CE, de Vuyst H, Narasimhan M. Self-sampling for human papillomavirus (HPV) testing: a systematic review and meta-analysis. *BMJ Glob Health*. 2019;4:e001351.
25. Australian Institute of Health and Welfare. National cancer screening programs participation [data]. Canberra: AIHW; 2019 [cited 2019 Jan 30]. Available from: www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation/data
26. Furnham A. Response bias, social desirability and dissimulation. *Personality and Individual Differences*. 1986;7:385–400.
27. Abboud S, De Penning E, Brawner BM, Menon U, Glanz K, Sommers MS. Cervical cancer screening among Arab women in the United States: an integrative review. *Oncol Nurs Forum*. 2017;44:E20–33.

Copyright: 

© 2021 Achat et al. This article is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Licence, which allows others to redistribute, adapt and share this work non-commercially provided they attribute the work and any adapted version of it is distributed under the same Creative Commons licence terms. See: www.creativecommons.org/licenses/by-nc-sa/4.0/