

Acceptability of self-sampling in Portuguese women: the good, the bad or the ugly?

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Abstract. *Background:* Self-sampling is a less costly approach that has been used for human papillomavirus (HPV) testing. *Methods:* A cross-sectional study involving 313 Portuguese women assessed the acceptability of cervicovaginal self-sampling. *Results:* Self-sampling was a well-accepted method [75.7%; 95% confidence interval (CI) 70.5–80.2], and the majority of women felt no pain (67.4%; 95% CI 61.9–72.5), no discomfort (70.9%; 95% CI 65.5–75.8) and no complexity (76.4%; 95% CI 71.2–80.9). The willingness to repeat self-sampling was high (89.5%; 95% CI 85.4–92.5). Compared to physician-sampling, women reported a preference for self-sampling (58.1%; 95% CI 52.5–63.6), as it was more comfortable (67.1%; 95% CI 61.5–72.2) and caused less pain (16.3%; 95% CI 12.5–20.9) and embarrassment (13.4%; 95% CI 9.9–17.8). *Conclusion:* Offering self-sampling for HPV testing may improve screening participation rates and overcome women's embarrassment regarding physician examination.

Additional keywords: acceptance, cervical cancer, HPV, physician-sampling, prevention, self-collected samples.

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The implementation of efficient strategies to control HPV infection requires a simple, easy and acceptable collection method for HPV detection, strengthening cervical cancer (CC) screening efforts.^{1,2} Self-sampling is a less costly and non-invasive collection device, which can be more easily obtained in resource-limited settings and hard-to-reach populations,¹ including younger or less-educated women and minority groups.^{3,4} Self-sampling has been reported to be an acceptable method^{5–11} and as sensitive as physician-sampling to detect DNA of HPV and other sexually transmitted agents.^{1,5,6,8,12–15} Moreover, self-sampling may be a suitable alternative method for studies on HPV transmission and vaccine trials,¹ and also the vaginal microbiome.¹⁶

The study was approved by the Ethics Committee at University Fernando Pessoa and followed the principles of the Declaration of Helsinki. Flyers and posters were used to inform women about the study and educational presentations. All participants were volunteers and recruited through educational

presentations on HPV and self-sampling, that were developed to explain the objectives of the study and self-sampling procedure. Two women (0.6%) refused to participate when they performed self-sampling, and 10 women (3.1%) were not eligible to participate (six did not perform self-sampling and four did not provide the questionnaire). This cross-sectional study included 313 Portuguese women (18–66 years), who provided informed consent and answered a questionnaire on demographics and acceptability towards self-sampling.

Chi-squared and Fisher's exact test were used to analyse correlations between preference and acceptance of HPV self-sampling, using a 5% level of significance. Acceptability score (ranging 1 to 6) for self-sampling included the answers to the items: pain, complexity, discomfort, embarrassment, willingness to repeat and preferred sampling method. The score was computed with one point given for each answer. The median age of participants was 26.0 years [standard deviation (s.d.) 10.211]. Previous history of gynaecologic examination was

Table 1. Acceptability items considering individual parameters for self-sampling and physician-sampling experiences

NR, non-responders, –, no data

		n (%)			
		No	Yes	NR	
Self-sampling	Pain	211 (67.4)	85 (27.2)	17 (5.4)	
	Complexity	239 (76.4)	41 (13.1)	33 (10.5)	
	Discomfort	222 (70.9)	56 (17.9)	35 (11.2)	
	Willingness to repeat	23 (7.3)	280 (89.5)	10 (3.2)	
		Self-sampling	Physician-sampling	Both methods	NR
Self-sampling vs physician-sampling	More embarrassment	42 (13.4)	162 (51.8)	76 (24.3)	33 (10.5)
	More comfortable or pleasant	210 (67.1)	56 (17.9)	13 (3.8)	34 (11.2)
	More painful	51 (16.3)	217 (69.3)	–	45 (14.4)
	Preferred method	182 (58.1)	94 (30.1)	–	37 (11.8)

reported by 91.1%; of which 58.5% had an examination at least once a year and a low percentage reported never having had a Pap test (15.3%).

Self-sampling was a well-accepted method (75.7%), with a mean score of 4.61 (s.d. 1.508). The majority of women felt no pain, no complexity and no discomfort (Table 1). There was no statistical difference comparing self-sampling items with the median age of participants (≤ 26 vs >26) and history of gynaecologic examination.

The willingness to repeat self-sampling was reported by 89.5% of participants (Table 1). In addition, women answered a question addressing their reasons for repeat self-sampling. The reasons for willingness to repeat were: acceptable (31.1%), comfortable (20.1%), easy (14.1%), non-painful (10.2%), practical (6.7%), screening method (9.5%), time-saving (5.7%) and privacy (2.6%). Discomfort and pain were reported only by 1.5% and 1.0% of responders, respectively.

Comparing self-sampling with physician-sampling experiences, women found the former less embarrassing, more comfortable or pleasant, less painful and considered it as the preferred sampling method (Table 1).

Studies about self-sampling for HPV DNA testing have found it to be an effective approach, assessing women's preferences and willingness.^{5–11} According to previous reports,^{7,17} the majority of women found self-sampling comfortable, easy to perform and non-painful. The mean acceptability score revealed that self-sampling was a well-accepted method. Similar levels of acceptability have been reported among women attending colposcopy clinics,^{12,18} and among women participating in CC screening.⁹

Reporting bias and validity estimation of self-reports is a major problem in sexual behaviours research. The comparison of self-sampling and physician-sampling acceptability should be interpreted with caution because the results could be based on self-reports that could change over time.

Offering HPV self-sampling may increase screening compliance and uptake,¹⁹ particularly among women who do not present for routine Pap test,²⁰ due to irregular access to a healthcare provider or reluctance to have a physician examination.^{7,13} Self-sampling as an adjunct to cervical cytology has been associated with a higher coverage and greater percentage of screened women.^{8,12} We also consider the role of self-sampling on the scale of global evaluation of vaccination programs and

under the dependence on the knowledge of populations about HPV sexually transmissible infection.²¹

The results of this study should be considered in light of self-sampling as an alternative method for HPV detection and CC screening and should be integrated into the healthcare system.

Conflicts of interest

None declared.

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