

Barriers to Cervical Cancer Screening among transgender men

Barreiras ao exame do Câncer do Colo do Útero entre homens transgêneros

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Eloísa Sotilli Scarioti

Médica Ginecologista e Obstetra

Institution: Universidade Federal do Paraná (UFPR)

Address: Rua Marechal Deodoro, 1329, Ap 58

E-mail: eloisa.scarioti@gmail.com

Dulcinary Dias Bittencourt

Mestre em Ciências

Institution: Universidade Federal do Paraná (UFPR)

Address: Rua Martin Afonso, 1817

E-mail: dulcidiasbitte@gmail.com

Rita Maira Zanine

Doutora em Clínica Cirúrgica

Institution: Universidade Federal do Paraná (UFPR)

Address: Avenida Getúlio Vargas, 3163, Ap 1401

E-mail: ritazanine@yahoo.com.br

ABSTRACT

Purpose: to evaluate the barriers to cervical cancer screening among transgender men, and also to understand their experiences and preferences for cervical cancer screening. **Methods:** 19-item online survey structured based on the Health Belief Model, a conceptual formulation for understanding why individuals do or do not engage in health-related actions. It consists of the following dimensions: perceived susceptibility, perceived severity, perceived benefits, perceived barriers and general health motivation. Familiarity with cervical cancer, with Human Papillomavirus (HPV) and with Pap Test, being up-to-date on Pap Tests and preference for HPV self-sampling were additionally assessed. **Results:** 27 transgender men aged 18-51 years completed the survey. Most of them have a formal job, income up to 1 minimum wage per month, and are health-insured. The majority is single, heterosexual, and completed high school. Despite the fact that most are familiar with HPV and cervical cancer and are aware of the importance of regular Pap Tests, less than 20% are up-to-date. The barriers to cervical cancer screening may be related to discrimination, fear of invasive procedures and also the gaps in preventive health care associated with Covid-19. Only 25.9% of participants preferred HPV self-sampling over provider-collected Pap Test screening. **Conclusion:** most participants were not up-to-date on Pap Test screening, and refer unpleasant experiences in the past, discrimination and fear of invasive procedures. Healthcare professionals should be aware of the needs of this specific population, in order to provide better care and to affirm the gender identity.

Keywords: Cervical Cancer, HPV, Pap test, transmasculine, health behavior.

RESUMO

Objetivo: avaliar as barreiras ao exame do câncer do colo do útero entre homens transgêneros, e também compreender suas experiências e preferências para o exame do câncer do colo do útero. **Métodos:** pesquisa on-line de 19 itens estruturada com base no Modelo de Crença de Saúde, uma formulação conceitual para entender porque os indivíduos se envolvem ou não em ações relacionadas à saúde. Consiste nas seguintes dimensões: percepção da suscetibilidade, percepção da gravidade, percepção dos benefícios, percepção das barreiras e motivação geral em relação à saúde. A familiaridade com o câncer cervical, com o Papilomavírus Humano (HPV) e com o Teste de Papanicolaou, a atualização dos Testes de Papanicolaou e a preferência pela auto-amostragem do HPV foram avaliadas adicionalmente. **Resultados:** 27 homens transgêneros entre 18 e 51 anos de idade completaram a pesquisa. A maioria deles tem um emprego formal, renda de até 1 salário mínimo por mês, e tem seguro de saúde. A maioria é solteira, heterossexual, e completou o ensino médio. Apesar de a maioria estar familiarizada com HPV e câncer do colo do útero e estar ciente da importância dos testes regulares de Papanicolaou, menos de 20% estão atualizados. As barreiras ao rastreamento do câncer do colo do útero podem estar relacionadas à discriminação, ao medo de procedimentos invasivos e também às lacunas nos cuidados preventivos de saúde associados ao Covid-19. Apenas 25,9% dos participantes preferiram a auto-amostragem do HPV em vez da triagem do Teste de Papanicolaou coletado pelo fornecedor. **Conclusão:** a maioria dos participantes não estava atualizada sobre a triagem do Teste de Papanicolaou, e referiram experiências desagradáveis no passado, discriminação e medo de procedimentos invasivos. Os profissionais de saúde devem estar cientes das necessidades desta população específica, a fim de oferecer melhores cuidados e de afirmar a identidade de gênero.

Palavras-chave: Câncer Cervical, HPV, teste de Papanicolaou, transmasculina, comportamento de saúde.

1 INTRODUCTION

According to the World Professional Association for Transgender Health (WPATH), the term *trans* refers to individuals "who cross or transcend culturally defined categories of gender". In these cases, the gender identity is different from the sex assigned at birth.¹ Accurate estimation of the number of people who self-identify as transgender or gender nonconforming (TGNC) is difficult due to the heterogeneity of this population. It is best to avoid terms such as "incidence" and "prevalence" because they can lead to improper pathologizing. TGNC people represent 0.1 to 2% of the population, depending on the inclusion criteria and geographic location.²

Transgenders face a lot of barriers to access the universal healthcare system in Brazil (Sistema Único de Saúde - SUS), including discrimination and disrespect to name and gender markers on identity documents.³ According to WPATH, healthcare professionals must respect people with nonconforming gender identities, provide care that affirms the gender identity and

reduces the distress of gender dysphoria, when present, and become knowledgeable about their health care needs.¹

José Alencar Gomes da Silva National Cancer Institute (INCA) estimated 16,590 new cases of cervical cancer for 2021.⁴ According to the World Health Organization (WHO) the incidence of the disease in 2020 was 604,000, which represents 3.1% of all cancers.⁵

Human Papillomavirus (HPV) is one of the most common sexually transmitted infections (STIs), and the clinical presentation varies from innocuous lesions to cancer. Regular screening associated with proper treatment and follow-up significantly reduced the incidence of cervical cancer.⁶ The Brazilian Guideline to Cervical Cancer Screening suggests Pap Test sampling in sexually active patients aged 25-64. The first and the second samples should be collected annually, and, if they're both negative, the screening can then be triennial.⁷ Trans men who have a cervix must also collect Pap Tests regularly but, as discussed above, several factors interfere their healthcare access. Peitzmeier *et al* concluded that only 64.3% of trans men were up-to-date on the screening, compared to 73.5% of cisgender women.⁸

This research aims to evaluate the barriers to cervical cancer screening among transgender men, to understand their experiences and preferences for cervical cancer screening, and to describe the demographic profile of the population.

2 METHODS

A transversal epidemiological study was conducted. The eligibility criteria were self-identification as transgender men and age between 18 and 64 years old. The questionnaires were disclosed through the internet due to Covid-19. The main biases associated with online surveys are under-coverage, meaning only respondents with internet access can complete it, and self-selection (it is left to individuals to select themselves for the survey).⁹ Knowing that this is a relatively small and very specific population, participants were sought through disclosure in online LGBTQ communities.

A 19-item questionnaire was developed based on the Health Belief Model, a conceptual formulation for understanding why individuals do or do not engage in health-related actions.^{10,11} It consists of the following dimensions, in this study: perceived susceptibility (to cervical cancer); perceived severity (of the consequences of irregular screening); perceived benefits (of cervical screening); perceived barriers (to cervical screening); and general health motivation. Those items were assessed through a 6-point Likert-type scales: 1= strongly disagree to 6= strongly agree.

Some additional variables were assessed, such as demographic data, familiarity with cervical cancer, with HPV and with Pap Test, regularity of Pap Test screening and preference for HPV self-sampling. Some studies suggested that trans men prefer self-sampling over provider-collected Pap Test screening.^{12,13}

Approval to conduct the survey was obtained from the Clinical Hospital of the Federal University of Paraná Ethics Committee. All participants gave prior consent.¹⁴

Statistical analysis was conducted using the software R Core Team 2021.¹⁵ Descriptive statistics were employed, including means, standard deviations, percentages and ranges of the quantitative research variables, and frequency tables for the qualitative ones. Simple tables percentual data were compared using exact binomial test or Kolmogorov-Smirnov (one sample). The association between qualitative variables was made using Exact Fisher Test. The comparison between the continual variables interested groups was made using Mann-Whitney or Kruskal Wallis non-parametrical tests.

3 RESULTS

A total of 30 questionnaires were responded, while three were excluded because they didn't meet the eligibility criteria, resulting in 27 questionnaires.

3.1 DEMOGRAPHIC PROFILE

The participant's ages ranged from 18 to 51 years, 30 years average. 51.9% have a formal job, and 44.4% income up to one minimum wage per month. Most are single (74.1%) and heterossexual (59.3%). 92.6% self-identify as trans, and 7.4% as non binary. 37% completed high school, and only 22.2% have university education. 51.9% are health insured (Table 1).

3.2 FAMILIARITY WITH PAP TEST, HPV AND CERVICAL CANCER

These items were assessed through the questions "have you ever heard of Pap Test?", "have you ever heard of HPV (Human Papillomavirus)?" and "have you ever heard of cervical cancer?". 77.8% of respondents are familiar with Pap Test, and most of them know HPV (96.3%) and cervical cancer (96.3%). 66.7% of the individuals who are familiar with Pap Test are health insured ($p < 0.05$).

3.3 PAP TEST REGULARITY

Regularity in Pap Test screening was assessed considering the frequency they collected the test in the past and the intention to collect in the future in the following categories: maintenance phase - the participant has had a Pap test once a year regularly and plans to continue once a year; action phase - has had the test irregularly but plans to have it annually; preparation phase - no experience but plans to have the test in the next year; contemplation phase - no experience but plans to have it sometime; and pre-contemplation phase - no experience and no plans for the future. The majority of participants are in the action phase (44.4%). Only 18.5% are up-to-date in the screening (maintenance phase). 7.4% have never had a Pap Test and have no intention to collect in the future (pre-contemplation phase). 80% of the maintenance phase respondents are heterosexual, while 20% are bisexual ($p < 0.05$).

3.4 PREFERENCE FOR HPV SELF-SAMPLING

Only 25.9% of participants preferred HPV self-sampling. 74.1% opted for provider-collected Pap Test screening, 60% of which have a formal job. 71.4% of the respondents who opted for self-sampling are unemployed ($p < 0.05$). The participants' age groups were not significant in the self-sampling preference analysis.

3.5 PERCEIVED SUSCEPTIBILITY

The great majority (96.3%) recognizes that Pap Test screening is also important to Trans men, but only 84% believe that it should be collected while using testosterone.

3.6 PERCEIVED SEVERITY

81.5% of respondents strongly agree that irregular screening can lead to negative health consequences.

3.7 PERCEIVED BENEFITS

All participants believe that Pap Test screening plays an important role in the prevention of cervical cancer.

3.8 PERCEIVED BARRIERS

This item was evaluated through the question "what are the barriers associated with Pap Test screening in Trans men?". 14.8% of respondents referred prior events of discrimination, 7.4% are afraid of invasive procedures and 77.8% refer two or more items. No demographic

variable showed statistical significance, suggesting that these barriers are not associated with income, schooling or health insurance.

3.9 GENERAL HEALTH MOTIVATION

Most participants (96.3%) strongly agree that it is important to take care of their health.

Table 1 - Demographic profile

		N	%
Employment	Formal	14	51.9%
	Unemployed	7	25.9%
	Informal	6	22.2%
Income	Up to 1 minimum wage	12	44.4%
	1-3 minimum wages	8	29.6%
	No income	3	11.1%
	3-6 minimum wages	2	7.4%
	6-9 minimum wages	1	3.7%
	9-12 minimum wages	1	3.7%
Marital Status	Single	20	74.1%
	Stable union	4	14.8%
	Married	2	7.4%
	Stable union (female partner)	1	3.7%
Sexual Orientation	Heterossexual	16	59.3%
	Bissexual	9	33.3%
	Homossexual	2	7.4%
Gender Identity	Trans	25	92.6%
	Non-binary	2	7.4%
Education	Complete high school	10	37%
	Incomplete graduate degree	8	29.6%
	Graduate degree	6	22.2%
	Incomplete high school	1	3.7%
	Masters	1	3.7%
	Post-graduation	1	3.7%
Health Insurance	Yes	14	51.9%
	No	13	48.1%

4 DISCUSSION

This research aimed to evaluate the demographic profile of a trans men population and to correlate it with the familiarity of the respondents with HPV and its implications such as cervical cancer, to therefore assess the barriers to cervical cancer screening. 27 transgender men aged 18-51 years completed the survey. Most of them have a formal job, and income up to 1 minimum wage per month. More than 80% of the respondents with these earnings are not familiar with Pap Test, while 66.7% of the ones who are familiar with the test have health insurance. These data suggest that insured respondents might have better socioeconomic conditions, more access to healthcare and, consequently, better knowledge about Pap Test screening. A study on lesbian women concluded that routine screeners were more likely to have graduated college, more likely to be working full time, more likely to be married or living with a partner, more likely to report an income over \$50,000 and more likely to be covered by any insurance than non-routine screeners.¹⁶ Literature suggests that trans men are more likely to have no health insurance, and gender nonconforming adults are more likely to have unmet medical care needs due to cost and no routine checkup in the prior year.¹⁷ Moreover, trans men have reduced odds of lifetime Pap Tests versus cis women.¹⁸ The average income of the analysed population was inferior to others described in literature, for example the study conducted in Rio de Janeiro in which the average was up to three minimum wages.¹⁹

Despite the fact that most participants are familiar with Pap Test, with HPV and with cervical cancer, less than 20% are routine screeners - percentage inferior to the literature findings.⁸ Most respondents proved satisfactory perceived susceptibility, severity and benefits, and good general health motivation. Low rates of screening adherence may be associated with barriers such as unpleasant experiences in the past, discrimination and fear of invasive procedures. A research conducted in the United States from 1998 to 2000 concluded that the most common barriers to accessing regular medical care were lack of insurance, inability to pay, provider insensitivity or hostility to transgender people and fear of transgender status being revealed.^{20,21} Analysing barriers to cervical cancer screening and crossing data with the demographic profile, no variable has shown statistic significance. This finding indicates that barriers to cervical cancer screening persist beyond known sociodemographic factors.

The great majority of routine screeners are heterosexual, in consonance to literature. A research of over a thousand lesbian women concluded that only 62% were up-to-date on Pap Test screening, a significantly lower rate compared to heterosexual women.¹⁶ Heterosexuality seems to be associated with greater odds of routine screening.

Regardless over 95% of respondents agree that Pap Test screening is important in trans men population, only 85% believe it should be done when using testosterone. Compared to cis women, trans men have higher prevalence of unsatisfactory Pap Tests due to emotional stress during the exam, which might interfere collecting an ideal sample, and also due to histological changes induced by long-term testosterone therapy, such as vaginal and cervical atrophy. Adjusting for age, race and Body Mass Index (BMI), trans men had a 10.77 increased odds of ever receiving an inadequate Pap Test compared to females. Length of time on testosterone was also associated with increased odds of inadequate samples.²²

The Covid-19 pandemic greatly affected the maintenance of ongoing healthcare preventive policies specially in the LGBT population, who reported interrupted use and access to medical care as a result of Covid-19 restrictions and personal avoidance of healthcare facilities to reduce exposure risk. There is little research on the impact of the pandemic among trans men, but the unmet healthcare needs affected reproductive health, access to HIV PrEP (pre-exposure) care and gender-affirming procedures.²³ A systematic review concluded that mental health, health behaviours, safety and access to routine healthcare showed worse outcomes in LGBT community compared with before the pandemic or compared with heterosexual/cisgender populations.²⁴ The low rates of less than 20% of routine screeners in this research may be related, besides other factors described above, to the gaps in healthcare access that already existed and were intensified by Covid-19.

This study also evaluated the desire for HPV self-sampling. Almost 75% of participants preferred provider-collected Pap Test screening, which dissent with literature.^{12,13} McDowell *et al* concluded that trans men perceived self- and provider-collected frontal HPV swabs to be less invasive and provoke less gender discordance compared to Pap Tests. However, participants who reported positive provider relationship found both Pap Tests and provider-collected swabs more bearable.²⁵ Over 70% of individuals who opted for HPV self-sampling are unemployed, maybe because self-sampling appears to be easier and doesn't demand a healthcare professional appointment. A study demonstrated that participants who avoided preventive care due to cost or discrimination were more likely to prefer self-sampling.¹² Age range did not have a role in the desire for self-sampling.

This research has some limitations, such as the reduced number of participants, largely due to impossibility of person-to-person publicizing because of Covid-19, which can lead to a Type 2 Error. Besides, as described above, there are biases related to online surveys - under-coverage and self-selection.⁹

5 CONCLUSION

The trans men population analysed in this study are mostly familiar to HPV and cervical cancer, and are aware of the importance of Pap Test screening. However, most participants were not up-to-date on Pap Test screening, and refer unpleasant experiences in the past, discrimination and fear of invasive procedures. The low rates of less than 20% of routine screeners may be also related to the gaps in healthcare access that were intensified by Covid-19. Healthcare professionals should be aware of the needs of this specific population, in order to provide better care and to affirm the gender identity.

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