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Original Research

Sociodemographic and lifestyle determinants of non-attendance for cervical cancer screening in Lithuania, 2006–2014

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ABSTRACT

Objectives: In 2004, Lithuania started the Nationwide Cervical Cancer Screening Programme. The aim of the study was to estimate the trend in the uptake of cervical cancer (CC) screening in Lithuania during 2006–2014 and to identify sociodemographic and lifestyle factors associated with non-attendance for screening.

Study design: Cross-sectional studies.

Methods: The data of 4248 women aged 25–60 years who participated in population-based cross-sectional surveys of Lithuanian Health Behaviour Monitoring were analysed. The postal surveys of independent random samples were conducted every second year. Participation in screening was determined by asking women whether they have had a Pap smear test within the last 3 years. Associations of non-attendance with sociodemographic characteristics and lifestyle factors were assessed by multivariate logistic regression analysis.

Results: The proportion of women who reported taking a test for CC within 3 years was continuously increasing from 60.0% in 2006 to 74.2% in 2014. The likelihood of not being screened was lower among older as compared to younger women (odds ratio = 0.70; 95% confidence interval = 0.61–0.82). Non-attendance was associated with lower education, being single, having rare contacts with a doctor, low physical activity, and obesity. In addition, older women who smoked and consumed alcohol at least once a week were more likely to have never been screened.

Conclusions: Established social and behavioural determinants of non-attendance for CC screening should be used for optimising CC prevention in Lithuania. The implementation of organised screening programme using innovative screening methods might increase attendance and reduce inequalities.

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Introduction

Incidence and mortality from cervical cancer (CC) vary considerably in the European Union with the highest rates estimated for Central and Eastern Europe.[1] In 2012, estimated mortality rate was 9.8 cases per 100,000 women in Lithuania compared to 1.8 cases per 100,000 women in Western European countries.[2] These variations in CC rates largely reflect the differences in the prevalence of risk factors between countries, in particular, exposure to human papillomavirus (HPV), as well as coverage and quality of population-based screening programmes.[3,4] Well-organised screening programmes have been highly effective in reducing the incidence of CC in most West European countries.[5] Despite a high prevalence of CC, some Central and Eastern European countries have poorly organised screening programmes.[6] It is well-known that effectiveness of screening programmes is closely related to screening coverage.[7,8] Attendance for screening has been found to be associated with socio-economic status of women.[9,10] Lower education and income have been reported to be predictors of lower participation in screening. Women having unhealthy behaviours were also less likely to participate.[11,12] Exploring factors associated with non-attendance for CC screening is essential for effective implementation of screening programmes.

In 2004, Lithuania started the Nationwide Cervical Cancer Screening Programme with screening interval of 3 years, targeting women aged 25–60 years.[13,14] The primary healthcare centres are responsible for inviting women and taking a Pap smear. The invitation methods include a verbal invitation during a visit with the general practitioner (GP) or a personal invitation letter; however, only a few primary healthcare centres are sending written invitations with screening details for women of the target population. Thus, CC screening still is more opportunistic than population-wide. All data of implementation of the programme are registered in the information system of National Health Insurance Fund under Ministry of Health, which is responsible for reimbursement of services and monitoring of the programme.[15] So far, there is very little information about women who do not attend the screenings.

The aim of this study was to estimate the trend in the uptake of CC screening in Lithuania during 2006–2014 and to identify sociodemographic and lifestyle factors associated with non-attendance for screening.

Methods

The data were obtained from five cross-sectional surveys of Lithuanian Health Behaviour Monitoring.[16] In 2006–2014, the surveys have been carried out every second year. For every survey, a nationally representative simple random sample aged 20–64 years was drawn from the National Population Register. The questionnaires, which have remained essentially unchanged over the study years, were mailed with one reminder. The Lithuanian Bioethics Committee approved all surveys. Written informed consent for participation was obtained from all respondents.

Data of women aged 25–60 years (the target group for CC screening programme in Lithuania) were analysed in this study. In total, 4248 women of this age group participated in Lithuanian Health Behaviour Monitoring surveys (Table 1). Response rates were 64.8% in 2006, 66.2% in 2008, 62.7% in 2010, 57.2% in 2012, and 44.3% in 2014. A self-reported history of CC screening was ascertained from the question: 'Have you ever had a Pap smear test for CC screening?' Possible answer choices were (1) during the last 12 months; (2) 1–3 years ago; (3) more than 3 years ago; and (4) never. The sociodemographic variables used in the analysis were age (25–44 and 45–60 years age groups), marital status (married or other—single, divorced or widowed), nationality (Lithuanian or other), education and place of residence. The respondents were categorised into three groups according to their educational level: low education (primary education, incomplete secondary education or secondary school), intermediate education (vocational school) and high education (college or university). According to the administrative classification of places of residence, the respondents were grouped as living in cities (capital city and four largest cities of Lithuania), towns

Table 1 – Characteristics of the study population (%).					
Characteristic	Study years				
	2006	2008	2010	2012	2014
	n = 820	n = 807	n = 1008	n = 857	n = 756
Age (years)					
25–44	43.9	47.9	49.6	50.0	50.8
45–64	56.1	52.1	50.4	50.0	49.2
Education					
Low	28.4	31.1	35.3	36.0	34.7
Intermediate	41.6	24.5	24.3	22.0	21.2
High	30.0	44.4	40.4	42.0	44.1
Place of residence					
Cities	44.4	49.9	41.6	34.9	44.4
Towns	36.8	30.3	23.8	25.3	29.8
Villages	18.8	19.8	34.6	39.8	25.8
Marital status					
Married	70.4	69.4	68.5	68.8	68.4
Other	29.6	30.6	31.5	31.2	31.6
Nationality					
Lithuanian	85.9	86.6	88.7	86.4	89.8
Other	14.1	13.4	11.3	13.6	10.2
Visits to a doctor during the last year					
No visit	14.4	11.5	13.3	11.3	10.1
1–2 visits	38.3	38.0	38.8	39.1	32.8
≥3 visits	47.4	50.6	47.9	49.5	57.1
Daily smoking					
Yes	14.7	13.9	15.5	13.2	11.7
No	85.3	86.1	84.5	86.8	88.3
Strong alcohol consumption at least once a week					
Yes	10.0	12.8	8.9	9.5	8.7
No	90.0	87.2	91.1	90.5	91.3
Leisure time physical activity					
≥2 days/week	44.8	40.4	52.2	52.6	49.7
<2 days/week	55.2	59.6	47.8	47.4	50.3
Obesity					
Yes	20.0	19.5	22.2	19.2	18.2
No	80.0	80.5	77.8	80.8	81.8