

WHY DON'T HUNGARIAN WOMEN TAKE PART IN ORGANIZED CERVICAL SCREENING?

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Summary

Aim. to analyse the socio-demographic background of non-attendance of organized cervical screening among medically non-trained women in Zalaegerszeg, and to investigate its reasons.

Materials and methods. Our cross-sectional study was carried out on a sample (N=1000) selected by an age-related stratified method of sampling. The self-administered questionnaire contained 35 questions, both binary (yes/no) and semi-open ones. The questions concerned socio-demographic data, gynaecological screening examination, motivation and atmosphere of screening. Both descriptive and mathematical statistical methods were applied in the data analyses.

Results. 85.5% (N=855) of respondents had attended cytological screening at least once, but 13.8% (N=138) had never attended before. Among people who had never attended were 53.3% of women aged 15-19 years, 31.5% of those with basic educational background (8 classes), 34.8% of unmarried women, and 24.1% of the unemployed ($p<0.05$).

Conclusions. Hungary's government has offered organized cervical screening programmes since 2003. The functional weakness of the programme is the low rate of attendance. Based on our results, fear of cancer, invasion of the private sphere, and past experiences of uncomfortable examinations may have contributed to this effect. Nevertheless, women who attended emphasized responsibility for their own state of health.

Key words: Hungary, Cervical cancer screening, Pap test, Attitudes, Non-attendance

INTRODUCTION

Cervical cancer is the seventh in the frequency range of cancers in Europe, but it is the second in the female age group of 15-44. The incidence is 59,931 among nearly 321.8 million women aged more than 15 years with 29,812 deaths in every year (1). There are also regional differences, i.e. countries with less developed health-care systems show a more unfavourable picture. High incidence and mortality are most typical in the former socialist countries. In Serbia for 100,000 people there are 27.3 new cases annually (2).

Assuming that every country aims to decrease mortality by screening programmes, differences should be caused by the efficiency of these programmes. Studies examining the reasons for non-appearance at gynaecological screening focus on women who did not attend in the last 5-10 years. Factors analysed include age, socio-economic status, ethnic group affiliation and inner characteristics. Based on this approach, Siahpush pointed out that in Australia in 2002, 21.4% of women under the age of 30, 30.1% of singles and 30.9% of women with a middle-eastern or Asian origin had never attended gynaecological cancer screening. However, in

the general Australian female sample non-attendance was as low as 3.2% of those aged 30-49, 3.2% for married women, and 6.8% for those with higher education (3). Swedish women interviewed by Oscarsson et al. declared reasons for not utilizing screening examinations such as „I do not need it, because I'm healthy”, „this cannot happen to me”, and „it is of no major concern to me”. The evaluation revealed that a negative body image, low self-esteem and the feeling of discomfort towards the examination may have additionally influenced the decision for non-attendance (4). The same authors randomly selected, using a computer system, women who did not participate in the screening within the past 5 years. Using telephone interviews (N=120) they asked about future intentions to attend a screening examination. Positive decisions depended on the personnel's friendly behaviour with respect and adequate attention. These requirements were based on previous negative experience gained through past medical care, especially by gynaecological examinations (5).

Hungary's screening system was revitalized within the National Programme as of September 2003. Women at risk (aged 25-65 years) received a personal invitation

letter every third year. Unfortunately, in its overall participation rates (4.02-6.57%), Hungary is lagging behind most European nations. In addition, there are great regional differences in the number of new cases (6-8). For example in Zala county in the West-Transdanubian region, the incidence of cervical cancer was strikingly high in 2004.

AIM OF THE STUDY

Our study was performed in the largest city of Zala county, Zalaegerszeg, to analyse socio-demographic factors that may have a negative impact on participation in screening among women without medical training.

MATERIALS AND METHODS

Our cross-sectional study was carried out between January 2007 and December 2008. The age-stratified representative sampling of 1000 women was based on Hungary's general distribution of 15-60 year old women.

The self-administered and anonymous questionnaires contained 35 questions, partially binary (yes/no) and semi open ones as well in four groups as follows: socio-demographic data, gynaecological screening examination, motivation, atmosphere of screening.

Statistical analysis was done with SPSS 17.0 statistics software. We calculated averages, dispersion, frequency, and the Spearman correlations. Chi-square test was used to evaluate interactions of categorical variables. In the logistic regression model we considered the question „Have you attended cervical cancer screening before?” as a dichotomized (1=no, 0=yes) dependent variable. Explanatory variables were selected if they influenced attendance already at the first screening. Thus the sample was reduced to 896 persons. According to the Wald statistic, all dependent variables influenced the dependent variable ($p < 0.001$). The value of Nagelkerke R square was 40.9%. Among ten explanatory variables seven had a significant impact on avoiding a screening examination so far.

RESULTS

The average age of women in our study was 37.72 years ($SD \pm 12.59$), the youngest being 16, the oldest 59. Married women were in the majority (50.7%), whereas singles made up 25.9%. The rate of non-contractual cohabitation was the highest among women 20-39 years old and 9.3% were divorced. Considering education, the number of women with secondary (grammar school) or secondary vocational school graduation was high (56.8%). 11.6% had a simple vocational education. There was also a significant proportion of women with university degrees (25.7%). The number of women with only elementary school (8 classes) education was insignificant.

85.5% of respondents had attended cytology screening at least once in their lifetime ($N=855$); however, 13.8% had never attended ($N=138$). Based on socio-demographic data, 53.3% of the age group 15-19, 31.5% of those with elementary education, 34.8% of unmarried

women, and 24.1% of women outside of the work force (unemployed, retired, students, those on maternity leave) are avoiding cervical screening ($p < 0.05$).

Among women who had attended screening at least twice, 69.4% ($N=693$) attended within the three-year interval as indicated by the National Programme. In this group 70.41% ($N=489$) attended annually, 21.06% every second year ($N=146$), and 0.08% every third year ($N=59$). Only 7.7% attended less often than every third year, and 5% followed the frequency set by the gynaecologist's recommendation.

Focusing on the *three-year screening interval*, more than 90% of groups aged 20-29 and 40-49, 82% of the group aged 30-39, 76.2% of the group aged 15-19, and 72.7% of the group aged 50-59 control especially this period of the screening. Those living in non-contractual cohabitation (88.3%) or marriage (82.6%), and unmarried girls (86%), attend examinations within the 1-3 year interval more frequently than divorced ones (76.2%) and widows (78.8%). 14.3% of divorced women attend a screening examination less often than every three years, and 8.3% of them respect first the gynaecologist's recommendation. High attendance rates were observed among women with university degrees (86.1%) and secondary school education (84.5%). Among women with elementary school education, 69.4% attend within the indicated interval, but 22.2% of them respect the gynaecologist's suggestion. Among those with vocational school qualifications, 74.8% attend screening at least once a year, but 15.5% admitted to appearing less often.

In older groups and among those aged 15-19 the chance is more than six times greater of having never attended gynaecological screening, and among those aged 20-29 the chance is more than two times greater. Considering the level of education, in the elementary school group there was a five times greater chance, and in the group with secondary school education this number was 2.39. Concerning the relationship with the family doctor, chances are lower among women who visit their doctor less than every two years compared to those who do this at least every half year. Women who are afraid to be diagnosed with cancer have a 3.48 times greater chance never to have attended screening. Those who claim they do not attend the screening because they are not called in for a specific appointment have a 4.5 times greater chance of never attending the screening (tab. 1).

The atmosphere of the office is basically determined by the sensitivity of the health-care personnel toward women being examined. 42.9% of women request an objective approach, but 30.2% would not have objections against a more intimate interest either. The doctor's friendly attitude is indispensable (55.6%), besides having a neat outlook and nice behaviour (59.3%); also his resolute but calm manner (55.6%) is favourable for the whole environment. A confidential atmosphere, which is absolutely necessary to provide intimacy, was expected in 53.1% of cases. More than half of women believe that minuteness (53.5%) or even assertive attention (49.5%) is also necessary. They expect complete information after

Table 1. Study of non-attendance.

	<i>p</i>	<i>Exp(B)</i>	95.0% C.I. for <i>EXP(B)</i>	
			Lower	Upper
Age	.002			
15-19 years	.001	6,575	2,150	20,112
20-29 years	.052	2,657	,991	7,128
30-39 years	.814	,900	,375	2,164
40-49 years	.746	1,161	,471	2,863
Marital Status	.069			
single	.036	2,336	1,058	5,158
divorced	.482	,696	,254	1,908
widow	.908	,918	,216	3,909
common-law relationship	.221	,475	,144	1,565
other	.410	1,932	,404	9,249
Educational Level	.008			
elementary school	.001	5,317	1,943	14,549
vocational school	.256	1,789	,656	4,878
secondary school exam	.009	2,395	1,240	4,623
Relationship with family doctor	.000			
every half a year	.000	,294	,168	,517
annually	.071	,547	,284	1,054
Does not attend, because they are afraid	.001			
yes	.000	3,489	1,850	6,582
doesn't care	.900	1,079	,331	3,514
Does not attend, because they are not invited for a specific appointment for screening	.000			
yes	.000	4,499	2,464	8,214
doesn't matter if they invite me or not	.940	,972	,460	2,053
Attends a screening, if the swab is taken at the family doctor's office.	.035			
yes	.016	3,115	1,232	7,881
doesn't matter where the examination takes place	.147	1,547	,858	2,790
I am shy.	.056			
yes	.197	1,440	,828	2,505
doesn't matter	.022	2,491	1,140	5,444
Would only attend, if there were appointments outside working hours.	.823			
yes	.604	1,183	,628	2,228
time of appointment doesn't matter	.902	,962	,522	1,774
Does not waste free-time for the screening.	.807			
yes	.562	1,332	,506	3,505
doesn't matter when they attend	.852	,934	,457	1,908

the examination (31.7%), and accept even a harsh manner (51.1%), but only 3.9% of women are afraid of being directly confronted with problems.

DISCUSSION

The screening examination based on a cytology test promises at least theoretically eradication of the cervical cancer. Despite Hungary's tradition in gynaecological and colposcopic screening, the efforts of the past decades are not reflected in mortality rates: about 500 women die of cervical cancer annually. The recent National Public Health Programme started cervical screening based on individual invitation in September 2003. Between September 2003 and September 2006, 2 million women received letters of invitation, but only 5% (N=96.000) attended, with large scale variations among counties (2.26-18.26%) (6). In our sample 69.4% appeared at a gynaecological consultation, although not annually but within a three-year period. Unfortunately, 13.8% have never appeared thus far.

When seeking explanations for the low attendance, psychological aspects also need to be looked into. The term „cancer screening” itself may be deterring, since the word „cancer” is received with fear and rejection by the less educated part of the population. Additionally, it is linked with incurable conditions causing extraordinary agony (9). In our study the primary source of worry was the fear of cancer, and it correlated with aging ($p<0.001$). One-fourth of respondents viewed taking a smear as uncomfortable and painful, which coincided with results obtained among American women in 2005, where 30% found the procedure highly unpleasant (10). Considering that perception of pain is influenced both by fear and level of anxiety and even a certain degree of discomfort and slight pain is inevitable, circumstances could be improved remarkably with careful behaviour (11).

For practising health-care professionals there are certain personality features required, such as humanity, tolerance, empathy and good communication skills (12). Within the general doctor-patient relationship, that of obstetrician-gynaecologists and their patients has special characteristics. The gynaecological examination interferes with the woman's „intimate sphere”. Doctors must meet all expectations to gain the patient's trust (13). In our sample, 53.1% of women expected a confidential atmosphere in the office. The participation rate can be increased by a suitable appointment time too, especially in the case of working people (e.g. in evening hours),

which can also minimise the waiting time in the office for the examination.

CONCLUSIONS

1. Hungary's health administration established a special concept and infrastructure for cervical screening in 2003. A major weakness of the programme, however, is the low rate of attendance. Our research has revealed great potential for improving the rate of participation.

2. Based on our results, fear, invasion of the private sphere, the feeling of uncomfortable examination and delayed waiting periods must be decreased.

3. Women aged 15-19, those having only elementary education, unmarried women, and the unemployed must be given increased attention. These populations must be informed in a special way about the importance of screening and also about its painlessness, and they should be given special circumstances of attendance. □

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