

Dépistage du cancer du col de l'utérus à Frameries, Belgique – étude descriptive

Cervix cancer screening in the Frameries community, Belgium – A descriptive study

by

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Abstract

In some countries, centrally organised screening programmes have been established, while in others, including Belgium, opportunistic screening prevails. Efficient use of health resources remains an important issue. Descriptive information on target populations is needed before implementing an organised screening programme. This study took place at Frameries, a sub-urban area near Mons (Hainaut province, Belgium). As the municipality wanted to start a health promotion and education programme, local data were necessary to prepare an intervention. The survey was made by a cross-sectional telephone interview of 341 randomly selected women 25 to 64 years old.

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The results indicate that underscreened women were more likely to be of lower educational level, to have never received any information about screening and to belong to older age groups. Other determinant factors were being single and unemployed.

Keywords

Cervix neoplasms, health survey, mass screening, Belgium, socio-economic factors, delivery of health care.

Introduction

Cervix cancer is a major public health problem worldwide. In developing countries, its incidence ranks second among cancers in women just after breast cancer (1). Incidence rates vary from around 3 per 100 000 women (age standardised) in Israel to 55 per 100 000 in Latin America (2). In Belgium, the incidence of the uterine cervix cancer ranks fourth among cancers of the women after breast, colorectal and ovarian cancers. In 1995, uterine cervix cancer (ICD 7 = 171) incidence rate was 12.7 cases per 100 000 in Belgium and 10.7 per 100 000 in Hainaut province (3). For 1994, mortality figures (ICD 9 = 180) were 3.62 and 3.92 per 100 000 respectively (4).

It is generally accepted that mass screening by cervical cytology is an effective way to reduce incidence of invasive forms of cervix cancer and to lower the specific mortality. Organised screening can lower the mortality rate to more than 90% in the screened population (2).

The practice of screening by Pap smears is now fairly well established especially in industrialised countries. The design of the screening programme, the interval between 2 smears, the age of the target group are still debated. According to the EEC funded programme, "Europe Against Cancer" guidelines, cervical cytology should be performed every 3 years in women 25 to 64 years old (2). In 1992, the government of Belgian French-speaking Community issued guidelines that differ from the European Guidelines only in the starting age: the screening should begin three years after the first sexual intercourse and no later than at 25 years of age (5). Up until now, there is no systematic screening organised at national level. A programme is currently being developed in the Flemish Region. At the present stage, it concerns mainly 3 provinces (6).

Nevertheless, looking at Belgium as a whole, most screening still occurs on an opportunistic basis.

Several studies have identified factors that facilitate or impede screening; among them age, socio-economic factors, knowledge and attitude toward cervical cancer screening, access to health facilities (2; 7-12). As the municipality of Frameries (Hainaut province, Belgium) planned to start a local programme to promote cervix cancer screening among women 25 to 64 years old, it was important to obtain data on the local situation. These would help to define priority target groups and to evaluate the actions.

Objectives

The main goal of this survey was to provide descriptive information on the screening habits of the local population in order to adapt the future project to local needs: identification of priority target groups and needs for health education.

The objectives were to know the screening status of the target population and their knowledge and attitude about screening. It was also important to collect information on the characteristics of women who were not adequately screened and to know which health care providers were involved in screening activities.

Material and Methods

Study Area

Frameries is a sub-urban locality situated 10 km from Mons in the Hainaut Province, Belgium. The total population amounted to 21 000 inhabitants among which about 5 400 were women in the age group of 25 to 64 years. There were 29 general practitioners at the time of the survey and some gynaecologists had their private practice in the locality. Health facilities included one hospital, one policlinic, one clinic and one health centre with a family planning clinic. The number of health structures and practitioners in Frameries and nearby were sufficient to provide adequate screening to the target population. The area is economically underprivileged and unemployment rate in the district was around 33% in 1996 (National Office for Employment, personal communication).

Due to its poor economic situation, the Province of Hainaut benefited from help of the EEC through the "Objective I Programme". Included in this large economic programme was a health project designed to prevent four health problems: cardiovascular diseases, cervix cancer, tuberculosis and alcohol abuse.

Design and methodology

This was a descriptive cross sectional study obtained by telephone interview. The survey period extended between July and November 1996, with a pilot phase on 24 women in the first month.

The target and study population included all women aged 25 to 64 years. Systematic random sampling was carried out on a population list provided by the local population registry. Phone numbers were obtained either from the phone directory or when necessary directly from the phone company.

Sample size

In order to determine the sample size, we estimated that 70% of the target population had pap smears. Thus, with a precision of α level of 5% and a β level of 10%, the minimal sample size would be 300 respondents.

Response Rate

Each phone number was called up to ten times at various times and days. A total of 341 respondents were successfully interviewed, 185 at the first call. Giving a response rate of 62%.

There were 111 (20%) refusals, 26 (5%) women were not interviewed because the telephone numbers were of working place or enterprise, 40 (7%) were errors of age, sex, location and the remainder 45 (6%) were answering devices, fax machines or wrong numbers.

Interview

Four well-trained nurses administered structured questionnaires (with 23 questions). Each interview lasted about 5 minutes.

The questions referred to demographic, socio-economic characteristics, practitioner performing the test, reason for having a the last Pap smear test, knowledge of and attitude to Pap smear, prior practice of screening,

whether and where they had received any information on cervix cancer screening.

Analysis

The Chi-square test was used to test the significance of bivariate associations with 95% confidence limit. Logistic regression was used for multivariate analysis to obtain variables that predict inadequate screening practice.

For analysis of screening status, two cases were excluded because they did not know whether or not they were screened (N = 339). For computing adequacy of screening with respect to interval since last screen, 5 women were excluded because they didn't know when the last screening took place (leaving a number of 336 respondents). Data entry was done using EPI 5 programme. Analysis was done using SPSS windows software.

Results

Demographic and socio-economic characteristics

The age of the respondents ranged from 25 to 64 years with a mean age of 44 and a standard deviation of 11. Age was recoded in 4 age groups (25-34 years, 35-44 years, 45-54 years, 55-64 years). The age distribution did not differ significantly from the age distribution of Frameries population in 1995 (Chi squared = 3.70, p = 0.30).

TABLE 1
Age distribution in sample and reference population

	Sample		Frameries population (1/1/95)	
	N	%	N	%
25-34 years	91	27	1 444	27
35-44 years	85	25	1 600	29
45-54 years	89	26	1 270	23
55-64 years	76	22	1 120	21
Total	341	100	5 434	100

Eighty-four percent of the women resided in urban setting and 16% in rural or semi-rural localities. There were 18% non-Belgian women: 14% from EEC Union countries and 4% from other countries. Seventy-three percents were married, 10% lived in unmarried couples 10% lived alone and 7% were widowed.

Forty-four percents had a job and 56% had not (either unemployed or inactive). Twenty percents of women had a secondary education level and 18% had a higher education level.

Screening status

The attendance rate was defined as the proportion of women who had a Pap smear in the last 3 years. The other women were considered under-screened.

Table 2 gives the distribution of the women according to the time elapsed since last smear. It indicates that 83% of the respondents had had a Pap smear at least once, 73% had it in the last five years. The attendance rate defined above was 64 percent (95% C.I. 58.6%-69.1%); 36% were not screened or were under-screened.

TABLE 2
Distribution of the women according to the time elapsed since last smear

Time since last Pap smear	N	%	Cumulative %
6 months or less	51	15.2	15.2
More than 6 months to 1 year	55	16.4	31.5
More than 1 year to 3 years	109	32.4	64.0
More than 3 years to 5 years	30	8.9	72.9
More than 5 years	35	10.4	83.3
Never Screened	56	16.7	100.0
Total	336	100.0	

Most screening tests were performed by gynaecologists either in private practice (60.8%) or in a hospital setting (32%). Only 1.8% of the tests were done by general practitioners. Pap smear tests were also taken in cancer screening centres, policlinic and in the family planning centre. Women screened in those latter places were more likely to be under-screened.

In general, the practitioner who prescribed the screening performed the Pap smear. However, 5.8% of the tests were prescribed by GP's whereas only 1.8% of them were performed by GP's. This would indicate

that some GP's tended to refer their patients to other structures probably gynaecologists.

The last Pap smear was a routine procedure in 65% of the women. For the others, it was done for medical reasons. The latter were more often underscreened.

Seventy-seven percent of the last tests were done at the request of the doctor and 21% at the request of the woman.

Among the 237 women who answered the question concerning the period between two tests, 62% had a test every 1 to 3 years, 16% had it more than once year. For 5.9%, the interval was longer than 3 years and 16% said they have it irregularly. These results show that overscreening and underscreening were quite common.

TABLE 3
Reasons for never have been screened (Number of respondents = 52)

Reason	N	%
Doctor never proposed	16	30.8
No information	9	17.3
Not necessary	9	17.3
Too young (< 35y.)	5	9.6
Other	3	5.8
Doesn't know why	10	19.2

Almost all the women who never had the test said they had never been invited to do so by any practitioner. The most common reasons for not having a smear test were that the doctor never proposed it (30.8%), that they lacked information (17.3%) or that they thought it was unnecessary because they were not pregnant or sick or were too young (table 3). Four women refused to answer that question. Among the never screened, 69% would agree to have a test if it were proposed by a health professional.

Knowledge

When their opinion was asked about the best interval between 2 screenings tests, most women (56.7%) quoted an interval of 1 year, 21.8%, an interval of 6 months. An interval of 1 to 3 years was quoted by 8.5% and 7.9% didn't know, 4.8% said that it depends on the health of the women or on the doctor's decision. Obviously, the current guidelines of Belgian French Community were not very popular among the respondents

and most opinions indicate a level of overscreening higher than practice indicated.

Over 50% of women had never received information concerning cervix cancer screening. For the others, the main sources of information were the medical staff (17.6%), media (19.1%) and posters/handouts (3.6%)

Socio-economic characteristics and screening status.

Women who had a test more than once a year were more likely to have a higher education level though the relation did not reach statistical significance, presumably because of the small sample size.

There was a significant relationship between “underscreened” status and marital status ($p < 0.01$), work ($p < 0.001$), age ($p < 0.001$) and the fact that the respondent had never received any information on screening ($p < 0.05$). There was an increase risk of being underscreened for those not living in couple (O.R. 2.20, C.I. 95%: 1.19-4.48), having no professional activity (O.R. 2.47, C.I. 95%: 1.54-3.95), having a low instruction level (O.R. 4.38, C.I. 95%: 2.57-7.46). The attendance rate reached a maximum (78.6%) in the age group 35-44 years and then declines to reach a minimum (45.9%) in the age group 55 years and over. No correction was made for the number of women who might be hysterectomised.

Multivariate relationships

TABLE 4
Risk factors for “underscreened” status

Risk Factors	OR	I.C. (95%)
Marital status		
Living alone	2.30	1.19-4.48
Living in couple	1.00	
Instruction		
Low level of education	4.10	2.22-7.4
High level of education	1.00	
Age		
< 35 yr.	1.29	NS
35-44 yr.	1.00	
45-54 yr.	2.21	1.06-4.6
> 54 yr.	3.74	1.74-8.04
Information related to cervix cancer		
Some information	1.00	
No information	2.16	1.25-3.73

Using logistic regression with the factors that have significant association with adequate screening status, the best predictors of being under-screened were low instruction level, marital status (not living in couple), higher age and lack of information about screening (table 4).

Discussion

In this survey, educational level, age, marital status and information were found to influence the attendance rate. These factors are also mentioned in the literature (9; 11-14).

The overall attendance rate was 64% (95% C.I. 58.6%-69.1%). Though, surveys were not conducted by the same team and use different questionnaires and slightly different methodologies, it is interesting to compare this figures with the ones obtained elsewhere in Belgium. The attendance rate was lower than the figures reported in the Flemish Region in 1995 (82%) (8) or in La Louvière, a city with comparable socio-economic characteristics, in 1995 (72%, 95% C.I.: 65-78%) (Enquête téléphonique pour le dépistage des cancers féminins sur l'entité de la Louvière, Dimarso Gallup-Belgium à la demande de La Louvière Ville-Santé, unpublished) but equivalent to the figures reported for Charleroi in 1996 (65%, 95% C.I.: 58-71%) a large city in the same province. None of the difference between the 3 cities in Hainaut reached statistical significance. The National Health Survey of 1997 reported attendance rate of 58% for the whole province of Hainaut compared to 70% for Belgium as a whole and 73% for the Flemish region (15).

Telephone interview is a convenient method to conduct a survey. In order to estimate the bias introduced by this method of survey, we compared the composition of our sample with the target population but didn't find any significant difference as far as age is concerned. Other factors could not be checked because no data were available at locality level.

A more disturbing problem is the ability of the respondent to correctly answer questions about her screening status. In the literature, several studies point out the overreporting when the responses to a questionnaire survey are compared to medical records. Although, medical records are not a perfect standard of comparison, this point is worth considering. In general, sensitivity is in the range of 90% (16) (17). This means that most women who have a record of Pap smear declare it. However, specificity is rather low and varies between 15% (16) to 55% (17), indicating that a

large proportion of women whose Pap smear could not be verified by their medical records declared they had one. Whether socio-economic factors that influence screening also influence the accuracy of the self-report is still a matter of debate. In general, self-report gives a more favourable picture of the situation than medical records do. Self-reporting of a lack of screening is reliable. These 2 articles found a positive predictive value of approximately two thirds. If we apply those figures to our results, this would mean that the screening attendance rate would be around 43% instead of 64%.

Overscreening is also a matter of concern. The survey did not provide an exact view of the overscreening. However, it showed that 16% of the women were screened at an interval of 1 year or less. Overscreening is also reported in other part of the country (6). Most women believe that a one-year interval between smears is desirable. This is probably the result of advice given by practitioners and an effort would be needed to promote the guidelines at their level.

Most of the screening tests were prescribed and performed by the gynaecologists. This situation may result either from the choice of the women or from the attitude of the general practitioner. The questionnaire was not designed to explore that matter further.

The results show that the medical personnel play a fundamental role in the decision to have a screening test: 77% of the last tests were suggested by a doctor and 69% of those who have never been screened would accept if a doctor proposed it. As the segment of the population who was underscreened (less educated, over 45 years old) may not have a regular contact with a gynaecologist; the role of the GP in promoting screening in the population is crucial.

Conclusion

The results of this survey are comparable to other studies performed in Belgium in the same period. Facilitating and limiting factors are those identified in the literature worldwide: age, education, and information about screening. Inherent to self-report, a level of uncertainty of the true level of screening remains.

Underscreening and overscreening exist in that community and both problems are a matter of concern. Overscreening precludes an efficient use of resources. Efforts should be made towards physicians and parti-

cularly gynaecologists to promote the implementation of the guidelines. Information given to women is also important. The implementation of organised screening at national level is another solution to make a more efficient use of the resources available.

Underscreening may be responsible for avoidable morbidity and mortality. Compared with other areas in the province and even more so with the Flemish Region, the attendance rate at Frameries is low. In order to improve it, screening promotion efforts should be targeted to those groups where attendance is low. The general practitioners may have a key role to play as most of those women don't go regularly to a gynaecologist. Even if they do not perform the test themselves, GPs can motivate those patients to undergo screening.

Résumé

Certains pays ont développé des programmes de dépistage de masse organisés au niveau central tandis que dans d'autres pays, comme la Belgique, le dépistage opportuniste est la règle. L'utilisation efficace des ressources reste un souci important en matière de soins de santé. Une information descriptive sur les populations cibles est nécessaire avant la mise en place d'un programme de dépistage de masse organisé. L'étude s'est déroulée à Frameries, une entité suburbaine de la région de Mons (province du Hainaut, Belgique). Comme, la Commune voulait commencer un programme d'éducation à la santé et de promotion de la santé, des données locales étaient nécessaires pour préparer une intervention. Une enquête téléphonique a été menée auprès de 341 femmes âgées de 25 à 64 ans.

Les résultats montrent que les femmes qui ne participent pas ou trop peu fréquemment au dépistage ont un niveau d'instruction bas, n'ont jamais reçu d'information à propos du dépistage et ont plus de 45 ans. D'autres facteurs comme le fait de vivre seul ou d'être au chômage diminuent aussi la participation au dépistage.

Samenvatting

Bepaalde landen hebben georganiseerde grootschalige opsporingsprogramma's ontwikkeld op centraal niveau, terwijl in andere landen, zoals in België, een meer opportunistische aanpak geldt. Maar voor de gezondheidszorg blijft het doelmatig gebruik van de middelen een belangrijke zorg. Het op punt stellen van een georganiseerd grootschalig opsporingsprogramma vereist een voorafgaande beschrijvende informatie van de doelgroepen. De studie werd uitgevoerd in Frameries, een voorstad in de regio van Bergen (provincie van Henegouwen, België). Aangezien de gemeentelijke programma's rond gezondheidseducatie en -promotie wilde opstarten, waren lokale gegevens noodzakelijk om de interventie voor te bereiden. Een telefonische enquête werd gehouden bij 341 vrouwen tussen de 25 en 64 jaar oud. De resultaten tonen aan dat de vrouwen die niet of te weinig deelnemen aan de opsporing een lage scholingsgraad hebben, nooit enige informatie over de

opsporing gekregen hebben en ouder dan 45 jaar zijn. Andere factoren zoals alleenstaande of werkloos zijn, verminderen eveneens de deelname aan de opsporing.

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