



## ORIGINALES

### Sociodemographic, individual and programming characteristics of women with cervical cancer

Características sociodemográficas, individuais e programáticas de mulheres com câncer de colo do útero

Características sociodemográficas, individuales y de programación de las mujeres con cáncer cervical

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#### ABSTRACT:

**Introduction:** cervical cancer is a serious public health problem throughout the world and often affects women of low socioeconomic level and of reproductive age.

**Objective:** to identify the set of sociodemographic, individual and programmatic characteristics present in the daily life of women that made them vulnerable to cervical cancer.

**Method:** descriptive and cross-sectional study addressing the various dimensions of vulnerability that had the participation of 99 women with a confirmed diagnosis of cervical cancer. To characterize the women, a structured questionnaire was used, composed of information directed to the sociodemographic aspects of the individual and related to the organization of the health services.

**Results:** the predominant age group was between 40 and 57 years. Most started sexual activity between 15 and 18 years old, had up to five sexual partners and had never used a condom. There was prevalence of married, white, Catholic women with primary education, family income between one and two minimum wages and having their own house. Before the diagnosis of cervical cancer, 45.5% performed the preventive examination once a year and after cytopathological collection, it occurred at least once a year. The majority sought the health service after symptoms of the disease.

**Conclusion:** it is necessary to develop effective interventions for women's health care based on the concept of comprehensiveness of care provided.

**Keywords:** Uterine Neoplasms; Women's Health; Vulnerability in Health.

## RESUMO:

**Introdução:** O câncer de colo do útero constitui, em todo o mundo, um sério problema de saúde pública e pode acometer especialmente mulheres de nível socioeconômico baixo e na faixa etária reprodutiva.

**Objetivo:** Identificar o conjunto de características sociodemográficas, individuais e programáticas presentes no cotidiano das mulheres que as tornaram vulneráveis ao câncer de colo do útero.

**Método:** Estudo descritivo e transversal que abordou as diferentes dimensões da vulnerabilidade e teve a participação de 99 mulheres com diagnóstico confirmado de câncer de colo do útero. Para caracterização das mulheres foi aplicado um questionário estruturado composto por informações direcionadas aos aspectos sociodemográficos, do indivíduo e relativos à organização dos serviços de saúde.

**Resultados:** A faixa etária predominante foi entre 40 a 57 anos. A maioria iniciou atividade sexual entre 15 e 18 anos, teve até cinco parceiros sexuais e nunca usou preservativo. Prevaleram as casadas, brancas, ensino fundamental, católicas, renda familiar entre um e dois salários mínimos e moradia própria. Antes do diagnóstico do câncer cervical, 45.5% realizavam o exame preventivo anualmente e após a coleta citopatológica ocorreu no mínimo uma vez por ano. A maior parte procurou o serviço de saúde após sintomas da doença.

**Conclusão:** Faz-se necessário o desenvolvimento de intervenções eficazes de assistência à saúde da mulher pautada no conceito de integralidade do cuidado prestado.

**Palavras chave:** Neoplasias Uterinas; Saúde da Mulher; Vulnerabilidade em Saúde.

## RESUMEN:

**Introducción:** El cáncer de cuello de útero constituye, en todo el mundo, un serio problema de salud pública y puede afectar especialmente a mujeres de nivel socioeconómico bajo y en el grupo de edad reproductiva.

**Objetivo:** Identificar el conjunto de características sociodemográficas, individuales y programáticas presentes en el cotidiano de las mujeres que las hicieron vulnerables al cáncer de cuello de útero.

**Método:** Estudio descriptivo y transversal que abordó las diferentes dimensiones de la vulnerabilidad y tuvo la participación de 99 mujeres con diagnóstico confirmado de cáncer de cuello de útero. Para caracterización de las mujeres se aplicó un cuestionario estructurado compuesto por informaciones dirigidas a los aspectos sociodemográficos, del individuo y relativos a la organización de los servicios de salud.

**Resultados:** El grupo de edad predominante fue entre 40 y 57 años. La mayoría inició actividad sexual entre 15 y 18 años, tuvo hasta cinco parejas sexuales y nunca usó preservativo. Prevalían las casadas, blancas, enseñanza básica, católicas, renta familiar entre uno y dos salarios mínimos y vivienda propia. Antes del diagnóstico del cáncer cervical, el 45.5% realizaba el examen preventivo anualmente y después de la colecta citopatológica ocurrió al menos una vez al año. La mayor parte buscó el servicio de salud después de los síntomas de la enfermedad.

**Conclusión:** Se hace necesario el desarrollo de intervenciones eficaces de asistencia a la salud de la mujer pautada en el concepto de integridad del cuidado prestado.

**Palabras clave:** Neoplasias Uterinas; Salud de la Mujer; Vulnerabilidad en Salud.

## INTRODUCTION

Cervical cancer is a serious public health problem worldwide, with developing countries accounting for 80.0% of the cases. Adolescents are more exposed to human papillomavirus (HPV) infection, being the highly vulnerable population to develop precursor lesions for cervical neoplasia<sup>(1,2)</sup>.

In Canada, due to accessibility of the preventive exam, it is the 11th most common type of cancer among women<sup>(3)</sup>. Finland has created the "Cancer Society of Finland" which is responsible for training and qualifying professionals to track precursor lesions and is currently one of the countries with the lowest incidence of cervical cancer<sup>(4)</sup>.

Other strategies for the prevention of cancer and HPV infection are immunization, changes in lifestyle and early detection through cervical cytology. Moreover, treatment

of early-stage cervical cancer has reduced the incidence of invasive carcinoma in several countries of the world<sup>(2)</sup>.

The nurse, in this context, plays a crucial role in the control of cervical cancer incidence and mortality, since it is the professional who works in health education, clarifies the fears related to Pap smear, makes an active search of the women who are late in collecting the cytology and performs the screening through preventive examination<sup>(5)</sup>.

In contextualizing the health-disease process, health professionals should broaden their view beyond the biological and individual dimension and understand that women have an important social and historical role<sup>(6)</sup>. The early diagnosis and participation of women in prevention programs is important, specifically those belonging to vulnerable groups, and there should be investment in reducing barriers to access and use of programs.

In this sense, when investigating the potential of health problems and their relation to cervical cancer, we have been stimulated to understand in depth how these factors are becoming part of the daily life of women. Thus, the present study aims to raise the set of individual, social and programmatic characteristics that have made women vulnerable to cervical cancer.

## METHODOLOGY

This is a descriptive and cross-sectional study carried out at the Oncology Gynecology Outpatient Clinic of the *Hospital das Clínicas*, School of Medicine of Botucatu, interior of São Paulo State, Brazil.

The sample was included for convenience and comprised of 99 women with cervical cancer in follow-up and treatment at the hospital where the study was performed. The data collection took place between November 2014 and July 2015 and was guided by the application of a questionnaire structured and elaborated by the researchers. In order to obtain the characterization of the women, this was composed by statements directed to the sociodemographic and individual aspects of the participants and the programmatic actions of the health services.

The inclusion criteria of the study were: women diagnosed with cervical cancer under follow-up and/or treatment at the *Hospital das Clínicas* of the School of Medicine of Botucatu, who attended on the day of the scheduled visit and consented to participate in the study and were in clinical conditions to answer the questionnaire about the perception of vulnerability to the disease, knowledge regarding cervical cancer and health actions aimed at the follow-up of the disease and care.

The Oncology Gynecology Outpatient Clinic works every Friday, from 8 to 12 a.m., and the data collection was performed on this day and time and in a room provided by the nursing team.

The data related to the characterization of the women were allocated in a Microsoft Excel 2010 spreadsheet and later the statistical analysis was performed. For the characterization of the sample, the descriptive statistics and the variables presented in tables containing the relative (%) and absolute (N) frequencies were used.

Considering a margin of error of 10% and a reliability of 95%, the minimum sample size was 96 patients.

The study complied with the formal requirements contained in national and international regulatory standards for research involving human subjects. It was approved by the Research Ethics Committee of the Faculty of Medicine of Botucatu, under no. 607.268 on April 7, 2014.

## RESULTS

Among the women participating in this study and having a confirmed diagnosis of cervical cancer, the age at diagnosis was between 21 and 78 years of age. The predominant age group (60.6%) was between 40 and 57 years and two women were under the age of 25.

Table 1 describes the sociodemographic characteristics of the women followed at the Gynecology Outpatient Clinic of the *Hospital das Clínicas*, School of Medicine of Botucatu. Regarding the origin by Regional Health Departments (RHD) and health regions, 92.2% (n = 92) of the study sample belonged to RHD VI (health regions: Pólo Cuesta and Vale do Jurumirim and Bauru ), for which the *Hospital das Clínicas* of Botucatu is a reference in the health service. It was also verified that seven women belonged to other RHDs: II (municipality of Guararapes, health region: Araçatuba/SP), VII (municipality of Holambra, region of Campinas/SP), IX (Marília/SP), XVI (municipalities of Cerquillo, Sorocaba and Tatuí, region of Sorocaba/SP). As for self-reported color, the majority (67.7%) said to be white. It was also observed that 74.7% had elementary education. In relation to religion, the majority (98.0%) declared to be religious and of these, 62.7% were Catholic. Marital status or a stable relationship was predominant (52.6%). Regarding family income, 69.7% reported receiving between one and two minimum wages. Regarding the place of residence, 67.7% lived in their own house. It was also observed that 70.7% of the women were economically active professionals before the diagnosis of cervical cancer and that after the discovery and treatment of the disease only 36.4% continued to perform paid professional activities. It is noteworthy that, after cancer, some women retired, were on sick leave or were discharged from their employment, and others changed their profession, becoming autonomous professionals.

**Table 1:** Sociodemographic characteristics of the women, *Hospital das Clínicas*, School of Medicine of Botucatu, 2015.

<b>Sociodemographic characteristics</b>	<b>n (%)</b>
<b>Provenance</b>	
RHD VI	92 (93.0)
RHD XVI	3 (3.0)
RHD II	2 (2.0)
RHD VII	1 (1.0)
RHD IX	1 (1.0)
<b>Skin Color (self-declared)</b>	
White	67 (67.7)
Brown	27 (27.3)
Black	5 (5.0)
<b>Degree of Instruction</b>	
Complete/incomplete elementary school	74 (74.7)
Complete/incomplete high school	13 (13.1)

Higher education/Postgraduate	6 (6.1)
Illiterate	6 (6.1)
<b>Religion</b>	
Yes	97 (98.0)
No	2 (2.0)
<b>Marital status</b>	
Married/Relationship	52 (52.6)
Widow	21 (21.2)
Divorced	13 (13.1)
Single	13 (13.1)
<b>Family Income (in minimum salaries)</b>	
< 1	6 (6.1)
1 a 2	69 (69.7)
≥ 3	24 (24.2)
<b>Place of residence</b>	
Own	67 (67.7)
Leased	15 (15.2)
Borrowed	13 (13.1)
Financed	4 (4.0)
<b>Economically active professional before diagnosis</b>	
Yes	70 (70.7)
No	29 (29.3)
<b>Economically active professional post-diagnosis</b>	
Yes	36 (36.4)
No	63 (63.6)

Regarding individual characteristics, most participants had their first sexual intercourse (52.5%) between 15 and 18 years, emphasizing that 21.2% initiated sexual activity with age less than or equal to 14 years. Regarding the age that they became mothers for the first time, it was observed that 68.7% were in the age range between 15 and 20 years. Still, a significant number of women (55.6%) had four or more pregnancies. As for the number of sexual partners during life, 31.3% had only one partner and 57.6% had two to five. Regarding the use of condoms with all partners, 59.6% never used it and only 4.0% have always used it. When questioned if they use a condom with their current partner, 60.6% had never use it and the majority (84.8%) reported that during the last sexual intercourse they did not use the condom. Data are reported as follows (Table 2).

**Table 2:** Individual characteristics of women, *Hospital das Clínicas*, School of Medicine of Botucatu, 2015.

Individual characteristics	n (%)
<b>Age of sexarch (years)</b>	
≥14	21 (21.2)
15 a 18	52 (52.5)
> 18	26 (26.3)
<b>Age that had the first child (years)</b>	
≥14	3 (3.0)
15 a 20	68 (68.4)
> 21	18 (24.3)
Without children	4 (4.0)

<b>Number of pregnancies</b>	
1 a 3	40 (40.4)
4 a 18	55 (55.6)
No gestation	4 (4.0)
<b>Number of lifetime partners</b>	
<b>One</b>	31 (31.3)
<b>2 a 5</b>	57 (57.6)
<b>6 a 10</b>	8 (8.1)
<b>&gt; 10</b>	3 (3.0)
<b>Condom use with all partners</b>	
Never	59 (59.6)
Sometimes	36 (36.4)
Always	4 (4.0)
<b>Condom use with current partner</b>	
Never	60 (36.4)
Sometimes	17 (17.1)
Always	6 (6.1)
No partner	16 (16.2)
<b>Condom use at last sexual intercourse</b>	
No	84 (84.8)
Yes	15 (15.2)

Regarding the programmatic characteristics presented in Table 3, it was evidenced that, before being diagnosed with cervical cancer, 45.5% of the women reported performing the preventive examination once a year; however, 31.3% had never collected cytology. As they are still in follow-up, most (57.6%) started to take the exam once a year and the others every six months or four months or quarterly. When questioned about whether they had any difficulty in scheduling the Pap smear test, 97.0% confirmed that they did not, and those who presented difficulties, reported it was due to lack of professionals in the health unit to take the exam and for not having a date in the schedule to perform cytology collection. Regarding the reasons for seeking the health service, only 27.3% said they did not present any gynecological complaints and sought the health unit as a routine visit. Most of the women sought the health service after symptoms of the disease and the main complaints were: pelvic pain, bleeding between cycles or after sexual intercourse or after menopause, leucorrhoea, dyspareunia and hemorrhage. Regarding the interval between the search for the health service, the discovery of the disease and the beginning of treatment, in 79.8% of the women this period was equal to or less than one month.

According to women, surgical treatment (hysterectomy - 32.3%) predominated, but it was also shown that radiotherapy and brachytherapy were associated with other types of treatment, such as chemotherapy, hysterectomy and conization. Some women also stated that after treatment they started to present other comorbidities, such as intestinal changes (diarrhea and constipation), urinary incontinence and motor difficulty.

**Table 3:** Programmatic characteristics of the health services, *Hospital das Clínicas*, School of Medicine of Botucatu, 2015.

<b>Programmatic characteristics</b>	<b>n (%)</b>
<b>Frequency of preventive examination before disease (years)</b>	
Yearly	45 (45.5)
2 a 3	11 (11.1)
> 3	12 (12.1)
I had never performed	31 (31.3)
<b>Frequency of preventive examination after disease</b>	
Yearly	57 (57.6)
Semester	32 (32.3)
Quarterly	10 (10.1)
<b>Difficulty of scheduling the preventive exam</b>	
No	96 (97.0)
Yes	3 (3.0)
<b>Reasons for the demand for the health service*</b>	
Bleeding between cycles/post coital/post menopause	53 (53.6)
Pelvic pain	30 (30.3)
Routine exam	27 (27.3)
Leukorrhea	23 (23.2)
Dyspareunia	22 (22.3)
Bleeding	18 (18.2)
Others**	9 (9.1)
<b>Time interval between health service / health facility search disease/onset of treatment (months)</b>	
≤ 1	79 (79.8)
2 a 6	15 (15.2)
≥ 7	3 (3.0)
Do not know	2 (2.0)

\*Data exceeded 100% because some women had more than one answer;

\*\*Burning, painful urination, pain in the vagina, cystocele, low back pain, weakness, condyloma, weight loss.

## DISCUSSION

Potential aspects of illness and injuries to cervical cancer depend on social, environmental, political and economic conditions, that is, on biological and behavioral characteristics of the subjects. When identifying these aspects, we sought to find solutions for effective prevention of the health of women in situations of vulnerability.

Regarding the survey of individual characteristics, this study identified that the age of diagnosis corroborated with the National Cancer Institute. The appearance of invasive cervical cancer in women up to 24 years is very low and screening is not effective in detecting it. Treating these lesions before the age of 25 would lead to a significant increase in colposcopy, would increase the risk of obstetric and neonatal morbidity associated with future gestation, and at this age there is a high probability of the disease regressing. Still, women aged between 50 and 64 years and with normal cytopathological examination present an 84% reduction in the risk of developing an invasive carcinoma between 65 and 83 years old<sup>(2)</sup>.

In the majority of women, the first sexual intercourse and motherhood occurred during the adolescence phase. Also, the women of study had had more than one child. This study confirms that having the first sexual intercourse at early age is mainly associated

with being black, daughter of adolescent mother and separated parents, having low educational and socioeconomic level, low self-esteem, lack of confidence, media influence, lack of knowledge about sexually transmitted infections, influence from the society and the environment in which they live, lack of dialogue with parents, insistence of the partner, lack of sex education at school, unemployment, use of drugs and alcohol, not practicing religion and influence of friends who have had sexual intercourse<sup>(7)</sup>.

Gestation was also a factor associated with infection due to the high prevalence of the virus in this population. It is believed that pregnancy may interfere with HPV infection due to immune and hormonal changes. It is known that high levels of steroid hormones produce decreased synthesis and activity of lymphocytes and macrophages. Thus, during pregnancy, there is transient and selective depression of cellular immunocompetence. Helper and suppressor T lymphocyte activity is decreased, as well as IgG and IgA activity in the cervical mucus<sup>(8)</sup>.

Gestation, due to maternal changes, such as hormonal and immune changes, is considered a risk factor for HPV infection, with cervical cancer being the most common among the other types associated with pregnancy. Pregnancy causes imbalance in the vaginal flora, increasing the vulnerability to contamination of infectious agents and HPV<sup>(8)</sup>.

Having had the first sexual intercourse under the age of 15, multiple partners and sexual intercourse without a condom was responsible for exposure to HPV infection and increased vulnerability to cervical cancer in institutionalized women in a female penitentiary<sup>(9)</sup>. Also, women with HPV and other infections are more susceptible to health problems and, in this case, to the faster development of invasive cervical carcinomas<sup>(2)</sup>.

With regard to social characteristics, there was a predominance of white color (self-declared color), complete or incomplete elementary education, Catholic, married, family income between one and two minimum wages and having their own house.

In the Ethiopian capital, a study showed that the majority of the patients were married (51%) and illiterate (52%). Also, socioeconomic aspects such as level of schooling, income and occupation influence women's decision-making because of their economic dependence on the spouse and they are more exposed to HPV infection because they have difficulty understanding cervical cancer vulnerability factors. These women also perform less frequently the preventive examination and are less conscious about the complications resulting from the disease, which increases the chance of late diagnosis<sup>(10)</sup>. Other research found that most women with cervical lesions were married (75%), white (31.82%), had low educational level and unfavorable socioeconomic status<sup>(11)</sup>.

It has been proven that religious practice influences women's behavior, encouraging healthy habits. Many churches, especially those located in impoverished regions, have assumed an important social role and, through educational activities, have developed with their practitioners actions aimed at prevention and health promotion<sup>(12)</sup>.

Concerning the participation of women as an active professional before and after diagnosis and treatment, this study showed that most stopped working after the illness.

In England, a study addressed the negative effect of work on cancer patients and showed that 17% of post-treatment subjects are less likely to work or work an average of 5.6 hours less per week. It has also been shown that returning to work occurs at least one year after the end of treatment<sup>(13)</sup>.

The programmatic characteristics of the health services allowed us to identify that women were more concerned about their health after cervical cancer.

Poor adherence to Pap smear is an important barrier to early diagnosis, but it has been overcome by some women who attach cancer to a fatal disease and thus carry out the examination. However, when the woman has no symptoms of the disease or does not understand the importance of screening, noncompliance with the routine examination becomes more evident. Such behavior is significant for the increased incidence and mortality of late diagnosed women<sup>(14-15)</sup>. It has been reported that a quarter to a third of the female population does not feel the need to perform cytopathological examination due to the absence of symptoms<sup>(16)</sup>.

Periodic cytopathological examination has been, up to this date, the best way to screen for cervical cancer and reduce mortality among women who are vulnerable to the disease. However, screening is effective in an organized system to monitor and treat the female population, able to assist them comprehensively and provide quality care<sup>(2)</sup>.

Regarding the beginning of treatment after the diagnosis of cancer, it is up to the primary care services to refer patients immediately to specialized services, as primary care services are responsible for proposing actions to promote and protect health, prevent diseases, early diagnosis, rehabilitation and maintenance of health in the collective and individual dimensions. Therefore, primary care has the responsibility to organize reference and check counter-reference<sup>(2)</sup>.

Regarding the type of treatment, hysterectomy, radiotherapy and brachytherapy were the most frequent in this study. Compared to other types of cancers, it is the treatment that has the best response to invasive disease prevention and cure. If the disease is diagnosed early and the treatment is performed correctly, there are chances to regress, almost totally, the development of the disease, because its evolution is slow and gradual<sup>(17)</sup>.

## CONCLUSION

The survey of sociodemographic, individual and programmatic characteristics allowed us to identify which risk factors for cervical cancer were predominant and contributed to the vulnerability to this disease, such as first sexual intercourse at early age, non-use of condoms, low educational level and family income and failure to perform the Pap smear test.

However, a possible limitation of this study is the fact that some women had been diagnosed with cervical cancer a few years ago. We believe that the period between diagnosis and data collection may have led to difficulties in remembering some characteristics in relation to their previous sexual life, but because they have still been followed up at the Oncology Gynecology Outpatient Clinic, they were certainly able to describe social aspects and those concerning the organization of health services and their participation in the treatment and tracking of other changes in their health status.

When considering women's perception on the characteristics that made them vulnerable to cervical cancer, it is necessary to develop effective care interventions guided by the concept of comprehensiveness of care. Investment in prevention through immunization and orientation on safe sexual practices is the best strategy and should be associated with early screening and treatment of precursor lesions for cervical cancer.

Therefore, this reinforces the importance of organizing screening programs, diagnosis and early treatment, health actions by a multidisciplinary team, ongoing education and qualified care planning.

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