DOI: 10.15253/2175-6783.2014000200008
www.revistarene.ufc.br

Original Article

# Risk and protection factors for women's health in the prevention of cervical cancer

## Fatores de risco e proteção à saúde de mulheres para prevenção do câncer uterino

## Factores de riesgo y protección a la salud de mujeres para prevención del cáncer uterino

Ana Carolina de Oliveira[1], Regina Soares Pessoa[2], Ayla Maria Calixto de Carvalho[1], Rosilane de Lima Brito Magalhães[3]

This study aimed to investigate the risk and protection factors for women who access health services for the realization of preventive screening for cervical cancer. Quantitative study conducted with 51 women in Teresina-PI, Brazil, in August 2013. The semi-structured form caught the variables of interest and the data were analyzed by the SPSS. Of the women, 72.5% were aged 25-39 years, 66.7% were married, and 55.0% accessed the service for prevention. With regard to the risk factors, 41.2% were overweight, 19.6% obese, and 72.5% were sedentary. Regarding the access to health services, 78.5% sought care in the past year. The cervical cancer screening program should be discussed in the sociocultural context, which will promote understanding and adherence to the recommendations of take the exam periodically. For this purpose, we recommend conducting immediate and effective measures to improve the viability of public policies for women's health.
**Descriptors**: Cervix Neoplasms Prevention; Risk Factors; Uterine Cervical Neoplasms; Women's Health.

Objetivou-se investigar os fatores de risco e de proteção de mulheres que acessam o serviço de saúde para realização do exame preventivo de câncer de colo uterino. Estudo quantitativo, realizado com 51 mulheres, em Teresina-PI, Brasil, em agosto de 2013. O formulário semiestruturado captou as variáveis de interesse, e os dados foram analisados pelo SPSS. Das mulheres, 72,5% tinham 25 a 39 anos; 66,7% casadas; e 55,0% acessaram o serviço para prevenção. Quanto aos fatores de risco, 41,2% apresentavam sobrepeso; 19,6% obesidade; e 72,5% eram sedentárias. Sobre o acesso ao serviço de saúde, 78,5% procuraram no último ano. O programa de rastreamento do câncer de útero deve ser abordado no contexto sociocultural, o que irá favorecer a compreensão e adesão às recomendações para realização do exame periodicamente. Recomenda-se a realização de medidas prioritárias e eficazes para melhor viabilização de políticas públicas de saúde da mulher.
**Descritores**: Prevenção de Câncer de Colo Uterino; Fatores de Risco; Neoplasias do Colo do Útero; Saúde da mulher.

El objetivo fue investigar los factores de riesgo y de protección de mujeres que accesan el servicio de salud para realización del examen preventivo de cáncer de cuello uterino. Estudio cuantitativo, realizado con 51 mujeres en Teresina, Piauí, Brasil, en agosto de 2013. El formulario semiestructurado captó las variables de interés, siendo los datos analizados por el SPSS. De las mujeres, 72,5% tenían 25 a 39 años; 66,7% eran casadas; y 55,0% accesaron el servicio para prevención. En relación a los factores de riesgo, 41,2% presentaban sobrepeso, 19,6% obesidad, y 72,5% eran sedentarias. En cuanto al acceso al servicio de salud, 78,5% procuraron en el último año. El programa de rastreo del cáncer de útero debe ser abordado en el contexto sociocultural, lo que favorecerá la comprensión y adhesión a las recomendaciones para realización del examen periódicamente. Se recomienda realizar medidas prioritarias y eficaces para mejorar la viabilidad de políticas públicas de salud de la mujer.
**Descriptores**: Prevención de Cáncer de Cuello Uterino; Factores de Riesgo; Neoplasias del Cuello Uterino; Salud de la Mujer.

[1]Faculdade Tecnológica de Teresina. Teresina, PI, Brazil.
[2]Hospital da Policia Militar. Teresina, PI, Brazil.
[3]Universidade Federal do Piauí. Teresina, PI, Brazil.

Corresponding author: Rosilane de Lima Brito Magalhães
Rua Visconde da Parnaíba, 2340. Cond. Horto Park, Bl Paineira, Apto. 103, Horto Florestal. CEP: 64049-570. Teresina, PI, Brazil. E-mail: rosilimabm@globo.com


Received: Feb. 10th 2014; Accepted: Apr 24th 2014.

## Introduction

Cervical cancer represents a public health problem, given its magnitude and mortality in women from lower social-economic groups in the production phase, being the third type that affects more women worldwide[1]. In Brazil, it is estimated the occurrence of 17,540 new cases for 2012 and 370 new cases for the state of Piauí. It is worth mentioning that 100 of these new cases are only for Teresina, the state capital[2].

Considering that identifying injuries at an initial phase and referral to a more effective treatment contribute to improve the quality of life of women, focusing on healing, it is important to develop strategies for early detection/screening for cervical cancer, through the material collection for cervical and vaginal microflora examinations, popularly known as cervical cytopathology and Pap smear. The examination should take place primarily in women aged 25-64 years, once a year, and every three years after two consecutive negative annual examinations[1], whose screening actions should take place in Primary Care by the Family Health Strategy teams.

Despite the effectiveness of the examination as to the diagnosis and the offer in public health services, it still does not get satisfactory coverage for its implementation[3]. Several situations reveal the non-adherence to prevention of cervical cancer in Brazil[3-4]. Through social representations, women presented attributions of different meanings for not performing the cancer prevention according to their level of education and marital status[5]. For example, being single, having low education, low income, and lack of access to health services contributed to non-adherence to the program[3]. In adolescence, adherence to Pap smear has a positive association with socio-demographic characteristics, such as higher levels of education and higher number of prenatal care consultations[4].

From the above, we highlight the need for the preventive examination offer to be disclosed and stimulated among sexually active women, from the earliest ages. Additionally, the practice of examination depends on the awareness of its benefits, followed by the actions of managers[6-7].

The change of habits, along with the stress generated by the modern lifestyle, contributes directly to the incidence of cancer in the female population[1]. Some factors, such as type of food, sedentary lifestyle, smoking, excessive workload, use of hormonal contraceptives, alcohol consumption, multiple sexual partners, AIDS and other sexually transmitted diseases may favor the occurrence of cervical cancer[6-8].

From the several abovementioned factors, the behavioral ones and the access are modifiable. Thus, it is necessary to investigate in order to show situations that can be analyzed and minimized in the Northeast Region of Brazil, which has the worst Human Development Index (HDI). The basic health care, the place for developing actions to promote health and access to the cancer prevention, guaranteed to every woman, constitutes an environment favorable to investigate the health problems affecting the quality of life of women, such as cervical cancer. Knowing the characteristics of this population will contribute in identifying the risk factors for cervical cancer and will enable discussions with primary care professionals based on the community health promotion.

Based on the above, this study aimed to investigate the risk and protection factors for the health of women who access services for prevention of cervical cancer.

## Method

This is a cross-sectional study conducted in Teresina, capital city of the state of Piauí, in the Northeast Region of Brazil, in August 2013. The Capital has 3 Health Districts and 253 Family Health Strategy teams. For the study, we selected two teams located in the area of the North-Central Health District with two thousand women aged 25-64 years. This is the area for developing teaching and academic extension

actions of the Undergraduate Nursing students.

For the sample size calculation, we used as parameter the access to service of women aged 25-64 years. We defined the age range as result of being the recommended age and indicated that 30% of the population registered in family health teams should conduct the preventive screening for cervical cancer[1]. Thus, for an estimated population of 2,000 women, the goal is 600 annual examinations, with a monthly target of 50. Based on this parameter, we studied 51 women aged 25-64 years who sought spontaneously the service for consultation on cervical cancer prevention.

Data collection happened through a semi-structured form and provided the following variables of interest: socio-demographic characteristics (age, education, marital status, housing, family members, paid labor, and transportation); health services (access, the reason for access, presence of diseases, use of medications, and preventive examination); risk factors (smoking, alcohol use, body mass index (BMI); and protective factors (physical activity). Three experts in the area validated this instrument regarding the form and content. Subsequently, we conducted a pre-test to observe its implementation and suitability; we did not use the information from pre-test in the study. Data collection took place in August 2013 by Undergraduate Nursing students in a Basic Health Unit.

We entered the data in Excel and exported them to the Statistical Package for the Social Sciences (SPSS), and analyzed the results descriptively in absolute and relative numbers. For quantitative variables, we calculated mean, median, and standard deviation (SD).

The Research Ethics Committee of the Local Health Foundation of Teresina authorized the study and the Research Ethics Committee of the Universidade Estadual do Piauí approved it under CAAE No. 14471913.0.0000.5209. All women signed a Free and Informed Consent Form.

## Results

Fifty-one women participated in the study. The majority (37, 72.5%) were aged 25-39 years, with a mean age of 36.78 (SD=10.57). Regarding education, it ranged from 9 to 12 years of schooling. As for the marital status, 34 women (66.7%) reported being married. Among them, 47 (92%) lived in their own residence; 11 (21.5%) claimed to work outside the home, whose principal means of transportation was motorcycle (19, 47.5%) or bicycle (18, 45.0%) (Table 1).

We categorized the per capita income reported into three extracts, according to the minimum wage (US$ 305.00 at the time): up to ¼ (53.0%); more than ¼ to ½ (39.2%); more than ½ to one (7.8%) (Table 1).

**Table 1** - Characteristics of women who accessed the health services for cervical cancer prevention (n=51)

| Characteristics | n (%) |
|---|---|
| Age group (years) | |
| 25-39 | 37 (72.5) |
| 40 ≥60 | 14 (27.5) |
| Schooling (years) | |
| 0-8 | 24 (47.0) |
| 9 ≥ 12 | 27 (53.0) |
| Marital status | |
| Single | 17 (33.3) |
| Married | 34 (66.7) |
| Housing situation | |
| Own | 47 (92.0) |
| Rented | 4 (8.0) |
| Lives | |
| With husband and kids | 34 (66.6) |
| With kids and parents | 15 (29.4) |
| Alone | 2 (3.9) |
| *Per capita* family income (US$) | |
| ≤ 76.20 | 27 (53.0) |
| 76.30-152.50 | 20 39.2) |
| 152.60-305.00 | 4 (7.9) |
| Paid labor | |
| Yes | 11 (21.5) |
| No | 40 (78.5) |
| Has own transportation | |
| Yes | 40 (78.4) |
| No | 11 (21.6) |
| Type of transportation (n=40) | |
| Motorcycle | 19 (47.5) |
| Bicycle | 18 (45.0) |
| Automobile | 3 (7.5) |

*Minimum age=25; Maximum age=64; mean=36.78; median=33.00

As regards the access to health services during the past year, 40 women (78.5%) sought health services by spontaneous demand, in which

the gynecological consultation in 22 (43.1%) was the main reason for the service demand, next there were follow-up visits for hypertension and/or diabetes 5 (12.5%), and psychiatric follow-up consultations 2 (5.0%), and others 11 (27.5%) (Table 2).

Regarding the use of medications, 29 (56.8%) were using some pharmaceutical drug. Contraceptives were the most used 14 (48.3%), followed by antihypertensive 5 (17.2%), antiglycemic 3 (10.3%), and anticonvulsants 2 (7%) (Table 2)

The search for preventive cervical cancer examination was performed by request of the health professional in 26 (51.0%) women; but only 10 (19.6%) were counseled about the examination collection (Table 2).

**Table 2** - Distribution of access and health condition of the 51 women

| Variables | n (%) |
|---|---|
| Access to health service in the last year | |
| Yes | 40 (78.5) |
| No | 11 (21.5) |
| Reason to seek the health service (n=40) | |
| Gynecological consultation for spontaneous demand | 22 (55.0) |
| Consultation and other follow-up services | 18 (45.0) |
| Presence of diseases | |
| Yes | 14 (27.4) |
| No | 37 (72.5) |
| Use of medications (n=51) | |
| Yes | 29 (56.8) |
| No | 22 (43.2) |
| Requested or recommended preventive examination | |
| Yes | 26 (51.0) |
| No | 25 (49.0) |
| Guidance about the collection of the preventive examination | |
| Yes | 10 (19.6) |
| No | 41 (80.4) |

Regarding the risk factors in study, related to smoking, alcohol consumption, and overweight, we found that women presented high risk in relation to BMI, waist circumference, and alcohol use (Table 3).

As for the harmful risk factors to health, 11 women reported the use of alcohol (21.6%). With regard to weight, 21 (41.2%) participants had BMI 20-30; and 33 (31.4%) showed waist circumference far greater than the 88 cm (Table 3).

**Table 3** - Distribution of health status and risk exposure of the 51 women.

| Variables | n (%) |
|---|---|
| Self-rated health (n=51) | |
| Very good | 3 (5.8) |
| Good | 20 (39.2) |
| Regular | 27 (53.0) |
| Bad | 1 (2.0) |
| Tobacco use – smoking | |
| Yes | 2 (3.9) |
| No | 49 (96.1) |
| Alcohol consumption | |
| Yes | 11 (21.6) |
| No | 40 (78.4) |
| Body Mass Index | |
| 18.5 – 25.0 | 20 (39.2) |
| 25.0 – 30.0 | 21 (41.2) |
| 30.0 or higher | 10 (19.6) |
| Waist measurement (cm) | |
| ≤ 88 | 18 (68.6) |
| > 88 | 33 (31.4) |

With regard to physical activities, 37 (72.5%) did not practice any exercise; however, among those who reported it, walking was the main activity 9 (64.3%) (Table 4).

**Table 4** - Protective factors reported by the women in study related to physical activity and healthy food consumption.

| Variables | n (%) |
|---|---|
| Physical activity (n=51) | |
| Yes | 14 (27.5) |
| No | 37 (72.5) |
| Type of physical activity (n=14) | |
| Walking | 9 (64.3) |
| Gym | 4 (28.6) |
| Cycling | 1 (7.1) |
| Time interval between the last two preventive examinations (years) | |
| ≤ 1 | 16 (31.5) |
| 1-2 | 19 (37.2) |
| ≥ 3 | 16 (31.3) |
| Regular intake of healthy food (at least five days a week) | |
| Milk | 29 (56.8) |
| Beans | 24 (47.0) |
| Fruits | 13 (25.5) |
| Chicken | 8 (15.7) |
| Natural juice | 8 (15.7) |
| Vegetables | 8 (15.7) |
| Fish | 3 (5.8) |

The time interval for the preventive examination varied by less than 1 year to more than 3 years (Table 4).

In this study, we focus on the indicators of food consumption considered markers of healthy patterns. We assess the frequency of consumption of fruits, vegetables, beans, chicken, fish, natural juice, and milk. The research was limited to investigate the frequency with which women consume these foods (Table 4).

The frequency that women consumed fruits and vegetables, five or more days a week, was around 15%. As to the habit of consuming chicken, fish, five or more days, we verified higher consumption of chicken (44%). The frequency of regular consumption of beans was 47%. As for the milk consumption, 54.9% reported consuming it every day (Table 4).

## Discussion

Due to the risk factors for developing cervical cancer and the protection factors for women's health, health services should promote actions aimed at the female population, ensuring the right to information and health.

Among the factors that contributed to non-adherence to the cervical cancer screening program, there is: being single, low education, low income, and lack of access to health services, identified in women aged 25-59 years, in Florianópolis-SC, Brazil[3]. For these women, the fact of being married and having access to health services facilitated the adherence to screening. People living in the coverage area of the Family Health Strategy (FHS), or where the team has a priority screening activity, may have an improved access to health services[1].

Cultural, social, economic, and behavioral factors are the villains of non-adherence to the examination, which leads to diagnosis at an advanced stage, compromising the healing of patients[9].

In this study, women over the age of 60 (6%) sought the service less often, when compared with other age groups. This situation is worrying considering that a higher age favors the occurrence of cervical cancer; and women aged 45-69 years, in menopause, with less education, and unpaid occupation are more likely to opt not to perform this examination (p=0.01). On the other hand, the presence of gynecological complaints contributed to seek the service[6]. The women in this study, even with other disorders, presented the gynecological complaint as the main reason for consultation.

Non-adherence to the examination is also associated with other factors such as shame, embarrassment, fear, lack of knowledge on communicable diseases, and even poor access to health services[9-11]. A study conducted in the South Region of Brazil, with 252 elderly women aged 60 years and older, showed that 84.1% (95% CI 79.0-88.4) underwent the Pap smear test. This had a positive association with independence for performing the instrumental activities of daily living such as mammography adherence and not having a partner. The frequency for sample collection was 14.3% for women over 80 years of age[12]. These data show that women over the age of 60 years deserve more attention, considering that the end of their childbearing years contributes to reducing gynecological consultations, thus distancing them from prevention practices in the same period of the life cycle when the incidence and severity of tumors are higher[6].

This research also investigated the presence of risk factors to health, among these the alcohol consumption, verifying a 21.6% rate on its use in the past 30 days. Alcohol consumption constitutes a manageable risk, however underrated by consumers, which may increase tolerance to exposure to this risk[13]. This population also reported smoking; evidence states that women with cervical cancer, and who are smokers, are 35% more likely to die from any cause, and 21% to die from cervical cancer compared with nonsmoking women[14].

About smoking, we investigated only the frequency of smokers, considering a smoker every individual who smokes, regardless of the frequency

and intensity; only 3.9% of women reported being smokers.

Women present high risk in relation to BMI and waist measurement. In epidemiological studies, the diagnosis of obesity is made from the Body Mass Index (BMI), obtained by dividing the weight in kilograms by the square of height in meters[15]. Overweight diagnosis happens when the BMI reaches a value equal to or greater than 25 kg/m$^2$; in turn, obesity diagnosis happens from a BMI of 30 kg/m$^2$. In this study, we applied these criteria, thus finding that 41.2% of women were overweight and 19.6% were obese. Regarding the evaluation of waist measurement, we observed that 64.7% of women had waist measurement higher than recommended (88 cm).

Opportunities for adults to be physically active can be classified into four domains: *in the free time* (leisure); *at work*; *while commuting*; and within the *household activities*. A type of indicator of physical activity during leisure time does not stipulate a minimum number of days per week for physical activity, it considers as recommended amount of physical activity during leisure time practicing at least 150 minutes per week of physical activity of mild or moderate intensity, or at least 75 minutes of vigorous-intensity physical activity[16]. Of the 51 women studied, only 14 (27.5%) performed physical activity in leisure time, among these, 9 reported walking, 1 cycling, and 4 were in gym activity.

With regard to eating habits, the World Health Organization (WHO) recommends a daily intake of at least 400 grams of fruit and vegetables[17], which is equivalent to approximately the daily intake of five servings of these foods, in other words, five servings of 80 grams. This study was limited to investigating the frequency with which women consume fruits and vegetables, which was around 15% in five or more days a week.

Regarding the number of women who reported the habit of consuming red meat, chicken, or fish five or more days a week, we observed low consumption of red meat (5.9%), increased consumption of chicken (44%) and fish (21%), demonstrating proper habits regarding the type of meat selected for the diet.

It is recommended to eat at least one serving of beans or other legumes (dried peas, chickpeas, lentils, or soy) a day, given the high fiber content of these foods, in addition to its relatively low energy density (a serving of beans is equals approximately to 5% of daily calories), since avoided preparations with high fat content[17]. In this study, the frequency of regular intake of beans was 47%.

There was a high frequency of women who reported the habit of consuming milk, 54.9% revealed consuming it every day. Regarding the consumption of soft drinks (or artificial juices), it ranged from 5.9% (one day a week) to 7.8% (seven days a week) with low consumption. As for sweets, about 31.4% of women reported its consumption at least one day a week.

Self-rated health is an analysis of the objective and subjective aspects of each individual. Subjectivity refers to the way people feel, and poor self-perceived health can represent a result of feelings caused by malaise, pain, or discomfort associated with the social, cultural, psychological, and environmental factors that modify how a person's life is affected by the problem experienced[18]. It is obtained through a single question that asks the individual to rate their health status as very good, good, regular, bad, or very bad.

In the self-evaluation of the surveyed women, 20 (39.2%) rated their health as good and 27 (53.0%) as regular, which may be associated with chronic diseases and behavioral and socioeconomic conditions identified among them.

Self-rated health is negatively affected by advancing age, lower income, and educational status. Since most chronic diseases have higher prevalence in older age groups, the indicator of self-rated health tends to worsen with increasing age. A high prevalence of chronic diseases, sometimes disabling, and that have low mortality, such as arthritis and depression,

have been found in women of advanced age[19].

The association between low monthly income and poor self-rated health is explained by the material conditions of life, based on the behavior/lifestyle, which emphasize the role of individuals' choices, and psychosocial, based on the theory of stress on production of disease. As for education, it constitutes an important mediator of the relationship between socioeconomic status and health perception; therefore, the level of education is a major cause of health inequalities, since people with higher levels of education are more likely to adopt healthy lifestyle habits[19].

In this study, we found that any professional, in relation to preventive screening for cervical cancer and fighting risk factors, did not give women guidance throughout the care. This situation is worrisome considering the Politics of Primary Health Care, which recommends the health promotion for people who seek this service. In this sense, the nursing consultation cannot aim exclusively at preventive examinations for gynecological cancer, it should be structured and have wider perspective for prevention, offering the woman a space for dialogue and bonding development. It is argued that the welcoming should be the starting point for comprehensive and longitudinal care, in order to meet the complex health needs of users[20].

The performance of health professionals through the Family Health Strategy requires from them a guided assistance in changing attitudes, in order to adapt their work process, so it can build links of solidarity and commitment to the quality of life of this population. Therefore, during the gynecological nursing consultation, the nurse should discuss the importance of periodically performing preventive screening for cervical cancer, risk factors for cervical cancer, associated with low socioeconomic conditions, the early onset of sexual activity, multiplicity of sexual partners, smoking, inadequate personal hygiene, and the prolonged use of oral contraceptives, besides the importance of the Human Papillomavirus (HPV) in the development of cervical cancer cells[21].

In this context, nurses should seek the promotion of healthy habits and disease prevention through educational activities, contributing to the direction of quality nursing practice and collaborating to new intervention possibilities on the observed reality.

For this reason, it is essential to establish the impact of gender issues on women's health, so that health professionals can adapt the care. It is necessary that health professionals look back to these women, some of them inserted in societies with little choice and perspective, and hence reduce the vulnerabilities to which they are exposed.

## Conclusion

Women in older age that seek health services less frequently and present risk to cervical cancer, such as smoking, overweight, obesity, waist circumference above the recommended standard, and sedentary lifestyle factors. The study suggests that the search for health service may be an important opportunity to guide the improvement of quality of life.

A spontaneous demand occurred in only 50% of women to perform the preventive screening for cervical cancer, and those received little guidance regarding the preparation for the collection and the importance of coming back to receive the exam.

It is important mentioning that, even in the face of a negative result, it is necessary to search for a healthy life, to continue the cancer prevention. In this purpose, people need also a greater involvement of staff to fight the risk factors through health promotion. Therefore, we recommend conducting immediate and effective measures to improve the viability of public policies on women's health, so that it can reflect the expansion of screening for the exam performance especially when they are in older ages.

## Collaborations

Oliveira AC contributed to the design of the

study, data collection, analysis, interpretation of data, and drafting the article. Pessoa RS contributed to the conception of the study, analysis, interpretation of data, drafting the article, and final approval of the version to be published. Carvalho AMC contributed to data collection, analysis, interpretation of data, and drafting the article. Magalhães RLB contributed to drafting the article and final approval of the version to be published.

## References


1. Santos RS, Melo ECP, Santos KM. Análise espacial dos indicadores pactuados para o rastreamento do câncer do colo do útero no Brasil. Texto Contexto Enferm. 2012; 21(4):800-10.
2. Instituto Nacional do Câncer. Coordenação Geral de Ações Estratégicas, Coordenação de Prevenção e Vigilância. Estimativa 2012: incidência de câncer no Brasil. Rio de Janeiro: INCA; 2011.
3. Gasperin SI, Boing AF, Kupek E. Cobertura e fatores associados à realização do exame de detecção do câncer de colo de útero em área urbana no Sul do Brasil: estudo de base populacional. Cad Saúde Pública. 2011; 20(7):1312-22.
4. Batista RPB, Mastroeni, MF. Factors associated with poor adherence to colpocytological examination in adolescent mothers. Acta Paul Enferm. 2012; 25(6):879-88.
5. Nascimento LC, Nery IS, Silva AO. Common knowledge among women on prevention of cervical cancer. Rev Enferm UERJ. 2012; 20(4):476-80.
6. Brischiliari SCR, Dell ACM, Gil LM, Romeiro TC, Gravana AA, Carvalho MD, et al. Papanicolau na pós-menopausa: fatores associados a não realização. Cad Saúde Pública. 2012; 28(10):1976-84.
7. Diogenes MAR, Cesarino MCF, Queiroz INB, Mendes RS. Risk factors for cervical cancer and adherence to papanicolaou among nursing workers. Rev Rene. 2012; 13(1):200-10.
8. Fernandes JV, Rodrigues SHL, Costa YGAS, Silva LCM, Brito AML, Azevedo JWV et al. Knowledge, attitudes, and practices related to Pap test in Northeastern Brazil. Rev Saúde Pública. 2009; 43(5):851-8.
9. Garcia CL, Pereira HC, Marinho MNASB. Percepções das mulheres acerca do exame de prevenção do câncer cérvico-uterino. Rev Bras Prom Saúde. 2010; 23(2):118-25.
10. Ferreira MLSM. Motivos que influenciam a não-realização do exame de Papanicolaou segundo a percepção de mulheres. Esc Anna Nery. 2009; 13(2):378-84.
11. Barroso MF, Gomes KRO, Andrade JX. Frequência da colpocitologia oncótica em jovens com antecedentes obstétricos em Teresina, Piauí, Brasil. Rev Panam Salud Pública. 2011; 29(3):162-8.
12. Freitas MCM, Ribeiro LC, Vieira MT, Teixeira MTB, Bastos RR, Leite ICG. Fatores associados à utilização do teste de Papanicolau entre mulheres idosas no interior do Brasil. Rev Bras Ginecol Obstet. 2012. 34(9):432-7.
13. Camilo C, Lima ML. No que se pensa quando se pensa em doenças: estudo psicométrico dos riscos de saúde. Rev Port Sau Pub. 2010; 28(2):140-54.
14. Coker AL, DeSimone CP, Eggleston KS, Hopenhayn C, Nee J, Tucker T.Smoking and survival among Kentucky women diagnosed with invasive cervical cancer: 1995-2005. Gynecol Oncol. 2009; 112(2):365-9.
15. Haun DR, Pitanga FJG, lessa I. Waist-height ratio compared to other indicators of obesity as predictosr of high coronary risk. Rev Assoc Med Bras. 2009; 55(6):705-11.
16. Malta DC, Iser BPM, Claro RM, Moura L, Silva Jr JB, Monteiro CA. Prevalência de fatores de risco e proteção para doenças crônicas não transmissíveis em adultos: estudo transversal, Brasil, 2011. Epidemiol Serv Saúde. 2013; 22(3):423-34.
17. Freire MCM, Balbo PL, Amador MA, Sardinha LMV. Guias alimentares para a população brasileira: implicações para a Política Nacional de Saúde Bucal. Cad Saúde Pública. 2012; 28(suppl):20-9.
18. Bezerra PCL, Opitz SP, Koifman RJ, Muniz PT. Percepção de saúde e fatores associados em adultos: inquérito populacional em Rio Branco, Acre, Brasil, 2007-2008. Cad Saúde Pública. 2011; 27(12):2441-51.

19. Pavão ALB, Werneck GL, Campos MR. Autoavaliação do estado de saúde e a associação com fatores sociodemográficos, hábitos de vida e morbidade na população: um inquérito nacional. Cad Saúde Pública. 2013; 29(4):723-34.

20. Dantas CN, Enders BC, Salvador PTCO, Alves KYA. A consulta de enfermagem na prevenção do câncer cérvico-uterino para mulheres que a vivenciaram. Rev Rene. 2012; 13(3):591-600.

21. Diógenes MAR, Linard AG, Teixeira CAB. Comunicação, acolhimento e educação em saúde na consulta de enfermagem em ginecologia. Rev Rene. 2010; 11(4):38-46.