
PROSTITUTES' KNOWLEDGE, ATTITUDE AND PRACTICE CONCERNING THE PAPANICOLAOU TEST

Érica de Alencar Rodrigues Neri¹, Maria Sauanna Sany de Moura², Jardeliny Corrêa da Penha³, Thaís Gomes Oliveira dos Reis⁴, Priscila de Souza Aquino⁵, Ana Karina Bezerra Pinheiro⁶

¹ Family Health Strategy nurse in the Teresina Municipal Health Foundation. Teresina, Piauí, Brazil. E-mail: ericaaneri@hotmail.com

² Nursing undergraduate at the Federal University of Piauí. Teresina, Piauí, Brazil. E-mail: sany-sany@hotmail.com

³ Master's student on the Post-Graduate Program in Clinical Care in Nursing and Health at Ceará State University, CAPES scholarship. Fortaleza, Ceará, Brazil. E-mail: deinhapenha@gmail.com

⁴ Nurse. Teresina, Piauí, Brazil. E-mail: talaisamsn@hotmail.com

⁵ Ph.D. in Nursing. Invited professor of the Federal University of Ceará (UFC). Fortaleza, Ceará, Brazil. E-mail: priscilapetenf@gmail.com

⁶ Ph.D. in Nursing. Adjunct professor IV of the UFC. Fortaleza, Ceará, Brazil. E-mail: anakarinaufc@hotmail.com

ABSTRACT: Prostitutes' sexual relations with multiple partners and failure to use condoms compromise their sexual and reproductive health. This study aimed to identify behavioral risk factors associated with cervical cancer among prostitutes in Picos in the state of Piauí (PI) and to evaluate these women's knowledge, attitude and practice in relation to the Papanicolaou test. This study is exploratory and descriptive and was undertaken with 77 women in their workplaces in September – October 2010. Risks were observed linked to sexual and reproductive health which can lead to cervical cancer. Their knowledge is inadequate, but the attitude is appropriate, as nearly all (97.4%) asserted that they would undertake the Papanicolaou test with greater frequency. It is therefore necessary for the nurses to engage in the formulation of educational strategies which may minimize the knowledge deficit of the population studied in relation to the Papanicolaou test.

DESCRIPTORS: Prostitution. Health knowledge, attitudes and practice. Uterine cervical neoplasms.

CONHECIMENTO, ATITUDE E PRÁTICA SOBRE O EXAME PAPANICOLAOU DE PROSTITUTAS

RESUMO: Relações com múltiplos parceiros e não utilização do preservativo pelas prostitutas comprometem sua saúde sexual e reprodutiva. Objetivou-se no estudo identificar fatores de risco comportamentais associados ao câncer de colo uterino entre as prostitutas de Picos-PI e avaliar o conhecimento, a atitude e a prática dessas mulheres em relação ao exame Papanicolaou. Estudo exploratório e descritivo, realizado com 77 mulheres nos seus locais de trabalho, em setembro-outubro de 2010. Observou-se que existem riscos ligados à saúde sexual e reprodutiva que podem propiciar o câncer de colo uterino. Há inadequação no conhecimento, porém a atitude é apropriada, pois a quase totalidade (97,4%) afirmou que faria o exame Papanicolaou com maior frequência. Portanto, é necessário engajamento dos enfermeiros na formulação de estratégias educativas que minimizem o déficit de conhecimento da população estudada sobre Papanicolaou.

DESCRIPTORIOS: Prostituição. Conhecimentos, atitudes e prática em saúde. Neoplasias do colo do útero.

CONOCIMIENTO, ACTITUD Y PRÁCTICA SOBRE EL PAPANICOLAOU DE PROSTITUTAS

RESUMEN: Al mantener relaciones con múltiples parejas y no usar preservativo, las prostitutas ponen en peligro su salud sexual y reproductiva. El objetivo del estudio fue identificar los factores de riesgo de comportamiento asociados con el cáncer de cuello uterino entre prostitutas de Picos-PI y evaluar los conocimientos, actitudes y prácticas en relación de estas mujeres con relación al Papanicolaou. Estudio exploratorio y descriptivo, realizado con 77 mujeres en sus lugares de trabajo, en septiembre/octubre de 2010. Se observó que existen riesgos directamente relacionados con la salud sexual y reproductiva de prostitutas que pueden promover la aparición del cáncer del cuello uterino. Hay una falta de conocimiento, pero la actitud es apropiada, porque casi todos dijeron que harían el examen de Papanicolaou con más frecuencia, 75 (97,4%). Por lo tanto, es necesaria la participación de las enfermeras en formulación de estrategias educativas que reduzcan al mínimo el déficit de conocimiento de la población estudiada sobre el Papanicolaou.

DESCRIPTORIOS: Prostitución. Conocimientos, actitudes y práctica en salud. Neoplasias del cuello uterino.

INTRODUCTION

Cervical Cancer (CC) is the second most frequent type of cancer among women, with approximately 500,000 new cases per year worldwide, responsible for the deaths of approximately 230,000 women per year.¹ For Brazil, 17,540 new cases were anticipated in 2012, with a risk estimated at 17 cases per 100,000 women. In Piauí, the estimated rate for 2012 was 22.58 per 100,000 women, above the national average.²

The Papanicolaou cytology is essential to identify the inflammatory and infectious changes in the female genital tract. It is one of the principal allies of doctors, nurses and primary care service users in the detection of precursor lesions of cervical cancer, increasing the possibility of success in immediate treatment and minimizing the appearance of possible complications. The Brazilian Ministry of Health recommends that the cytopathological examination should be undertaken in women between 25 and 60 years of age once per year and, after two consecutive negative annual examinations, once every three years.³

Among the determinants for the appearance of the high grade intraepithelial lesion and invasive cervical cancer, is infection by the Human papillomavirus (HPV), in association with other risk factors such as smoking, multiple sexual partners, use of oral contraceptives, multiparity, low ingestion of vitamins, early coitarche and co-infection with infectious agents such as Human Immunodeficiency Virus (HIV) and *Chlamydia trachomatis*.¹

Prostitution is an ancient profession which has always exposed women to a variety of types of risk, prejudice and discrimination. This marginalization often arises from these women's low socio-economic condition, vulnerability to sexual violence, addiction to illicit drugs and fear of, or difficulty in, seeking information from the health services.

In the ambit of prostitution, the determinant in the sexual relation is not the practitioners' reciprocal affection or desire; what is in play is the commercialization of the pleasure, whether for money or any other type of benefit.⁴

In maintaining sexual relations with a multiplicity of partners, and not taking the appropriate precautions, the population described here compromises its sexual and reproductive health, possibly developing CC, among other diseases. Furthermore, the need to gather data on prostitutes' knowledge, attitude and practice regarding

cervical cancer and the preventive examination justify this study, as its findings will allow the detection of vulnerabilities and the directing of health education activities with these professionals.

For these reasons, the research aimed to identify behavioral risk factors associated with CC among the prostitutes of Picos-PI and to evaluate these women's knowledge, attitude and practices in relation to the Papanicolaou test.

METHODS

This is a descriptive, exploratory study, carried out in bars, pick-up points and brothels, with the support of the Association of Sex Workers of the municipality of Picos (APROSEP), which is responsible for seminars on Sexually Transmitted Diseases (STD) and AIDS, the use of condoms and the importance of undertaking preventive examinations; the monitoring of the frequency of the undertaking of this examination; and the distribution of educational materials and condoms.

The study population was made up of 450 prostitutes registered with APROSEP, and a sample calculation for finite populations was made. A Confidence Interval of 95% and a sample error of 5% were established.

77 women took part in the study, all of whom met the inclusion criteria established: to be a prostitute associated with APROSEP, and to be over 18 years old. Women who had mental problems or who were under the effect of drugs were excluded from the study, as were those who were working at the time of the interview. For participation in the research, the prostitutes were approached in the prostitution zones identified by APROSEP, in the mornings, from Monday to Friday, this being a non-probabilistic convenience sample.

The data was collected between the months of September and October, using the technique of interview and the Knowledge, Attitude and Practice (KAP) survey regarding the Papanicolaou test. The KAP survey allows one to measure what the population knows and thinks and how it acts in relation to a specified problem, by means of a set of questions developed based on the principal variables (causes or effects), which a given theory understands as determinants for a behavior.⁵ The survey was constructed through reading other works with distinct populations, and from the present study's authors' knowledge.

Variables related to the prostitutes (age, marital status, schooling, income) were added to

the KAP survey, as were variables related to the behavioral risk factors (coitarche, history of STDs, alcoholism, smoking, and drug use). The instrument was validated by two judges from the area of sexual and reproductive health and, following changes, the instrument was tested with ten prostitutes who did not participate in the research.

Knowledge was considered to be adequate when the prostitute had previously heard of the examination, knew that it is to detect cervical cancer, and was able to cite two care steps to be taken prior to the examination; knowledge was considered inadequate when she had never heard of the examination, or had heard of it but did not know what it is for; or when she could not cite two care steps necessary to take prior to the examination.

In relation to attitude, it was adequate when the prostitute answered that she would undertake the examination more frequently and, at least, at three yearly intervals; it was inadequate when she answered that she would not undertake it with greater frequency. Regarding practice, it was adequate when she answered that she undertakes the examination at least once every three years and had last undertaken it within this period; it was inadequate when she had undertaken the examination more than three years previously, had never had it, or could not remember the date of the last consultation.

The data was presented in illustrative tables containing absolute and relative frequencies and was analyzed with descriptive statistics, using the program Microsoft Excel for Windows®, version 2007.

So as to respect the rights of the participants in the research, the study was submitted to the Federal University of Piauí's Research Ethics Committee, which approved it under protocol n. 0177.0.045.000-10.

RESULTS AND DISCUSSION

According to the data shown in table 1, the interviewees were aged between 18 and 50 years old, with an average of 28.1 years old and a predominance of those aged between 21 and 30 (51.9%), showing young women's prevalence in prostitution. This fact is understandable, as beauty and youth are requirements for the commercialization of sexual pleasure.⁶

The prostitutes consider their age to be a characteristic which exercises a powerful influence in the competition for the client, principally during the negotiation of the encounter's condi-

tions. The older women, having spent longer in the profession, are seen as having greater sexual experience, although many clients do not demand this characteristic, disregarding these woman and preferring the younger women.⁷

When questioned about their marital status, the most common response was 'single'. Sustaining a steady relationship is difficult when working as a prostitute, as the man may not be able to tolerate this way of life; equally, having a stable relationship may not be a priority in the prostitutes' lives.

In relation to schooling, it was observed that 51 of them (66.2%) had few years of study, as at the most they had started but not finished junior high and that in addition to this, 45 (58.4%) had an income of up to one minimum salary, these being characteristics which are consistently associated with lack of information and the compromising of the maintenance of a healthy life. A similar result was found in another study, in which it was observed that 42 (51.9%) prostitutes interviewed had a monthly income of between 1 and 3 minimum salaries.⁸

Table 1 - The prostitutes' socio-demographic characteristics. Picos-PI, Sept-Oct, 2010

Socio-demographic data (n=77)	n	%
Age		
Between 18 and 20 years old	10	13.0
Between 21 and 30 years old	40	51.9
Between 31 and 40 years old	19	24.7
Between 41 and 50 years old	8	10.4
Marital status		
Single	68	88.3
Married	2	2.6
Stable relationship	4	5.2
Separated	2	2.6
Widow	1	1.3
Schooling		
Illiterate	4	5.2
Junior High incomplete	47	61
Junior High complete	11	14.3
Senior High incomplete	10	13
Senior High complete	3	3.9
University - incomplete	2	2.6
Individual monthly income (from prostitution)		
Up to ½ a minimum salary*	11	14.3
Between ½ and 1 minimum salary	34	44.1
Between 1 and 2 minimum salaries	21	27.3
Between 3 and 4 minimum salaries	7	9.1
Over 4 minimum salaries	4	5.2

* minimum salary in 2010 = R\$ 510,00.

Regarding the behavioral risk factors associated with CC, the information is shown in table 2, which describes the data relative to coitarche, the method of contraception, previous history of STDs, alcoholism, smoking and undertaking of the HIV test.

Table 2 – Distribution of behavioral risk factors associated with cervical cancer among the prostitutes interviewed. Picos-PI, Sept-Oct, 2010

Behavioral risk factors (n=77)	n	%
Age of coitarche		
Between 10 and 15 years old	51	66.2
Between 16 and 20 years old	26	33.8
Method of contraception used with steady partner		
Oral	20	43.5
Sterilization	18	39.1
Injection	5	10.9
Oral and condom	2	4.3
Condom	1	2.2
None	31	40.2
Previous history of STD		
Yes	9	11.7
No	68	88.3
History of alcoholism		
Yes	63	81.8
No	14	18.2
Active smoker		
Yes	45	58.4
No	32	41.5
Has undertaken HIV test		
Yes	64	83.1
No	13	16.9

Early coitarche was observed in the population investigated, with an average age of 14.8. It is emphasized that this constitutes a common risk factor in other studies with distinct populations.⁹ We can consider the following as vulnerability factors for cervical cancer: early coitarche, multiple sex partners, a history of STDs, prolonged use of oral contraception, infection with HPV, smoking and immunosuppression.³

The investigation of the method of contraception used is of great importance, as it is known that the use of oral hormonal contraception is also a known risk factor for the occurrence of CC. The low prevalence of condom use with the steady partner is noteworthy; this can raise the occurrence of STDs.

Furthermore, a study carried out in Fortaleza

in the North-East of Brazil showed that condom use in sterilized women is extremely low: 20 (7.2%) reports.¹⁰ Thus, it may be observed that the women interviewed are at risk of acquiring CC. A separate study also suggests the low prevalence of condom use, principally with the steady partner, in female prostitutes.¹¹

In spite of the few reports of condom use, on being questioned about their prior history of STDs, only 9 (11.7%) stated that they had had this type of pathology. The low prevalence may be associated with ignorance of the characteristic symptoms. STDs are often undiagnosed, as the women do not always associate the symptoms with a sexually transmitted disease, which increases the cases of under-diagnosis.

A study undertaken with female sex workers in Umuarama in the state of Paraná, however, showed a different result. In that study, blood was collected from 75 women for researching HIV, HBsAg and syphilis, and 52 of the women agreed to the collection of samples of vaginal secretions for the researching of trichomoniasis, candida and bacterial vaginosis. As a result, it was observed that 24 (32%) had one or more of the STDs studied.¹²

The use of alcoholic drinks was declared by 63 (81.8%) prostitutes. This high percentage may be explained by factors such as the agreement with bar owners to encourage consumption by clients, or even by the need to use alcohol as a means of escaping from the difficulties encountered in the work.¹³ Furthermore, alcohol can cause dependence and affect the mental, neurological and emotional functions. The regular ingestion of alcoholic drinks leads to memory loss, as well as risks such as failure to use condoms.¹⁴

Smoking was also observed in 45 (58.4%) interviewees. One study ascertained the prevalence of smoking in 56.7% of the prostitutes included in the research.⁶ Observing these results, one can see that the consumption of tobacco is common among these women, a worrying fact, as it is known that cigarettes contain innumerable toxic substances, possibly bringing irreversible harm such as diverse types of cancer, including cervical cancer.

Smoking acts in oncogenesis of the cervical epithelia through the depression of the local immunocompetence and the risk is directly related to the quantity of cigarettes smoked.^{15,3} In this study, of the 45 women who mentioned being active smokers, 23 (51.1%) admitted smoking between 20 and 40 cigarettes per day.

Also checked was whether the HIV test had been taken, as this attitude can reveal the risk perceived, either from the multiplicity of partners which is intrinsic to the profession, or from the non-use of condoms in sexual practices. 64 women were found (83.1%) who had had the test. The HIV test cannot be confused with prevention, as it is only one of the stages of the diagnostic process. Prevention presupposes a search for information, a profound reflection on risks and how these relate to the subject's life, and the constant discussion of sex, pleasure, responsibility, power and the autonomy to take decisions.¹⁶

Finally, the variables related to the prostitutes' knowledge, attitude and practice in relation to the Papanicolaou test were investigated; the information is in table 3.

Table 3 - Prostitutes' knowledge, attitude and practice regarding the Papanicolaou test. Picos-PI, Sept-Oct, 2010

Knowledge	n	%
Has heard about prevention of CC	76	98.7
Aim of the test	12	15.6
Mention two correct care steps to take prior to the test	3	3.8
Adequate knowledge	1	1.3
Attitude		
Would do the test more frequently	75	97.4
Adequate attitude	75	97.4
Practice		
Frequency equal to or less than once every three years	62	80.5
Last exam less than three years previously	65	84.4
Adequate practice	62	80.5

When asked if they had heard of the preventive test, 76 (98.7%) answered yes. However, 30 (38.9%) could not state what the test is for, 21 (27.3%) did not know that the test detected CC and 7 (9.1%) stated that it is to prevent CC.

Separate research found a similar result when it questioned 250 women as to whether they had heard of the test, as 246 (98.4%) responded in the positive. The answer which most stood out in relation to the objective of the examination was that it was for preventing CC, with 137 (54.8%), followed by detecting or preventing AIDS, with 40 (42.1%).¹⁷ The knowledge about the Papanicolaou test was also investigated in a study undertaken in Rio Grande do Norte, with women aged between 15 and 69 years old, with an observed prevalence

of 46.1% of adequate knowledge, well above the data obtained in the present study with prostitutes.¹⁸

The fact is worrying that these women do not know what the exam is for, which may hinder its regular undertaking. The test's principal aim is the early detection of cervical cancer, that is, when it has not yet become invasive. However, the microscopic analysis and laboratorial tests, allied with the clinical examination during the undertaking of the Papanicolaou test also detect STD.³

In spite of the preventive examination not having the detection and cure of Sexually Transmitted Diseases (STDs) as an initial aim, it is because of these conditions that the majority of women seek the health service, thus making it possible for the health professionals to act in the investigation, prevention, treatment and monitoring of other health issues, including CC.¹⁹

In relation to the care steps which must be taken prior to the examination, the majority of the prostitutes - 43 (55.8%), could not mention even one care step. This is alarming, as it may be imagined that a person who does not know of them, does not practice them. The absence of care steps taken prior to the exam can cause alteration in the results, either by making the procedure difficult to carry out, or by making it difficult to read the slides, creating problems which can involve frustration on the part of the clients and leading to their not returning to repeat the examination.

Among those who answered regarding the care steps, 21 (27.3%) referred only to abstaining from sex. Thinking that it is necessary for there to be a prolonged period of abstinence can discourage the prostitutes from undertaking the examination regularly, as it entails a reduction in income, given that having sexual relations with penetration is the principal characteristic of their work. Five (6.5%) interviewees mentioned erroneous care steps.

A study undertaken with 120 women from a primary health center in Natal, in the state of Rio Grande do Norte, evidenced that the most cited care steps were: not having sexual relations on the eve of the examination (42%), not using ointment or pessaries (33%) and not to be menstruating (17%).²⁰

Other care steps need to be known to the women, such as not carrying out intravaginal examinations or douching within 48 hours of the cell collection, avoiding sexual relations in the 48 hours prior to the examination, avoiding using

local contraceptives or spermicides 48 hours prior to the examination, and waiting until the fifth day after the end of menstruation.³

For these reasons, one can see the need for an educational intervention directed at the women concerning the care steps to be taken prior to the cell collection, given that neglecting these interferes with the undertaking of the examination and with its result, recognizing that the above-mentioned care steps must be known to all the women who undertake the test.²⁰

Therefore, in the evaluation proposed, only one (1.3%) prostitute was classified as having adequate knowledge, as she was the only one to answer all the questions analyzing knowledge correctly, that is, she mentioned that she had heard of the exam, which is to detect CC, and cited two care steps which precede the examination.

This percentage of knowledge was extremely low when compared with other studies. A study in Peru with 501 patients observed that 53 (10.6%) had a high knowledge regarding the Papanicolaou test.²¹ The unawareness of the test's importance may predispose the women not to undertake it periodically.

In relation to attitude, it was considered adequate in 75 (97.4%) cases, in which the interviewees asserted that if they could, they would undertake the preventive examination with a higher frequency, it being the case that 65 (84.4%) would do it more than once a year, and 10 (13%) would do it once a year. In spite of the predominance of inadequate knowledge on the examination, the prostitutes interviewed believe it to be an important examination for their health.

Also investigated was the reason for which they would do the examination more frequently, it standing out that they would do it simply for self-care, 29 (38.6%) or so as to prevent diseases, 23 (30.6%). Only 6 (8%) mentioned the prevention of CC as a reason, and 5 (6.6%) the profession which they exercise. It should be noted that some were not able to express themselves and that other reasons also appeared, such as: the non-use of condoms with the steady partner, fear of acquiring diseases, of transmitting them to their children and of a single examination not detecting the disease. This data simply emphasizes the prostitutes' ignorance about the purpose of the Papanicolaou test.

The KAP Survey carried out showed that 169 (63.3%) women interviewed presented an adequate attitude by expressing, consciously, the

recognition of its advantages and benefits and correctly explaining the importance of undertaking it periodically.¹⁸ In the study with women in Fortaleza, on the other hand, the prevalence of an adequate attitude concerning the Papanicolaou test was 28%, which may be related to the criteria used as parameters for classification.¹⁷ Having an adequate attitude may influence a commensurate practice, however, it does not guarantee it, which explains the divergences between attitude and practice found in the study.

In relation to practice, 62 (80.5%) stated that they carry out the test at least once every three years, which is in line with the Ministry of Health recommendations, in the case of two consecutive annual tests.³ Nevertheless, six (7.8%) had never done it and five (6.5%) only did it when some symptom appears. Of the interviewees, 65 (84.4%) said that they had undertaken the test within the last three years, indicating that, concerning the population interviewed, the coverage of the Papanicolaou test was above the goal of 80% established by the 2006 Pact for Life (*Pacto pela Vida*).²²

The most commonly found frequency for the undertaking of the test was more than once a year, 26 (33.8%), followed by once a year, 21 (27.3%). The practice was considered adequate in 62 (80.5%) cases. The encouragement and guidance given by the president and social educators of APROSEP may have contributed significantly to this positive result. Nevertheless, the work must be incessant in relation to sensitizing these women in regard to the test's importance, given that many still have an inadequate attitude to it. In Fortaleza, 67.6% of the women interviewed had adequate practice in relation to the Papanicolaou test.¹⁷

The Papanicolaou test is a simple, low cost examination, and is of fundamental importance if we are to reduce incidence and mortality from CC. Even so, many women still resist undertaking the examination from fear or embarrassment in the face of keeping their intimate parts exposed.²³

Furthermore, studies have shown that lack of patience and dialog with patients during the gynecological examination has contributed to a reduction in patients seeking the health service so as to prevent cervical cancer. This is a common reality when the attendance is provided by the Unified Health System (*Sistema Único de Saúde – SUS*).²⁴

Thus, one can see the importance of health education strategies undertaken with a view to achieving efficient results in controlling gyne-

cological cancer. It is often the nurses who are directly responsible for undertaking the colposcopic examinations in the health centers, but in spite of their training directed at health promotion, a distancing from educational activities to the detriment of the consultations has been observed, which is alarming to the profession.¹⁷

CONCLUSIONS

The study evidenced that the prostitutes have inadequate knowledge on the Papanicolaou test, as the majority had heard of the test, but did not know for sure either what it is for, or what care steps are necessary to be taken before undertaking it. In contrast with this result, an especially appropriate attitude was observed, as nearly all asserted that they would do the test with higher frequency and, at the most, once a year, showing the belief in the test's importance for maintaining their health, even though they knew little about it. The practice was considered adequate in 76.6% of the interviews. This was the percentage of the prostitutes who mentioned having the test at a frequency of, at the most, once every three years, at the same time as asserting that the last test had been in the last three years.

With this, it can be inferred that the fact that the majority of the women mention having undertaken the test in the last three years is encouraging, as it indicates good coverage of tests in a population shown to be co-existing with risk factors for the development of cervical cancer.

Among the risk factors present in the daily life of the women who prostitute themselves, in addition to the multiplicity of partners, the most frequently observed are: low socio-economic condition, early coitarche, and smoking. The use of oral contraceptives, also considered a risk factor for CC, was mentioned by few interviewees. In addition, even taking into account the prostitutes' intense vulnerability, it was noted that the reports of STDs were scarce.

The data presented favors the knowledge of the vulnerabilities associated with the prostitutes, related principally to cervical cancer, which may contribute to directing health professionals' actions, in the quest for the promotion of these women's sexual health, principally related to the test's objective and care steps called for prior to the cell collection. Therefore, the results show the need for greater engagement by managers in formulating educational strategies to minimize the

studied population's knowledge deficit regarding the Papanicolaou test, which is also a fundamental role of nursing professionals.

Thus, it is hoped that this study may contribute to changing the reality observed, as well as serving as a precursor for further research on this issue, so as to prevent cervical cancer, particularly in groups with conditions of greater vulnerability. Further studies need to be undertaken, so as to estimate the occurrence of the adequacy of knowledge, attitude and practice in other regions of Brazil.

REFERENCES

1. Instituto Nacional do Câncer (BR). Estimativa 2010: Incidência de Câncer no Brasil. Síntese de resultados e comentários. 2010 [acesso 2010 Abr 21]. Disponível em: http://www.inca.gov.br/estimativa/2010/index.asp?link=conteudo_view.asp&ID=5
2. Instituto Nacional do Câncer (BR). Estimativa 2012: Incidência de câncer no Brasil. Neoplasia maligna do colo do útero. 2012 [acesso 2012 Jan 20]. Disponível em: <http://www.inca.gov.br/estimativa/2012/mapa.asp?ID=5>
3. Ministério da Saúde (BR). Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Controle dos cânceres do colo do útero e da mama. Brasília (DF): MS; 2006.
4. Benzaken AS, Garcia EG, Sardinha JCG, Pedrosa VL, Paiva V. Intervenção de base comunitária para a prevenção das DST/Aids na região amazônica, Brasil. *Rev Saúde Pública*. 2007 Dez; 41(2):118-26.
5. Ministério da Educação (BR). Instituto Nacional do Desenvolvimento da Educação. Manual do aplicador do estudo CAP. Brasília (DF): ME; 2002.
6. Aquino PS. Desempenho das atividades de vida de Prostitutas [dissertação]. Fortaleza (CE): Universidade Federal do Ceará, Programa de Pós-Graduação em Enfermagem; 2007.
7. Guimarães K, Merchám-Hamman E. Comercializando fantasias: a representação social da prostituição, dilemas da profissão e a construção da cidadania. *Rev Estud Fem*. 2007 Set-Dez; 13(3):525-44.
8. Nicolau AIO, Aquino PS, Moura ERF, Pinheiro AKB. Perfil gineco-obstétrico e realização do exame de prevenção por prostitutas de Fortaleza. *Rev RENE*. 2008 Jan-Mar; 9(1):103-10.
9. Cirino FMSB, Nichiata LYI, Borges ALV. Conhecimento, atitude e práticas na prevenção do câncer de colo uterino e HPV em adolescentes. *Esc Anna Nery*. 2010 Jan-Mar; 14(1):126-34.
10. Nicolau AIO, Moraes MLC, Lima DJM, Ribeiro SG, Aquino PS, Pinheiro AKB. Perfil sexual de mulheres

- esterilizadas: comportamentos e vulnerabilidades. *Rev RENE*. 2011 Abr-Jun; 12(2):253-60.
11. Aquino PS, Nicolau AIO, Pinheiro AKB. Desempenho das atividades de prostitutas segundo o modelo de enfermagem de Roper, Logan e Tierney. *Rev Bras Enferm*. 2011 Jan-Fev; 64(1):136-44.
 12. Correa NAB, Matumoto FH, Lonardon MVC. Doenças sexualmente transmissíveis em mulheres profissionais do sexo, Umuarama, Estado do Paraná. *Rev Bras Anal Clin*. 2008 Jul-Set; 40(3):209-13.
 13. Passos ADC, Figueiredo JFC. Fatores de risco para doenças sexualmente transmissíveis entre prostitutas e travestis de Ribeirão Preto (SP), Brasil. *Rev Panam Salud Publica*. 2004 Ago; 16(2):95-101.
 14. Ministério da Saúde (BR). Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Guia alimentar para a população brasileira: promovendo uma alimentação saudável. Brasília (DF): MS; 2008.
 15. Uchimura NS, Ribalta JC, Focchi J, Uchimura TT, Simões MJ, Silva ES. Os efeitos do tabagismo na densidade das células de Langerhans do colo uterino. *Acta Scientiarum. Health Sciences*. 2004 Jul-Dez; 26(2):369-73.
 16. Ministério da Saúde (BR). Secretaria de Políticas de Saúde Coordenação Nacional de DST e Aids. Profissionais do sexo: documento referencial para ações de prevenção das DST e da Aids. Brasília (DF): MS; 2002.
 17. Vasconcelos CTM, Pinheiro AKB, Castelo ARP, Costa LQ, Oliveira RG. Conhecimento, atitude e prática relacionada ao exame colpocitológico entre usuárias de uma unidade básica de saúde. *Rev Latino-Am Enfermagem*. 2011 Jan-Fev; 19(1):97-105.
 18. Fernandes JV, Rodrigues SHL, Costa YGAS, Silva LCM, Brito AML, Azevedo JWV, et al. Conhecimentos, atitudes e prática do exame de Papanicolaou por mulheres, Nordeste do Brasil. *Rev Saúde Pública*. 2009 Set- Out; 43(5):851-8.
 19. Lima TM, Castelo ARP, Oliveira RG, Costa LQ, Tavares MC, Santiago JMV, et al. Analysis of the cytopathological reports achieved and not removed from a Centro de Parto Natural (CPN) in Fortaleza-CE: a documentary study. *Online Braz J Nurs [online]*. 2009 [access 2012 Jul 01]; 8(2). Available: <http://www.uff.br/objnursing/index.php/nursing/article/view/j.1676-4285.2009.2354>
 20. Davim RMB, Torres GV, Silva RAR, Silva DAR. Conhecimento de mulheres de uma Unidade Básica de Saúde da cidade de Natal/RN sobre o exame de Papanicolaou. *Rev Esc Enferm USP*. 2005 Set; 39(3):296-302.
 21. Bazán F, Posso M, Gutiérrez C. Conocimientos, actitudes y prácticas sobre la prueba de Papanicolaou. *An Fac Med Lima*. 2007 Jan-Mar; 68(1):47-54.
 22. Ministério da Saúde (BR) Secretaria Executiva, Departamento de Apoio à descentralização Coordenação-Geral de Apoio à Gestão Descentralizada. Diretrizes operacionais dos Pactos pela Vida, em Defesa do SUS e de Gestão. Brasília (DF): MS; 2006.
 23. Américo CF, Freitas LV, Dias LMB, Chagas ACMA, Lima TM, Moura ERF, et al. Women who take pap smear in Fortaleza - social and sexual characterization. *Online Braz J Nurs [online]*. 2009 [access 2012 Jul 01]; 8(3). Available: <http://www.objnursing.uff.br/index.php/nursing/article/view/j.1676-4285.2009.2528/557>
 24. Miranda-Ribeiro P, Simão AB. Demografia em debate. Belo Horizonte (MG): Associação Brasileira em Estudos Populacionais; 2008.