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Receptivity and Factors Associated with Cervical Cancer Preventive Measures in a Capital City of Northern Brazil

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Abstract

Cervical Cancer is an important public health problem, especially in the North of Brazil, although there is vast academic knowledge about its pathophysiology and preventive measures. This study evaluated receptivity to the HPV vaccine and adherence to the Cervical Cancer Prevention exam (CCP) among Primary Care users in the city of Palmas, TO, in addition to identifying the socio-cultural factors and knowledge about HPV and vaccination associated with these forms of prevention. This was a quantitative cross-sectional study, with a stratified sample of 664 users, between 18 and 60 years old, from 30 Community Health Centers in the city of Palmas, TO. For association of variables, the chi-square test was adopted, with a significance level of 5%. HPV vaccine receptivity by users was 84.79% (n=563), while receptivity toward vaccinating their children was 91.85% (n=575). Adherence to the CCP was 66.93% among the women surveyed (n=336). Inadequate knowledge about HPV and the vaccines was 70.34% (n=408) and 43.97% (n=266), respectively. Adequate knowledge about the virus and the HPV vaccination was associated with greater receptivity to child vaccination (p=0.009 and p=0.001, respectively) and adherence to CCP (p=0.007 and p<0.001), which confirms the importance of education in health in disease prevention.

Keywords: Cervical neoplasms, Papillomaviridae, Pap test, Papillomavirus vaccines.

INTRODUCTION

Cervical Cancer (CC) is the second most frequent cancer among women in the Northern Region of Brazil (21.20/100 thousand), without considering non-melanoma skin tumors. This region is the only one in the country where cancer rates of breast and cervix are equivalent among women[1]. In a study by Barbosa and collaborators, when analyzing estimates for 2030, they showed that the mortality rates for this cancer will increase only in the North and Northeastern regions of Brazil; the others regions are expected to show rates with a decreasing trend, mainly due to the reduction of risks[2].

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The association between Human Papillomavirus (HPV) and CC was first assumed almost 50 years ago. Today, it is known that HPV is necessary for the progression towards cancer[3]. Genital infection with this virus is capable of causing cellular changes that can progress to cancer. These pre-neoplastic changes are discovered on the Papanicolaou exam, also known as the cervical cancer preventive exam (CCP) and are curable in almost all cases1. The discovery of the association of cancer with HPV and the possibility of identifying precursor lesions of cancer through the CCP explain why CC is classified as a preventable cause of death by appropriate actions promoting health, prevention, control and care, and is, therefore, an indicator of the quality of the intervention of the Unified Health System (SUS)[4].

When considering that HPV vaccination constitutes primary prevention and that cancer screening through regular CCP is the most important form of secondary prevention, several studies have suggested that the level of knowledge about HPV and/or about the HPV vaccines has an impact on adherence to the aforementioned forms of prevention[5-8]. However, many of these are studies with small samples or that included only portions of the population[9-11]. In this context, the present research has social and scientific relevance, given the scarcity of publications on the specific theme for the Northern Brazilian region.

The identification of factors associated with vaccine receptivity contributes to actions in favor of vaccination adherence, since favorable receptivity contributes to obtaining satisfactory vaccine coverage[12]. The HPV vaccine was included in the National Immunization Program (NIP) in 2014 and the cumulative coverage of its two doses has not yet reached the target, especially among boys[12]. Therefore, investigating vaccine receptivity is relevant to understand whether low receptivity is the justification for the still modest adherence.

There are three vaccines available on the market: bivalent, quadrivalent, and nonavalent. In Brazil, the Ministry of Health makes the quadrivalent vaccine available to girls aged between 9 and 14 years, with an expansion in 2017, for boys between 11 and 14 years old, and for men and women from 9 to 26 years old in priority groups12,13. All vaccines prevent infections by subtypes 16 and 18 - high-risk HPVs - which cause about 70% of cervical neoplasms, and their safety is guaranteed by the World Health Organization (WHO) with proven effectiveness greater than 90% in prevention of cervical intraepithelial neoplasms, when administered to the population of girls who have not yet started sexual activity[12,13].

The CCP exam is performed on women aged 25 to 64 years, and it is recommended to repeat the exam every three years after two consecutive normal results obtained with an interval of one year[14]. Even vaccinated women, when they reach the recommended age, should undergo CCP, as the vaccine does not protect against all HPV oncogenic subtypes[14]. In order for there to be an epidemiological impact on the decrease in CC incidence and mortality rates, it is estimated that screening programs should cover 85% of women[2].

Adherence to the CCP in the city of Palmas, TO was studied in order to find subsidies that justify the still high incidence of CC in the North region, given that the control of the number of new cases is directly related to the quality of access that women have to regular screening services[2,15]. Economic factors are important determinants of this reality[2,5,16], due to reasons that include poor education about preventive behaviors and the lack of resources allocated for easy and agile access to the health system[5,15]. Consequently, limitations on access to health services not only prevent poorer women from being diagnosed, but they also preclude the opportunity to receive adequate treatment in time to obtain a cure[2,16].

In view of the scarcity of publications that address the receptivity to preventive measures - primary and secondary - against CC in the Northern Brazil, this study was developed with the objective of assessing receptivity to the HPV vaccine and adherence to the cervical cancer prevention exam among users of Primary Health Care services in the city of Palmas, capital of Tocantins, in addition to checking the association of socio-cultural factors and knowledge about HPV and its vaccine with these forms of prevention.

METHODOLOGY

It was a quantitative, descriptive, and cross-sectional study, composed of a sample of 664 users registered in the 30 Community Health Centers (CHC) of the Family Health Strategy in the city of Palmas, Tocantins, with data collection carried out between December from 2017 to March 2018. The study included individuals aged 18 to 60 years, of both sexes, and users of Primary Health Care (PHC) services. The sampling was random and stratified by CHC, distributed in the three regions of the urban area of Palmas: North, Central, and South. The sample size was calculated according to the formula proposed by Barbetta17, from the estimated number of the population of Palmas (in 2014) with age between 18 and 60 years, according to IBGE/DAB Palmas - provided by the Municipal Health Department of Palmas - of 167,286 inhabitants, reaching a maximum tolerable error of 3.873%.

The study was approved by the Human Research Ethics Committee of the Federal University of Tocantins (UFT), under CAAE No. 72643817.4.0000.5519. Participation in the study was voluntary and occurred while individuals were waiting for care. All participants signed the Informed Consent Form. For data collection, an instrument with 30 closed questions was elaborated, based on two others already validated[6,9]. A pre-test of the questionnaire was carried out in a small sample of SUS users, which was disregarded in the statistical analysis. This instrument addressed, in addition to the questions related to the characterization of the user's socio-cultural profile, the following themes: relationship between HPV and CC, forms of HPV contagion, risk factors for CC, adherence to CCP, target audience of the HPV vaccine, audience that could benefit from vaccination, receptivity to HPV vaccine, , and reasons for not accepting child vaccination.

The EpiInfo 7.0 program was used for tabulation and statistical analysis of the data. All variables were organized into classes and described by absolute and percentage frequencies. The chi-square test was applied to analyze the association between variables, with a significance level of 5%. Dependent variables considered were: receptivity to the HPV vaccine and adherence to the Prevention exam; and independent variables were: gender, age, skin color, religion, marital status, having children, financially responsible person at home, education of the person responsible for the home, CHC region, in addition to knowledge about HPV and the HPV vaccine.

The "receptivity to the HPV vaccine" refers to the acceptance of the vaccine by the participants as a good intervention. Such a concept does not necessarily imply the action of being vaccinated against the virus. The latter is perceived by the authors, as well as seen in the literature7, as adherence to the vaccine. Receptivity was assessed, not adherence, because the vaccine is not provided by SUS for the age group of the sample studied. In addition, the identification of factors associated with acceptance can contribute to actions in favor of adherence. In order to identify adherence to the CCP, the following question was asked: “Have you

performed the Cervical Prevention exam in the last 3 years?"; the answers "yes", "no", and "I am a man" were offered. All analyses related to adherence to the CCP took into account only the female portion of the sample, comprising 502 users aged between 18 and 60 years.

The evaluation of knowledge about HPV consisted of analyzing the following themes: 1) having heard about HPV; 2) knowing the relationship between HPV and CC; 3) knowing how the virus infects; 4) knowing the purpose of the CCP; and 5) knowing the risk factors related to developing CC. The first two themes correspond to one item each. The third theme covers 10 items, the fourth theme "knowing the purpose of the CCP" covers 4 items, and the fifth theme consists of 6 items. Thus, a total of 22 items were analyzed to measure the participant's knowledge concerning HPV. Each item had only one correct answer. A total score was calculated by adding all the correct answers (range 0 to 22) and their knowledge was considered adequate or inadequate according to that score. Thus, adequate knowledge was established when there were more than 50% correct answers (12 or more items); and inadequate knowledge when there were 50% or less correct answers (11 or less items). The criterion for classifying knowledge into adequate or inadequate was based on the study by Martins et al.18. Participants who failed to answer 11 or more items (50% or more of the items covered) were excluded from the analysis, totaling 84 questionnaires excluded.

In the construction of the variable on knowledge concerning the HPV vaccine, questions were analyzed according to the themes: knowing about the existence of the vaccine, knowing that it is provided free of charge by SUS, knowing the target audience of the NIP, and knowing the audience that could benefit from the vaccination. Each of these themes corresponded to 1 item, totaling 4 items. Each item had only one correct answer. A total knowledge score was calculated by adding up all the correct answers (range 0 to 4) and the knowledge was classified according to that score. Thus, it was considered as adequate knowledge if there were more than two correct answers (more than 50%); and as inadequate knowledge when the participant got 2 or less correct responses. In addition, participants who failed to answer 2 or more of the 4 items were disregarded, resulting in the exclusion of 59 questionnaires.

RESULTS

The sample of 664 people was composed, in its majority, by women (n=502; 75.60%), brown (n=409; 61.60%), up to 45 years old (n=527; 79.37%), with some kind of religion (n=590; 88.86%), with a stable partner (n=405; 60.99%), and are a CHC user in the southern region of the city (n=297; 44.73%).

Among the respondents, faced with the hypothesis that the vaccine is offered free to users, 84.79% (n=563) answered that they would like to be vaccinated against HPV. There was a significant association between the desire to be vaccinated and the variables of gender ($p<0.001$), age of the participant ($p<0.001$), and education of the person in charge of the household ($p=0.044$) (Table 1). Thus, the female sex, people aged between 18 and 45 years old, and residents of a home whose guardian has 9 years or more of study showed greater receptivity to the HPV vaccine.

Of the 626 users who answered the question about the possibility of vaccinating a child (referred to in this text as "filial vaccination"), 575 (91.85%) stated that they would accept child vaccination. The fact of having children

was not associated with the willingness of users to supposedly vaccinate them. Only the variables addressing knowledge about HPV and knowledge about the HPV vaccine were associated with parental receptivity (p=0.009 and p=0.001, respectively) (Table 2), so that adequate knowledge about HPV and/or about the HPV vaccine were the factors that were related to the action of agreeing with the hypothesis of vaccinating a child.

Still considering receptivity to child vaccination, only 51 participants rejected this alternative. Among such participants, 37 spoke about the reasons for non-acceptance: 16 users (31.37%) said they had never thought about the subject; 8 (15.69%) revealed fear of side effects; 6 (11.77%) assessed the vaccine as unnecessary, since the child would not have an active sex life at the time the vaccination is recommended; 5 (9.80%) did not trust the vaccine; and 2 (3.92%) considered that, in the age group that the NIP offers the vaccine, the child would be too young to be vaccinated.

The sample of 664 users was composed of 502 women, among whom there was a 66.93% adherence to the CCP (n=336). There was a significant association between having the exam within the last three years and the variables of having children (p<0.001), knowledge about HPV (p=0.007), and knowledge about the HPV vaccine (p<0.001) (Table 3). Therefore, women who were mothers and/or who had adequate knowledge about HPV and/or the vaccine underwent a CCP within the three years prior to the date of data collection.

Of the 664 participants, 526 (79.22%) said they had heard about HPV. A little less than half (45.03%; n=299) knew the relationship between HPV and cervical cancer. The other questions that involved knowledge about HPV were analyzed together in the composition of this variable. For this analysis, 580 individuals were considered, of which 408 (70.34%) demonstrated inadequate knowledge (Table 4).

Regarding the vaccine, 498 (75%) said they had heard of it. Of these, 90.16% (n=449) knew that it is provided freely by SUS, 34.14% (n=170) knew the target audience, and 32.33% (n=161) knew its benefit for anyone who has not been previously infected by the vaccine's virus subtypes. These four questions were analyzed together in the variable "knowledge" about the vaccine. Of the 605 users considered in the calculations, 339 (56.03%) demonstrated inadequate knowledge (Table 4).

Table 1 – Receptivity to the HPV vaccine and its association with socio-cultural variables and knowledge about Human Papillomavirus and its vaccine, in users of Primary Health Care (PHC) in Palmas,TO, 2018.

	HPV vaccine receptivity				
	Yes		No		
Variables	n.	%	n.	%	P
Gender (N=626)					**<0.001**
Male	119	78.81	32	21.19	
Female	444	93.47	31	6.53	
Age (N=618)					**<0.001**
18-45 years	460	92.56	37	7.44	
46-60 years	95	78.51	26	21.49	
Skin color (N=614)					0.429
White	108	87.80	15	12.20	
Not white	443	90.22	48	9.78	
Religion (N=624)					0.954
Some religion	500	89.93	56	10.07	
No religion	61	89.71	7	10.29	
Head of the household (N=580)					0.072
Respondent	295	87.54	42	12.46	
Another person	224	92.18	19	7.82	
Education of household head (N=620)					**0.044**
Up to 8 years of study	133	85.81	22	14.19	
9 years of study or more	425	91.40	40	8.60	
Marital status (N=625)					0.702
Married	344	90.29	37	9.71	
Not married	218	89.33	26	10.66	
Children (N=621)					0.705
Yes	422	89.60	49	10.40	
No	136	90.67	14	9.33	
Region (N=626)					0.639
North	121	90.98	12	9.02	
Central	190	88.37	25	11.63	

to be continued...

...continuation- Table 1

Variables	HPV vaccine receptivity: Yes n.	Yes %	No n.	No %	P
South	252	90.65	26	9.35	
Knowledge about HPV (N=564)					0.814
Adequate	153	90.00	17	10.00	
Inadequate	352	89.34	42	10.66	
Knowledge about the HPV vaccine (N=593)					0.509
Adequate	237	90.80	24	9.20	
Inadequate	296	89.16	36	10.84	
Total (N=626)	**563**	**89.94**	**63**	**10.06**	

n: absolute value per class of variable; N: sample size, variables with N <664 refer to the absence of answers to the specific question; p-value refers to the Chi-squared test.

Table 2 – Receptivity to child vaccination against HPV and its association with socio-cultural variables and knowledge about Human Papillomavirus and its vaccine, in users of Primary Health Care (PHC) in Palmas, TO, 2018.

Variables	Receptivity of child vaccination: Yes n.	Yes %	No n.	No %	P
Gender (N=626)					0.562
Male	137	90.73	14	9.27	
Female	438	92.21	37	7.79	
Age (N=611)					0.815
18-45 years	451	91.85	40	8.15	
46-60 years	111	92.50	9	7.50	
Skin color (N=615)					0.422
White	109	90.08	12	9.92	
Not white	456	92.31	38	7.69	
Religion (N=616)					0.768
Some religion	506	91.83	45	8.17	
No religion	59	90.77	6	9.23	
Head of the household (N=582)					0.870
Respondent	311	91.74	28	8.26	
Another person	222	91.36	21	8.64	
Education of household head (N=620)					0.864
Up to 8 years of study	140	92.11	12	7.89	
9 years of study or more	429	91.67	39	8.33	
Marital status (N=617)					0.961
Married	346	91.78	31	8.22	
Not married	220	91.67	20	8.33	
Children (N=614)					0.464
Yes	432	90.41	36	7.69	
No	132	92.31	14	9.59	
Region (N=626)					0.787
North	123	92.48	10	7.52	
Central	199	92.56	16	7.44	
South	253	91.01	25	8.99	
Knowledge about HPV (N=564)					**0.009**
Adequate	165	97.06	5	2.94	
Inadequate	358	90.86	36	9.14	
Knowledge about the HPV vaccine (N=594)					**0.001**
Adequate	253	95.83	11	4.17	
Inadequate	292	88.48	38	11.52	
Total (N=626)	**575**	**91.85**	**51**	**8.15**	

n: absolute value per class of variable; N: sample size; variables with N<664 refer to the absence of answers to the specific question; p-value refers to the Chi-squared test.

Table 3 – Adherence to the Cervical Cancer Preventive Examination (CCP) and its association with sociocultural variables and knowledge about Human Papillomavirus and its vaccine, in users of Primary Health Care (PHC) in Palmas-TO, 2018.

Variables	Adherence to the CCP: Yes n.	Yes %	No n.	No %	P
Age (N=469)					0.157
18-45 years	265	69.37	117	30.63	
46-60 years	67	77.01	20	22.99	
Skin color (N=469)					0.827
White	68	70.10	29	29.90	
Not white	265	71.24	107	28.76	
Religion (N=458)					0.066
Some religion	297	71.57	118	28.43	
No religion	25	58.14	18	41.86	

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Variables	Adherence to the CCP Yes n.	Yes %	No n.	No %	P
Head of the household (N=437)					0.145
Respondent	158	73.49	57	26.51	
Another person	149	67.12	73	56.15	
Education of household head (N=469)					0.562
Up to 8 years of study	78	68.42	36	31.58	
9 years of study or more	253	71.27	102	28.73	
Marital status (N=458)					0.061
Married	203	73.55	73	26.45	
Not married	119	65.38	63	34.62	
Children (N=455)					<0.001
Yes	259	75.07	86	24.93	
No	62	56.36	48	43.64	
Region (N=475)					0.279
North	66	67.35	32	32.65	
Central	122	75.31	40	24.69	
South	148	68.84	67	31.16	
Knowledge about HPV (N=431)					0.007
Adequate	99	79.84	25	20.16	
Inadequate	205	66.78	102	33.22	
Knowledge about the HPV vaccine (N=452)					<0.001
Adequate	170	80.57	41	19.43	
Inadequate	147	61.00	94	39.00	
Total (N=475)	336	70.74	139	29.26	

n: absolute value per class of variable; N: sample size; variables with N<502 refer to the absence of answers to the specific question; p-value refers to the Chi-square test.

Table 4 – Knowledge about HPV and HPV vaccine, according to users of Primary Health Care (PHC) in Palmas-TO, 2018.

Knowledge	Adequate n	Adequate %	Inadequate n	Inadequate %
HPV (N=580)	172	29.66	408	70.34
HPV Vaccine (N=605)	266	43.97	339	56.03

n: absolute value per class of variable; N: sample size; variables with N <664 refer to the absence of responses.

DISCUSSION

Potentially high receptivity to the vaccine, above 80%, has also been observed in other studies[6,7]. A meta-analysis[8] carried out in American and Chinese electronic databases, in order to verify receptivity to HPV vaccination in mainland China, identified values close to 70%. Palmas has PHC coverage close to 100%, unlike most cities in the North; a fact that can facilitate receptivity to this primary prevention measure. It is observed, however, that the reduction in the incidence of cancer will occur in the long run, since the CC affects middle-aged women, justifying the still relevant indexes in the state.

From the association between the female gender and receptivity to vaccination, and considering the HPV vaccine as a primary measure for CCU prophylaxis, a disparity was observed between the sexes regarding health prevention practices, a fact that corroborates with the literature and establishes men as having a more distant and resistant posture to preventive behaviors[8,10,19]. Although men are not at risk for CC, they form part of the infection chain and also transmit the virus. For this reason, collective immunity is fundamental in preventing female infection and its consequences[12]. Furthermore, it should be noted that the incidence rate of HPV-related cancers in sites common to both sexes, such as anus and oropharynx, is twice as high in the male group[20].

The good receptivity of child vaccinationwas also seen in nationall[6,7,21] and international[8,22] studies, which showed high levels of parental receptivity, some even around 90%. Realizing parental acceptance is important, since the HPV vaccine involves immunizing children and adolescents, in order to protect against a sexually transmitted infection. Thus, this vaccination involves social and cultural issues[9]. For example, studies have shown that some parents fear that the vaccination of adolescents encourages premature sexual intercourse and/or promiscuity[12,23], opposing the findings of the present study in which no parent reported fear of stimulating the early initiation of sexual life. In the present study, among the users who refused the possibility of vaccinating a child, approximately 12% did not accept the supposed child vaccination because they considered that the child did not need the vaccine because they did not have an active sex life, revealing ignorance about the importance of the vaccination occurring prior to the beginning of sexual activities, guaranteeing immunity against the main subtypes involved in carcinogenesis. Several studies have shown that the best time for vaccination is, in fact, before sexual activity begins[12,14].

A study carried out in Ipatinga, SP showed that 84.1% of the women in the sample underwent CCP in 2014[5]. Similar values were observed in Pernambuco women aged 25 to 59 years, among which the coverage of the preventive examination was approximately 82%[24]. According to IBGE2[5], 79.4% of Brazilian women, between 25 and 64 years of age, underwent the preventive exam in the three years prior to the survey. According to WHO[26], with a coverage of the target population of at least 80% and the guarantee of adequate diagnosis and treatment of altered cases, it is possible to reduce, on average, from 60 to 90% the incidence of invasive cervical cancer. When considering these values, adherence to the CCP in the city of Palmas, TO was below expectations.

Women who declared that they did not have children were associated with lower adherence to the exam. Research carried out in Pernambuco[24] showed similar results, which pointed to the condition of not having children as the main factor associated with failure to perform the preventive exam. In addition, this same study concluded that the CCP offer was strongly associated with maternal experience and obstetric or family planning consultation. The prenatal consultation provides guidance and health education which are important for adherence to the exams, but these should also be offered in other consultations.

Directing the investigation to the factors related to the actions of the health services that allow access to the examination, in addition to those inherent to the female public, would contribute to the organization of a system capable of recognizing women who are not regularly doing their exams, which are the majority of women who will develop invasive cancer[15]. A study in Bahia showed that almost 30% of women had difficulties accessing the exam in the public network, in addition to affirming that they did not know how to schedule the exam at Community Health Centers in their neighborhood[27]. It is emphasized that the CC mainly affects women of lower socioeconomic status and with difficulties in accessing health services[1,2,5,12,15].

Several studies[5,6,8,10] showed a lack of knowledge about HPV, with most people not having basic information about sexual transmission, high frequency, absence of symptoms, and the causal relationship with cancer, which corroborates with the outcome of the present study. HPV infection is recognized as a causal factor for the development of CC; however, it is still a subject poorly discussed, even among women[28]. Despite this, authors[7,29] have pointed to greater knowledge about the vaccine and the virus as a facilitator of receptivity to the vaccine and/or positively associated with

greater adherence and intention to vaccinate. Such results are partially consistent with this study, which showed a positive association of knowledge about the virus and the vaccine only with receptivity to child vaccination and no association with the intention to be vaccinated.

When observing the variables "knowledge about HPV" and "knowledge about the vaccine", users demonstrated greater knowledge about the vaccine than about the virus. Recent vaccination campaigns are noted, which can make information about the vaccine more accessible. The important role that campaigns play in health education has already been described in the literature[5,21]. Contact with an HPV campaign resulted in a 4.5 times greater probability of knowing about the virus compared to those who did not have this contact[5].

It was demonstrated in this work that being aware of the existence of the virus, by itself, did not characterize adequate knowledge on the subject. Thus, the need to improve information on the subject is affirmed, in order to involve and mobilize the population towards the effective adoption of preventive behaviors linked to Public Health[5,6]. The simple identification of the cause of a specific cancer may not be enough to trigger preventive efforts, thus, the need for education, individual motivation, and collective efforts to control cancer are highlighted[30]. Some studies suggest that health professionals should assume a central role in this scenario[23,24,29], with interventions aimed at verifying the level of knowledge about HPV and encouraging preventive actions aimed at limiting diseases[5].

The present study sought to measure the knowledge about the HPV vaccine in order to address its specificities, not only considering whether the participant had heard about or knew about the existence of the vaccine, as some authors have done[6]. Most studies identify knowledge about the HPV virus, but not specifically the knowledge inherent to its vaccine[5].

It is noteworthy that this study examined a diverse and comprehensive sample, which represents the population using PHC - a scenario in which primary and secondary prevention measures, in fact, are carried out - from a capital city in the North of Brazil. Few studies address the receptivity to the vaccine in PHC. Only studies that contained specific conditions (private health services, colleges, schools, women with a history of intraepithelial neoplasia, etc.) were found[9-11,22]. In addition, including men in this study made it possible to assess the preventive behavior of a group that, despite not being affected by cervical cancer, plays a crucial role in the transmission of the HPV virus and, therefore, in the effectiveness of preventive measures.

CONCLUSÃO

Cervical Cancer (CC), although highly preventable, still remains a significant public health problem, especially in the northern region of the country. It was found that people assisted by Primary Health Care (PHC) have little knowledge about the etiology and the main preventive measure against CC: HPV and its vaccine. Despite this, receptivity to the HPV vaccine was high, both in relation to the vaccination itself and its provision to children (child vaccination). It is noteworthy that being male, less educated, and of an older age were factors related to less receptivity to vaccination itself, different from receptivity to child vaccination, which was influenced only by knowledge about the virus and about the HPV vaccine. Adherence to the Cervical Cancer Preventive examination (CCP) was low in the PHC population in Palmas, TO, especially among women who were not mothers and

who had little knowledge about HPV and its vaccine.

Thus, it was observed that insufficient knowledge about HPV and the vaccine impairs people's involvement with the preventive measures proposed by PHC. In addition, the degree of knowledge was also investigated, unlike most studies that only considered the fact of having heard about HPV. This study covered a comprehensive sample, composed of men and women of varying ages, attended at Community Health Centers (CHC), in order to represent the population of the entire capital. There are few studies of this magnitude on the subject, particularly in the Northern Brazil.

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