ARTIGO ARTICLE

Severe intimate partner physical violence as a risk factor for inadequate cervical cancer screening

Violência física grave entre parceiros íntimos como fator de risco para inadequação no rastreio do câncer de colo de útero

Violencia física grave entre parejas sentimentales como factor de riesgo para la inadecuación en el rastreo del cáncer de cuello uterino

> Ricardo de Mattos Russo Rafael ^{1,2} Anna Tereza Miranda Soares de Moura ^{1,2}

doi: 10.1590/0102-311X00074216

Abstract

With the aim of assessing the occurrence of severe intimate partner physical violence as a risk factor for inadequate screening of uterine cervical cancer, a case-control study was performed with a multidimensional questionnaire in a sample of 640 users of the Family Health Strategy in the Municipality of Nova Iguaçu, Rio de Janeiro State, Brazil. Cases were defined as women who had not had a cervical cytology test in the previous three years. The results showed that severe physical violence against the woman $\binom{1}{\text{adjusted}}OR = \frac{1}{\text{adjusted}}OR$ 2.2; 95%CI: 1.1-4.4) and co-occurrence of the event in the couple ($_{adjusted}$ OR = 3.8; 95%CI: 1.4-9.8) were risk factors for inadequate screening. Alcohol abuse by the woman was an effect modifier for not having the test among victims of violence (adjusted OR = 10.2; 95%CI: 1.8-56.4) and in cases of co-occurrence of violence ($_{adjusted}OR = 8.5$; 95%CI: 1.4-50.7). In addition to known causal factors for intimate partner violence, the results point to a risk association between women's exposure to abuse and inadequate screening. The findings call for an expanded view of women's absenteeism from screening, since this indicator can represent unmet demands not readily detected by health teams.

Uterine Cervical Neoplasms; Mass Screening; Domestic Violence; Violence Against Women; Primary Health Care

Correspondence

R. M. R. Rafael

Universidade do Estado do Rio de Janeiro. Boulevard Vinte e Oito de Setembro 157, Rio de Janeiro, RJ 20551-030, Brasil. prof.ricardomattos@gmail.com

¹ Universidade do Estado do Rio de Janeiro, Rio de Janeiro, Brasil

² Universidade Estácio de Sá, Rio de Janeiro, Brasil.

Introduction

Uterine cervical cancer is still a leading cause of death in women and is a relevant and challenging public health problem ¹. The combination of strategies to prevent human papillomavirus infection and systematic cervical screening has been identified as one of the most cost-effective measures for reducing morbidity and mortality from the disease, and is also the basis for strategies to control this cancer in Brazil ^{2,3}.

Since 2011, Brazil has expanded the target age bracket for screening, now recommending that women 25 to 64 years of age have a cervical cytology test at least every three years after two subsequent negative results with an interval of less than a year. The use of other diagnostic techniques, and when applicable confirmatory tests for the disease, are only indicated in the presence of atypical results in the first screening phases, thus avoiding unnecessary tests and rationalizing health system costs 4. According to a nationwide study, 78.4% (95%CI: 78.0-78.9) of Brazilian women 25 to 64 years of age reported having had at least one test in the previous three years 5. Although the survey's results show coverage close to 80%, as recommended by the World Health Organization (WHO) 6, there are large regional screening differences, ranging from 73.1% to 81.3% in the Northeast and Southeast of Brazil, respectively.

A now classic study by the International Agency for Research on Cancer (IARC), pointing to a 91% reduction in cumulative incidence of the disease in populations with adequate screening in the target age bracket, also backed the expansion of the supply of cervical cytology tests in primary health care in the country, especially through the Family Health Strategy (FHS) 4,5,6,7. Each multidisciplinary team at this level of care provides coverage for up to four thousand individuals and is located in the communities' own territory, which favors monitoring the assigned population and the active search for users that miss appointments, thus facilitating preventive measures in uterine cervical cancer 8.

Even with access facilitated by the FHS, a sizeable share of women remains excluded from the early uptake system, thus hindering testing and adding further risks for the development of this cancer ^{2,3,4}. Various theoretical models have attempted to explain the barriers to regular attendance at health services, particularly addressing structural issues in the programs or socio-demographic variables such as age, schooling, color/ethnicity, and economic class ^{9,10}. Gender issues and users' individual beliefs have gained space in recent debates and studies on the subject by investigating feelings and sensations possibly experienced by the woman, such as fear, shame, and forgetfulness, thus assisting the understanding of barriers to screening. The various representations of fear add to socio-demographic aspects and users' lifestyles, comprising a set of barriers in self-care that appear to relate to family and social dynamics and support, aspects that are still considered a gap in knowledge production on the prevention of uterine cervical cancer ^{11,12}.

The literature has already shown an association between family conflict/intimate partner violence and difficulty in access to and use of health services, especially services that require regular attendance ^{2,13}. Notwithstanding the definition proposed by the WHO, the limits and acceptance of practices involving intimate partner violence are still quite controversial, considering the issue's historical evolution and sociocultural construction. Even with these difficulties, the intent, unequal power, and use of force that causes or may potentially cause harm have been identified as distinguishing elements in the occurrence of violence. With a varied, non-exclusive typology, they are characterized as practices of psychological, physical, and sexual abuse, with consequences that are difficult to detect by health teams and to a certain extent even by the persons that experience these situations ¹⁴. By considering the special role still played by the woman as the principal family caregiver and her frequent presence in health services, there is a clear need to address aspects of family dynamic and lifestyles – like alcohol use and abuse – to better understand the decision to undergo diagnostic tests for serious diseases with poor prognosis.

In order to help understand this apparent relationship between the use of health services and the family dynamics experienced by the clientele, and taking as the reference the variables involved in the causality of the two constructs, these explanatory dimensions were included in the theoretical model to expand the possibilities for understanding the causal chains. Socio-demographic variables, especially age, schooling, economic class, and housing conditions were expected to influence the target outcome distally – inadequate cervical screening, also interacting with the phenomenon of violence,

as already identified in the literature 2,3,6,8. Importantly, schooling has been identified as a mediating factor for relations in the use of health services, which could expand the effect of given exposures, as in the case of violence. At the intermediate level, alcohol abuse was included in the model not only as a risk factor for the occurrence of violence, but also because it impacts users' family relations and lifestyles 13,14,15, as a possible factor that mediates relations between violence and the use of health services.

Based on the proposed theoretical model, the current study aims to assess severe intimate partner physical violence as a risk factor for inadequate cervical cancer screening in the context of the FHS. Clearly it will only be possible to shed light on part of this complex relationship, especially considering that other variables can mediate the causal relations, especially those related to the social and community macro-political levels, expressed at higher levels in the ecological model of violence and which are beyond the scope of the current study 14.

Method

Study design, scenario, population, and data collection

This is a case-control study affiliated with the project Barriers to Access to Cervical Cancer Screening: A Study on Associations with Intimate Partner Violence and Alcohol Abuse in Users of the Family Health Program in the Municipality of Nova Iguaçu in Greater Metropolitan Rio de Janeiro, Brazil. Even after the recent expansion of primary care, the municipality still concentrates its healthcare network and other social resources primarily in the central urban area, selected as the study site in order to recruit participants with the best access. The region has five family health units with a total of ten multidisciplinary teams. The smallest unit, with one team and coverage of less than four thousand individuals, was used in the pilot study phase. The other services participated in the data collection, totaling nine health teams and an assigned population of 26,025 inhabitants.

The study's target population consisted of all women 25 to 64 years of age enrolled in the FHS, based on guidelines for cervical cancer screening programs in Brazil 4. The sample consisted of residents in the family health teams' coverage area who reported intimate relations for at one year and had attended one of the units during the data collection period (November 2012 to June 2013). The sample excluded women with a history of hysterectomy, a highly frequent surgery, cone biopsy, or any other previously detected high-grade cervical lesion, conditions that would alter the criteria for performing cervical cancer screening.

The sample size was calculated using a 95% confidence interval (95%CI), 80% power, odds ratio (OR) of 2.0, and a proportion of one case to every three controls. The final sample was 640 participants, including 160 cases and 480 controls, divided equally between the four health units. Inadequate cervical cancer screening was defined as women who had not had a cervical cytology test in the previous three years, counting backwards from the date of the data collection. Controls were selected from women that attended the health services during the same period and had at least one such test in the previous three years, according to the Brazilian Ministry of Health guidelines 4.

Cases were selected at the time of different procedures conducted at the healthcare unit, such as medical, nursing, and dental appointments, while accompanying other users or family members such as elderly or children, or to obtain other information. Whenever it was impossible for the teams to provide a prior list of daily users, uptake of cases was based on the total list of women with more than three years since their last cervical cytology test (the defining criterion for the group). The eligibility form was applied to the unit's users, and when the selection criteria were met, we proceeded to application of the study questionnaire phase, with no losses or refusals in this group. For each participant allocated as a case, three women were selected opportunistically for the control group, with preference for the cases' accompanying persons, relatives, and neighbors. Recruitment of controls also used the eligibility form, with losses of 8.3% (n = 40).

Data collection instrument

Data were collected with a multidimensional instrument that initially covered the sample's sociodemographic characteristics, consisting of independent variables related to age, color/ethnicity, conjugal status, schooling, economic class, and housing conditions. Economic class was based on the *Brazilian Economic Classification Criteria* (Brazilian Market Research Association) ¹⁶, using a composite score of 11 items that evaluate household's consumer goods and services and head-of-family's schooling. Housing conditions were assessed with a composite environmental score considering of the number of residents in the household, the main type of indoor flooring material, electricity and water supply, and sewage disposal and garbage collection ¹⁷.

Alcohol use was assessed with the TWEAK scale (*Tolerance, Worry, Eye-opener, Amnesia, & C/Kut-down*), cross-culturally validated and adapted for use in Brazil ¹⁸. Abuse was defined as a score greater than two points. Assessment of the occurrence of severe intimate partner physical violence used the *Revised Conflict Tactics Scales* (CTS2), also cross-culturally validated and adapted for use in Brazil and widely used in studies on violence ^{19,20,21}. "Severe physical violence against the woman" was defined as at least one positive item on the scale. "Co-occurrence of severe physical violence" was defined as positive items in both directions on the scale, and "situation of severe physical violence" when the woman scored a positive item as either the perpetrator or victim. Violence was measured for the three years prior to the study, taking the woman's current relationship as the reference.

Data analysis

Data cleaning and statistical processing used the Stata SE 13 software (StataCorp LP, College Station, USA), initially in univariate mode in order to determine the data distribution. Bivariate analysis used calculation of the respective OR, 95%CI, and p-values. Age bracket and economic class were treated as continuous variables.

All variables belonging to the different dimensions proposed in the theoretical model that presented values below the cutoff point (p-values ≤ 0.25) in the bivariate analysis were used. Possible interactions between the independent variables (socio-demographics and alcohol abuse) and the variables corresponding to severe physical violence were assessed. The final logistic regression models included the observed confounders, and the interactions were tested on the basis of the theoretical-conceptual model, that is, using the schooling and alcohol abuse variables.

Ethical aspects

The study was approved by the Institutional Review Board of the Pedro Ernesto University Hospital, of the State University of Rio de Janeiro, under case review CAAE 01724512.6.0000.5259. According to the ethical principles applied to research involving human subjects, the study used a free and informed consent form for all the participants, explaining the study's objectives, risks, and benefits before signing. The women were assured of anonymity, privacy, and the right to withdraw from the study at any time.

Based on ethical and methodological reflections in studies involving women in situations of violence, the choice was made to use female interviewers only, in order to provide more comfortable interaction ^{22,23}. A prior approach with the teams and detailed discussion of the fieldwork dynamics facilitated organization of the data collection, especially because the health units maintained their normal routine operations, while reserving a quiet place for the interviews. A support network was also organized for all the participants, so that whenever necessary it was possible to schedule a cervical screening test and referral to specialized services for women in situations of violence.

Results

Mean age of the study participants was 44.0 years (95%CI: 43.1-44.9), with 40.1% over 40 years (95%CI: 36.4-44.0). Most of the women were black or brown (i.e., combined as black), married, with

less than eight years of schooling, in economic class C, and with good housing conditions. Statistically significant associations were observed between the outcome and age bracket and schooling. In order to maintain the procedure for entering the regression model, the calculations were also presented for the respective ORs for the variables "age bracket" and "economic class" in their continuous form, respectively 1.0 (95%CI: 1.0-1.0; p-value = 0.001) and 0.99 (95%CI: 0.9-1.0; p-value = 0.708), as well as for the race/color variable in its original format, that is, with all the categories. Table 1 shows the sample's characteristics and the bivariate analysis between the independent variables and the dependent variable (inadequate cervical cancer screening).

Abuse perpetrated against the woman ($_{crude}OR = 2.1$; 95%CI: 1.1-4.1) and co-occurrence of violence in the couple ($_{crude}$ OR = 3.0; 95%CI: 1.2-7.4) both showed statistical significance. Co-occurrence showed an increase in OR (adjusted OR = 3.8; 95% CI: 1.4-9.8) after adjusting for age bracket, race/color, and housing conditions (Table 2).

The greatest effect modification occurred between severe physical violence against the woman and alcohol abuse by the woman (OR = 10.2; 95%CI: 1.8-56.4). The interactions between co-occurrence of severe physical violence and schooling less than eight years (OR = 6.3; 95%CI: 1.8-22.1), alcohol abuse by the woman (OR = 8.5; 95%CI: 1.4-50.7) and the male partner (OR = 6.3; 95%CI: 1.6-24.1) were also significant (Table 3).

Discussion

Systematic cervical cancer screening has been the object of numerous studies on possible barriers to access and use of services, and the current state of knowledge stills presents gaps ^{24,25}. The literature includes few studies on causal relations with inadequate cervical cancer screening, thus highlighting the relevance of the current study's findings.

Two forms of intimate partner violence showed positive risk relations with inadequate screening, independently of other target factors. Physical violence against the woman showed a twofold greater risk of inadequate screening, while co-occurrence increased the odds of inadequate screening fourfold, when compared to women with adequate screening. Although the approach to the study of these risk factors is unique, other studies have already pointed to the negative influence of violence on healthcare measures that require regular attendance at health services. Physical violence against pregnant women appears to be closely related to poor quality of prenatal care, suggesting the need for more frequent follow-up and reinforcing the importance of care and guaranteed access for women that are victims of violence 14,26. A similar study had already pointed to the risk relations between intimate partner physical abuse and follow-up of children in primary care units, highlighting that care mainly exercised by women themselves can be influenced by their level of autonomy and capacity to mobilize and manage the necessary resources ²⁷. Studies have shown that the harms caused by a conflictive family environment act in a vicious circle; all those living in the micro-social space suffer from such experiences and display worse health indicators as a result ^{28,29}. The message for health professionals is that women in situations of intimate partner violence may experience greater difficulties in maintaining regular care for themselves and their dependents, especially due to the greater visibility in the household's proximity.

A relevant exercise is to reflect on the fear women experience in such situations, which may be related to the cervical cytology testing itself and to the process of victimization in situations of intimate partner violence. The fear related to the test may result from the expectation of pain during the procedure and can be associated with the examiner 12. The situation of violence also evokes low selfesteem, shame, and fear, which can result in behavior changes, expanding their isolation and difficulty in caring for themselves and others 29,30,31,32. Further research is needed on the way this combination of negative sensations can impact care.

The FHS functions with the unique possibility of proximity to the territory, favoring the development of bonds between users and health teams 33. Home visits themselves can serve as a tool to prevent violence, since they allow identifying vulnerabilities in the family context itself 34. Meanwhile, these same attributes can also act as barriers in conflictive situations. Women that experience intimate partner violence end up attending health services less regularly, in the attempt (even subjective) to

Table 1

Characteristics of the study sample and bivariate analysis comparing dependent variable (inadequate cervical cancer screening) and socio-demographic aspects and alcohol abuse in women enrolled in the Family Health Strategy in Nova Iguaçu, Rio de Janeiro State, Brazil, 2013.

Variables	C	istribution	cOR (95%CI)	p-value	
	n	% (95%CI)		-	
Woman's age bracket (years)					
< 30	89	14.0 (11.5-16.9)	1.0		
30-39	166	26.1 (22.8-29.7)	1.3 (0.7-2.5)	0.419	
40-49	154	24.2 (21.1-27.7)	1.3 (0.7-2.5)	0.447	
50-59	173	27.2 (23.9-30.8)	2.0 (1.1-3.8)	0.029	
≥ 60	53	8.3 (6.4-10.8)	3.2 (1.5-7.0)	0.003	
Woman's race/color					
White	260	40.6 (36.9-44.5)	1.0		
Black/Brown (= Black)	259	56.1 (52.2-59.9)	1.3 (0.9-1.9)	0.138	
Asian-descendant/Indigenous	21	3.3 (2.1-4.9)	0.6 (0.2-1.6)	0.396	
Conjugal status					
Married	370	57.8 (53.9-61.6)	1.0		
Other	270	42.2 (38.4-46.1)	1.0 (0.7-1.4)	0.995	
Woman's schooling (years)					
≤ 8	355	55.5 (51.6-59.3)	1.0		
> 8	285	44.5 (40.7-48.4)	0.5 (0.4-0.8)	0.002	
Woman's economic class					
A/B	129	20.2 (17.2-23.5)	1.0		
С	452	70.7 (67.1-74.1)	0.9 (0.6-1.4)	0.639	
D/E	58	9.1 (7.1-11.5)	1.5 (0.7-2.9)	0.258	
Housing conditions					
Good	100	15.6 (13.0-18.7)	1.0		
Bad	639	84.4 (81.3-86.9)	0.7 (0.4-1.2)	0.185	
Woman's alcohol abuse					
No	580	90.6 (88.1-92.6)	1.0		
Yes	60	9.4 (7.3-11.9)	1.5 (0.9-2.7)	0.153	
Male partner's alcohol abuse					
No	453	70.8 (67.1-74.2)	1.0		
Yes	187	29.2 (25.8-32.9)	0.9 (0.6-1.5)	0.769	

95%CI: 95% confidence interval; cOR: crude odds ratio. Note: OR and 95%CI calculated for continuous variable.

maintain a certain degree of invisibility ^{13,26}. The recognition of violent family dynamics can be triggered by home visits and by proximity to the team, leading to avoidance of the health unit. There is a persistent social view that the woman stays in the violent relationship by her own choice, and it is difficult to avoid value judgments by the healthcare professionals, with the possibility of re-victimization and avoidance ³⁵. The threefold higher risk of inadequate cervical cancer screening emphasizes the need to focus on aspects of family conflict resolution through active search measures and other activities developed by the FHS.

As for the socio-demographic dimension, the results point to age and schooling as risk factors associated with inadequate screening, especially in age brackets higher than fifty years and in women with less than eight years of schooling. Other authors had already reported concerns with age extremes in the target public, especially when approaching menopause and with the larger interval between gynecological appointments, thus with less contact with preventive measures ^{25,36}. The currently accelerated demographic transition in Brazil numerically expands this particularly vulnerable subgroup, and it thus is necessary to rethink practices for health services to capture the group ^{37,38}.

Table 2

Distribution, bivariate analysis, and adjustment model comparing target independent variables (forms of severe physical violence) and the dependent variable (inadequate cervical cancer screening) in women enrolled in the Family Health Strategy. Nova Iguaçu, Rio de Janeiro State, Brazil, 2013.

Variables	C	istribution	cOR (95%CI)	aOR (95%CI) *	
	n	% (95%CI)			
Intimate partner violence against woman					
No	603	94.2 (92.1-95.7)	1.0	1.0	
Yes	37	5.8 (4.2-7.9)	2.1 (1.1-4.1)	2.2 (1.1-4.4)	
p-value			0.036	0.027	
Co-occurrence of intimate partner violence					
No	620	96.9 (95.2-98.0)	1.0	1.0	
Yes	20	3.1 (2.0-5.0)	3.0 (1.2-7.4)	3.8 (1.4-9.8)	
p-value			0.015	0.006	
Situation of intimate partner violence					
No	586	91.6 (89.1-93.5)	1.0	1.0	
Yes	54	8.4 (6.5-10.9)	1.5 (0.8-2.7)	1.6 (0.8-2.9)	
p-value			0.178	0.142	

^{95%}CI: 95% confidence interval; aOR: adjusted odds ratio; cOR: crude odds ratio.

Table 3

Results of adjusted odds ratio (aOR) in multivariate analyses comparing forms of severe intimate partner violence and inadequate cervical cancer screening among users of the Family Health Strategy, as a function of woman's schooling and alcohol abuse. Nova Iguaçu, Rio de Janeiro State, Brazil, 2013 (N = 634).

Variables	> 8 years of schooling *		Alcohol abuse *			
			By woman		By male partner	
	Yes	No	No	Yes	No	Yes
Intimate partner violence against woman						
No	1.0	1.0	1.0	1.0	1.0	1.0
Yes	0.7 (0.1-3.4)	3.8 (1.5-9.5)	1.2 (0.5-2.8)	10.2 (1.8-56.4)	1.4 (0.5-3.7)	5.7 (1.8-18.1)
p-value	0.685	0.004	0.725	0.008	0.546	0.003
Co-occurrence of intimate partner violence						
No	1.0	1.0	1.0	1.0	1.0	1.0
Yes	1.0 (0.1-9.0)	6.3 (1.8-22.1)	1.8 (0.4-7.5)	8.5 (1.4-50.7)	3.9 (0.7-20.5)	6.3 (1.6-24.1)
p-value	0.991	0.004	0.416	0.019	0.108	0.007
Situation of intimate partner violence						
No	1.0	1.0	1.0	1.0	1.0	1.0
Yes	0.4 (0.1-2.0)	2.7 (1.3-5.7)	0.9 (0.4-2.0)	5.3 (1.2-22.8)	1.1 (0.4-2.5)	3.9 (1.3-11.5)
p-value	0.282	0.010	0.876	0.025	0.875	0.012

^{*} Adjusted for age bracket, race/color, and housing conditions.

Low schooling as an important risk factor for inadequate screening appears to be associated with issues of social vulnerability ^{25,36}. Low schooling can affect access to and understanding of information related to preventive health measures, in addition to hindering safer decision-making concerning one's own body, increasingly acknowledge as an important point for care. It is important to note the modifying effect of the variables schooling and alcohol abuse by the woman and her partner, increas-

^{*} Adjusted for age bracket, race/color, and housing conditions.

ing the risks of all forms of violence analyzed in the study. There is a consensus in the literature on the existence of interaction between social vulnerability, alcohol abuse, and intimate partner violence, and the findings here reinforce the need for a specific approach to these situations ^{13,39}. The role of alcohol as a barrier to access may relate to the severity of family conflicts and the woman's loss of autonomy over decisions pertaining to her own care ^{40,41}.

The findings should be interpreted in light of their limitations. The first is the lack of information on the temporal relationship between the occurrence of violence and inadequate cervical cancer screening. The study's methodological option did not include the interaction related to the time window between events, defining all those that occurred in the previous three years as positive. Future studies may establish new analytical models, inserting different time intervals in the proposed causal chain model. The selection of users from the FHS only allowed investigating those with a minimum level of attendance at the health units, since that is where the recruitment took place. Even with the adoption of measures to adjust case definition according to the report of lack of cervical cytology screening in the previous three years, intimate partner violence can act with greater force in women that do not even attend such services. This effect modification is typical of studies in outpatient or similar settings, so household surveys are needed to measure the risk produced by exposure to violence in women not regularly attending health units.

Given the difficulty in producing a list of women that attend the health units irregularly, without scheduling appointments, we used a non-probabilistic convenience sample, interviewing those present at the services during the study period. This strategy can be influenced positively on aspects of external validity, by producing information through an approach based on the health units' spontaneous clientele and without adopting prior criteria that would only select subgroups with specific complaints or conditions. The results thus provide a more comprehensive and accurate measurement of the experience in the sphere of the FHS, with the capacity for generalization to other similar realities, considering each location's characteristics and specificities.

Despite the limitations, the results expand the possibilities for understanding inadequate cervical cancer screening by including dimensions related to family dynamics and the feelings of the women themselves who experience violence. In addition to emphasizing age bracket as a barrier to use of services, already demonstrated in previous studies, severe physical violence also stood out as an important risk factor when perpetrated by the male partner or in relationships with the co-occurrence of abusive situations, thus reinforcing the idea of a vicious circle for the consequences of these acts ⁴². The woman's low schooling and alcohol abuse by the couple, when associated with the phenomenon of violence, also considerably increased the risk of inadequate screening.

A careful and empathetic assessment of the family dynamic is not an easy task, even in specially structured services like the FHS. It is essential to ensure an expanded approach to women that fail to undergo cervical screening at adequate intervals, since absenteeism can represent demands not easily perceived during routine healthcare. Community support networks – with users' participation and local social resources – can facilitate closer contact between this clientele and the health teams, who often lack adequate training to deal with such complex and unique situations.

Contributors

R. M. R. Rafael participated in the conception and elaboration of the research project, data collection and analysis, and writing and final approval of the manuscript. A. T. M. S. Moura contributed to the research project's conception and elaboration, supervised the data analysis, and contributed to the writing and final approval of the manuscript.

Acknowledgments

The authors wish to thank the Carlos Chagas Filho Rio de Janeiro State Research Foundation (Faperj) for funding the study.

References

- 1. Instituto Nacional de Câncer José Alencar Gomes da Silva. Estimativa 2016: incidência de câncer no Brasil. Rio de Janeiro: Instituto Nacional de Câncer José Alencar Gomes da Silva; 2016.
- Castro B, Ribeiro DP, Oliveira J, Pereira MB, Sousa JC, Yaphe J. Rastreio do câncer do colo do útero: limites etários, periodicidade e exame ideal: revisão da evidência recente e comparação com o indicador de desempenho avaliado em Portugal. Ciênc Saúde Coletiva 2014; 19:1113-22.
- World Health Organization. Comprehensive cervical cancer control - a guide to essential practice. 2nd Ed. Geneva: World Health Organization; 2014.
- Instituto Nacional de Câncer José Alencar Gomes da Silva. Diretrizes brasileiras para o rastreamento do câncer do colo do útero. Rio de Janeiro: Instituto Nacional de Câncer José Alencar Gomes da Silva; 2011.
- Instituto Brasileiro de Geografia e Estatística. Pesquisa nacional de saúde, 2013: ciclos de vida – Brasil e grandes regiões. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística;
- World Health Organization. Cancer control. Knowledge into action: who guide for effective programmes. Geneva: World Health Organization; 2007.
- 7. IARC Working Group on Evaluation of Cervical Cancer Screening Programmes. Screening for squamous cervical cancer: duration of low risk after negative results of cervical cytology and its implication for screening policies. BMJ 1986; 293:659-64.
- Rafael RMR, Moura ATMS. Exposição aos fatores de risco do câncer do colo do útero na Estratégia de Saúde da Família de Nova Iguaçu, Rio de Janeiro, Brasil. Cad Saúde Colet (Rio J.) 2012; 20:499-505.
- Navarro C, Fonseca AJ, Sibajev A, Souza CIA, Araújo DS, Teles DAF, et al. Cobertura do rastreamento do câncer de colo de útero em região de alta incidência. Rev Saúde Pública 2015; 49:17.
- 10. Pinho AA, França-Junior I. Prevenção do câncer de colo do útero: um modelo teórico para analisar o acesso e a utilização do teste de Papanicolau. Rev Bras Saúde Matern Infant 2003; 3:95-112.
- 11. Aguilar RP, Soares DA. Barreiras à realização do exame Papanicolau: perspectivas de usuárias e profissionais da Estratégia de Saúde da Família da cidade de Vitória da Conquista -BA. Physis (Rio J.) 2015; 25:359-79.
- 12. Rafael RMR, Moura ATMS. Barreiras na realização da colpocitologia oncótica: um inquérito domiciliar na área de abrangência da Saúde da Família de Nova Iguaçu, Rio de Janeiro, Brasil. Cad Saúde Pública 2010; 26:1045-50.

- 13. Moraes CL, Arana FDN, Reichenheim ME. Violência física entre parceiros íntimos na gestação como fator de risco para a má qualidade do pré-natal. Rev Saúde Pública 2010; 44:667-76.
- 14. Krug EG, Dalhberg LL, Mercy JA, Zwi AB, Lozano R, editores. Informe mundial sobre la violencia y la salud. Genebra: Organización Mundial de la Salud; 2002.
- 15. Rafael RMR, Moura ATMS. Relationship between alcohol consumption and violence between intimate partners: a sectional study. Online Braz J Nurs 2016; 15:617-23.
- 16. Associação Brasileira de Empresas de Pesquisa. Critérios de Classificação Econômica Brasil. 2011. http://www.abep.org (accessed on 27/ Apr/2011).
- 17. Reichenheim ME, Harpham T. Perfil intracomunitário da deficiência nutricional: um estudo de crianças abaixo de 5 anos numa comunidade de baixa renda do Rio de Janeiro. Rev Saúde Pública 1990; 24:69-79.
- 18. Moraes CL, Viellas EF, Reichenheim ME. Assessing alcohol misuse during pregnancy: evaluating psychometric properties of the CAGE, T-ACE, and TWEAK in a Brazilian setting. J Stud Alcohol 2005; 66:165-73.
- 19. Straus MA, Hamby SL, Boney-McCoy S, Sugarman DB. The Revised Conflict Tactics Scales (CTS2): development and preliminary psychometric data. J Fam Issues 1996; 17:283-316.
- 20. Moraes CL. Reichenheim ME. Cross-cultural measurement equivalence of the Revised Conflict Tactics Scales (CTS2) Portuguese version used to identify violence within couples. Cad Saúde Pública 2002; 18:783-96.
- 21. Reichenheim ME, Klein R, Moraes CL. Assessing the physical violence component of the Revised Conflict Tactics Scales when used in heterosexual couples: an item response theory analysis. Cad Saúde Pública 2007; 23:53-62.
- 22. Rafael RMR, Moura ATMS. Considerações éticas sobre pesquisas com mulheres em situação de violência. Rev Bras Enferm 2013; 66:287-90.
- 23. World Health Organization. Putting women first: ethical and safety recommendations for research on domestic violence against women. Geneva: World Health Organization; 2001.
- 24. Borges MFSO, Dotto LMG, Koifman RJ, Cunha MA, Muniz PT. Prevalência do exame preventivo de câncer do colo do útero em Rio Branco, Acre, Brasil, e fatores associados à não-realização do exame. Cad Saúde Pública 2012; 28:1156-66.
- 25. Hackenhaar AA, Cesar JA, Domingues MR. Exame citopatológico de colo uterino em mulheres com idade entre 20 e 59 anos em Pelotas, RS: prevalência, foco e fatores associados à sua não realização. Rev Bras Epidemiol 2006; 9:103-11.

- Chambliss LR. Intimate partner violence and its implication for pregnancy. Clin Obstet Gynecol 2008; 51:385-97.
- 27. Silva AG, Moraes CL, Reichenheim ME. Violência física entre parceiros íntimos: um obstáculo ao início do acompanhamento da criança em unidades básicas de saúde do Rio de Janeiro, Brasil? Cad Saúde Pública 2012; 28:1359-70
- Carvalho-Barreto A, Bucher-Maluschke JSNF, Almeida PC, Desouza E. Desenvolvimento humano e violência de gênero: uma integração bioecológica. Psicol Reflex Crit 2009; 22:86-92.
- Rafael RMR, Moura ATMS. Violência contra a mulher ou mulheres em situação de violência? Uma análise sobre a prevalência do fenômeno. J Bras Psiquiatr 2014; 63:149-53.
- Zancan N, Wassermann V, Lima GQ. A violência doméstica a partir do discurso de mulheres agredidas. Pensando Fam 2013; 17:63-76.
- 31. Swan SC. A review of research on women's use of violence with male intimate partners. Violence Vict 2008; 23:301-14.
- Lyons J, Bell T, Fréchette S, Romano E. Childto-parent violence: frequency and family correlates. J Fam Viol 2015; 30:729-42.
- Garuzi M, Achitti MCO, Sato CM, Rocha SA, Spagnuolo RS. Acolhimento na Estratégia Saúde da Família: revisão integrativa. Rev Panam Salud Pública 2014; 35:144-9.
- 34. Shimbo AY, Labronici LM, Mantovani MF. Reconhecimento da violência intrafamiliar contra idosos pela equipe da estratégia saúde da família. Esc Anna Nery Rev Enferm 2011; 15:506-10.

- Nascimento EFGA, Ribeiro AP, Souza ER. Percepções e práticas de profissionais de saúde de Angola sobre a violência contra a mulher na relação conjugal. Cad Saúde Pública 2014; 30:1229-38.
- 36. Gonçalves CV, Sassi RM, Oliveira Netto I, Castro NB, Bortolomedi AP. Cobertura do citopatológico do colo uterino em Unidades Básicas de Saúde da Família. Rev Bras Ginecol Obstet 2011; 33:258-63.
- Girianelli VR, Gamarra CJ, Azevedo e Silva G.
 Os grandes contrastes na mortalidade por câncer do colo uterino e de mama no Brasil. Rev Saúde Pública 2014; 48:459-67.
- Vasconcelos AMN, Gomes MMF. Transição demográfica: a experiência brasileira. Epidemiol Serv Saúde 2012; 21:539-48.
- 39. Jewkes R. Intimate partner violence: causes and prevention. Lancet 2002; 359:1423-9.
- Fontanella BJB, Demarzo MMP, Mello GA, Fortes SLCL. Os usuários de álcool, atenção primária à saúde e o que é "perdido na tradução". Interface Comun Saúde Educ 2011; 15:573-85.
- 41. Ronzani TM, Furtado EF. Estigma social sobre o uso de álcool. J Bras Psiquiatr 2010; 59:326-32.
- 42. Lindner SR, Coelho EBS, Bolsoni CC, Rojas PF, Boing AF. Prevalência de violência física por parceiro íntimo em homens e mulheres de Florianópolis, Santa Catarina, Brasil: estudo de base populacional. Cad Saúde Pública 2015; 31:815-26.

Resumo

Com o objetivo de avaliar a ocorrência de violência física grave entre parceiros íntimos como fator de risco para inadequação no rastreio do câncer do colo do útero, foi desenvolvido um estudo do tipo caso-controle com aplicação de formulário multidimensional com 640 usuárias da Estratégia Saúde da Família do Município de Nova Iguaçu, Rio de Janeiro, Brasil. As mulheres que não realizaram o exame colpocitológico nos últimos três anos foram consideradas como casos. Os resultados demonstraram que as variáveis abusos contra a mulher $(OR_{ajustada} = 2,2; IC95\%: 1,1-4,4)$ e a coocorrência do evento no casal ($OR_{ajustada} = 3,8$; IC95%: 1,4-9,8) como fatores de risco à inadequação no rastreio da doença. O abuso de álcool pela mulher se mostrou como modificador de efeito para a não realização do exame pelas vítimas (OR_{aiustada} = 10,2; IC95%: 1,8-56,4) e nos casos de coocorrência de violência ($OR_{ajustada} = 8,5$; IC95%: 1,4-50,7). Além dos fatores já reconhecidos na causalidade das violências entre parceiros íntimos, os resultados apontam para relação de risco entre as experiências abusivas vivenciadas pelas mulheres e a inadequação do rastreamento. Desse modo, ampliar o olhar sobre o absenteísmo das mulheres aos exames deve ser considerado, já que esse indicador pode desvelar demandas não percebidas facilmente pelas equipes de saúde.

Neoplasias do Colo do Útero; Programas de Rastreamento; Violência Doméstica; Violência Contra a Mulher; Atenção Primária à Saúde

Resumen

Con el objetivo de evaluar la ocurrencia de violencia física grave entre parejas sentimentales, como factor de riesgo para inadecuación en el rastreo del cáncer de cuello uterino, se desarrolló un estudio de tipo caso-control con la aplicación de un formulario multidimensional a 640 usuarias de la Estrategia Salud de la Familia en el municipio de Nova Iguaçu, Río de Janeiro, Brasil. Las mujeres que no realizaron el examen colpocitológico durante los últimos tres años fueron consideradas como casos. Los resultados demostraron que las variables: abusos contra la mujer ($OR_{ajustada} = 2,2;$ IC95%: 1,1-4,4) y la coocurrencia del evento en la pareja $(OR_{ajustada} = 3, 8; IC95\%: 1, 4-9, 8)$ son factores de riesgo para la inadecuación en el rastreo de la enfermedad. El consumo abusivo de alcohol por parte de la mujer se mostró como un modificador de efecto para que las víctimas no realizaran el examen ($OR_{ajustada} = 10,2$; IC95%: 1,8-56,4), así como en los casos de coocurrencia de violencia (OR_{aiustada} = 8,5; IC95%: 1,4-50,7). Además de los factores ya reconocidos en la causalidad de la violencia entre parejas sentimentales, los resultados apuntan a la relación de riesgo entre las experiencias abusivas, vividas por las mujeres, y la inadecuación del rastreo. De este modo, se debe considerar ampliar la perspectiva sobre el absentismo de las mujeres en los exámenes, ya que este indicador puede desvelar necesidades no percibidas fácilmente por parte de los equipos de salud.

Neoplasias del Cuello Uterino; Tamizaje Masivo; Violencia Doméstica; Violencia Contra la Mujer; Atención Primaria de Salud

Submitted on 02/May/2016 Final version resubmitted on 13/Mar/2017 Approved on 03/Apr/2017