

FACTORS OF RISK IN SEXUAL AND REPRODUCTIVE HEALTH OF WOMEN PRISONERS: INTEGRATIVE REVIEW

FATORES DE RISCO EM SAÚDE SEXUAL E REPRODUTIVA DE MULHERES PRESIDÁRIAS: REVISÃO INTEGRATIVA

FACTORES DE RIESGO EN SALUD SEXUAL Y REPRODUCTIVA DE MUJERES PRISIONERAS: REVISIÓN INTEGRADORA

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Objective: to identify sexual and reproductive health risk factors related to health vulnerability of imprisoned women. **Method:** integrative literature review held in Virtual Health Library databases in December 2016, using the strategy Population, Variables and Outcomes. A sample of 21 articles was obtained. **Results:** there are risk factors related to sexual and reproductive health vulnerability that are enhanced by the absence and/or deficit of actions on health promotion, protection, recovery and rehabilitation in the prison context. **Conclusion:** sexual and reproductive grievances of imprisoned women are related to social and programmatic individual risk factors.

Descriptors: Inmates; Risk factors; Health Vulnerability; Women's Health.

Objetivo: identificar os fatores de risco relacionados à saúde sexual e reprodutiva que incidem sobre a vulnerabilidade em saúde de mulheres presidiárias. *Método:* revisão integrativa da literatura realizada nas bases de dados contidas na Biblioteca Virtual em Saúde, no mês de dezembro de 2016, utilizando-se a estratégia Population, Variables and Outcomes. *Obteve-se amostra de 21 artigos. Resultados:* existem fatores de risco que incidem sobre a vulnerabilidade em saúde sexual e reprodutiva que são potencializados devido à ausência e/ou déficit de ações de promoção, proteção, recuperação e reabilitação da saúde no âmbito prisional. *Conclusão:* os agravos à saúde sexual e reprodutiva das mulheres em situação prisional estão relacionados tanto a fatores de risco individuais como sociais e programáticos.

Descritores: Reclusos; Fatores de Risco; Vulnerabilidade em Saúde; Saúde da Mulher.

Objetivo: identificar los factores de riesgo relacionados con la salud sexual y reproductiva que se centran en la vulnerabilidad en salud de mujeres prisioneras. *Método:* revisión integradora de la literatura realizada en las bases de datos de la Biblioteca Virtual en Salud, en diciembre de 2016, utilizándose la estrategia Population, Variables

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and Outcomes. Muestra de 21 artículos. Resultados: hay factores de riesgo que afectan a la vulnerabilidad en la salud sexual y reproductiva que son potencializados debido a la ausencia y/o déficit de acciones de promoción, protección, recuperación y rehabilitación de la salud en el contexto penitenciario. Conclusión: los agravios a la salud sexual y reproductiva de mujeres presas se relacionan a factores de riesgo individuales, sociales y programáticos.

Descriptores: Prisioneros; Factores de Riesgo; Vulnerabilidad en Salud; Salud de la Mujer.

Introduction

The high incidence of violence and drug use and/or traffic has contributed to increased crime and consequent detention among women in the prison context, becoming a public health problem⁽¹⁾.

The analysis of the health situation imprisoned women shows that the precarious preventive and care measures in the prison system and the imprisonment process itself make these women vulnerable to physical injuries and to a high incidence of mental disorders and sexually transmitted infections. This situations requires a dialogue with health services for the implementation and execution of comprehensive health care⁽²⁾.

With the institutionalization of the prison system, sexual and reproductive vulnerability occur as a result of biological issues, gender inequality, stigma and social discrimination, and lead to greater demand for health services compared with the situation of male inmates⁽²⁻³⁾.

Most of the female prisoners did not have contact and/or bond with health services before incarceration; consequently, most of these women have little knowledge on their own health state and may be less aware of the importance of preventive care for adoption and/or maintenance of healthy lifestyles, enhancing their vulnerability to diseases and health problems⁽²⁾.

Given the need to adopt efficient and effective actions aimed at promoting sexual and reproductive health of female prisoners, the following question was set: Which are the sexual and reproductive risk factors related to health vulnerability of female prisoners?

This study adopted the concept of vulnerability understood as exposure to individual, collective

or contextual factors. These factors can trigger diseases and/or health problems due to a number of aspects that, although related to individual susceptibilities and availability resources, require the integration of three interdependent axes for analysis and understanding⁽⁴⁾.

This theoretical framework classifies vulnerability in three dimensions: *individual*, which takes intrinsic aspects of the subjects and their different ways of life as starting point, referring to the level and quality of information that people have in order to incorporate health promotion and preventive practices in daily life, minimizing exposure to diseases or protecting them; *social*, which refers to the understanding of health-disease processes as socially determined and influent on individual behavior and practices based on material, cultural, political and moral aspects; and *programmatic*, a dimension that assumes that life in society is mediated by various institutions, including health institutions, that should consider the relationship between the subject and the surrounding social context, so that available programs and services may perform the diagnosis of vulnerabilities and interventional actions⁽⁴⁾.

The concept analysis of vulnerability contributes to widen the understanding of the sexual and reproductive health phenomenon in the prison context and for the inference of causal relationships between risk factors, their dimensions and possible impacts on the health of convict women.

While the definition of risk in its epidemiological connotation is associated to groups and populations, vulnerability refers to susceptibilities and predispositions of people

to negative effects on health. Although these are distinct elements, risk and vulnerability are closely related and they can only be understood when they are integrated into the historical and social context. However, a common erroneous association between these concepts happens when vulnerability is used to substitute risk. It is noteworthy that, when individuals find themselves vulnerable and exposed to risk factors, they respond inappropriately to this inter-relation and they start to develop diseases and/or negative health responses⁽⁵⁾.

Thus, this study aimed to identify sexual and reproductive health risk factors related to health vulnerability of female prisoners. By recognizing these aspects, this study seeks to contribute to implement political and educational strategies and changes in the health care system geared to the specific characteristics of the public studied, in order to elucidate the necessary measures to accomplish a comprehensive approach to women's health, and to facilitate the dialogue between the prison system and public health actions.

Method

This study consisted in an integrative literature review, a method that allows the formulation of general conclusions about a particular area of knowledge through the synthesis of multiple published studies. Its development followed the steps: identification of the guiding question; establishment of inclusion and exclusion criteria; categorization of studies; evaluation of the selected studies; interpretation of results; and presentation of the review⁽⁶⁾.

The main question of this review is: Which are the sexual and reproductive risk factors related to health vulnerability of female prisoners? After carrying out the search for articles using the *Population, Variables and Outcomes* (PVO) strategy, the information was used to find appropriate answers to the research question and thus to obtain a better definition of the population, problem context and/or situation, variables of interest and results. The method used for searching articles is described in Chart 1.

Chart 1 – Subject descriptors found in MeSH for the research question components according to PVO strategy. Crato, CE, Brazil, 2016

Strategy items	Components	Subject descriptors
<i>Population</i>	Female prisoners	<i>Prisoners (women's)</i>
<i>Variables</i>	Risk factors (health)	<i>Risk factors (health)</i>
<i>Outcomes</i>	Vulnerability (health)	<i>Women's health (vulnerability)</i>

Source: Created by the authors.

The survey was conducted in the Virtual Health Library (VHL) databases in December 2016, using the advanced search method and the category title, abstract and theme. Subject descriptors of the *Medical Subject Heading* (MeSH) of the *National Library of Medicine National Institutes of Health* (PubMed) were used.

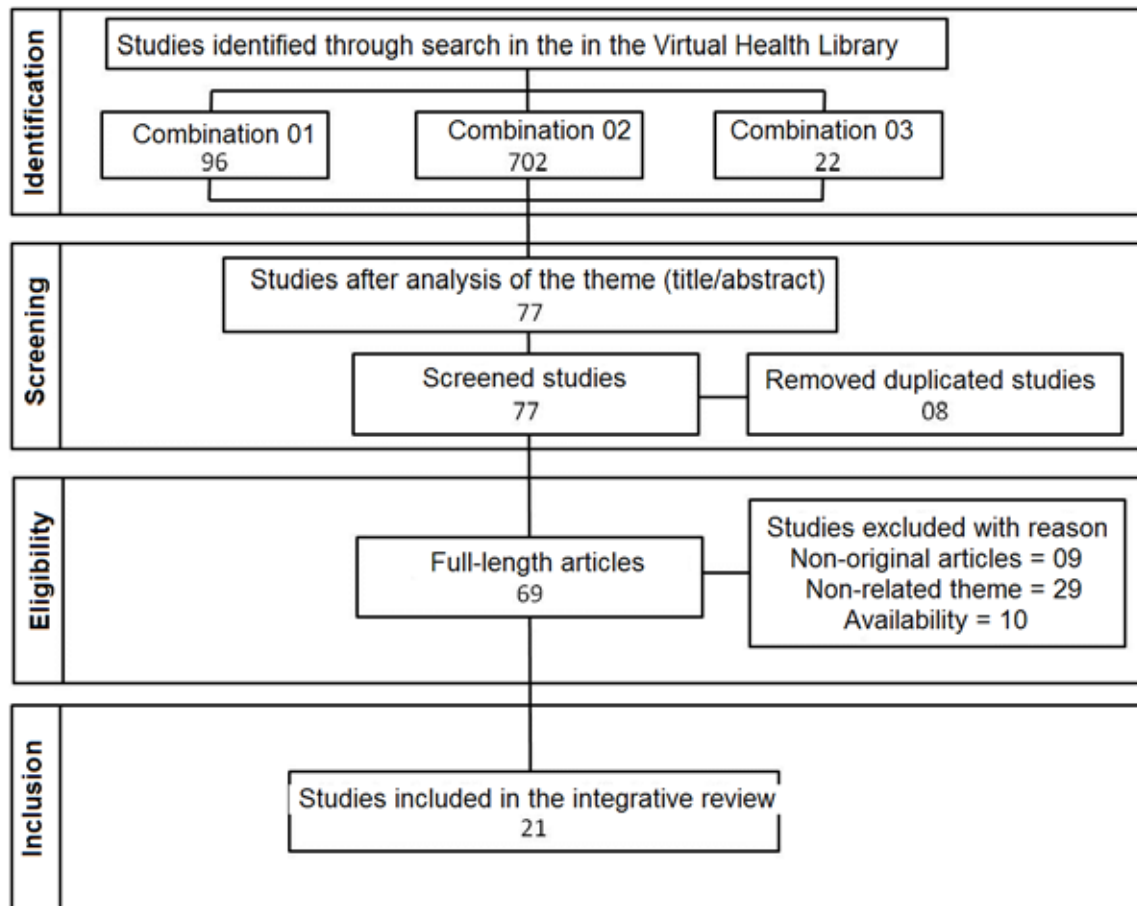
Three combinations with *Boolean operators* were carried out between descriptors as search strategy: *Women's Health and Prisoners*, resulting in 340 references; *Prisoners and Risk Factors*, resulting in 2,052 references; and *Women's*

Health and Prisoners and Risk Factors, resulting in 56 studies.

Thus, the final number of 2,448 articles was subjected to a screening process comprising four steps: article available in full-length; articles published in Portuguese, English and Spanish; Article as document type; and year of publication within a seven-year scope (2010-2016).

We used the instrument *Preferred Reporting Items for Systematic Review and Meta-Analyses* (PRISMA)⁽⁷⁾ to demonstrate the process of search and selection of studies, as shown in Figure 1:

Figure 1 – Flowchart of the search and selection process of articles by combining MeSH *Terms* in the Virtual Health Library (VHL). Crato, Ceará, Brazil, 2016



Source: Created by the authors.

In order to systematize the process of collection of information, a form divided into two parts was applied: the first part addressed title, authors, index base, year and journal of publication, methodological design and sample; and the second part addressed the identification of risk factors, based on social, individual and programmatic dimensions of health vulnerability. Subsequently, data was synthesized and results were presented, interpreted and discussed in a critical and descriptive way, making associations between risk factors and health vulnerabilities.

Results

We analyzed 21 articles that were characterized in relation to the identifying data of primary studies with respect to title, year and journal of publication and index base, place and country where the studies were conducted (Chart 2) and their methodological design and number of participants (Chart 3). This information is summarized below:

Chart 2 – Characteristics of primary studies in relation to the identification data. Crato, Ceará, Brazil. 2016 (to be continued)

Authors/year	Title of the article	Basis/ Journal	Location/Country
Steinberg JK, Grella CE, Boudov MR, Kerndt PR, Kadrnka CM, 2011 ⁽⁸⁾	Methamphetamine use and highrisk sexual behaviors among incarcerated female adolescents with a diagnosed STD	MEDLINE J Urban Health	Three juvenile detention centers in California, USA
Roth AM, Williams JA, Ly R, Curd K, Brooks D, Arno J, et al., 2011 ⁽⁹⁾	Changing sexually transmitted infection screening protocol will result in improved case finding for trichomonas vaginalis among hig-hrisk female populations	MEDLINE Sex Transm Dis	A minimum security private prison in Marion County, Indiana, USA
Binswanger IA, Mueller S, Clark CB, Cropsey KL, 2011 ⁽¹⁰⁾	Risk factors for cervical cancer in criminal justice settings	MEDLINE J Womens Health (Larchmt)	Five local jails from a midsize metropolitan area from the Southeast Region of the US
Nicolau AIO, Ribeiro SG, Lessa PRA, Monte AS, Bernardo EBR, Pinheiro AKB, 2012 ⁽¹¹⁾	Knowledge, attitude and practice of condom use among prisoners: STD/HIV prevention in the prison setting	MEDLINE Rev Esc Enferm USP	A female prison in Aquiraz, Ceará state, Brazil
Huang KRN, Atlas RBA, Parvez FMD, 2012 ⁽¹²⁾	The significance of breastfeeding to incarcerated pregnant women: an exploratory study	MEDLINE Birth	A prison in New York City, USA
Leukefeld C, Havens J, Tindall MS, Oser CB, Mooney J, Hall MT, et al., 2012 ⁽¹³⁾	Risky relationships: targeting HIV prevention for women offenders	MEDLINE AIDS Educ Prev	Four state prisons in Connecticut, Delaware, Kentucky and Rhode Island, USA
Nijhawan AE, Chapin KC, Salloway R, Andrea S, Champion J, Roberts M, et al. 2012 ⁽¹⁴⁾	Prevalence and predictors of trichomonas infection in newly incarcerated women	MEDLINE Sex Transm Dis	A prison in San Diego, California, USA
Caviness CM, Anderson BJ, Stein MD, 2012 ⁽¹⁵⁾	Prevalence and predictors of sexually transmitted infections in hazardously-drinking incarcerated women	MEDLINE Women health	A Adult Correctional Institute in Rhode Island, USA
Nokhodian Z, Yazdani MR, Yaran M, Shoaie P, Mirian M, Ataei B et al., 2012 ⁽¹⁶⁾	Prevalence and risk factors of HIV, syphilis, hepatitis B and C among female prisoners in Isfahan, Iran	MEDLINE Hepat Mon	A central prison in Isfahan, Iran
Barros LAS, Pessoni GC, Teles AS, Souza SMB, Matos MA, Bringel RM, et al., 2013 ⁽¹⁷⁾	Epidemiology of the viral hepatitis B and C in female prisoners of Metropolitan Regional Prison Complex in the State of Goiás, Central Brazil	MEDLINE Rev Soc Bras Med Trop	A prison complex of Aparecida de Goiânia, state of Goiás, Brazil
Farel CE, Parker SD, Muessig KE, Grodensky CA, Jones C, Golin CE, et al. 2013 ⁽¹⁸⁾	Sexuality, sexual practices, and HIV risk among incarcerated African-American women in North Carolina	MEDLINE Women Health Issues	Two state prisons in North Carolina, USA

Chart 2 – Characteristics of primary studies in relation to the identification data. Crato, Ceará, Brazil. 2016 (conclusion)

Authors/year	Title of the article	Basis/ Journal	Location/Country
Voisin DR, Salazar LF, Crosby R, Diclemente RJ, 2013 ⁽¹⁹⁾	The relationship between ethnic identity and Chlamydia and Gonorrhea infections among low-income detained African American adolescent females	MEDLINE Psychol Health Med	Eight regional juvenile detention centers in the State of Georgia, USA
Anjos SJSB, Ribeiro SG, Lessa PRA, Nicolau AIO, Vasconcelos CTM, Pinheiro AKB, 2013 ⁽²⁰⁾	Risk factors for cervical cancer in female prisoners	BDEF Rev Bras Enferm	A female penal institute, state of Ceará, Brazil
Aguiar SRV, Villanova FE, Martins LC, Santos MS, Maciel JP, Falcão FLM, et al., 2014 ⁽²¹⁾	Human papillomavirus: prevalence and factors associated in women prisoners population from the Eastern Brazilian Amazon	MEDLINE J Med Virol	A female rehabilitation center in Ananindeua, state of Pará, Brazil.
Baltieri DA, 2014 ⁽²²⁾	Psychosocial pathways to sexual dysfunction among female inmates	MEDLINE Arch Sex Behav	A female prison, state of São Paulo, Brazil
Fogel CI, Crandell JL, Neevel AM, Parker SD, Carry M, White BL, et al., 2015 ⁽²³⁾	Efficacy of an adapted HIV and sexually transmitted infection prevention intervention for incarcerated women: a randomized controlled trial	MEDLINE Am J Public Health	Two state prisons in North Carolina, USA
Gupta N, Schmidt HI, Buisker T, Dufour MK, Goldenson J, Myers J, et al., 2015 ⁽²⁴⁾	After the fact: a brief educational program on HIV postexposure prophylaxis for female Detainees in the local jail	MEDLINE J Correct Health Care	A prison in San Francisco City and County Jail California USA
Costa LHR, Alves JP, Fonseca CEP, Costa FM, Fonseca FF, 2016 ⁽²⁵⁾	Gender in the context of sexual and reproductive rights of women deprived of freedom	IBECS Global Nursing ward	Prison system of Montes Claros and Pirapora, Minas Gerais, Brazil
Geitona M, Milioni SO, 2016 ⁽²⁶⁾	Health status and access to health services of female prisoners in Greece: a cross-sectional survey	MEDLINE BMC Health Serv Res	Department of female detention of the Korydallos County, Central Region of Greece
Trigueiro DRSG, Almeida SG, Monroe AA, Costa GPO, Bezerra VP, Nogueira JA, 2016 ⁽²⁷⁾	AIDS and prison: social representations of women in situations of deprivation of liberty	LILACS Rev Esc Enferm USP	Maria Julia Maranhao Reeducation Center, João Pessoa, Brazil
Ahmed RA, Angel C, Martell R, Pyne D, Keenan L, 2016 ⁽²⁸⁾	The impact of homelessness and incarceration on women's health	MEDLINE J Correct Health Care	A pre-trial detention in Canada

Source: Created by the authors.

Chart 3 – Characteristics of primary studies in relation to the methodological design. Crato, Ceará, Brazil. 2016 (to be continued)

Authors/year	Design of the study	Participants
Steinberg JK, Grella CE, Boudov MR, Kerndt PR, Kadrnka CM, 2011 ⁽⁸⁾	Descriptive cross-sectional study with quantitative approach and application of a form	539 female adolescents
Roth AM, Williams JA, Ly R, Curd K, Brooks D, Arno J, et al., 2011 ⁽⁹⁾	Descriptive cross-sectional study with quantitative approach and collection of biological material	362 women
Binswanger IA, Mueller S, Clark CB, Cropsey KL, 2011 ⁽¹⁰⁾	Descriptive cross-sectional study with quantitative approach with inquiry	390 women
Nicolau AIO, Ribeiro SG, Lessa PRA, Monte AS, Bernardo EBR, Pinheiro AKB, 2012 ⁽¹¹⁾	Evaluative study of Knowledge, Attitude and Practice (KAP) with cross-sectional and quantitative approach	155 women
Huang KRN, Atlas RBA, Parvez FMD, 2012 ⁽¹²⁾	Exploratory and qualitative study with semi-structured interviews	20 pregnant women
Leukefeld C, Havens J, Tindall MS, Oser CB, Mooney J, Hall MT, et al., 2012 ⁽¹³⁾	Randomized study of two arms with prevention, intervention and comparison groups with a three-month <i>follow-up</i>	344 women
Nijhawan AE, Chapin KC, Salloway R, Andrea S, Champion J, Roberts M, et al., 2012 ⁽¹⁴⁾	Descriptive cross-sectional study with quantitative approach and collection of biological material	387 women
Caviness CM, Anderson BJ, Stein MD, 2012 ⁽¹⁵⁾	Randomized clinical trial with brief intervention	245 women
Nokhodian Z, Yazdani MR, Yaran M, Shoaie P, Mirian M, Ataei B et al., 2012 ⁽¹⁶⁾	Descriptive cross-sectional study with quantitative approach and application of a form	163 women
Barros LAS, Pessoni GC, Teles AS, Souza SMB, Matos MA, Bringel RM, et al., 2013 ⁽¹⁷⁾	Descriptive cross-sectional study with quantitative approach and collection of biological material	148 women
Farel CE, Parker SD, Muessig KE, Grodensky CA, Jones C, Golin CE, et al., 2013 ⁽¹⁸⁾	Exploratory and qualitative study with semi-structured interviews	29 women
Voisin DR, Salazar LF, Crosby R, Diclemente RJ, 2013 ⁽¹⁹⁾	Descriptive cross-sectional study with quantitative approach and application of a form	123 female adolescents
Anjos SJSB, Ribeiro SG, Lessa PRA, Nicolau AIO, Vasconcelos CTM, Pinheiro AKB, 2013 ⁽²⁰⁾	Descriptive cross-sectional study with quantitative approach and application of a form	36 women
Aguiar SRV, Villanova FE, Martins LC, Santos MS, Maciel JP, Falcão FLM, et al., 2014 ⁽²¹⁾	Population-based, analytical, descriptive, cross-sectional study with quantitative approach with application of questionnaire and collection of biological material	190 women
Baltieri DA, 2014 ⁽²²⁾	Descriptive cross-sectional study with quantitative approach and application of a form	315 women
Fogel CI, Crandell JL, Neevel AM, Parker SD, Carry M, White BL, et al., 2015 ⁽²³⁾	Randomized controlled study with prevention, intervention and comparison groups with three and six months of <i>follow-up</i>	521 women
Gupta N, Schmidt HI, Buisker T, Dufour MK, Goldenson J, Myers J, et al., 2015 ⁽²⁴⁾	Intervention study with quantitative approach	145 women

Chart 3 – Characteristics of primary studies in relation to the methodological design. Crato, Ceará, Brazil. 2016 (conclusion)

Authors/year	Design of the study	Participants
Costa LHR, Alves JP, Fonseca CEP, Costa FM, Fonseca FF, 2016 ⁽²⁵⁾	Descriptive and exploratory study with qualitative and quantitative approach and application of questionnaires and focus group technique	34 women
Geitona M, Milioni SO, 2016 ⁽²⁶⁾	Descriptive cross-sectional study with quantitative approach with application of a form	135 women
Trigueiro DRSG, Almeida SG, Monroe AA, Costa GPO, Bezerra VP, Nogueira JÁ, 2016 ⁽²⁷⁾	Exploratory and descriptive study with quantitative and qualitative approach, supported by the theoretical framework of social representations using a structured multiple choice questionnaire.	268 women
Ahmed RA, Angel C, Martell R, Pyne D, Keenan L, 2016 ⁽²⁸⁾	Qualitative study using the focus group technique with semi-structured interviews	21 female

Source: Created by the authors.

Low socioeconomic status and level of education was observed among female prisoners^(8,11-12,16-17,20-21,24-25,28). Prisoners come from marginalized social groups located in suburbs and urban centers^(11,20), from unstructured family nuclei^(11,17,22), belonging to racial and ethnic minorities^(8,10,12,14-15,18-19,22,24,27-28). They are mostly young^(11,13,20,27), some were homeless^(11-12,24,28), victims of domestic⁽¹²⁾ and gender^(11,25,28) violence, with a history of sexual and physical abuse or^(8,11-12,17,22,26,28) who were unemployed or engaged in low-paid works^(11,13,25), which often determined their involvement with prostitution^(10-11,14-16,18,26) with crime under the influence of affective-sexual partners⁽¹³⁾. Imprisonment would happen mainly due to drug use and/or trafficking^(8,11-12,15,22-23,26,28), with probability of criminal recidivism^(25,28) and difficulties of social reintegration due to post-incarceration stigma⁽²⁸⁾.

As for the individual risk factors that interfered in sexual and reproductive health in prisons, because incarcerated women are mostly young, they were more predisposed to acquiring Sexually Transmissible Infections (STI)^(8,14-15,19,23-24,27) enhanced by the adoption of risk behaviors⁽²³⁾ when the first sexual intercourse occurred at the age of 15 years or less^(10,20-21). This fact influenced the adoption of unprotected sexual activities^(8,10-11,13,15-17,20-21,23-24,27) and/or inappropriate use of condoms^(8,10-11,13,15,18,20-21,27) and sexual activity with multiple and concurrent

partners, under the influence of illicit drugs and prostitution⁽²³⁾.

In the case of stable affective-sexual relations, fear of provoking suspicion and rejection from the part of the partner was observed, as the use of condom could suggest lack of confidence in the partner. Women would do this to guarantee the emotional support. Thus, negotiation was difficult and this had as consequence a greater exposure to STI^(13-14,23). In contrast, among bisexual and homosexual practices and involvements^(11,16,18,22,25,27), there was low perception of risk among women⁽²⁴⁾. Moreover, in some institutions, there was limitation to intimate visits of partners, which would take place in inappropriate conditions and without privacy. Homosexual intimate encounters with external partners and affective-sexual relationships between inmates were prohibited⁽²⁵⁾.

These processes were enhanced by multiplicity of partners^(8,10-11,13-18,20-21), history of sexually transmitted infections^(8,10,21), alcohol consumption^(8,14-15,22) and use of illicit drugs^(8,13-15,19). These became vehicle of transmission, when injecting drug equipment was shared^(13,17-16) or to do tattoos and *bodypiercings*^(11,16). These processes were also determinant of early pregnancies^(8,10), especially when they were associated with poor knowledge about the need to use condoms in a safe and proper⁽¹¹⁾, knowledge on sexually transmitted infections and their transmission modes⁽¹³⁾ and sexual risk behaviors⁽²⁴⁾, lack of

guidance about sexuality⁽²⁵⁾ and, with respect to the lactation period, poor knowledge about the importance of breastfeeding⁽¹²⁾ and care for children in the first six months postpartum⁽²⁵⁾.

Further risk factors for sexual and reproductive health were the irregular performance of the papanicolaou examination^(10,14,19-20), prolonged use of contraceptives⁽²⁰⁾, smoking^(10,20-21) and advanced age, mainly for *Human Papilloma Virus* (HPV), cervical cancer and sexual dysfunction^(20,22), the latter usually associated with depressive symptoms⁽²²⁾.

In the programmatic aspect, some institutional factors determining vulnerability to sexual and reproductive health of female prisoners stood out. In this aspect, one important factor is the removal of the social, cultural and family context when entering into the prison⁽¹²⁾ as this space is characterized by having a physically weak structure⁽²⁵⁾ and a stigmatizing environment, favoring sexual abuse, rape and violence⁽⁸⁾, enhanced by long-term stay^(17,22) and overcrowded cells⁽¹¹⁾.

Whereas flaws in social and psychological support services were present^(8,10,12,22), lack of preventive actions^(11,13,24) and poor access to health services in general^(10-11,15,20-22,26-28) were associated with greater exposure to physical injuries, mental disorders and transmission of infectious diseases⁽¹¹⁾, especially sexual diseases, commonly observed in the prison system. However, prevention, diagnosis, monitoring, control and treatment were flawed and/or inadequate for chlamydia, gonorrhea and trichomoniasis^(9,14-15,19), cervical cancer and *Human Papilloma Virus* (HPV)^(10,21), hepatitis B and C, syphilis⁽¹⁶⁻¹⁷⁾ and *Human Immunodeficiency Virus* (HIV)^(8,13,16,18). When educational activities were developed they were typically punctual and fragmented⁽¹¹⁾.

When disease prevention actions purposed promoting sexual and reproductive health, their development was ineffective and weak because of inadequate, irregular and insufficient distribution of condoms and poor provision of information on their use⁽¹⁰⁻¹¹⁾. Weakness came also from the intermittent gynecological care,

highlighting the irregularity of realization of Pap smears^(10,14,19-21).

Prenatal care was observed to occur in a limited way⁽¹²⁾, causing problems to the pregnancy and the birth process. To give birth in prison^(12,25) implied the commitment of the bond due to the separation between mother and child in the first months, with harm to the initial process of breastfeeding and its duration⁽¹²⁾. It is noteworthy that there was a lack of support and alternative means to promote mother-child bond⁽¹²⁾ and this hindered the strengthening of ties and entailed psychological damage to puerperal women and impaired child growth and development⁽²⁵⁾.

Discussion

It is observed that the prison system exposes women to factors that are intrinsically related to their constitutive dimension in their relationships and particularities. The identification and the study of the effects of biological, affective, cognitive and behavioral aspects, which are ultimately determinants of health vulnerability, are necessary^(1,5,29-32).

Therefore, individual responses to adverse situations are conditioned by vulnerability and may result in varying degrees of coping. This justifies the relevance of focusing on individual actions, although this is not enough, as some broader actions on the collective and social context are needed^(5,11,31-32).

This approach should go beyond individual responsibility, broadening the analytical approach, besides expanding the focus of attention. The endeavor to understand the mediations present in the health-disease process promotes possibilities prevention and health promotion actions and strategies focused on the context and the daily lives of people and communities^(11,32).

In contrast, the way society is structured in terms of dialogue with the prison system implies the production of risk factors and definition of vulnerability⁽⁵⁾. The social dimension of vulnerability stems from the understanding of the health-disease processes as social processes, as

they often extrapolate the constituent elements of the individual plan⁽³²⁾.

This recognition implies to understand the risks and their distribution in a integrated and contextualized manner in relation to the economic, political, ethical and cultural issues of a given territory. Understanding the meaning of vulnerability also involves perceiving people's ability to cope with their problems in the social context and the conduct adopted to solve such problems and in the conducts objectively and subjectively analyzed, based on the socio-symbolic and ontological dimension of life from the point of view of the human life^(32,34).

Aspects and the conditions present in the daily lives of people are affected by and/or associated with the combination of gender inequality, stigma and discrimination, socioeconomic status and low level of education. These situations are unfavorable to employment, housing, family and community structure. Belonging to racial, ethnic and/or socially marginalized minorities may lead to lack of resources and support, knowledge deficits that impact on access to information media and health care services, limiting, therefore, the ability of coping, empowerment and effective exercise of rights^(5,29-35).

Women deprived of freedom in this context see themselves in vulnerable situations. The incarceration process often leads to forms of exclusion, segregation and denial of rights. These things are aggravated by the weakness of social networks and community support, exclusion, discrimination or weakening of social groups and of resilience^(1,32-34).

During incarceration process, women build their identities based on interpersonal relations that develop in this scenario and affect the daily health practices in a dynamic way⁽³¹⁾. Thus, health care actions need to incorporate the social dimension of vulnerability to consider individual ways of life, knowledge and practices and their interference in health promotion practices, disease prevention and resizing of strategies for contextual dimensions⁽³³⁾.

The programmatic dimension refers to the evaluation of the structural and functional

capacity and monitoring of control, diagnosis and assessment programs through social and health indicators and management of resources. This dimension aims to qualify the effective and democratic access to health services in order to prevent exposure to diseases through health promotion. It also aims at the possibility of accessing the means of protection and building policies for social and health needs^(29-30,32).

Whereas the difficulties to access and to create bond with health services represent a significant determinant of vulnerability, it is emphasized that the prison environment itself exacerbates this distance. In this perspective, the dialogue between health services and the prison system becomes critical, considering that there is still a duality between the needs presented by the people and the structure provided by the prison and health systems⁽³⁴⁾.

On the other hand, the definition of diagnosis and identification of elements that enhance or minimize vulnerability, as well as the understanding of the problems that affect the health of incarcerated women subsidizes the adoption of theoretical and practical interventions that may impact on improvements in health conditions. These actions, developed within the prison should focus on prevention and health promotion, should comply with the assumptions of a comprehensive policy and include programs for prevention, diagnosis, control, health status monitoring and access to services. Therefore, they require markers of two natures: one related to the structure and dynamics of health service organization; and the other on the operationalization of legal and political actions^(30,35-36).

Therefore, changes in practices and approaches are necessary, as the simultaneous and chronological cumulative exposure to different risk factors can accentuate the experience of vulnerability in individual, social and programmatic levels in different settings, contexts and populations⁽³⁴⁾. This can be seen in women deprived of freedom, in which negative health outcomes are evident throughout the incarceration process.

As limitations, we point out that this study did not analyze the coping strategies of people and communities before situations of vulnerability, neither sought to unravel the interrelationships between risk factors leading to vulnerabilities in individual, social and programmatic dimensions. In this sense, we stress the need of further research on the theme in order to propose care strategies directed to the female prison population.

Final Considerations

Identifying risk factors that have an impact on health vulnerabilities in prison settings is fundamental to professionals who provide assistance to the female prison population. In this context, the findings of this review met the purpose of the study, as we have identified the risk factors and their relation with the three dimensions of health vulnerability (individual, social and programmatic) in the prison context, pointing to the susceptibility of incarcerated women to develop health problems due to simultaneous and/or cumulative exposure.

The understanding of the complexity of these factors and of the health problems and responses of individuals requires a broader view about the health-disease process as a comprehensive and multifaceted phenomenon, as well as theoretical and conceptual contributions of the vulnerability dimensions.

Studies show that sexual and reproductive health grievances imprisoned women are related to individual, social and programmatic factors, which implies increased vulnerability in these areas. The need to carry out the care in the prison system through development and implementation of prevention and health promotion actions, early diagnosis, monitoring, control and treatment of diseases focused on sexual and reproductive health is emphasized. These still represent a challenge to the implementation of comprehensive attention to the health of imprisoned women, which must take place by the articulation between prisons, professionals and health services.

Collaborations:

1. conception, design, analysis and interpretation of data: Maria Juscinaide Henrique Alves, Emanuely Vieira Pereira and Jameson Moreira Belém;

2. writing of the article and relevant critical review of the intellectual content: Maria Juscinaide Henrique Alves, Emanuely Vieira Pereira, Jameson Moreira Belém, Glauberto da Silva Quirino, Evanira Rodrigues Maia and Ana Maria Parente Garcia Alencar;

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