SEXUAL BEHAVIOR OF POST-MODERN WOMEN AND SEXUALLY TRANSMITTED INFECTIONS: A REVIEW STUDY

Comportamento sexual de mulheres pós-modernas e as infecções sexualmente transmissíveis: um estudo de revisão
Comportamiento sexual de mujeres posmoderno e infecciones de transmisión sexual: estudio de revisión

Gabriela Silva Esteves de Hollanda
Wynne Pereira Nogueira
Maria Eliane Moreira Freire
Layane Trindade de Souza
Maria Aparecida Cavalcanti Catão

ABSTRACT
Objective: to identify the scientific evidence available in the literature on the risky sexual behavior of women and the relationship with the occurrence of Sexually Transmitted. Method: integrative review of articles available in full, obtained from PubMed, EBSCO, Lilacs and Web os Science databases. Controlled descriptors and keywords “women” or “woman” or “female”, “sexually transmitted disease/transmission” or “sexually transmitted diseases/transmission” and “risky sexual behavior” or “unsafe sex” were used. Results: 794 studies were identified. Of there, thirteen studies composed the sample. Evidence showed that multiple sexual partners; the use of mobile apps to recruit partners; women who have sex with women regardless of sexual orientation; age disparity in relationships; intergenerational relationships are risky sexual behaviors among women. Conclusion: presence of new sexual risk behaviors among post-moderns women. Identify new and old risky sexual behaviors is critical for screening for sexually transmitted infections.

DESCRIPTORS: Women; Sexual behavior; Health risk behaviors; Sexually transmitted diseases; Nursing.

1 Universidade Federal de Pernambuco, Recife, Pernambuco, Brazil
2 Universidade Federal da Paraíba, João Pessoa, Paraíba, Brazil

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Corresponding Author: Gabriela Silva Esteves de Hollanda, E-mail: gabyhollanda@hotmail.com

RESUMO
Objetivo: identificar as evidências científicas disponíveis na literatura sobre os comportamentos sexuais de risco de mulheres e a relação com a ocorrência de Infeções Sexualmente Transmissíveis. Método: revisão integradora de artigos disponíveis na integra, obtidos nas bases PubMed, EBSCO, Lilacs e Web of Science. Foram utilizados descritores controlados e palavras-chave “women” ou “woman” ou “female”, “sexually transmitted disease/transmission” ou “sexually transmitted diseases/transmission” e “comportamento sexual de risco” ou “unsafe sex”. Resultados: foram identificados 794 estudos. Desses, treze estudos compuseram a amostra. As evidências mostraram que múltiplos parceiros sexuais; o uso de aplicativos móveis para recrutar parceiros; mulheres que fazem sexo com mulheres independentemente da orientação sexual; disparidade de idade em relacionamentos; relacionamentos intergeracionais são comportamentos sexuais de risco entre mulheres. Conclusão: presença de novos comportamentos sexuais de risco entre as mulheres pós-modernas. Identificar os novos e velhos comportamentos sexuais de risco é fundamental para o rastreio das infecções sexualmente transmissíveis.

DESCRIPTORES: Mulheres; Comportamento sexual; Comportamento de risco à saúde; Doenças sexualmente transmissíveis; Enfermagem.

RESUMEN
Objetivo: identificar la evidencia científica disponible en la literatura sobre el comportamiento sexual de riesgo de las mujeres y la relación con la ocurrencia de Infecciones de Transmisión Sexual. Método: revisión integradora de artículos disponibles en su totalidad, obtenidos de las bases de datos PubMed, EBSCO, LILACS y Web of Science. Se utilizaron descriptores controlados y palabras clave “women” o “woman” o “female”, “sexually transmitted disease/transmission” o “sexually transmitted diseases/transmission” y “comportamiento sexual de risco” o “unsafe sex” se utilizó. Resultados: se identificaron 794 estudios. De estos, trece estudios comprendieron la muestra. La evidencia mostró que múltiples parejas sexuales; el uso de aplicaciones móviles para reclutar socios; mujeres que tienen relaciones sexuales con mujeres independientemente de su orientación sexual; disparidad de edad en las relaciones; las relaciones intergeneracionales son comportamientos sexuales de riesgo entre las mujeres. Conclusión: presencia de nuevos e comportamientos sexuales de riesgo entre mujeres posmodernas. Identificar comportamientos sexuales de riesgo nuevos y antiguos es fundamental para la detección de infecciones de transmisión sexual.

DESCRIPTORES: Mujeres; Comportamiento sexual; Conductas de riesgo para la salud; Enfermedades sexualmente transmisibles; Enfermería.

INTRODUCTION

Sexual behavior is the result of learning from unintentional social relationships, mostly not involving affective and psychological dimensions associated with sexual activity. It is understood that depending on the cultural aspect, historical, social, and life context of each person, sexual behavior can bring negative and undesirable repercussions to the individual and others, such as pregnancy and the acquisition of Sexually Transmitted Infections (STI), including the human immunodeficiency virus (HIV).\(^3\)\(^,\)\(^2\)

In recent years, changes in sexual behavior have favored the increase in the prevalence of STIs, especially HIV.\(^3\) Non-adherence to condom use and multiple partners represent the main sexual risk behaviors. Regarding women, the non-use of condoms with new partners, a very common practice, has increased considerably. Social issues and gender inequality must be valued when talking about female sexual risk behavior.\(^3\)\(^,\)\(^4\)

Over the years, sexual behaviors express the transformations in human behavior changes and in the history of STIs, whether in their epidemiological profile or in the actions for confronting them.\(^5\) Although the highest prevalence of cases is concentrated in males, in recent decades there has been an increase in cases among women, which demonstrates the presence of sexual risk behavior associated with changes in the sociocultural context and modernity, especially through the use of social networks, such as the use of mobile applications for recruiting sexual partners.\(^6\)\(^,\)\(^7\)

Moreover, it is known that negotiation for the practice of safe sex is still restricted, given that the woman’s power to reduce or eliminate risk is limited by her partner, and others still treat trust and fidelity as elements linked to protection.\(^7\)\(^,\)\(^8\)

It is also added that most women do not identify themselves as a group and with behaviors considered to be at higher risk for the development of STIs, making it more difficult for them to perceive the risk and adopt preventive measures.\(^9\)

In view of the above, and considering that the issue of women’s sexual risk behaviors is little investigated, even in the international context, the interest in conducting this review is justified. The results of this review can improve knowledge of women’s sexual and reproductive health needs, consequently, qualifying care and seeking means for these women to understand their vulnerability to STIs.

Thus, in view of the change in women’s sexual behaviors and the importance of recognizing them as being at risk for the development of STIs, this review aims to identify the scientific evidence available in the literature on women’s sexual risk behaviors and their relation to the occurrence of STIs in the context of post-modernity.
METHOD

A descriptive research of the integrative literature review (ILR) type was carried out, which makes it possible to explore the literature broadly and with methodological rigor, in addition to analyzing and synthesizing scientific knowledge about the object of study through the results of previous research, as well as identifying gaps that must be filled by conducting new studies.10-11

This integrative review followed essential steps for its development: identification of the topic and selection of the review question; establishment of eligibility criteria; search and identification of studies in scientific databases; extraction of data from the studies; evaluation of selected studies and critical analysis; synthesis of review results; evaluation and interpretation of results; and presentation of data in the integrative review structure.12

The PECOT strategy (acronym for patient, exposure, comparison, outcomes and time)13 was used to construct the question, where P – patient/population (women), E – exposure (sexual risk behavior evidenced in the literature), C – control/comparison (not applicable to this study), O – outcome (STI involvement and transmission), T – time (period from 2014 to 2020). The development of this ILR had as a research question: What is the scientific evidence about women’s sexual risk behaviors and the relationship with STIs?

The literature search for the primary studies was conducted via internet in the following databases: Medical Literature Analysis and Retrieval System Online (Medline via PubMed), Ebsco, Latin American and Caribbean Literature on Health Sciences (Lilacs) and Web of Science. Searches occurred in December 2020.

To ensure a broad and thorough search, the controlled descriptors and keywords were delimited in the Thesaurus according to each database, i.e., Medical Subject Headings (Mesh) and Health Sciences Descriptors (DeCS). The boolean AND and OR indicators were used. For the search in the Lilacs database, in addition to the Boolean operators, the qualifiers were used as presented in the following chart (Chart 1).

For the selection of primary studies in this review, the inclusion criteria adopted were: primary studies, analytical design in which the authors investigated sexual behaviors for STI transmission in women; research published in Portuguese, English or Spanish; and in the last five years (December 1, 2015 to December 1, 2020). There was a time limit to ensure the adequate number of studies, since a large number of primary studies would make it unfeasible to conduct the following steps of the review.

The studies were systematically included using the Preferred Reporting Items Systematic Review and Meta-Analyses (PRISMA) method.14 Initially, to choose the studies that would integrate the sample, the titles and abstracts of the articles extracted in the search were read and analyzed by one of the authors. In the next step, the articles were read in their entirety by two researchers independently, with the purpose of accessing the appropriation of the review question, and then proceeding with the extraction of the data of interest for the study. In case of disagreements of opinions in the analysis of the articles, the researchers met and reached a consensus.

Figure 1 shows the flow chart of the selection of the primary studies.

The extraction of information from the articles occurred from a structured collection instrument. For each article in the final sample of this review, the study identification form was filled out after translation and exhaustive reading, allowing information collection in a systematic way by peers. The information of interest was: study title, authors, database where the publication was located, journal, year of publication, objective, study design, target audience, and sexual risk behaviors associated with STIs. Thus, the results were presented descriptively by means of a summary table (Chart 2), allowing an overview of the main findings among the studies selected for this ILR.

To identify the quality of evidence of the studies extracted for this ILR, the classification adopted by Melnyk & Finout-Overholtet al. was used, which contemplates seven levels.15

RESULTS

The study resulted in the analysis of 13 articles. Regarding the country of origin, three studies were developed in the United States, two in the United Kingdom, Colombia and Spain, respectively, and one each in China, Chile, Portugal and Great Britain. Regarding the strength of the evidence obtained in the articles, 13 studies with level of evidence IV were found, 11 being respectively, and one each in China, Chile, Portugal and Great Britain, with the rest was: study title, authors, database where the publication was located, journal, year of publication, objective, study design, target audience, and sexual risk behaviors associated with STIs. Thus, the results were presented descriptively by means of a summary table (Chart 2), allowing an overview of the main findings among the studies selected for this ILR.


<table>
<thead>
<tr>
<th>Databases</th>
<th>Search Strategies</th>
<th>Identified Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>PubMed</td>
<td>women OR woman OR female AND sexually transmitted disease/transmission OR sexually transmitted diseases/transmission AND Comportamento Sexual de Risco OR unsafe sex ... [Mesh]</td>
<td>718</td>
</tr>
<tr>
<td>EBSCO</td>
<td>women OR woman OR female AND sexually transmitted disease/transmission OR sexually transmitted diseases/transmission AND Comportamento Sexual de Risco OR unsafe sex ... [Mesh]</td>
<td>65</td>
</tr>
<tr>
<td>Lilacs</td>
<td>mulher OR mulheres AND doença sexualmente transmissível/transmissão OR doença de transmissão sexual/transmissão OR infeções sexualmente transmissíveis/transmissão AND comportamento sexual de risco OR sexo de risco OR sexo desprotegido ... [DeCS]</td>
<td>06</td>
</tr>
<tr>
<td>Web of Science</td>
<td>women OR woman OR female AND sexually transmitted disease OR sexually transmitted diseases AND Comportamento Sexual de Risco OR unsafe sex ... [Mesh]</td>
<td>05</td>
</tr>
</tbody>
</table>

**Source:** Study data.
authors, year of publication, objectives, sample characterization and sexual risk behaviors.

DISCUSSION

The studies that comprised this review, which deal with women’s sexual risk behaviors for the development of STIs, were produced mostly by cross-sectional studies. All of them were classified as level of evidence IV. It is noteworthy that the best scientific evidence is obtained in research with high methodological quality, due to the ability to gather information that supports clinical decision-making.\(^{16}\)

In this study, certain STI risk sexual behaviors such as: non-use of condoms; early sexual initiation; multiple sexual partners; use of alcohol and other drugs; sex work and/or exchanging sex for money or drugs, are portrayed in the studies and their relationship to STIs is recognized as proven by scientific evidence.\(^{17-18}\)

However, from the studies surveyed, we observed women’s sexual risk behaviors that, until then, have been little discussed in the scientific literature: the use of the Internet to recruit sexual partners; women who have sex with women; age disparity in relationships; intergenerational relationships, inserted in the topics partnership-related sexual behavior and; age-related sexual behavior of table two.\(^{19-20}\)

Table 2 – Description of the production of knowledge about the sexual behaviors of women associated with the prevalence of Sexually Transmitted Infections, according to authors, year of publication, objectives, characterization of the sample, sexual risk behaviors. João Pessoa, Paraíba, 2020.

<table>
<thead>
<tr>
<th>Authors/Year</th>
<th>Goals</th>
<th>Showcase</th>
<th>Sexual Risk Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotton et al., 2017</td>
<td>Analyze people who inject drugs and their sexual and support networks</td>
<td>Men (106) and women (56) who inject drugs in Chicago–USA</td>
<td>A: Women were significantly more likely (&lt;0.01) to report sex in exchange for money or drugs than men (66% vs. 4%). B: Women (43%) reported &gt;2 partners in the 6 months and men (30%); Women were significantly more likely (&lt;0.01) to have partners with unknown HIV status (34% vs. 9%).</td>
</tr>
<tr>
<td>Friedman et al., 2017</td>
<td>Describe the behavior, partnerships, and sexual risk settings of young opioid users</td>
<td>Men (307) and women (153) who use opioids non-medically in New York City – USA</td>
<td>B: 10% of women reported sex with other women in the past 90 days, 56% of women reported sex with other women in their lifetime; 12% of women reported group sex at a sexual event. C: 13% of women reported that a condom was always used in the past 90 days during vaginal sex and 3% (1 of 29) during anal sex.</td>
</tr>
<tr>
<td>Villar-Loubet et al., 2016</td>
<td>Analyze demographic data, sexual self-efficacy, self-esteem, acculturation, and HIV as correlates of unprotected sexual intercourse</td>
<td>HIV-negative women (514) from South Florida – USA</td>
<td>B: Women had statistically high association between unprotected intercourse and switching sex. C: In the past 12 months, the odds of unprotected anal intercourse increased (AOR = 1.63; 95% CI = 1.08, 2.45) with increasing attributions of sexual relationship power to the male partner.</td>
</tr>
</tbody>
</table>
Table 2 – Cont.

| Study (Year) | Participants | Outcome
<table>
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<tbody>
<tr>
<td>Costa et al., 2018</td>
<td>Assess HIV knowledge, risk perception, and sexual behavior</td>
<td>Women (177) considered at risk for STIs in Portugal</td>
</tr>
<tr>
<td>Villegas-Castâno et al., 2016</td>
<td>Establish STI prevalence and risk factors in public school students in Medellin</td>
<td>Male (315) and female (254) public school students in Medellin – Colombia</td>
</tr>
<tr>
<td>Mueses-Marín et al., 2018</td>
<td>To describe the perceptions of sexual risk, HIV and testing in people with risky sexual practices and in heterosexual people</td>
<td>Men (471) and women (468) in two groups (G1: traditional risk; G2: not belonging to the traditional risk group) in Cali – Colombia</td>
</tr>
<tr>
<td>Tanton et al., 2018</td>
<td>To describe the characteristics of care at sexual health clinics of people who reported unsafe sex in the past year</td>
<td>Sexually active men (4819), sexually active women (6668) in Great Britain – United Kingdom</td>
</tr>
<tr>
<td>Pérez-Morente et al., 2017</td>
<td>To determine the risk factors associated with sexual behavior in the population assisted at an STI control center</td>
<td>Men (277) and women (219) with suspected clinical history of STI from Granada – Spain</td>
</tr>
<tr>
<td>Irarrázabal et al., 2016</td>
<td>To identify the relationship between substance use and HIV risk behaviors in women who reported substance use</td>
<td>Women (203) who used some substance in the last 3 months from Puente Alto and La Pintana – Chile</td>
</tr>
<tr>
<td>Moure-Rodríguez et al., 2016</td>
<td>To determine the incidence of alcohol and condomless sex and the association with heavy alcohol and cannabis use</td>
<td>University students followed for five years (517) in Santiago de Compostela – Spain</td>
</tr>
<tr>
<td>Bai Feng Chen et al., 2016</td>
<td>Identify personal profiles and risk behaviors among injecting drug users</td>
<td>Men (718) and women (198) from Maanshan detoxification centers – China</td>
</tr>
<tr>
<td>Sonnenberg et al., 2015</td>
<td>Describe the epidemiology of MG and explore it as a potential STI</td>
<td>Men and women (4828) tested for MG in Great Britain – United Kingdom</td>
</tr>
<tr>
<td>Mitchell et al., 2015</td>
<td>Describe the prevalence of use of medications to aid sexual performance and identify associated factors</td>
<td>Men (6863) and women (7067) aged 16 to 74, living in Great Britain</td>
</tr>
</tbody>
</table>

Legend: A – Sexual behavior related to the use of licit and non-licit drugs; B – Sexual behavior related to multiple partnerships; C – Sexual behavior related to the practice of condom use; D – Age-related sexual behavior.

Source: Data from the study.

The considerable number of women who at some point in their lives exchanged sex for money or drugs or were sex workers confirms the vulnerability of this group to infections. One survey showed that women with longer time in prostitution showed a significant association with client use of the male condom. However, these women use condoms with their clients, but not with their steady partners.

Moreover, stable relationships and living in the same household as the partner may justify risky sexual behaviors such as neglecting to use condoms and sharing injecting drug materials with sexual partners. A study identified that despite the elderly stating a favorable attitude toward condom use, they did not use them in their stable relationships. A survey with college students identified that the less frequent use of condoms presented statistically significant results with the variable stable relationships and that female students used condoms less frequently compared to men when practicing vaginal and anal sex.

Regarding multiple sexual partners and early sexual debut for this study, multiple partnerships were considered to be more than one sexual partnership in the last 12 months and early sexual debut, before the age of 15.
Behavior such as having multiple partners is recognized as risk behavior by women when asked about their vulnerability to STIs. Studies that relate multiple partners and testing positive for an STI show that the average number of lifetime sexual partners increased (4.0 in 1989 to 12.1 in 2014; and in the last 12 months from 1.0 in 1989 to 2.8 in 2014) and condom use decreased in relationships with new partners.

Early sexual initiation in women is associated with higher risk of pregnancy and as a result, low educational level, financial dependence, and new pregnancy in the following years. Moreover, a study developed with school adolescents sexually active before the age of 15 years evidenced as one of the risk factors for STIs (59.9%).

Among the women’s risk behaviors briefly mentioned in the studies and hitherto little discussed are: digital tools for sexual partner recruitment, as well as women having sex with women, age disparity in relationships, and intergenerational relationships.

Free or low-cost social media and mobile apps have brought communication opportunity to much of the population that has access to the internet. These devices are increasingly sought after for providing anonymity, casual relationships, and the pursuit of sexual partnerships, increasing the risk of STI exposure.

Research developed with African women in late adolescence showed that relationships with multiple partners were associated with sexual independence and a strategy to expand financial resources, exchanging sex for money. This identified Mozambican women recruiting sexual partners through apps as a way to enjoy the benefits of economic emancipation. However, there is evidence of risk for early pregnancy, early marriage, and consequent intergenerational sex perpetuating low female purchasing power. Another study in Great Britain on sexual attitudes, practices, and behaviors found that the non-attendance of women interviewed at sexual health clinics was associated with reporting more than one sexual partner (50.7%), anal sex (81.2%), and using the internet to recruit partners (9.1%).

Women who have sex with women (MSM) have long been considered low risk for acquiring and transmitting HIV and other STIs. However, the number of MSM is growing and represents not only women who self-identify as lesbian or gay and have sex only with women, but also bisexual women and women who self-identify as heterosexual but have sex with other women.

In addition, this group engages in sexual behaviors with the exchange of bodily fluids that can transmit HIV or STIs to partners. These behaviors include oral sex, receptive vaginal sex, or anal finger play, genital-to-genital rubbing, and sharing sex toys.

Furthermore, in research conducted with a group of women who had sexual experience with other women involving genital contact, they were more likely to test positive for Mycoplasma genitalium infection (OR 2.80; 1.09-7.22), and this association remained after adjustment for age and number of partners.

Age disparity in relationships refers to those with an age difference between sexual partners of five years and intergenerational relationships are relationships in which there is an age disparity of 10 years or more; both are risk factors for STIs.

A higher average age is often presented by female partners. Although this condition is frequent, it should be evaluated with caution, as it can generate a situation of vulnerability. Since this age difference makes the negotiation of sexual activity, condom use, and the decision for contraceptive methods more inflexible. This age difference is another risk factor for STI prevalence.

CONCLUSION

The present IR allowed the construction of a synthesis of scientific knowledge about women’s sexual risk behaviors that contribute to the development of STIs. Moreover, the evidence points to risk behaviors for STIs common to urban regions and the postmodern world, such as the use of mobile applications, alcohol consumption, and illicit drugs. This scenario contributes to the risk of STI transmission and, consequently, to maintaining the chain of transmission of these infections.

Throughout history, women have been conquering their autonomy in all senses: sexual, moral, political, and family. All this change is the result of the transformation of intimacy and of the new conceptions of individual rights promoted by the complexity of relationships in post-modernity.

Sexual behavior is part of women’s sexual health and requires timely and individualized treatment. Thus, health professionals need to be trained to deal with this problem, with an integral approach to STDs, especially to reduce the incidence among women.

REFERENCES


22. Hotton, AL, Boodram, B. Gender, transience, network partnerships and risky sexual practices among young


