

External environment of woman and congenital syphilis in the light of Levine's Conservation Theory

Ambiente externo da mulher e sífilis congênita à luz da Teoria da Conservação de Levine

Ambiente externo de la mujer y sífilis congénita a la luz de la Teoría de la Conservación de Levine

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ABSTRACT

Objective: to discuss elements of the external environment of women with newborns with congenital syphilis. **Method:** this exploratory, qualitative, descriptive study was conducted between January and March 2020 with 25 puerperal women inpatients in follow-up of newborns with congenital syphilis at a Rio de Janeiro state maternity hospital in the Baixada Fluminense. The data were treated by thematic analysis and discussed in the light of the Conservation Theory proposed by Myra Estrin Levine. The research protocol was approved by the research ethics committee. **Results:** before and during pregnancy, the participants' external environment featured little education, lack of knowledge about syphilis, intra-family violence and violence perpetrated by an intimate partner, and non-treatment of men. **Conclusion:** antenatal care is an especially favorable setting, because it brings health personnel together with pregnant women and provides opportunities for recognizing external elements that influence maternal and fetal outcomes.

Descriptors: Syphilis; Pregnancy; Gender-Based Violence; Nursing Theory.

RESUMO

Objetivo: discutir os elementos do ambiente externo da mulher com recém-nascido portador de sífilis congênita. **Método:** estudo qualitativo, descritivo e exploratório, realizado entre janeiro e março de 2020, com 25 puérperas internadas em uma maternidade estadual da Baixada Fluminense do estado do Rio de Janeiro, em acompanhamento de recém-nascidos com sífilis congênita. Tratamento dos dados realizado por análise temática e discutidos à luz da Teoria da Conservação proposta por Myra Estrin Levine. Protocolo de pesquisa aprovado por Comitê de Ética em Pesquisa. **Resultados:** antes e durante a gravidez, o ambiente externo das participantes se caracteriza por baixa escolaridade, desconhecimento acerca da sífilis, violências intrafamiliar e perpetrada por parceiro íntimo, e não tratamento do homem. **Conclusão:** o acompanhamento pré-natal é um momento privilegiado por aproximar os profissionais das gestantes e oportunizar o reconhecimento dos elementos externos influenciadores dos desfechos maternos e fetais.

Descritores: Sífilis; Gestação; Violência de Gênero; Teoria de Enfermagem.

RESUMEN

Objetivo: discutir los elementos del ambiente externo de mujeres cuyos recién nacidos tienen sífilis congénita. **Método:** investigación cualitativa, descriptiva y exploratoria realizada entre enero y marzo de 2020 junto a 25 puérperas hospitalizadas en una maternidad estatal de la *Baixada Fluminense* del estado de Rio de Janeiro que acompañaban sus recién nacidos con sífilis congénita. Los datos fueron tratados por análisis temático y discutidos a la luz de la Teoría de Conservación propuesta por Myra Estrin Levine. El protocolo de la investigación fue aprobado por el Comité de Ética en Investigación. **Resultados:** antes y durante el embarazo, el ambiente externo de las participantes se caracteriza por baja escolaridad, desconocimiento sobre sífilis, violencia intrafamiliar y ejercida por compañero, y ausencia de tratamiento de los hombres. **Conclusión:** la atención prenatal es un momento privilegiado ya que acerca los profesionales a las embarazadas y permite el reconocimiento de elementos externos que influyen en los desenlaces maternos y fetales.

Descriptores: Sífilis; Embarazo; Violencia de Género; Teoría de Enfermería.

INTRODUCTION

Syphilis is a disease known for centuries and it affects men, women and children. Its transmission occurs especially through sexual contact and, if not treated properly during pregnancy, the fetus can be contaminated, with a higher risk of congenital syphilis (CS) in the primary and secondary stages of the disease^{1,2}. It is noted that CS can cause between 30% and 50% of intrauterine fetal deaths, preterm deliveries and neonatal deaths^{3,4}.

According to the World Health Organization, 12 million people get infected by syphilis per year and, of these, from 1.5 to 1.85 million are pregnant women⁵. In Brazil, in 2018 there was a 25.7% increase in the reported cases of gestational syphilis (GS), with emphasis on the Southeast region, which presented the highest rates¹.

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In this context, CS detection represents an indicator of the quality of the assistance provided during the prenatal period. However, the high incidence of CS in the country is a challenge, which can be associated with low qualification of human resources, failures in diagnosis and treatment, and non-detection of pregnant women and their partners early in time^{3,6}. Other factors that contribute to the growing CS numbers are difficulty negotiating condom use and refusal to undergo treatment by the partner, evidencing the asymmetrical relationships between men and women in the decision-making processes concerning sexual and reproductive health^{7,8}.

In view of this, the care provided by nurses in the prenatal care context should not be limited to the biological aspects, being necessary to guarantee women welcoming and individualized care, as negative repercussions on their health can result from a harmful external environment. In this sense, application of Nursing theories in the practice of these professionals favors understanding individuals as holistic and dynamic beings, who are in constant interaction with the environment and depend on their relationship with other people, the family and the social environment to preserve their own health⁹.

Considering the gap in the diverse Nursing scientific production on women's external environment and its relationship with CS, this study is justified because it uses Levine's Conservation Theory to reveal the external environment elements, both before and during pregnancy, which culminated in the birth of a newborn with CS.

Given the above, the following guiding question was defined in this study: "Which elements of women's external environment exerted an influence on the Congenital Syphilis outcome?"; and the following objective was established: to discuss the elements of the external environment of women with newborns who have Congenital Syphilis.

THEORETICAL FRAMEWORK

Myra Estrin Levine's⁹ Conservation Model supports nurses in the provision of holistic and individualized care, aimed at preserving or recovering physical, mental, social and spiritual well-being, in order to help subjects to achieve comprehensive health, or *entirety*. To such end, it is anchored in four principles, namely: energy, structural integrity, personal integrity and social integrity. Energy conservation consists of its incoming and outgoing balance, while structural integrity conservation refers to preservation or recovery of the body structure. Personal integrity is associated with the individual's identity, and social integrity involves acknowledgment of subjects as social beings.

In this perspective, the environment is configured as one of the pillars for holistic care⁹, in which the internal environment combines the individual's physiological and pathological aspects, which are influenced by the external environment, where the social context that interferes with health in a positive or negative way is inserted¹⁰.

In this study, the physiological aspects are associated with women's biopsychosocial and spiritual balance; and the pathological ones refer to the detrimental effects caused by the external environment to their own health and to their child's, such as GS resulting in CS. Therefore, it is essential that prenatal care nurses understand women's external environment⁹, in order to offer comprehensive and respectful care that reduces maternal and perinatal morbidity and mortality.

METHOD

A qualitative, descriptive and exploratory study. The locus was the Rooming-In area of a state maternity hospital located in *Baixada Fluminense*, state of Rio de Janeiro. With the purpose of identifying puerperal women who accompanied newborns diagnosed with CS, the first step was to analyze 50 medical charts recorded from January to March 2020, inviting 25 women who met the following inclusion criteria to participate in the study: belonging to any age group; being in the immediate puerperium condition; having sexual relationships with men and/or women; having undergone the therapeutic regimen for GS as recommended by the Ministry of Health; and being in due physical and psychological conditions to voluntarily participate in the research. Women who did not undergo prenatal care were excluded, as well as those who were diagnosed with syphilis during pregnancy but were not treated or received inadequate treatment, puerperal women with other pathologies, and those accompanying newborns in the immediate physiological puerperium.

Data collection took place through a semi-structured and individual interview, whose script was prepared by the researchers with open and closed questions aimed at gathering the socioeconomic and reproductive characteristics, the syphilis history and the experiences in the women's social, family and marital contexts.

Participants were informed about the research risks and benefits, as well as about the right to withdraw at any moment and signing the Free and Informed Consent and Assent Forms. Consequently, participation of the women was voluntary, emphasizing that there were no refusals to the invitation to take part in the study.

The interviews took place in a private room at the maternity hospital, without the presence of any companion, and scheduled according to the participants' availability. They lasted a mean of 30 minutes. With prior authorization, they were recorded in a digital device and immediately transcribed in full. Anonymity was guaranteed by adopting

identification codes, using the letter M followed by the cardinal numbers in ascending order (from M1 to M25) representing the order in which the interviews were conducted. The total number of participants followed the saturation by scarcity principle¹¹.

Content analysis was used for data processing, specifically the thematic analysis proposed by Laurence Bardin, who defines it as a set of survey techniques and rigorous examination of communications, in order to obtain systematic and objective procedures to describe the content of the messages, which allow inferring knowledge related to the production/reception conditions of these messages¹². After transcribing and interpreting the interviews, exploration of the material and the coding process were conducted; subsequently, 70 thematic units were built and, of these, 65 were grouped into units corresponding to the external environment presented in Levine's Nursing Theory, related to the "women's social and family context" and "women's marital context" thematic axes, which constituted the categorization called "External environment – Women's social and family contexts".

Finally, it should be noted that the research and elaboration stages of this article followed the criteria set forth in the Consolidated Criteria for Reporting Qualitative Research (COREQ), and that it was approved by the Research Ethics Committee, having observed the required ethical standards.

RESULTS

Regarding characterization, all 25 participants were aged between 15 and 34 years old; 16 of them self-declared as brown- or black-skinned and had Complete Elementary School; and 19 earned no personal incomes. As for sexual history, 15 interviewees reported sexarche at 15 years of age or younger, and two had their first sexual experience through rape, one of them when she was under 14 years old. As for marital status, all reported being heteroaffective and 14 lived in stable unions.

In relation to parity, 17 were primigravidas and 8 were multiparous. The majority (n=16) attended at least six prenatal consultations. Five underwent the syphilis rapid test; of these, four had reagent results in the first consultation and one of them, in the third trimester. The others (20) were tested by the Venereal Disease Research Laboratory (VDRL), and 11 were diagnosed during the third trimester of their pregnancies.

External environment: Women's social and family contexts

The results of this category show that the social context of the women participating in this study is characterized by low level of information about syphilis (n=15) and by non-use of barrier contraceptive methods as a way to prevent sexually transmitted infections and pregnancies (n=18).

No, I never used condoms. Then I took the morning-after pill. (M4)

I preferred not to use them because they always complain. I ended up getting pregnant and catching that disease. (M10)

I know it's a disease that you catch through sex. I can't really explain it to you. (M12)

I didn't use condoms out of my own will. (M20)

I don't know. I've already heard some things, but I know that you catch it through unprotected sex. (M24)

Among the participants characterized as multiparous, three mentioned that they had also been diagnosed with syphilis in previous pregnancies:

I had syphilis with my first child and treated it. No syphilis in the second [pregnancy], but I had it again in the third. I guess that I got contaminated again. (M2)

I also had syphilis in my second pregnancy, same father. (M8)

I have four children. I had syphilis in the pregnancies for the older two and caught it from my husband. The father of my third child is another man, and I didn't have the disease [...]. As I went back to my ex-husband, I ended up getting contaminated again and this baby was finally born with the disease. (M10)

As part of the women's external environment, it is verified that the family context is marked by reproductive histories of syphilis among family members and friends of seven interviewees:

I heard that my mother had syphilis in one of her pregnancies and this sister was born very bad [...]. Syphilis is normal in my family and the babies end up OK. They're hospitalized for a while, but then they're OK. (M11)

My cousin had syphilis. She found out before getting pregnant, but she didn't care about it, she didn't even treat it. That's normal where I live. (M23)

I have a sister and a cousin who also had syphilis during their daughters' pregnancies, but it remained a family secret. The other day, I also learned that my aunt also had it in her pregnancies. (M25)

In addition, physical aggression scenes in the intra-family space is a reality in the external environment of 11 participants.

My father drank and then, at home, he used to beat my mother a lot. Sometimes, he even wanted to beat me and my brothers. He turned into a monster. (M10)

My mother died because of the stab wound she got from an ex-boyfriend, because she didn't want to be with him anymore! She always had violent boyfriends. Really weird guys. (M13)

My father beat my mother a lot, they beat each other actually, it was a two-way violent relationship. (M19)

He drank a lot and then beat my mother, he stabbed her once. (M21)

External environment: Women's marital context

This category reveals the vulnerability of the participants' external environment, as 23 women report conflicts, physical aggressions, threats, humiliations, isolation, stalking, infidelity and theft of personal objects in relationships with current and past intimate partners.

[...] we were already separated at the end of the pregnancy [...] this syphilis showed me that he betrayed me. (M5)

He said that he'd kill me if I caught syphilis from another man. But he had a lover. (M11)

My ex-partner took my cards, money and phone. (M12)

Every argument, he cursed at me, no matter who was around. (M14)

He's very jealous. He didn't let me go out alone. I can't even go visit my female friends and he even controls my cell phone. (M15)

My ex used to stalk me. It was a struggle for me to get rid of him. (M20)

In this marital context, sexual violence (overlapped with physical violence) was reported by 15 interviewees:

When I didn't want to have sex with him, he pushed me and cursed me. He didn't use condoms at all [...]. He was better during pregnancy. (M1)

When I was going to have sexual relationships, he hurt me, forced me and refused to use condoms. (M10)

He got nervous and punched me [...] I was already pregnant. (M19)

I had a hard time with him in my last pregnancy [...]. He knew that I needed for him to use condoms, but he wouldn't accept at any cost [...]. I once said I didn't want to have sex and he slapped me and forced me. (M25)

As another component of the external environment that exerts a direct impact on the participants' health, partners' non-adherence to the treatment is pointed out in the face of the GS diagnosis, as mentioned by 15 women:

He's terrified at injections and didn't want to do the treatment or use condoms. (M1)

He didn't even want to know about undergoing treatment. And now my son is forced to suffer from these injections and I'm stuck here with him. (M12)

He says that macho men don't catch the disease and he didn't treat it. (M25)

DISCUSSION

Participants' sociodemographic characteristics are similar to those observed in other Brazilian studies³⁻¹⁵. Regarding the obstetric history, most of the interviewees attended at least six prenatal consultations. However, only five of them underwent the syphilis rapid test in their first appointment. Therefore, considering the minimum number of prenatal consultations carried out, they proved to be insufficient for the women to have timely access to the syphilis diagnosis, which indicates low quality of prenatal care¹⁶.

In that sense, it is worth reiterating that, as a screening strategy, it is recommended that pregnant women undergo the rapid test in their first consultation. In addition to that, the rapid treponemal test should be performed in the first and third trimesters of pregnancy, being a practice that confers quality to the care provided and ensures timely and effective treatment, as well as it avoids adverse maternal and neonatal outcomes¹⁷⁻²¹.

Regarding the external environment elements, the results show that the participants were unaware of the risks imposed by syphilis both on their own health and on their child's. This fact is an obstacle to the preventive and therapeutic approach, which is also associated with low schooling and with barriers accessing the services and information for health promotion. The literature confirms the correlation between lower schooling levels, early initiation of sexual life and low understanding of the infection risks, confirming the findings of this study²²⁻²⁴.

Regarding non-adherence to condom use in sexual relations, it is verified that the women participating in this research do not recognize the importance of using them or that there were difficulties in the negotiation process with

their partners. These findings are worrying for the epidemiological surveillance of vertical transmission of syphilis²³, as well as they reveal the gender issues that permeate the practice of safe sex²⁵.

In this study, another aspect worth mentioning is the fact that syphilis and physical violence are present in the reproductive lives of the participants, their families and their female friends. This social reproduction of behaviors that permeate generations can endure as a pattern, with syphilis itself as an example, whose transgenerationality remains for decades as a serious public health problem in Brazil²⁶, as well as a risk to maternal and neonatal health.

In this perspective, revisiting Levine's Theory in relation to the concepts of the environment, it is understood that human beings capture and introject all the situations they experience in their external world, with the possibility of carrying them on to the future life. Thus, the women who witnessed occurrence and inadequate treatment of syphilis in their mother, aunts and cousins naturalized these issues in their sensory system.

As shown in the results, some participants experienced gender violence in childhood and adolescence, when they witnessed the aggressions against their mother and, on some occasions, alcohol abuse, which potentiated violence²⁷. In other words, violence played a major role in the external environment of these women from a very early age, with gender inequalities prevailing based on relationships of domination and submission²⁸.

These family and social contexts exert an impact on women's internal environment, as they affect their mental health, generating low self-esteem which, in adulthood, may come to influence their way of dealing with personal problems, inclining them to submit to situations of violence in their marital relationships or with their children^{10,27}.

In part, this explains how intra-family violence was present in the lives of some women until culminating in Intimate Partner Violence (IPV)²⁷, which was experienced by all the participants in this study during pregnancy, despite being a time when they need attention and care for their health²⁸⁻³⁰. This reality is pointed out by several Brazilian studies^{10,31-33}, denoting that the women's external environment is violent, a reflection of an androcentric society, anchored in patriarchal values that reproduce gender inequalities and violence^{28,30}.

In addition, the participants' reports about situations of sexual violence and the partners' refusal to use condoms denote the existence of asymmetries in the marital context, where male domination²⁸ is configured as a risk factor for physical and mental integrity, the fact that there is no cure for syphilis, reinfection of women and, therefore, vertical transmission. In this scenario, it is added that partner infidelity can be seen as an IPV type which, especially during pregnancy, impairs female self-esteem¹⁰ and increases the chances of reinfection.

It is also noted that the cure of GS is influenced by non-treatment of the infection among men, with arguments such as fear of intramuscular drug therapy and pain; as well as the influence of social constructions, which feed stereotypes about syphilis as a female issue. Thus, non-adherence to treatment and follow-up of the disease³⁴ translates into a serious public health problem, as men will continue to be a potential transmission agent of the infection, negatively influencing women's internal environment, due to the serious repercussions for their own health and for that of the fetus³⁵⁻³⁷. A study carried out in Uganda corroborates these results and adds that lack of time and the perception of syphilis as a genetic disease or a woman's problem are elements that certainly lead to CS³⁸.

Such data reinforce that nurses working in prenatal care need to know and understand women's external environment in order to offer care aimed at the real individual demands and health needs, through educational activities with a view to empowering this population segment, providing a sensitive professional perspective to identify situations of violence that permeate GS diagnosis and treatment. At the same time, it is important for assistance to problematize taboos and myths that reproduce gender inequalities and contribute to the perpetuation of syphilis and IPV.

Therefore, along with welcoming, active listening and management of syphilis, the actions of nurses who deal with women's external environment should be guided, in order to direct the appropriate treatment and follow-up to obtain a cure. In addition to that, it is essential to foster public policies that include men in prenatal care, in order to reduce the incidence of CS²³.

Study limitations

Despite the relevance of the data obtained, a single obstetric setting was included in this study, which can preclude generalization of the results.

CONCLUSION

The following were evidenced as elements of the social and family contexts that make up the external environment of women with newborns who have CS: low schooling level; low level of information about syphilis; non-use of barrier

contraceptive methods as a way to prevent sexually transmitted infections and pregnancies; reproductive histories of syphilis among family members and female friends; and physical aggression in the intra-family space. As for elements of the marital context, the participants' external environment is characterized by violence perpetrated by current and past intimate partners, as well as by the partners' non-adherence to the treatment. These elements of the external environment interfered negatively in mental, physical, sexual and reproductive health, imposing effective risks to maternal and fetal health, which transformed the physiological environment into a pathological one, leading to the occurrence of CS.

All women assisted by nurses in the prenatal period require comprehensive and resolute care based on a relationship of trust and knowledge about their experiences. It is certain that this course of action will favor recovery of comprehensive health, through care that transcends the biomedical model, because only then will care have the potential to intervene on the pathological elements that determine GS and CS.

The contribution of this study is highlighted, as it proposes actions for nurses to interact through educational activities in line with the applicability of Levine's Conservation principles in the scope of prenatal care, with the purpose of conserving energy and recovering women's structural, personal and social integrity. This care will favor preservation of their identity and autonomy, that is, stimulating their empowerment, so that they feel strengthened during the syphilis treatment process.

Finally, it is indispensable to include the theme of "gender and sexuality" in the pedagogical proposals of undergraduate and graduate courses, in order to promote reflection and awareness in future Nursing professionals regarding the proper way to deal with the theme of violence, as well as respecting the ministerial protocols on STIs, based on women's external environment.

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