

DOI: <https://doi.org/10.36489/nursing.2020v23i265p4193-4204>

# Functional lettering in health: syphilis in pregnant women

**ABSTRACT** | This study aimed to measure the level of functional health literacy and the level of knowledge about syphilis in a group of pregnant women. A sociodemographic questionnaire, the Brazilian version of the B-THOFLA (Brief Test of Functional Health Literacy in Adults) was used to measure functional health literacy and a questionnaire with basic questions about syphilis. As a result, most of the group had a young profile and were up to 25 years old, with a high rate of non-use of condoms, good functional health literacy and a low level of knowledge about syphilis. Characterizing as a highly vulnerable group to sexually transmitted infections, including syphilis.

**Keywords:** Functional Health Literacy; Syphilis; Pregnant Women.

**RESUMEN** | Este estudio tuvo como objetivo medir el nivel de alfabetización funcional en salud y el nivel de conocimiento sobre la sífilis en un grupo de mujeres embarazadas. Se utilizó un cuestionario sociodemográfico, la versión brasileña de B-THOFLA (Brief Test of Functional Health Literacy in Adults) medir la alfabetización funcional en salud y un cuestionario con preguntas básicas sobre la sífilis. Como resultado, se obtuvo: la mayoría del grupo tenía un perfil joven y hasta 25 años, con una alta tasa de no uso de condones, buena alfabetización funcional en salud y un bajo nivel de conocimiento sobre la sífilis. Se caracteriza por ser un grupo altamente vulnerable a las infecciones de transmisión sexual, incluida la sífilis.

**Palabras claves:** Alfabetización Funcional en Salud; Sífilis; El embarazo.

**RESUMO** | Este trabalho teve como objetivo mensurar o nível de letramento funcional em saúde e o nível de conhecimento sobre sífilis em um grupo de gestantes. Foi utilizado questionário sociodemográfico, a versão brasileira do B-THOFLA (Brief Test of Functional Health Literacy in Adults) para mensurar o letramento funcional em saúde e questionário com perguntas básicas sobre sífilis. Obteve-se como resultado: maior parte do grupo tendo um perfil jovem e possuindo até 25 anos, tendo alto índice de não utilização de preservativos, um bom letramento funcional em saúde e um baixo nível de conhecimento sobre sífilis. Se caracterizando como um grupo altamente vulnerável a infecções sexualmente transmissíveis, incluindo a sífilis.

**Palavras-chaves:** Letramento Funcional em Saúde; Sífilis; Gestantes.

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## INTRODUCTION

According to the Ministry of Health<sup>(1)</sup>, syphilis is one of the sexually transmitted infections that has had a high incidence rate in recent years in the national territory. One of these complications is syphilis in pregnant women, which can lead to the development of congenital syphilis, as these two types of manifestation of the disease have also grown in numbers of cases. Paradoxically, even with high incidence rates, syphilis can be controlled, considering the existence of sensitive diagnostic tests, efficient treatment and low burden.

It is more efficient to fight through prevention, campaigns focused on the target audience and promotion. There are factors that need to be considered, such as: low income, education level, marital status, among others. Functional health literacy is the cognitive competence to understand, interpret and apply written or verbalized health information<sup>(2)</sup>.

Health literacy is important for patients' self-care, however it also affects them from prevention and diagnosis to

understanding the disease and its treatment<sup>(3,4)</sup>. One of the main functions of the nurse is to educate. Health education is a fundamental instrument for good quality care, through which nurses provide guidelines for self-care, both individually and collectively, transforming individuals, families and communities into multipliers of health knowledge<sup>(5)</sup>.

There is a difficulty when it comes to preventing vertical transmission, from establishing an early diagnosis to proper treatment. It is understood as appropriate treatment for pregnant women, when penicillin is used and that has reached the end of one month before the birth of the offspring. The dose of the medication being according to the stage of syphilis and the partner also being treated at the same time. Through a union of efforts between good quality prenatal care, laboratory tests in adequate time, treatment of individuals who have sexually related and the awareness of all, we may be able to control this infection<sup>(6)</sup>.

Given the reality described, the objective of this study is to assess the level of health literacy as well as knowledge

**Received on:** 05/23/2020  
**Approved on:** 05/23/2020

related to syphilis. As a specific objective, to know health literacy, discuss health education and correlate the level of literacy with knowledge of syphilis.

## METHODOLOGY

This is a cross-sectional and quantitative study that was conducted in the months of October and November 2019.

The places to carry out the study were health centers and community centers where there were actions from the “Bem Nascer” university extension of the Catholic University of Vitória Centro Universitário. In this university extension, health education focused on women's health and pregnancy, self-care, sexually transmitted infections, breastfeeding, childbirth, changes in the body of the pregnant woman, which took place in health centers and community centers in Greater Vitória, are worked with pregnant women and companions. in the State of Espírito Santo.

The study population was 30 pregnant women, regardless of gestational period, aged 18 years or over, able to understand the objectives of the study and who knew how to read and write, in addition to participating in the university extension “Bem Nascer”.

Data collection took place through the application of a sociodemographic questionnaire that also had eight questions about syphilis and an instrument for assessing functional health literacy. Participants were approached at university extension meetings and explained about the study and its objectives. After the Free and Informed Consent Term was agreed and signed, they answered the questionnaires.

First, the sociodemographic questionnaire and basic questions about syphilis were answered, followed by the instrument to assess health literacy, the latter having a maximum response time of 3 minutes. It was not warned in advance about the duration, when the time was over, it was collected for later evaluation.

The sociodemographic aspects pre-

sent in the study were: age, education, marital status, number of sexual partners she had in her life, number of pregnancies, stillbirths, abortions and children,



Given the reality described, the objective of this study is to assess the level of health literacy as well as knowledge related to syphilis.



number of times she had unprotected sex, contraceptive method and where she received information about syphilis. The literature bases these variables as

factors that can influence the quality of pregnancy and the contagion not only of syphilis, but of other sexually transmitted infections.

The Brazilian version of the B-THO-FLA (Brief Test of Functional Health Literacy in Adults) was used to measure functional health literacy which contains 19 items of textual understanding, with each item having a value of 1 point, thus the score maximum is 19 points. A score of 0 to 10 points was considered as inadequate functional literacy in health; medium functional health literacy of 11 to 12 points; adequate functional health literacy from 13 to 19 points. An adequate level of functional health literacy was considered sufficient, and an inadequate level was medium and low.

The assessment of knowledge about syphilis was carried out through a questionnaire containing 8 basic questions about the disease. Each question had only one right answer, the total score is the sum of the number of questions answered correctly, each question had a value of 1 point. Low level of knowledge about syphilis was considered when the 59th percentile was reached at most (0-4 points); medium knowledge of syphilis between the 60th and 74th percentiles (5 points); sufficient knowledge about syphilis at or above the 75th percentile (6-8 points). Sufficient level of knowledge about syphilis was stipulated, and medium and low levels were inadequate.

The analysis performed in this work consists of data exploration using descriptive statistics (distribution of frequencies, graphs and measures of central tendency and variability). The computer program Microsoft Excel® 2010 and the computer program SPSS® 23.00 for Windows were used.

This work was approved by the Ethics and Research Committee of Católica and Vitória Centro Universitário under the opinion of No. 3,707,458. All participants signed the Informed Consent Form before executing the study protocol.

**Tabela 1. Características sociodemográficas de 30 gestantes participantes. Vitória, ES, Brasil, 2019.**

Características	n (%)
<b>Idade</b>	
18 anos	7 (23,3)
19 a 25 anos	20 (66,7)
26 a 40 anos	3 (10,0)
<b>Escolaridade</b>	
Fundamental Incompleto	3 (10,0)
Fundamental Completo	5 (16,7)
Médio Incompleto	6 (20,0)
Médio Completo	12 (40,0)
Superior Incompleto	3 (10,0)
Superior Completo	1 (3,3)
<b>Estado Civil</b>	
Solteiro (a)	10 (33,3)
Casado (a)	11 (36,7)
União Estável	9 (30,0)
<b>Quantidade de filhos</b>	
Nenhum	10 (33,3)
Um	4 (13,3)
Dois	9 (30,0)
Três	4 (13,3)
Quatro	2 (6,7)
Cinco	1 (3,3)

**Tabela 2. Distribuição de Frequências segundo Gestação. Vitória, ES, Brasil, 2019.**

Gestação	Frequência	%
Gestando pela 1ª vez	6	20,0
2 a 4	24	80,0
Total	30	100,0

**Tabela 3. Distribuição de Frequências segundo Aborto. Vitória, ES, Brasil, 2019.**

Aborto	Frequência	%
Nenhum	15	50,0
Um	5	16,7
Dois	6	20,0
Três	3	10,0
Quatro	1	3,3
Total	30	100,0

**RESULTS AND DISCUSSION**

All participants were female, pregnant and lived in the metropolitan region of the state of Espírito Santo. Mostly aged between 18 and 25 years (90%), with up to complete high school (86.7%), married and in a stable relationship (66.7%), having up to two children (76.6%).

Even though the studied group had a young profile, women up to 25 years old mostly, about 80% of the participants were, when the research was done, gestating at least for the second time (Table 2). Contrasting also with this young profile is the high incidence of abortion, where half of the group has had at least one abortion (Table 3).

According to data in Table 4, which refers to self-affirmations about sexual life, it was found that most of the group that answered the question about the amount of unprotected sex they had in their lives had more than 21 unprotected sex, representing 43.3% of the group.

About more than half of the sample reported not using any contraceptive method, approximately one third used oral or injectable contraceptives and one tenth said they used a tablet. The only contraceptive method that is effective in preventing sexually transmitted infections is the male/female condom, however the participants did not mention using it in their relationships, demonstrating a vulnerability to possible infection not only from syphilis, but from other diseases as well (Table 5). As it is a sexually transmitted disease, it is understood that the more unprotected relationships the individual has, the greater his chances of contracting the disease. Syphilis being only one of several sexually trans-

**Tabela 4. Distribuição de Frequências segundo Quantidade de relações sexuais desprotegidas. Vitória, ES, Brasil, 2019.**

Quantidade de relações sexuais desprotegidas	Frequência	%
1	4	13,3
De 2 a 5	7	23,3
De 6 a 10	1	3,3
De 11 a 20	1	3,3
Mais de 21	13	43,3
Não respondeu	4	13,3
Total	30	100

**Tabela 5. Distribuição de Frequências segundo Método Contraceptivo. Vitória, ES, Brasil, 2019.**

Método Contraceptivo	Frequência	%
Não utiliza	16	53,3
Anticoncepcional oral/injetável/ adesivo	10	33,3
Tabela	3	10
Não respondeu	1	3,3
Total	30	100

**Tabela 6. Distribuição de Frequências segundo Onde recebeu informação sobre sífilis. Vitória, ES, Brasil, 2019.**

Onde recebeu informação sobre sífilis	Frequência	%
Nunca recebi	4	13,3
Pré-natal	10	33,3
Escola	9	30,0
Amigos	1	3,3
TV	1	3,3
Livros	1	3,3
Outros	1	3,3
Não respondeu	3	10,0
Total	30	100,0

**Tabela 7. Proporção de acertos e erros dos itens relacionados ao nível de conhecimento da sífilis, respondidos por 30 pacientes. Vitória, ES, Brasil, 2019.**

Questões referentes ao Nível de Conhecimento da Sífilis	Acertos n (%)	Erros n (%)
Como se pega a sífilis	26 (86,7)	4 (13,3)
Quais os sintomas da sífilis	8 (26,7)	22 (73,3)
Sífilis tem cura	18 (60,0)	12 (40,0)
É possível passar sífilis para o filho quando está grávida	18 (60,0)	12 (40,0)
É possível ter sífilis quantas vezes	11 (36,7%)	19 (63,3)
Quais os perigos de transmitir sífilis para o bebê	16 (53,3)	14 (46,7)
Mãe com sífilis pode amamentar	7 (23,3)	23 (76,7)
Tratamento indicado para a sífilis	13 (43,3)	17 (56,7)

mitted diseases and infections. Second study<sup>(7)</sup>, there will be a reduction in new cases of sexually transmitted infections when there are changes in how people behave sexually, especially if they use condoms properly. These changes occur through incessant information to the public and educational actions that promote the recognition of risks and the promotion of measures aimed at prevention.

Related to receiving information about syphilis, approximately 1/3 said they had received information in prenatal care. In this study, the adherence of these pregnant women to prenatal care was not questioned, since "Bem Nascer" also performed its actions in collective prenatal meetings in Basic Health Units. Despite all the participants being pregnant, a small portion had information about syphilis in prenatal care, according to study<sup>(8)</sup>, Brazil has high coverage of prenatal care, but low adequacy of care and, according to another study<sup>(9)</sup>, the prenatal care offered by the Unified Health System is not entirely effective. Research<sup>(10)</sup> says that, even though women have received information during prenatal care, it is necessary to improve the way the communication process is instituted to improve care and minimize risks. Regarding having received information about the disease at school, it represents 30%, showing the importance of teaching about sexual health in educational institutions; 13.3% say they never received information about syphilis, revealing that despite the increase in the number of cases, there is still a part of the population that is unaware of the disease (Table 6).

The analysis of the proportion of correct answers and errors related to the questionnaire on knowledge about syphilis indicated that

the most correct question is related to the form of contagion of syphilis. Most understand that sexual intercourse is one of the main forms of transmission, but only 26.7% answered the question that questioned about the symptoms, showing the lack of knowledge necessary for self-perception of signs suggestive of the disease. The issue with the

highest number of errors was related to breastfeeding when the mother is infected with the disease, so it is understood that there is a difficulty in knowing under what conditions breastfeeding is not allowed (Table 7).

Study<sup>(11)</sup> refers that health education related to syphilis in pregnant women is an important tool

for the prevention and promotion of health, thus, the correctly informed pregnant woman is able to make choices aimed at non-infection, both her own and her offspring, in addition to to become a possible disseminator of knowledge to the partner (s) and other pregnant women.

According to the graph in Figure 1, most of the sample demonstrated insufficient knowledge about syphilis, only 1/3 reached the level considered sufficient. This reveals that syphilis prevention mechanisms are not sufficient and / or efficient in passing on knowledge about the disease to the population, with pregnant women being an important target audience, since, in addition to the risk of contracting acquired syphilis, they can placenta infect their offspring, leading to the development of congenital syphilis when not treated properly. Study<sup>(12)</sup> reports that the higher the level of knowledge about the disease, the greater the concern with protecting yourself from it. Health education actions are configured in a way to change this scenario, where the lack of adequate knowledge is one of the main causes for the vulnerability of these women.

There are few national studies on functional health literacy that relate the level of functional health literacy to the level of knowledge about syphilis. According to Figure 2, which illustrates the classification of functional health literacy, the group, in its majority, presented adequate health literacy, representing a total of 76.7% of the sample, contrasting with the level of knowledge about syphilis, where the majority did not obtain satisfactory income.

The results demonstrate that there is a decrease in the quality and quantity of information about

Figura 1. Classificação do Nível de Conhecimento da Sífilis. Vitória, ES, Brasil, 2019.

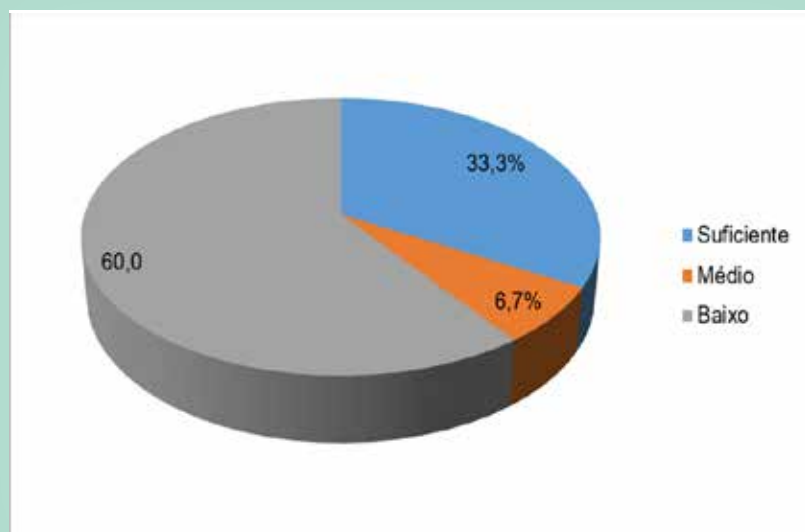
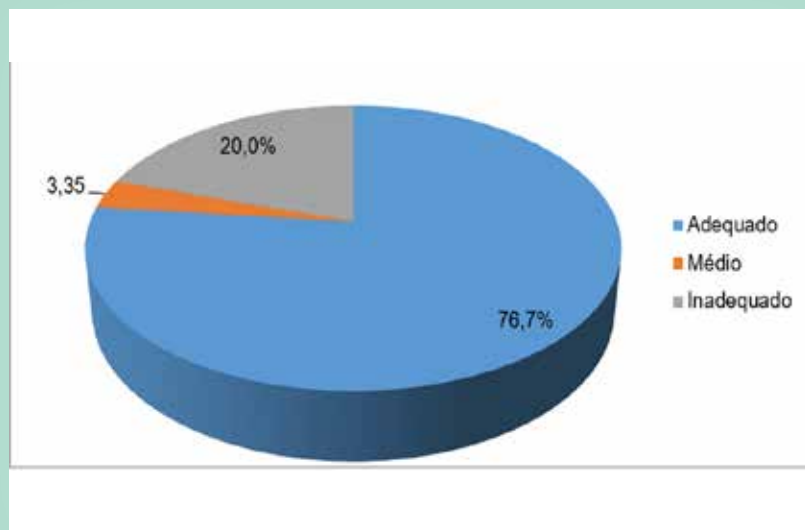


Figura 2. Classificação do Letramento. Vitória, ES, Brasil, 2019.



syphilis in the pregnant women participating in the study, revealing a vulnerability. Study <sup>(13)</sup> says that educational interventions based on accurate and sufficient information to users of health services can improve health-related results, arousing the active interest of individuals to develop self-care in health. In this context, the role of nursing in providing information in a clear, precise manner, in language accessible to the understanding of the subject and using methods necessary for the effectiveness of health education in an efficient manner, is essential. Nursing has sufficient capacity and skills to provide care through health education<sup>(14)</sup>.

The limitations of this study are related to the low volume of participating pregnant women, the small number of studies on literacy in pregnant women and the level of knowledge of pregnant women about syphilis, and the relationship between these variables.

## CONCLUSION

This study resulted in levels of functional health literacy con-

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As a way to change this reality, health education should be used, respecting the best way of approaching and transferring knowledge from health professionals to pregnant women  
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sidered adequate for the majority of the studied population, and level of knowledge about syphilis inadequate for the majority of the studied group, configuring a non-relationship between the levels of functional health literacy and knowledge on syphilis in pregnant women. As a way to change this reality, health education should be used, respecting the best way of approaching and transferring knowledge from health professionals to pregnant women, referring from the causative agent and symptoms, to consequences and limitations caused by the infection. In addition to emphasizing the use of condoms.

It is suggested to focus on awareness, prevention, and health promotion actions with an emphasis on sexually transmitted infections, especially in relation to acquired and congenital syphilis, in women who wish to be mothers and those who are pregnant. Health education based on the identification of literacy would assist in the best form of communication, as it would be based on the community's understanding of health. 🐦

## Referências

1. Ministério da Saúde (BR). Boletim Epidemiológico [Internet]. Brasília (DF): MS, 2017 [acesso em 16 mai 2019]; 48(36):5-41. Disponível em: <http://portal.arquivos.saude.gov.br/images/pdf/2017/novembro/13/BE-2017-038-Boletim-Sifilis-11-2017-publicacao-.pdf>.
2. Macêdo VC, Lira PIC, Frias PG, Romaguera LMD, Caires SFF, Ximenes RAA. Risk factors for syphilis in women: case-control study. *Rev Saúde Pública*. 2017; 51:78.
3. Adams RJ, et al. Health literacy: a new concept for general practice? *Aust. Fam. Physician*. 2009; 38(3):144-7.
4. Sampaio HAC, et al. Letramento em saúde de diabéticos tipo 2: fatores associados e controle glicêmico. *Ciência & Saúde Coletiva*. 2015; 20:865-874.
5. Andrade ME, et al. Percepção do enfermeiro quanto à sua atuação educativa na estratégia saúde da família. *Rev Enferm UERJ*. 2016; 1(5).
6. Lafetá KRG, et al. Sífilis materna e congênita, subnotificação e difícil controle. *Revista Brasileira de Epidemiologia*. 2016; 19:63-74.
7. Thiesen F. ISTs e uso de preservativos. *Revista UNIPLAC*. 2018; 6(1).
8. Viellas EF, et al. Assistência pré-natal no Brasil. *Cadernos de Saúde Pública*. 2014; 30:S85-S100.
9. Domingues RMSM, et al. Sífilis congênita: evento sentinela da qualidade da assistência pré-natal. *Revista de Saúde Pública*. 2013; 47:147-157.
10. Silva NM, et al. Conhecimento de puérperas sobre amamentação exclusiva. *Rev Bras Enferm*. 2014; 67(2):290-295.
11. Lima GK, et al. Educação em saúde sobre sífilis com um grupo de gestantes: um relato de experiência de acadêmicas de enfermagem. *SA-NARE-Revista de Políticas Públicas*, 2013; 12(2).
12. Costa TS, et al. Escola, sexualidade, práticas sexuais e vulnerabilidades para as infecções sexualmente transmissíveis (IST). *Revista interdisciplinar de ensino, pesquisa e extensão*. 2017; 4(1).
13. Oliveira GM, et al. Identificação do letramento em saúde para organização de atividades de educação em saúde com gestantes. 2019. 34 f. Trabalho de Conclusão de Residência (Atenção à Saúde Coletiva) - Universidade Federal de Uberlândia, Uberlândia, 2019.
14. Guerreiro EM, et al. Educação em saúde no ciclo gravídico-puerperal: sentidos atribuídos por puérperas. *Rev bras enferm*. 2014; 67(1):13-21.