



Sexually transmitted infections: sociodemographic data and risk factors in people with visual impairment

Infecções sexualmente transmissíveis: dados sociodemográficos e fatores de risco em pessoas com deficiência visual

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Objective: to identify associations between sociodemographic aspects and risk factors for sexually transmitted infections in people with visual impairment. **Methods:** a cross-sectional study using an interview with 58 people with severe visual impairment or blindness. The prevalence ratio and Chi-Square and Fisher's tests were calculated. **Results:** it was verified the association of risk factors for sexually transmitted infections with the sociodemographic conditions of the participants. Sexual practice was significantly associated with age ($p=0.022$); the beginning of sexual practice associated with sex ($p=0.009$); the number of partners at sex ($p=0.048$) and marital status ($p=0.048$); the use of condoms during sexual intercourse also to sex ($p=0.013$) and to marital status ($p=0.003$). **Conclusion:** sociodemographic characteristics may interfere with the risk factors for sexually transmitted infections in people with visual impairment.

Descriptors: Sexually Transmitted Diseases; Risk Factors; Blindness; Sexuality; Nursing.

Objetivo: identificar associações entre os aspectos sociodemográficos e os fatores de risco para infecções sexualmente transmissíveis em pessoas com deficiência visual. **Métodos:** estudo transversal utilizando-se entrevista com 58 pessoas com deficiência visual grave ou cegueira. Calculou-se a razão de prevalência e testes de Qui-Quadrado e Fisher. **Resultados:** Constatou-se associação de fatores de risco para infecções sexualmente transmissíveis com as condições sociodemográficas dos participantes. A prática sexual mostrou-se significativamente associada à idade ($p=0,022$); o início da prática sexual associada ao sexo ($p=0,009$); o número de parceiros ao sexo ($p=0,048$) e ao estado civil ($p=0,048$); o uso de preservativo durante as relações sexuais também ao sexo ($p=0,013$) e ao estado civil ($p=0,003$). **Conclusão:** as características sociodemográficas podem interferir nos fatores de risco para infecções sexualmente transmissíveis em pessoas com deficiência visual.

Descritores: Doenças Sexualmente Transmissíveis; Fatores de Risco; Cegueira; Sexualidade; Enfermagem.

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Introduction

Sexually transmitted infections affect more than one million people in the world every day and 500 million people per year, due to some of these diseases, such as gonorrhea, chlamydia, syphilis and trichomoniasis, which have a high incidence and prevalence, serious complications and facilitate the transmission of the Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS). It is estimated that only the genital herpes virus reaches 530 million people⁽¹⁾.

Indicators show that young people, men who have sex with men, sex workers, and people with limited access to health services are mostly those most affected by sexually transmitted infections (STIs). Biological, social and cultural factors and causes, stigma, discrimination and violence, are examples of determinants for the occurrence of health problems, including infections⁽²⁻³⁾.

Among the stigmatized social segments is that of people with disabilities, who experience difficulties in accessing health goods and services due to architectural and attitudinal barriers that, in addition to interfering with the quality of health care of these people, violate the legal postulates of accessibility⁽⁴⁾. These people are perceived as asexual, devoid of feelings, desires, incapable of loving and constituting family. These prejudices discourage the acquisition of knowledge regarding sexual attitudes and practices⁽⁵⁾ and, in the case of visually impaired people, favor exposure to conditions and problems that increase their vulnerability and exposure to risk factors for STIs⁽⁶⁾.

Because people with visual impairments are deprived of the right to information on sexual health, their vulnerability to various diseases increases, such as contracting STIs, unwanted pregnancies, among others⁽⁷⁾. This idea is reinforced in another study, which states that, among other factors, people with disabilities are vulnerable due to living conditions, risky sexual behavior, unstable and unprotected sex⁽⁸⁾.

In health, the concept of vulnerability refers to the susceptibility of an individual to diseases and health problems. This term expands the understanding of the factors that weaken the people in the exercise of their citizenship, since it entails the recognition of ethical, political and technical factors⁽⁹⁾. This concept is "described as situations of threat to human autonomy, or as the process of being at risk for the development of diseases, damages or losses, resulting from a set of individual, collective and contextual aspects"^(10:1114).

Thus, it is necessary to consider that educational resources on health and prevention of sexual and reproductive health related risk behaviors for people with visual impairment are of limited availability⁽¹¹⁾, so that studies that consider the social, demographic and economic policies are indispensable to guide interventions for the prevention and reduction of cases of STIs and AIDS, since they may interfere with the attitudes and practices of blind persons facing these diseases⁽⁸⁾. In this context, the following hypothesis was formulated in the present study: sociodemographic aspects interfere in the risk factors for STI in people with visual impairment.

The relevance of this study is reinforced because its results may provide support for reflection in the professional, society and human resources training in the health area related to the sexual rights of people with disabilities and educational practices in sexual health. In this sense, the objective was to identify associations between the socio-demographic aspects and the risk factors for STI in people with visual impairment.

Methods

A cross-sectional study was carried out at the Campina Grande Institute of the City of Campinas, Paraíba, Brazil, in 2015. A population of 65 people with a visual impairment between severe visual impairment and blindness was identified⁽¹²⁾ and then selected the random sample, composed of 58 people, using the formula: $n = N \cdot Z_2 \cdot P(1-P) / (N-1) \cdot e^2 + Z_2 \cdot P$

(1-P), consisting of the parameters: n = Sample value; N = Value of population; Z = confidence interval: 1.96; P = Prevalence = 50%; e = Tolerated error = 0.05. The inclusion criteria were as follows: age 18 and over, attending the activities of the selected institution, and residing in the urban area of Campina Grande. People who presented other types of disabilities, in addition to visual ones, were excluded to ensure a standardized sample with similar demands.

After authorization of the Institute of the Blind, a lottery was conducted, followed by an invitation to the people who met the inclusion criteria. Participants were clarified about the research and signed the Term of Consent. The interviews were scheduled, at dates and times convenient for the participants, and held in a private room, provided by the institute itself. Each interview lasted approximately 30 minutes.

The instrument used consisted of a form developed for the study based on the concepts of the Clinical Protocol and Therapeutic Guidelines/ Sexually Transmitted Infections of the Ministry of Health, instituted by the National Commission of Incorporation of Technologies in the Unified Health System⁽²⁾ and composed of variables about socio-demographic and economic aspects: sex, age, marital status, schooling, religion and income; and variables of risk factors for STIs: knowledge and prevention, sexual practice, sexual initiation, number of partners throughout life, use of condoms during intercourse, alcohol use, drug use, sharing of individual objects and history of STIs.

Data analysis was performed using descriptive statistics, with absolute and relative frequencies, and the Statistical Package for Social Sciences 2.0. The Chi-Square and Fisher tests were used.

Age was dichotomized at the cut-off point 38 years, which corresponds to the average of the ages of all participants. The variable 'Beginning of sexual practice' was dichotomized at the 16-year point, indicating the end of the middle adolescence, with a progressive sexual interest. Schooling was

dichotomized at the point 10 years, which is equivalent to the minimum time necessary to start high school. We also considered the Prevalence Ratio (PR), which measures the strength of the association between a given exposure factor and the occurrence of the disease, being: $PR = 1$, when there is no association; $PR > 1$, which suggests that exposure is a risk factor; and $PR < 1$, which suggests protection factor⁽¹³⁾.

The research project was approved by the Research Ethics Committee of the State University of Paraíba, Brazil with N^o 648,095 and CAAE N^o 28723614,6,0000,5187.

Results

Of the total of 58 participants, the majority were male (51.7%), with religious belief (91.4%), with more than 10 years of schooling (63.8%), single (51.7%), and lived with income of up to one minimum wage (79.3%). The average age was 38.03 years (± 10.3 , $X_{min} = 18$, $X_{max} = 59$). It was also detected that the majority maintained the sexual practice (84.5%); other participants did not have sexual practices (13.8%); and one abstained from talking about sexual practice (1.7%). Participants stated: knowledge about STIs (93.1%); knowledge about prevention (98.3%); intercourse after 16 years (63.3%); more than one sexual partner (53.1%); not using condoms (47%); sometimes use a condom (26.5%); already been diagnosed with some STI (19.0%); alcohol consumption (39.7%).

As shown in Table 1, the occurrence of sexual practice was significantly associated with age ($p=0.022$); and the beginning of sexual practice associated with sex ($p=0.009$). The occurrence of sexual practice is 0.7 times lower in individuals aged between 18 and 38 years compared to > 38 years, reducing by 27.0% the ratio of prevalence of sexual practice. On the other hand, the beginning of sexual practice in individuals aged ≤ 16 years is 3.6 times higher in males compared to females.

Table 1 – Association between socio-demographic and economic aspects and risk factors for STIs of people with visual impairment

Socio-demographic and economic aspects	Risk Factors for STIs					
	Sexual practice (n=57)			Beginning of sexual practice (n=46)		
	Yes	No	p PR/CI	≤16 years	>16 years	p PR/CI
Gender						
Male	27	2	0.115*	12	12	0.009*
Female	22	6	-	3	19	3.66(1.19-11.2)
Age						
18-38	21	7	0.022*	6	14	0.741†
>38	28	1	0.77(0.62-0.97)	9	17	-
Marital status						
Without partner	24	8	-	7	15	0.913†
With partner	25	-	-	8	16	-
Schooling (years)						
≤10	23	3	0.458*	9	13	0.250†
>10	26	5	-	6	18	-
Religion						
No religious creed	5	-	-	1	4	0.468*
With religious creed	44	8	-	14	27	-
Income (Minimum Wage)						
≤1	39	7	0.514*	12	26	0.522*
>1	10	1	-	3	5	-

*Fisher's test, † Chi-Square test; PR: Prevalence Ratio; CI: Confidence Interval

In Table 2, in relation to the number of partners, there was association with gender (p=0.048) and marital status (p=0.048). The occurrence of “having more than one partner” is 1.6 times higher in males than in females. However, this variable does not behave as an outcome variable; and is 1.57 times higher in individuals without partners.

Regarding condom use during sexual intercourse, it was associated with sex (p=0.013) and marital status (p=0.003). The occurrence of “sometimes using/not using” the condom is 0.6 times

lower in males than in females; and 0.5 times lower in subjects without partners.

Table 2 – Association between socio-demographic and economic aspects and the risk factors for STIs of people with visual impairment

Socio-demographic and economic aspects	Risk Factors for Sexually Transmitted Infections					
	Number of partners (n=40)			Use of condoms during sex (n=49)		
	>1	Only partner	p PR/CI	Sometimes Do not use	Al-ways	p PR/CI
Gender						
Male	16	4	0.048*	16	11	0.013*
Female	10	10	1.60 (0.98-2.61)	20	2	0.65 (0.46-0.91)
Age						
18-38	13	6	0.666†	14	7	0.350†
>38	13	8	-	22	6	-
Marital status						
Without partner	14	3	0.048*	13	11	0.003*
With partner	12	11	1.57 (1.01-2.47)	23	2	0.58 (0.40-0.86)
Schooling (years)						
≤10	10	5	0.864†	14	9	0.060*
>10	16	9	-	22	4	-
Religion						
No religious creed	4	1	0.418*	3	2	0.401*
With religious creed	22	13	-	33	11	-
Income (Minimum Wage)						
≤1	21	11	0.588*	29	10	0.533*
>1	5	3	-	7	3	-

*Fisher's test, † Chi-Square test; PR: Prevalence Ratio; CI: Confidence Interval

Table 3 shows that there was no association between socio-demographic and economic aspects with “STI history”, “Knowledge about STI”, “knowledge about STI prevention.”

Table 3 – Association between socio-demographic and economic aspects and risk factors for STIs of people with visual impairment

Socio-demographic and economic aspects	Risk Factors for Sexually Transmitted Infections							
	Historic		p	Knowledge		p	Knowledge about prevention	
	Yes	No		Yes	No		Yes	No
Gender								
Male	4	26	0.213*	26	4	-	29	1
Female	7	21		28	-		28	-
Age								
18-38	4	24	0.295*	27	1	0.333*	27	1
>38	7	23		27	3		30	-
Marital status								
Without partner	4	29	0.118*	30	3	0.418*	32	1
With partner	7	18		24	1		25	-
Schooling (years)								
≤10	5	21	0.963†	22	4	-	25	1
>10	6	26		32	-		32	-
Religion								
No religious creed	1	4	0.665*	5	4	-	25	1
With religious creed	10	43		49	-		32	-
Income (Minimum Wage)								
≤1	10	36	0.315*	43	3	0.587*	45	1
>1	1	10		10	1		11	-

*Fisher's test, † Chi-Square test

Discussion

The study presents limitations because it is cross-sectional and because it refers to the restricted scenario of an institution, a factor that hinders the generalization power. Thus, we suggest longitudinal population studies, where it would be possible to establish causal relationships.

Despite the limitations, it was possible to verify that the data on gender, age and schooling are in contrast to the national indicators according to which the visually impaired people in Brazil are mostly women, are over 65 years of age and little schooling⁽¹⁴⁾. It is believed that the divergence with the literature regarding schooling has occurred because of the engagement of people with visual impairment of the study in the "Institute of the Blind", because it has a space conducive to learning, responsible for the

schooling and social inclusion of these subjects.

Regarding marital status and income, there was evidence that corroborates a study with 20 people with visual impairment, conducted in the State of Ceará, Brazil, in which 50.0% were single and 70.0% had income of up to one minimum wage. Likewise, these evidences resemble those of a study conducted in the State of Paraíba, Brazil, in which the majority of visually impaired persons did not work, had no partner and knowledge, attitude and practice about STI were inadequate⁽⁸⁾.

The remuneration is linked to the professional qualification, but even with more years of study, as identified in this research; visually impaired people face barriers to participation in the labor market⁽¹⁵⁾. Authors acknowledge that their access to work is provided for and guaranteed by both international and Brazilian legislation. There are difficulties in recruitment and selection due to the lack of adaptation of companies to integrate these workers to the new market requirements, as well as the idea of some of these workers that it is better to stay home receiving financial assistance from the State⁽¹⁶⁾.

Regarding the risk factors, the most frequent were to have more than one lifetime partner and not to use a condom during sex, which can put the participants in a situation of vulnerability to STIs. In a study of 824 women in the state of São Paulo, Brazil, it was demonstrated that there is a 1.98 higher probability of contracting HIV in women who had five to ten partners compared to those who had one to five partners, since viral transmissibility will be shared with other organisms at each sexual relation with differentiated partners⁽¹⁷⁾.

Regarding the use of condoms, the results corroborate a study developed with 36 people with blindness, in which it was detected that the majority of the participants had behavior considered inappropriate. Most women had never had a gynecological examination while the minority had done it for more than three years⁽⁸⁾. In another study carried out with 150 users of a Basic Family Health

Unit, it was found that the majority was married, or they were in a consensual and domestic union, reported not using condoms during sexual intercourse and did not have self-perception of vulnerability to contamination by IST/HIV⁽¹⁸⁾.

In the association between socio-demographic and economic aspects and risk factors for STI, the association between “age and sexual practice” was evidenced, suggesting that having age between 18 and 38 years influences sexual practice. Associations between “sex and the beginning of sexual practice” were also evidenced, and that being male can influence the onset of sexual intercourse early. These results corroborate national and international studies that point to the onset of sexual practice before age 15 as a more frequent condition among young males^(6-7, 18). It can be inferred that this male sexual precocity derives from the cultural myth of granting man the experience free of sexuality, restricting this right to women, in a demonstration of symbolic violence expressive of gender domination.

Therefore, the association between “sex and condom use during intercourse” and “marital status” and “condom use during intercourse”, where single men were more frequent for condom use, was also evidenced.

Knowledge about STIs and prevention was more frequent among women, but the quality of this information may not be sufficient and adequate to cause behavior change, since these participants presented attitudes considered risk factors for these diseases.

In addition to the polarity between knowledge and effective behavior change, blind people still face attitudinal barriers, as exemplified in a study in Zambia, in which participants reported difficulty in taking preventive measures due to prejudice in health services offered by professionals with difficulty of communication with this social segment and inadequate spaces that hinder the confidentiality of information⁽¹⁹⁾.

Conclusion

It is concluded that sociodemographic conditions allow the occurrence of risk factors for sexually transmitted infections in people with visual impairment.

The occurrence of sexual practice was less frequent in young adult individuals younger than 38 years; sexual debut before age 16 was more common in men. Male participants and unmarried individuals had a higher percentage because of having more than one partner. However, these last two groups had the lowest frequency for non-use of the condom when related to the women group. This fact calls attention to the importance of attention to the attitudes of blind women related to condom use.

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Collaborations

França ISX contributed in the design, relevant critical review of the intellectual content and final approval of the version to be published. Lima SP, Aragão JS and Silva AFR contributed in the writing of the article, analysis and interpretation of the data and final approval of the version to be published. Coura AS and Santos SR contributed to the analysis and interpretation of the data, relevant critical revision of the content and final approval of the version to be published.

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