# **Global Academic Journal of Medical Sciences**

Available online at www.gajrc.com

**DOI:** https://doi.org/10.36348/gajms.2025.v07i06.002



ISSN: 2706-9036 (P) ISSN: 2707-2533 (O)

Original Research Article

# Trends and Determinants of Increasing Sexually Transmitted Infections among Men in Urban Centres of South-South Nigeria

Gbaranor K. B.<sup>1\*</sup>, Oreh Adaeze C.<sup>2</sup>, John E. E.<sup>3</sup>, Ekeng O. B.<sup>4</sup>, Orukwowu U.<sup>5</sup>, Mube A. W.<sup>6</sup>, Barinua-Gbaranor N. P.<sup>7</sup>, Etuk M. S.<sup>3</sup>, Okoiseh O. S.<sup>8</sup>, Monday S. N.<sup>9</sup>, Timi-Oladipo A.<sup>9</sup>, Fache M. M.<sup>10</sup>, Rabi F.<sup>11</sup>, Sarone F.<sup>12</sup>, Nmerukini C.<sup>13</sup>, Nonju I. I.<sup>1</sup>, Bohr L. E.<sup>1</sup>, Sito O. K.<sup>14</sup>, Berepele O. R.<sup>14</sup>, Peterside S. S.<sup>15</sup>, Ohaka J. C.<sup>16</sup>

- <sup>1</sup>Department of Human Physiology, College of Medical Sciences, Rivers State University, Port Harcourt, Rivers State, Nigeria.
- <sup>2</sup>Ministry of Health, Rivers State, South-South, Nigeria
- <sup>3</sup>Akwa Ibom State Ministry of Health, Uyo, Akwa Ibom State, Nigeria
- <sup>4</sup>Department of Anaesthesia, Nile University, Abuja, Nigeria
- <sup>5</sup>Department of Nursing Sciences, College of Medical Sciences, Rivers State University, Port Harcourt, Rivers State, Nigeria
- <sup>6</sup>Department of Obstetrics and Gynaecology, University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State, Nigeria
- <sup>7</sup>Department of Office and Information Management, Faculty of Administration and Management, Rivers State University, Rivers State, South-South, Nigeria
- <sup>8</sup>Department of Obstetrics and Gynaecology, University of Uyo Teaching Hospital, Uyo, Akwa Ibom State, Nigeria
- <sup>9</sup>Cardinal Care Hospital and Maternity, Abuja, Nigeria
- <sup>10</sup>Procare Hospital, life Camp, Abuja
- <sup>11</sup>Department of Radiology, Nile University, Abuja, Nigeria
- <sup>12</sup>Department of Human Physiology, PAMO University of Medical Sciences, Port Harcourt, Rivers State, Nigeria.
- <sup>13</sup>Department of Internal Medicine, College of Medical Sciences, Rivers State University, Port Harcourt, Rivers State, Nigeria
- <sup>14</sup>Department of Family Medicine, University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State, Nigeria
- <sup>15</sup>Rivers State Primary Healthcare Management Board
- <sup>16</sup>Department of Community Medicine, College of Medical Sciences, Rivers State University, Port Harcourt, Rivers State, Nigeria

## \*Corresponding Author Gbaranor, K. B.

Department of Human Physiology, College of Medical Sciences, Rivers State University, Port Harcourt, Rivers State, Nigeria

# Article History

Received: 04.09.2025 Accepted: 24.10.2025 Published: 15.11.2025 Abstract: Men play a critical role in the transmission and control of sexually transmitted infections, yet they are often overlooked in public health discussions and interventions. Sexually transmitted infections (STI) is on the increase among male in rural communities. Possible contributing factors include multiple sexual partnerships, inconsistent condom use, alcohol and drug use, and delayed health-seeking behavior. Exploring these factors will provide valuable insight into designing more inclusive and effective STI prevention programs targeting men. This study is aim to evaluate the Rising trend of sexually transmitted infections among male in Urban areas of South-South Nigeria. This was a crosssectional study involving 250 women. A well-structured questionnaire was administered to participants. The study lasted for a period of 3 months. Statistical analysis was done using SPSS version 25.0 and p < 0.05 was significant. The results revealed that most of the participants affected were between 23 to 37 years of age, 76% had secondary education, 68% were single, 72% farming, 72% are aware of STI, 72% have no knowledge about STI, 72% have multiple girl friends, 80% do not use condom, 80% has contacted STI, 80% treated STI with herbal, 76% do not treat their girl friend alongside, and 80% had complications from STI treatment.

Keywords: Rising, Trend, Sexually Transmitted Infections, Urban, Areas.

Copyright © 2025 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

#### INTRODUCTION

Sexually transmitted infection is an infection acquired during sexual intercourse (oral, vaginal, and anal), especially when having unprotected sex. This infection is easily spread in the rural areas where protective device is not patronized. Sexually transmitted infection (STI) is spread when the man or the woman involves in multiple sex partners and without putting on protective device (Gbaranor, et al., 2023). STIs refer to a wide range of bacterial, fungal, viral, and protozoal infections, most of which are asymptomatic and share a common mode of transmission through unprotected sexual intercourse Sexually Transmitted Infections (STIs). Available online, 2025; Zanotta, et al., 2025) These infections are primarily caused by pathogens such as Chlamydia trachomatis, Neisseria gonorrhoeae, Treponema pallidum, and Trichomonas vaginalis, as well as viral agents such as Herpes Simplex Virus, Papillomavirus, HCV, and HIV. Their symptoms can affect quality of life and significantly impact both individual reproductive health and sustainability of the healthcare system. Many existing healthcare centers and infection management protocols are primarily designed for adults, highlighting the need for contextspecific strategies to ensure the effective involvement of adolescents and young people, considering patient complexity and the parent-child dynamic. Emerging data among young people indicate the spread of multidrug-resistant STI strains resulting from genetic selective pressure and the indiscriminate use of antibiotics. For Neisseria gonorrhoeae, the second most common bacterial STI in Europe, the emergence of resistance to last-line therapies, such as ceftriaxone, has become a major public health concern due to the limited available therapeutic alternatives and the lack of a vaccine (Zanotta, et al., 2025; Goldstei, et al., 2024; Wang, et al., 2024). In 2023, the European Centre for Disease Prevention and Control (ECDC) reported that Chlamydia trachomatis remains, up to now, the leading bacterial cause of STIs, with young people aged 15-24 accounting for 68% of total cases (European Centre for Disease Prevention and Control, 2015; Zanotta, et al., 2025). At the same time, a concerning increase in Neisseria gonorrhoeae cases was reported among heterosexual young people (Zanotta, et al., 2025; Nerlander, et al., 2023). STIs continue to pose a significant global public health challenge. In 2020, there were an estimated 374 million global cases of chlamydia, gonorrhea, syphilis and trichomoniasis (Williams, et al., 2025; World Health Organisation,

2024). Sexual behaviours such as inconsistent condom use, unprotected sex, multiple sexual partners and paid sexual encounters are significant risk factors for STI transmission (Fasciana, et al., 2021; Paz-Bailey, et al., 2016; Spicknal, et al., 2017; Camoni, et al., 2011; Glick, 2012; Williams, et al., 2025). Use of substances while engaging in sexual activity can promote high-risk sexual behaviours such as unprotected sex or soliciting sex for drugs (Williams, et al., 2025; Murali, et al., 2018). Previous study revealed that 73.10% of the participants have multiple girlfriends and these multiple girlfriends practiced by the participants could be due to the fact that majority of them were single and this prompted them to engaged in uncontrolled relationship (Gbaranor, et al., 2023). Having multiple sexual partners is a serious risk factor in contacting STI. Despite the multiple girlfriends being practiced by the participants, most of them (76.90%) do not put on condom during sex and this becomes channel of contacting STI and as such, putting themselves and their sexual partner's lives in jeopardy (Gbaranor, et al., 2023). STIs impact individuals, communities and healthcare systems. Understanding the prevalence and the risk fac tors associated with STIs is critical for developing effective prevention and treatment strategies (Williams, et al., 2025).

#### MATERIALS AND METHOD

This was a cross-sectional study involving 250 males who were within the age of 18 to 47 years. A well-structured questionnaire was administered to participants. Each participant had one questionnaire to fill appropriately and independently after instructions were given to them by the Research Assistants. Data collection took place over two months, from February to April, 2025. Statistical analysis was done using SPSS version 25.0 and p < 0.05 was significant.

# **RESULTS**

The results revealed that most of the participants affected were between 23 to 37 years of age (Table 1), 76% had secondary education (Table 2), 68% were single (Table 3), 72% farming, 72% are aware of STI (Table 4), 72% have no knowledge about STI (Table 5), 72% have multiple girl friends (Table 6), 80% do not use condom (Table 7), 80% has contacted STI (Table 8), 80% treated STI with herbal, 76% do not treat their girl friend alongside, and 80% had complications from STI treatment.

**Table 1: Age Distribution of Participants** 

Age Group	Frequency	ncy Percentage (%)	
18-22 years	20	8.00	
23-27 years	70	28.00	
28-32 years	90	36.00	

Age Group	Frequency	Percentage (%)
33-37 years	30	12.00
38-42 years	20	8.00
43-47 years	20	8.00
Total	250	100

**Table 2: Educational Distribution of Respondents** 

Education	Frequency	Percentage (%)
Primary	50	20.00
Secondary	190	76.00
Tertiary	10	4.00
Total	250	100.00

Table 3: Marital Distribution of Respondents

Marital Status	Frequency Percentage (%	
Married	80	32.00
Single	170	68.00
Total	250	100.00

Table 4: Awareness of STI

Response	Frequency	Percentage (%)
Participants who are aware of STI	180	72.00
Participants who are not aware of STI	700	28.00
Total	250	100.0

**Table 5: Knowledge about STI** 

Response	Frequency	Percentage (%)
Participants who have knowledge about STI	70	28.00
Participants who do not have knowledge about STI	180	72.00
Total	250	100.0

Table 6: Participants who have multiple girlfriend

Response	Frequency	Percentage (%)
Participants who have multiple girlfriends	180	72.00
Participants who do not have multiple girlfriends	70	28.00
Total	250	100.0

**Table 7: Condom usage during sex** 

Response	Frequency	Percentage (%)
Participants who use condom during sex	50	20.00
Participants who do not use condom during sex	200	80.00
Total	250	100.0

Table 8: Participants who has contacted STI

Response	Frequency	Percentage (%)
Participants who has contacted STI	200	80.00
Participants who has not contacted STI	50	20.00
Total	250	100.0

## **DISCUSSION**

Men play a critical role in the transmission and control of sexually transmitted infections, yet they are often overlooked in public health discussions and interventions. Sexually transmitted infections (STI) is on the increase among male in urban centers. Possible contributing factors include multiple sexual

partnerships, inconsistent condom use, alcohol and drug use, and delayed health-seeking behavior. Exploring these factors will provide valuable insight into designing more inclusive and effective STI prevention programs targeting men.

The study revealed that most of the participants who contacted sexually transmitted

infections were between 23 to 37 years of age and majority of the participants had secondary level of education and as such may not be able to get much information. Again, the research revealed that majority of the participants were single and reside in rural area. In rural areas, single boys mostly have access to or own their room and that may be the impetus while they engage in sexual intercourse frequently. Unlike in the Urban areas were accommodation is scare and expensive and this could hinder frequent sexual intercourse due to the fact that many boys to a single room as against in the rural areas where you see one guy to a single room.

The study also revealed that majority (72%) of the participants are aware of STI, but have no knowledge about STI. This lack of knowledge about the STI may be probably due to their location and their level of education. Limited sexual health education contributes to poor knowledge about STIs, prevention methods, and symptoms and myths and misconceptions about STIs may be widespread.

The study revealed that there is an increase in trend of sexually transmitted infections (STI) among males living in the rural areas and 80% of the participants has contacted. This growing trend may be linked to changing in sexual behaviors, limited access to reproductive health services, and poor awareness of preventive and early treatment options. The research also revealed that this increase in the incidence of STI in the rural areas could be attributed to combination of social, economic, and healthcarerelated issues. Rural areas often have fewer healthcare facilities and specialists, leading to delayed diagnosis and treatment of STIs. Lack of confidential and youth-friendly services can deter males from seeking care when contacted this STI. Stigma around discussing sexual health or STIs can also prevent open communication and seeking care. Masculinity norms might discourage men from using condoms or seeking testing in the rural areas.

The study revealed that 72% of the participants have multiple girl friends and 80% do not use condom during sexual intercourse. This multiple sexual partners or engagement in unprotected sex increases infection risk. Again, the research shows that most of the participants who reside in the rural areas use substance abuse (alcohol or drugs) and this may impair judgment leading to unsafe sex. Poverty and low socioeconomic status could also limit access to prevention tools (e.g., condoms). The study also revealed that lack of availability or cultural resistance to condom use contributes to transmission. Difficulty tracing and treating sexual partners leads to ongoing transmission cycles and thus contribute to the rising

trend of contacting STI among males in rural areas. Absence of routine STI screening in rural clinics results in undiagnosed and untreated infections.

Majority of the participants who contacted STI, treated STI with herbal medicine and 76% do not treat their girl friend alongside. This method of treatment adopted by the participants could increase the spread of STI. Herbal treatments often lack consistent dosing, which can lead to ineffective treatment or toxicity. Relying solely on herbal medicine without proper medical diagnosis or antibiotics/antivirals may lead to untreated infections, increasing the risk of complications and transmission. Some herbs can cause allergic reactions, liver or kidney damage, or interact negatively with other medications. Many STIs, especially viral ones like HIV or herpes, cannot be cured with herbs. Conventional antiviral therapy is necessary. While some herbal medicines may offer symptom relief or mild antimicrobial effects, they are generally not recommended as sole treatments for STIs. Proper diagnosis and treatment with proven antibiotics or antiviral drugs remain critical. Using herbal medicine as a complementary approach should be discussed with healthcare providers to avoid risks.

Majority (80%) of the participants had complications from STI treatment owing to the fact that most of them rely on herbal medicine probably because their little or no health centres and lack of proper education on the menace of STI. Again, because most of them are farmers, that's may prompt them to engaged the service of herbs in the treatment of STI.

#### CONCLUSION

A sexually transmitted infection (STI) is an infection that is primarily spread through sexual contact, including vaginal, anal, or oral sex. STIs can be caused by bacteria, viruses, or parasites, and they can affect anyone who is sexually active, regardless of age, gender, or sexual orientation. The study revealed that there is an increase in trend of sexually transmitted infections (STI) among males living in the rural areas and 80% of the participants has contacted. This growing trend may be linked to changing in sexual behaviors, limited access to reproductive health services, and poor awareness of preventive and early treatment options. Limited access to healthcare services, low awareness and aducation, cultural and social norms, high-risk Sexual behaviors, economic and social factors, limited use of condoms, poor partner notification and treatment and lack of screening programs are factors that necessitated the rising trend in spreading STI among males in rural areas.

#### Acknowledgments

We acknowledge Nazor Barinua-Gbaranor, Nuazor Victory Barinua, Kedumle Success Barinua, Tuamene Excellent Barinua and Excellent Support Global Foundation for their moral support, prayers, understanding, and encouragement during the period of this research.

Funding: No funding

Conflict of Interest: None declared

Ethical Approval: Not required

## **REFERENCES**

- Akil J. Williams, T'Shara P. Ali, Imani D. Griffith, Simone T. Jeremie, Shivani Mahabir, Chelsea A. Sudan, Kristof C. Stüven, Marsha A. Ivey (2025). Prevalence and risk factors associated with sexually transmitted infections among adults attending an STI clinic in a small island developing state. BMC Infectious Diseases.
- Camoni L, Conte ID, Regine V, Colucci A, Chiriotto M, Vullo V, et al., Sexual behaviour reported by a sample of Italian MSM before and after HIV diagno sis. Ann Ist Super Sanità. 2011;47:214–9.
- European Centre for Disease Prevention and Control. Annual Epidemiological Report 2014— Sexually Transmitted Infections, Including HIV and Blood-Borne Viruses; ECDC: Stockholm, Sweden, 2015.
- Fasciana T, Capra G, Di Carlo P, Calà C, Vella M, Pistone G, et al., Socio-Demo graphic characteristics and sexual behavioral factors of patients with sexually transmitted infections attending a hospital in Southern Italy. Int J Environ Res Public Health. 2021;18(9):4722.
- Gbaranor, K. B, Imarhiagbe, O. C, Ikakita Y., Robinson E. D., Dickson, I. C, Kinako, S. E., Asikimabo-Ofori S. L., Mube W. A., Austin-Asomeji, I., Ile V. I., Oluoha, R. U., Dimkpa C.R., Nyeche E. O (2023). Choice of Treatment of Sexually Transmitted Infections among Males in Rural Areas of South South, Nigeria. International Journal of Medical Science and Dental Research. Volume 06, Issue 04, PP 128-135
- Glick SN, Morris M, Foxman B, Aral SO, Manhart LE, Holmes KK, et al. A comparison of sexual behavior patterns among men who have sex with men and heterosexual men and women. J Acquir Immune Defic Syndr. 2012;60(1):83–90.
- Goldstein, E.; Moss, E.; Bennett-Slater, S.;
  Ferguson, L.; McInally, C.; McHugh, M.; Maxwell,

- A.; Winter, A.; Gunson, R.N. Impact of Molecular Ciprofloxacin Resistance Testing in Management of Gonorrhoea in a Large Urban Clinic. Sex. Transm. Infect. 2024, 100, 226–230. [CrossRef] [PubMed]
- Murali V, Jayaraman S. Substance use disorders and sexually transmitted infections: a public health perspective. BJPsych Adv. 2018;24(3):161-6.
- Nerlander, L.; Champezou, L.; Gomes Dias, J.; Aspelund, G.; Berlot, L.; Constantinou, E.; Díaz, A.; Epštein, J.; Fogarassy, E.; Hernando, V.; et al. Sharp increase in gonorrhoea notifications among young people, EU/EEA, July 2022 to June 2023. Euro Surveill. Bull. Eur. Sur Mal. Transm. Eur. Commun. Dis. Bull. 2024, 29, 2400113. [CrossRef]
- Paz-Bailey G, Mendoza MCB, Finlayson T, Wejnert C, Le B, Rose C, et al., Trends in condom use among MSM in the united states: the role of antiretroviral therapy and seroadaptive strategies. AIDS. 2016;30(12):1985.
- Sexually Transmitted Infections (STIs) (2025).
  Available online: https://www.who.int/news-room/fact-sheets/detail/sexually transmitted-infections-(stis) (accessed on 5 March 2025).
- Spicknall IH, Gift TL, Bernstein KT, Aral SO. Sexual networks and infection transmission networks among men who have sex with men as causes of disparity and targets of prevention. Sex Transm Infect. 2017;93(5):307–8.
- Wang, B.; Mohammed, H.; Andraweera, P.; McMillan, M.; Marshall, H. Vaccine Effectiveness and Impact of Meningococcal Vaccines Against Gonococcal Infections: A Systematic Review and Meta-Analysis. J. Infect. 2024, 89, 106225. [CrossRef] [PubMed]
- World Health Organisation. Sexually transmitted infections (STIs). 2024. Avail able from: https://www.who.int/news-room/fact-sheets/detail/sexually-transmitted-infections-(stis). [cited 2024 Oct 13].
- Zanotta N., West N., Cason C., degli Ivanissevich S., Meneghel A., Righi F., Brunelli L., Casuccio A., Gazzetta S., Gianfrilli D., et. NewTrendsinSexually Transmitted Infections Adolescents andYoungPeople: Among Epidemiology, Clinical and Diagnostic Management. Microorganisms 2025, 13, 1411. https://doi.org/10.3390/ microorganisms13061411.