



## The Relationship of Socioeconomic Decline with the Incidence of Sexually Transmitted Infections (STIs)

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**Article Info:**

**Article history:**

Received: May 20, 2026

Revised: June 20, 2026

Accepted: June 23, 2026

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**Keywords:**

Economic Conditions; Sexual  
Behavior; Sexually Transmitted  
Infections; Socioeconomic Decline;  
STI Education

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**Abstract**

**Background:** Sexually transmitted infections (STIs) are a reproductive health problem closely associated with socioeconomic conditions. Economic downturns can hinder access to timely sexual health services, condoms, and treatment, potentially increasing vulnerability to STIs.

**Objective:** This study aimed to evaluate the association between perceived socioeconomic decline and self-reported STI diagnosis among sexually active adults.

**Methods:** This study used an analytical observational design with a cross-sectional approach. The subjects were sexually active adults who met the eligibility criteria. Data were collected using structured questionnaires assessing perceived economic decline, sexual history, and STI diagnosis status. The association between economic decline and STI occurrence was analyzed using the chi-square test, and the prevalence ratio (PR) with a 95% confidence interval (CI) was reported.

**Results:** This study involved 92 subjects, with a mean age of  $30.49 \pm 6.00$  years. The proportion of STIs in the group experiencing economic decline was 31.3%, whereas the proportion in the group without economic decline was 10.7%. Perceived economic decline was associated with STI prevalence (PR = 2.917; 95% CI: 0.943–9.023;  $p = 0.036$ ), although the CI crossing 1.0 warrants cautious interpretation.

**Conclusion:** Economic downturn was associated with the incidence of STIs. Further research is recommended using a prospective design with multivariate analysis and clinically confirmed STI diagnoses. These findings have implications for public health practice, particularly in designing STI prevention programs that integrate economic support components and address socioeconomic vulnerabilities. Health policymakers should consider incorporating STI screening and education into social protection programs targeting economically distressed populations.

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**To cite this article:** Riyanto, P., Pranowo, D. A., Wijdani, D. H., Cindy, & Pamungkas, C. I. T. (2026). The relationship of socioeconomic decline with the incidence of sexually transmitted infections (STIs). *Glosains: Jurnal Sains Global Indonesia*, 7(3), 1059–1068. <https://doi.org/10.59784/glosains.v7i3.801>

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### INTRODUCTION

Sexually transmitted infections are a group of infections that are transmitted primarily through sexual contact and can cause significant reproductive health burdens, ranging from pregnancy and infertility complications to increased susceptibility to HIV (Van Gerwen et al., 2022). STIs can be caused by more than 30 types of bacteria, viruses, and parasites that are transmitted through vaginal, anal, and oral sexual intercourse, and some infections can be

transmitted from mother to child during pregnancy, childbirth, or breastfeeding. The global burden of STIs is still high, as more than 1 million curable STIs are estimated to occur daily in the 15 to 49 age group, and most of those infections are asymptomatic. In 2020, the WHO estimates that there will be 374 million new infections due to chlamydia, gonorrhea, syphilis, and trichomoniasis in the age group of 15 to 49 years.

Analysis Global Burden of Disease 2021 also shows that the number of cases of sexually transmitted diseases reached around 289.17 million in 2021, with an increase of about 58.38% compared to 1990. The burden is heavier in areas with Sociodemographic index and in the young and middle age groups (Deng et al., 2025) This condition is also relevant in Indonesia, as shown by the analysis Indonesia Demographic and Health Survey In 2017, 37,109 sexually active women aged 15 to 49 years old, which recorded a self-reported STI prevalence of 14.32%, with some provinces reporting figures above 20% (Lumbantoruan et al., 2025).

Regional data from South Asia and Southeast Asia also showed a prevalence of self-declared STIs of 12.94% in 791,019 adults aged 15 to 49 years, making STIs an important public health problem in the region. The data shows that STIs are not only a biomedical problem, but also a socio-economic problem, considering that transmission, delayed diagnosis, and barriers to access to treatment are often related to income conditions, employment status, residence, education level, and ability to access health services (Sabo et al., 2025).

Previous research has shown a relationship between socioeconomic status and STIs, but most studies still assess economic conditions as fixed categories, such as wealth index, education level, employment status, or income level at a given point in time (Sabo et al., 2025). A national study in Indonesia reported that lower economic status is associated with self-reported STIs in women, so economic factors need to be considered in the prevention of STIs in sexually active populations (Lumbantoruan et al., 2025). Studies of women of reproductive age in Southeast Asia also reported that women with lower economic status in Indonesia, Cambodia, and Myanmar had a higher risk of STIs compared to better economic groups (Yamani et al., 2025) Multi-country studies in South and Southeast Asia show that self-declared STIs are influenced by individual and community factors, including gender, age, marital status, education, wealth status, employment, multiple sexual partners, HIV knowledge, community literacy levels, and media exposure.

The relationship shows that socioeconomic factors can affect STIs through sexual behavior pathways, sexual health knowledge, ability to buy condoms, ability to pay for examinations, and ease of access to therapy (Sabo et al., 2025). Studies on delays in seeking services in STI patients in Eastern Ethiopia show that poor knowledge, fear of social stigma, unmarried status, number of sexual partners, and not being enrolled in community health insurance are associated with delays in seeking health services (Bifa et al., 2025).

Delays in these services are important to note because STIs that are not immediately examined and treated can prolong the period of infection, maintain the chain of transmission, and increase the risk of reproductive complications. The gap in previous research lies in a lack of attention to dynamic socioeconomic downturns, such as job loss, decreased income, deteriorating food security, or housing instability, which differ from low socioeconomic conditions that are static or fixed socioeconomic conditions.

Based on this description, the relationship between socioeconomic decline and the incidence of STIs still requires more targeted research, considering economic exposure, population characteristics, STI diagnosis methods, and diverse behavioral pathways and access to services between studies. This study aims to evaluate the relationship between socioeconomic decline and the incidence of STIs.

## METHOD

### Research Design

This study used an analytical observational design with a cross-sectional approach. This design was chosen to assess the relationship between socioeconomic decline and the incidence of sexually transmitted infections (STIs) among the study subjects within a single observation period. The main exposure variable was economic decline, while the main outcome variable was the incidence of STIs. This study also assessed sociodemographic characteristics, sexual history, perceived stress related to economic conditions, history of STI education, and type of STI

diagnosis as supporting data to describe the profile of the research subjects.

### **Research Population and Eligibility Criteria**

The target population in this study was sexually active adults aged  $\geq 18$  years. The accessible population consisted of individuals who were present at the research site during the data collection period and were willing to participate. Subjects were included if they met all the following criteria: (1) aged  $\geq 18$  years; (2) able to read and understand questionnaire items in Indonesian; (3) had a history of sexual activity; and (4) provided voluntary consent after receiving an explanation of the study. Subjects were excluded if: (1) questionnaire data were incomplete for the main variables related to economic decline or STI status; (2) they were unable to provide adequate information for the purposes of analysis; or (3) they withdrew consent before completing the questionnaire. The sampling technique used was consecutive sampling. All individuals who met the inclusion criteria and were willing to participate were recruited sequentially until the required sample size was reached.

### **Research Instruments and Data**

The research data consisted entirely of primary data obtained through a questionnaire developed based on variables aligned with the research objectives. The first part contained sociodemographic characteristics, including age, gender, employment status, marital status, educational background, and residence status. The second part assessed perceived economic decline and perceived stress related to economic conditions, each using a 5-point Likert scale, with categories ranging from none to very severe. Economic decline was further categorized as present when subjects reported mild to very severe decline and absent when subjects reported no economic decline. The third part contained sexual history, including the number of sexual partners, history of sexual relations outside a permanent partner, history of condom use, and history of education about STIs. The fourth section contained STI diagnosis status, categorized as present or absent, as well as the types of STIs, including syphilis, gonorrhea, chlamydia, genital herpes, condyloma, other STIs, or unknown.

### **Data Collection Procedure**

Data collection was carried out after the subjects had received an explanation of the research purpose, benefits of participation, data confidentiality, and the right to refuse or withdraw at any time without consequences. Subjects who were willing to participate were asked to provide written informed consent before completing the questionnaire. The questionnaire was completed independently by the subjects in a privacy-assured space or with assistance from the researcher if the subjects had difficulty understanding the questions. The completeness of each questionnaire was checked directly by the enumerator immediately after completion. Incomplete data on the main variables were not included in the analysis. All collected data were then coded, entered a research worksheet, and independently double-checked by two people to minimize errors in the data entry process.

### **Data Analysis**

Data analysis was carried out using SPSS version 24 for Windows through descriptive and bivariate analyses. Numerical data, such as age, were presented as means and standard deviations, while categorical data, such as gender, employment status, marital status, education level, residence status, perceived economic decline, perceived economic stress, sexual history, and STI status, were presented as frequencies and percentages. The relationship between economic decline and STI incidence was analyzed using the chi-square test. The magnitude of the association was reported as a prevalence ratio (PR) with a 95% confidence interval (CI). The results of the analysis were considered statistically significant when the p-value was  $\leq 0.05$ .

## RESULTS AND DISCUSSION

### Results

#### Characteristics of Research Subjects

This study involved 92 subjects with an average age of  $30.49 \pm 6.00$  years. The characteristics of the subjects were dominated by men as many as 49 subjects (53.3%), working subjects as many as 62 subjects (67.4%), and married subjects as many as 52 subjects (56.5%). The subject's educational history is divided equally between the elementary to high school and S1 equivalent groups, namely 46 subjects (50.0%) each. The most subjects' residence status was living with their spouse, which was 45 subjects (48.9%). The perception of economic decline was most in the very heavy category, namely 28 subjects (30.4%). The perception of stress on economic conditions was most in the category of severe stress, namely 32 subjects (34.8%). Based on the grouping of economic declines, most of the subjects experienced economic decline, namely 64 subjects (69.6%). The diagnosis of STIs was found in 23 subjects (25.0%), with the most types of STIs being condyloma in 6 subjects (6.5%) (Table 1).

**Table 1.** Characteristics of Research Subjects

<b>Variable</b>	<b>N (%)</b>
<b>Age, year (Average <math>\pm</math> Standard Deviation)</b>	30.49 $\pm$ 6.00
<b>Gender</b>	
Women	43 (46,7%)
Male	49 (53,3%)
<b>Employment Status</b>	
Not working	30 (32,6%)
Work	62 (67,4%)
<b>Marital Status</b>	
Unmarried	40 (43,5%)
Married	52 (56,5%)
<b>Education History</b>	
Elementary School	46 (50,0%)
S1-Equivalent	46 (50,0%)
<b>Residency Status</b>	
With a partner	45 (48,9%)
With parents/family	21 (22,8%)
With friends/colleagues	7 (7,6%)
Living alone	14 (15,2%)
Others	5 (5,4%)
<b>Economic Perception Deteriorates</b>	
No economic downturn	28 (30,4%)
Mild economic downturn	5 (5,4%)
Moderate economic downturn	15 (16,3%)
Heavy economic downturn	16 (17,4%)
The economic downturn is very severe	28 (30,4%)
<b>Perception of Stress on the Economy</b>	
Not experiencing stress	12 (13,0%)
Mild stress	11 (12,0%)
Moderate stress	16 (17,4%)
Heavy stress	32 (34,8%)
Stress is very heavy	21 (22,8%)
<b>Economic decline</b>	
There	64 (69,6%)
None	28 (30,4%)
<b>STI Diagnosis</b>	
There	23 (25,0%)
None	69 (75,0%)

<b>Types of STIs diagnosis</b>	
None	69 (75,0%)
Syphilis	4 (4,3%)
Gonorrhoea	4 (4,3%)
Chlamydia	5 (5,4%)
Genital herpes	1 (1,1%)
Condyloma	6 (6,5%)
Other STIs	2 (2,2%)
Don't know	1 (1,1%)

The characteristics of the subjects' sexual history showed that most subjects had one sexual partner, i.e. 57 subjects (62.0%). A history of sexual intercourse outside of the partner remained reported to be absent in most subjects, i.e. 55 subjects (59.8%). The use of condoms during sexual intercourse was most in the infrequent category, namely 27 subjects (29.3%), which shows that the consistency of condom use in the study subjects is still low. The history of education about STIs was reported in 58 subjects (63.0%), while 34 subjects (37.0%) had never received education about STIs (Table 2).

**Table 2.** Characteristics of Sexual History

<b>Variable</b>	<b>N(%)</b>
<b>Number of Sexual Partners</b>	
1	57 (62,0%)
2	23 (25,0%)
3	11 (12,0%)
4	1 (1,0%)
<b>History of relationships other than with a partner</b>	
There	37 (40,2%)
None	55 (59,8%)
<b>History of using condoms during sexual intercourse</b>	
Never	26 (28,3%)
Rare	27 (29,3%)
Sometimes	22 (23,9%)
Frequent	11 (12,0%)
Always	6 (6,5%)
<b>History of getting education about STIs</b>	
There	34 (37,0%)
None	58 (63,0%)

### **Bivariate Analysis of the Relationship of Economic Decline to STI Incidence**

The incidence of STIs was more common in subjects who experienced economic decline compared to subjects who did not experience economic decline. In the group with economic decline, there were 20 subjects (31.3%) who experienced STIs, while in the group without economic decline, there were 3 subjects (10.7%) who experienced STIs. The results of Chi-Square's analysis showed that economic decline was significantly related to the incidence of STIs with a value of  $p = 0.036$ . The prevalence ratio value of 2.917 showed that subjects who experienced economic decline had a prevalence of STIs of 2.917 times higher than subjects who did not experience economic decline. The 95% confidence interval of 0.943 to 9.023 indicates a fairly wide range of estimates.

**Table 3.** The Relationship of Economic Decline to STI Incidence

Variable	Status IMS		PR	I 95%	Value p
	There	None			
Economic Decline					
There	20 (31,3%)	44 (68,8%)	2,917	0,943-9,023	0,036*
None	3 (10,7%)	25 (89,3%)			

\*Analysis using *the Chi-Square test*. The result is considered significant if the p value  $\leq 0.05$ .

## Discussion

This study shows that economic decline is related to the incidence of STIs in the study subjects. Subjects with economic decline had a proportion of STIs of 31.3%, while subjects without economic decline had a proportion of STIs of 10.7%. The economic decline was associated with an increase in the prevalence of STIs by 2,917 times. These findings suggest that worsening economic conditions are associated with a higher prevalence of STIs. The direction of the relationship suggests that the economic changes experienced by the subjects can play a role as a social factor that aggravates their vulnerability to STIs.

Economic downturns can affect an individual's ability to purchase condoms, access screenings, and obtain timely therapy (Aemro et al., 2025; Lumbantoruan et al., 2025). These findings are also in line with the understanding that STIs are not only related to biological factors, but also to sexual behavior, access to health services, sexual health education, and socioeconomic barriers (Van Gerwen et al., 2022; Workowski et al., 2021). The results of this study reinforce the importance of assessing economic factors in efforts to prevent and control STIs in the sexually active adult population.

The findings of this study are in line with Indonesia's national analysis using data Indonesia Demographic and Health Survey 2017 involving 37,109 women and reporting a prevalence of self-declared STIs of 14.32%. The study showed that low economic status was associated with an increased chance of self-declared STIs in Indonesian women (Lumbantoruan et al., 2025). These results support the hypothesis that economic vulnerability may affect STI risk, especially when declining purchasing power hinders access to condoms, laboratory tests, sexual health consultations, and timely treatment (Aemro et al., 2025; Lumbantoruan et al., 2025). The findings are also in line with a study of pregnant women in Southern Ethiopia that reported that laboratory-based STIs are still prevalent in antenatal services, with some infections occurring asymptotically (Ebido et al., 2025). The similarity in the direction of the findings can be explained through several interrelated paths.

Severe economic pressures can limit an individual's ability to reach sexual health services, including the cost of screenings, medications, and condoms (Agimas et al., 2024; Bifa et al., 2025). Delays in seeking services can prolong the period of infection, increase the chance of transmission, and increase the risk of complications that should be prevented with early management (Bifa et al., 2025; Guddu et al., 2024). Vulnerable economic conditions can also reduce the ability to negotiate condom use, especially in individuals who are financially dependent on sexual relationships (Adu et al., 2022; Scheidell et al., 2018). A multi-country study shows that sexual behavioral factors, knowledge of STIs, and socioeconomic position are related to self-declared STIs, so STI control needs to pay attention to social factors beyond clinical aspects (Côra et al., 2025; Sabo et al., 2025).

A number of other studies have produced findings that are not entirely in the same direction. A multi-country study in Sub-Saharan Africa involving 234,310 women in fixed sexual relations reported that working women had a lower chance of self-declared STIs with an aOR of 0.86, although the overall prevalence of STIs reached 5.8% (Adu et al., 2022). Studies of adult populations in South Asia and Southeast Asia reported that employment status may be associated with a slightly higher chance of STIs with an AOR of 1.14, so the relationship between employment, economic conditions, and STIs does not always move in one consistent direction (Sabo et al., 2025). Studies of women of reproductive age in Senegal have also shown that sociodemographic factors and areas of residence may be related to self-declared STIs, so that the influence of economic conditions may differ according to population characteristics and social environment (Kinfe et al., 2024). The difference in the direction of the findings between studies is most likely due to the inconsistency in the way economic conditions are measured.

The asset-based wealth index, employment status, income level, and education level each capture different dimensions of socioeconomic conditions (Razavi et al., 2025). Asset-based indices more often describe a household's relatively stable economic position, while economic declines in this study describe changes that are closer to the experience of lost income, decreased purchasing power, or deterioration in the ability to meet health needs. This study uses the perception of economic decline as a subjective experience of changes in economic conditions, rather than absolute economic position, so this variable is different from the economic indicators used in many large survey-based studies.

Differences in output measurements can also affect outcomes, as self-declared STIs can miss asymptomatic cases and can be affected by embarrassment or stigma when respondents report a history of STIs (Dhabhai et al., 2025; Lumbantoruan et al., 2025). The limitations of symptom-based diagnosis are also important to note because most STIs can proceed asymptomatic and go undetected when the examination relies solely on clinical complaints (Martin et al., 2022; Workowski et al., 2021).

The characteristics of the subjects in this study show several factors that can strengthen the relationship between economic decline and STIs. The study subjects were dominated by men at 53.3%, with a proportion of working at 67.4%, married status at 56.5%, and having a perception of a very heavy economic decline of 30.4%. The proportion of severe stress due to economic pressure is also quite large, namely 34.8%. This picture suggests that economic downturns are not solely an income issue, but can also be psychosocial pressures that affect health decisions, service-seeking behaviors, and sexual behaviors.

Studies in Southeast Asia on women of reproductive age show that low economic position and unsafe sexual behavior are associated with STIs in several countries, including Indonesia, Cambodia, and Myanmar (Yamani et al., 2025). Ongoing economic pressures can lower the priority for prevention, increase the tendency to delay examinations, and increase the likelihood of inadequate use of self-medication (Bifa et al., 2025; Negussie et al., 2025). Social stigma against STIs can also exacerbate service delays, especially when individuals are concerned about social judgment, service costs, or confidentiality of their sexual health status (Guddu et al., 2024; Lumbantoruan et al., 2025). These findings suggest that STI interventions need to pay attention to education, access to affordable services, and reduction of social barriers in economically distressed groups.

The characteristics of the subjects' sexual history also provide a relevant explanation for the main findings of this study. Most subjects had one sexual partner at 62.0%, but a history of sexual intercourse outside of the partner was still found in 40.2% of the subjects. The use of condoms is also still relatively low, with the proportion who never or rarely use condoms reaching 57.6%. This pattern may explain why economic declines are related to STIs, as the risk of biological transmission of STIs tends to be greater when economic stress occurs in conjunction with unprotected sexual intercourse and sexual intercourse outside of a permanent partner. A multi-country study in South and Southeast Asia showed that multiple sexual partners were associated with an increased chance of self-declared STIs with an aOR of 2.79 (Sabo et al., 2025).

Studies in Southeast Asia also show that sexual behavior, knowledge of STIs, age, education, and economic status have varying relationships with STIs in women of reproductive age (Yamani et al., 2025). Low condom use can increase the chances of exposure to STI-causing pathogens, especially when individuals have sexual intercourse outside of their regular partner or are unaware of their partner's STI status (Van Gerwen et al., 2022; Williams et al., 2025). The findings suggest that economic decline may not be a single factor, but rather interacts with low condom use, sexual intercourse outside of partners, low knowledge of STIs, and limited access to sexual health services (Sabo et al., 2025; Segala et al., 2024).

The strength of this research lies in the relevance of the issues raised in the perspective of public health, because this study links socioeconomic decline with the incidence of STIs while including sexual history and perception of economic stress as part of the subject picture. This study contributes to public health knowledge by examining the association between perceived socioeconomic decline and STI occurrence, incorporating sexual history and economic stress perception as contextual variables. The main limitation of this study is the use of cross-sectional

designs, so the cause-and-effect relationship between economic decline and STI incidence cannot be ascertained. Perception-based measures of economic downturn and economic stress also risk information bias. Questionnaire-based diagnosis of STIs self-reported can lead to bias because STIs can also occur without symptoms, so this limitation is an important methodological note. The analysis used is still in the form of a bivariate test, so the influence of confounding variables such as age, gender, marital status, condom use, history of sexual relations outside of the partner, and knowledge of STIs has not been fully controlled.

The relatively wide range of confidence intervals also indicates that the sample size is still limited to produce precise estimates. Further research needs to use prospective design, diagnosis of STIs based on clinical or laboratory examinations, as well as multivariate analyses to assess the effects of economic decline after controlling for sexual behavior factors and sociodemographic characteristics. Laboratory testing is important because some STIs do not cause symptoms, so a complaint-based approach alone can lead to cases going undetected. This approach can strengthen the validity of findings and help develop STI interventions that are more appropriate for groups with economic stress.

### CONCLUSION

Based on the results of the study, economic decline was associated with the prevalence of STIs among the study subjects, with a higher proportion of STIs observed in the group that experienced economic decline (PR = 2.917; 95% CI: 0.943–9.023;  $p = 0.036$ ). These findings suggest that worsening economic conditions may be one factor associated with a higher prevalence of STIs. Further research is recommended using a prospective design, multivariate analysis, and clinical examination-based STI diagnosis. These findings have important implications for public health practice, particularly in designing STI prevention programs that integrate economic support components and address socioeconomic vulnerabilities among sexually active adult populations. Health policymakers should consider incorporating STI screening and education into social protection programs targeting economically distressed groups.

### ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to Universitas Bina Nusantara for providing academic support and facilitating the completion of this research. The authors also extend their appreciation to all respondents who voluntarily participated in this study and shared valuable information. Finally, the authors are grateful to the anonymous reviewers and the editorial team for their constructive comments and suggestions, which significantly improved the quality of this manuscript.

### AUTHOR CONTRIBUTION STATEMENT

Puguh Riyanto: Conceptualization, methodology, investigation, data curation, formal analysis, writing—original draft, and project administration. Devina Adiyani Pranowo: Methodology, investigation, data curation, validation, and writing—review and editing. Dini Hisan Wijdani: Investigation, formal analysis, visualization, validation, and writing—review and editing. Cindy: Data curation, investigation, resources, validation, and writing—review and editing. Cagar Irwin Taufan Pamungkas: Conceptualization, supervision, methodology, validation, writing—review and editing, and final approval of the manuscript.

### REFERENCES

- Adu, C., Mohammed, A., Budu, E., Frimpong, J. B., Tetteh, J. K., Ahinkorah, B. O., & Seidu, A. A. (2022). Sexual autonomy and self-reported sexually transmitted infections among women in sexual unions. *Archives of Public Health, 80*(1), 40. <https://doi.org/10.1186/s13690-022-00796-4>
- Aemro, A., Ali, M. S., Zegeye, A. F., Workneh, B. S., Zeleke, G. A., Mekonen, E. G., Tamir, T. T., Wassie, M., Terefe, B., & Tekeba, B. (2025). Determinants of sexually transmitted infection-related care-seeking behavior among reproductive-age women in sub-Saharan Africa: A multilevel analysis. *PLoS One, 20*(9), e0331781. <https://doi.org/10.1371/journal.pone.0331781>
- Agimas, M. C., Solomon, M., Shewaye, D. A., Abebaw Angaw, D., & Derseh, N. M. (2024). Prevalence

- of delayed treatment for sexually transmitted infections and its determinants in sub-Saharan Africa. A systematic review and meta-analysis. *PloS One*, 19(3), e0299629. <https://doi.org/10.1371/journal.pone.0299629>
- Bifa, D., Yilma, D., Banti, T., & Asefa, L. (2025). Determinants of delayed healthcare seeking among STI patients in Eastern Ethiopia: a case-control study. *Frontiers in Public Health*, 13, 1522882. <https://doi.org/10.3389/fpubh.2025.1522882>
- Côra, G. R., Ross, J. de R., Vidal, F. C. B., Diniz, I. J. L., & Moura, M. E. S. (2025). Association of Behavioral and Socioeconomic Factors With Sexually Transmitted Infection Positivity in Vulnerable Women From a Neotropical Setting. *Interdisciplinary Perspectives on Infectious Diseases*, 2025, 4600610. <https://doi.org/10.1155/ipid/4600610>
- Deng, M., Chen, J., Wang, Z., Zheng, R., Pang, W., Sun, R., & Bai, Z. (2025). Trends in the incidence of common sexually transmitted infections at the global, regional and national levels, 1990–2021: results of the Global Burden of Disease 2021 study. *Tropical Medicine and Health*, 53. <https://doi.org/10.1186/s41182-025-00744-2>
- Dhabhai, N., Pathak, B. G., Mburu, G., More, D., Chowdhury, R., Wi, T. E., ... & Mazumder, S. (2025). Prevalence of reproductive tract and sexually transmitted infections among symptomatic and asymptomatic women, validity of syndromic management, in urban and periurban low to mid socioeconomic neighbourhoods of North Delhi: an observational study. *BMJ Public Health*, 3(2). <https://doi.org/10.1136/bmjph-2024-001791>
- Ebido, M. J., Mekonnen, Z., Lachat, C., Levecke, B., Gari, T., & Padalko, E. (2025). High prevalence of sexually transmitted infections among pregnant women in southern Ethiopia: evidence from routine laboratory diagnosis. *Sexual Health*, 22(6). <https://doi.org/10.1071/SH25171>
- Guddu, G. A., Getahun, A., Yadesa, G., & Tolossa, T. (2024). Delay in healthcare seeking and associated factors among patients presenting with sexually transmitted infection symptoms in the Horo Guduru Wollega Zone, Oromia, Western Ethiopia, 2022. *Frontiers in Reproductive Health*, Volume 6-2024. <https://doi.org/10.3389/frph.2024.1348262>
- Kinfe, B., Abate, H. M., & Mankelkl, G. (2024). Determinants of self-reported sexually transmitted infections among reproductive age women in Senegal: evidenced by Senegal demographic and health survey. *Contraception and Reproductive Medicine*, 9(1), 53. <https://doi.org/10.1186/s40834-024-00318-3>
- Lumbantoruan, S. M., Eka, N. G. A., & Saputri, A. (2025). Self-reported sexually transmitted infections among women in Indonesia: analysis of 2017 Indonesia demographic and health survey. *BMC Public Health*, 25(1), 4088. <https://doi.org/10.1186/s12889-025-25193-8>
- Martin, K., Dziva Chikwari, C., Mackworth-Young, C. R. S., Chisenga, M., Bandason, T., Dauya, E., Olaru, I. D., Francis, S. C., Mavodza, C., Nzombe, P., Nyamwanza, R., Hove, F., Tshuma, M., Machiha, A., Kranzer, K., & Ferrand, R. A. (2022). "It was difficult to offer same day results": evaluation of community-based point-of-care testing for sexually transmitted infections among youth using the GeneXpert platform in Zimbabwe. *BMC Health Services Research*, 22(1), 171. <https://doi.org/10.1186/s12913-022-07557-7>
- Negussie, Y. M., Fente, B. M., Asmare, Z. A., Asnake, A. A., Bezie, M. M., Asebe, H. A., & Seifu, B. L. (2025). Self-reported sexually transmitted infections and associated factors among sexually active men in East Africa: a multilevel analysis of recent demographic and health surveys. *BMJ Open*, 15(1), e085628. <https://doi.org/10.1136/bmjopen-2024-085628>
- Razavi, M., Gaba, C., Crown, W., & Nandakumar, A. (2025). Formulation and validation of a regional household wealth index for sub-Saharan Africa. *PloS One*, 20(10), e0335603. <https://doi.org/10.1371/journal.pone.0335603>
- Sabo, K. G., Mare, K. U., Lahole, B. K., Wengoro, B. F., Demeke, H. S., Mohamed, A. A., Bilal, M. A., & Molero, A. H. (2025). Self-reported sexually transmitted infections among adults in South and Southeast Asian countries: a multilevel analysis of recent DHS data (2015-2023). *BMJ Open*, 15(11), e101845. <https://doi.org/10.1136/bmjopen-2025-101845>
- Scheidell, J. D., De Rochars, V. M. B., Séraphin, M. N., Hobbs, M. M., Morris Jr, J. G., Célestin, J. P., ... & Khan, M. R. (2018). Socioeconomic vulnerability and sexually transmitted infection among pregnant Haitian women. *Sexually transmitted diseases*, 45(9), 626. <https://doi.org/10.1097/OLQ.0000000000000861>

- Segala, F. V., Novara, R., Panico, G., Laforgia, R., Raho, L., Schiavone, M., ... & Di Gennaro, F. (2024). Prevalence of sexually transmitted infections and predictors for loss to follow up among marginalized homeless and migrant communities: a cross-sectional study. *Annals of Global Health*, 90(1), 25. <https://doi.org/10.5334/aogh.4388>
- Van Gerwen, O. T., Muzny, C. A., & Marrazzo, J. M. (2022). Sexually transmitted infections and female reproductive health. *Nature Microbiology*, 7(8), 1116–1126. <https://doi.org/10.1038/s41564-022-01177-x>
- Williams, A. J., Ali, T. P., Griffith, I. D., Jeremie, S. T., Mahabir, S., Sudan, C. A., Stüven, K. C., & Ivey, M. A. (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*, 25(1), 923. <https://doi.org/10.1186/s12879-025-11297-4>
- Workowski, K. A., Bachmann, L. H., Chan, P. A., Johnston, C. M., Muzny, C. A., Park, I., Reno, H., Zenilman, J. M., & Bolan, G. A. (2021). Sexually Transmitted Infections Treatment Guidelines, 2021. *MMWR. Recommendations and Reports: Morbidity and Mortality Weekly Report. Recommendations and Reports*, 70(4), 1–187. <https://doi.org/10.15585/mmwr.rr7004a1>
- Yamani, L. N., Astutik, E., Qurniyawati, E., Lusida, M. I., Getaneh, Y., & Kelly, M. (2025). Associations between socio-demographics, sexual knowledge and behaviour and sexually transmitted infections among reproductive-age women in Southeast Asia: Demographic Health Survey results. *BMC Public Health*, 25(1), 738. <https://doi.org/10.1186/s12889-025-21962-7>