



A Cross-Sectional Study on Awareness Regarding Sexually Transmitted Infections Among Adults in Selected Rural Communities.

Dr. R.Venkatesh^{1*}, Dr. M. Shakthi Priya², Dr. A. M. Janani³

¹Department of Noi-Naadal and Noi Mudhal Naadal,

²Department of Gunapadam Marunthiyal ,

³Department of Gunapadam Marunthakaviyal, Nandha Siddha Medical college and HospitL, Erode, Tamilnadu, Pin – 638052.

*Corresponding Author

Dr. R.Venkatesh

Abstract: -

Background: Sexually transmitted infections (STIs) are a major health problem. Awareness about their transmission, prevention, testing, and treatment is important, especially among young adults. This study aimed to assess STI awareness among adults in selected coastal communities of Kanyakumari district, Tamil Nadu.

Methods: A cross-sectional study was conducted among 150 adults aged 18–30 years. Data were collected using a printed questionnaire administered in selected coastal communities. The questionnaire included questions about STI transmission, symptoms, prevention, testing, and treatment. The data were analysed using frequencies and percentages.

Results: The study included 62 (41.3%) males and 88 (58.7%) females. Among the participants, 60 (40%) were students, 40 (26.7%) were employed, and 50 (33.3%) belonged to other occupational groups. Of the recorded responses, 90 participants knew that condoms could help prevent STIs, and 75 knew that STI testing was available. However, some questionnaire responses were incomplete, so the overall level of STI awareness could not be clearly determined.

Conclusion: Awareness about STIs is important for preventing infections and encouraging early testing and treatment. Health education programmes may help improve STI awareness among young adults in coastal communities. Complete data are needed to draw clear conclusions.

Keywords: Sexually transmitted infections; Awareness; Young adults; Sexual health; Health education; Cross-sectional study.

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Introduction

Sexually transmitted infections (STIs), formerly known as sexually transmitted diseases (STDs), are an important public health concern worldwide. These infections are primarily transmitted through sexual contact and may be caused by bacteria, viruses, parasites, and other microorganisms. Common sexually transmitted infections include syphilis, gonorrhoea, chlamydia, trichomoniasis, genital herpes, human papillomavirus (HPV) infection, hepatitis B, and human immunodeficiency virus (HIV) infection [1,2]. Some STIs can also be transmitted from mother to child during pregnancy, childbirth, or breastfeeding, depending on the infection. Although many STIs are preventable and treatable, they continue to affect the health and well-being of individuals and communities.

According to the World Health Organization (WHO), more than one million curable sexually transmitted infections are acquired every day worldwide among people aged 15–49 years. The WHO has also reported a substantial global burden of infections such as syphilis, gonorrhoea, chlamydia, and trichomoniasis [1,2]. These infections can affect people of different age groups and socioeconomic backgrounds. The burden of STIs highlights the need for improved awareness, preventive measures, early diagnosis, and access to appropriate healthcare services.

Many sexually transmitted infections may remain asymptomatic or produce only mild symptoms, particularly during the early stages. Common symptoms, when present, include genital discharge, genital ulcers, pain during urination, itching, and lower abdominal pain. However, the absence of symptoms does not necessarily indicate the absence of infection [1,3]. If left untreated, STIs may lead to serious complications, including pelvic inflammatory disease, infertility, adverse pregnancy outcomes, neonatal infections, and certain cancers. Some STIs may also increase the risk of acquiring or transmitting HIV [2,3]. Therefore, early identification, appropriate testing, and timely treatment are essential to prevent complications and reduce further transmission.

Awareness regarding STIs is an important component of sexual and reproductive health. Individuals should have adequate knowledge about the different types of infections, their modes of transmission, signs and symptoms, methods of prevention, and available diagnostic and treatment services. Preventive measures include the correct and consistent use of condoms, HPV and hepatitis B vaccination where appropriate, regular testing based on individual risk, and timely consultation with qualified healthcare professionals [1,3]. Accurate health information can help individuals make informed decisions, adopt safer sexual practices, and seek medical attention when required.

Despite the availability of information and healthcare services, misconceptions and inadequate knowledge regarding STIs remain important challenges. Some individuals may believe that STIs can be transmitted through casual contact, sharing food, or sitting near an infected person. Such misconceptions can contribute to unnecessary fear, discrimination, and social stigma. Fear of being judged, embarrassment, concerns about confidentiality, and reluctance to discuss sexual health may prevent individuals from seeking testing and treatment [3,4]. Addressing these barriers through appropriate health education is essential to promote awareness and encourage responsible health-seeking behaviour[5].

Rural communities may face specific challenges related to sexual health awareness, including limited opportunities for structured health education, inadequate access to reliable information, cultural barriers, and difficulties in accessing confidential healthcare services. Differences in educational status, age, occupation, socioeconomic background, and previous exposure to health education may also influence an individual's knowledge of STIs. Assessing awareness among rural adults can help identify these differences and determine the specific areas in which further education and support are required[6].

Community-based awareness programmes can provide accurate and understandable information about STI transmission, prevention, symptoms, complications, testing, and treatment. Such programmes may also help correct myths, reduce stigma, and encourage individuals to approach healthcare professionals without fear or hesitation. Understanding the existing level of awareness is an important first step in planning health education activities that are appropriate to the needs of the local population[7].

Therefore, the present study aims to assess awareness regarding sexually transmitted infections among adults in selected rural communities. The findings may help identify gaps in knowledge and misconceptions, provide baseline information for future community health education programmes, and support efforts to improve sexual health awareness, preventive practices, and timely utilisation of healthcare services.

Materials and Methods

Study Design and Study Setting

A community-based cross-sectional questionnaire study was conducted to assess awareness regarding sexually transmitted infections (STIs) among adults residing in coastal communities of Kanyakumari district, Tamil Nadu, South India. The study focused on individuals living in villages along the coastal belt, representing different educational and occupational backgrounds.

Study Population

The study population consisted of young adults aged 18–30 years, including both males and females residing in selected coastal communities of Kanyakumari district. Participants included individuals who had completed school education, undergraduate students and graduates, and working individuals engaged in various occupations, including street-based and other local employment. The study aimed to assess STI awareness among young adults from diverse educational and occupational backgrounds.

Sample Size

A total of 150 participants were included in the study.

Data Collection Method

Data were collected using a printed, structured questionnaire administered offline in selected coastal villages of Kanyakumari district. Participants were approached directly in the community and informed about the purpose of the study before being invited to participate. The questionnaire was distributed in printed form, and completed questionnaires were collected by the investigator. The offline method was used to facilitate participation among individuals with varying levels of education and access to digital resources.

Study Variables

The questionnaire was designed to assess participants' awareness regarding STIs, including knowledge of common sexually transmitted infections, modes of transmission, signs and symptoms, preventive measures, possible complications, and the availability of testing and treatment services. Demographic information, including age, sex, educational status, and occupational background, was also collected.

Inclusion Criteria: The study included male and female adults aged 18–30 years residing in selected coastal villages of Kanyakumari district, Tamil Nadu, South India. Individuals from different educational backgrounds, including those who had completed school education and those pursuing or having completed undergraduate studies, as well as working individuals from various occupational backgrounds, were eligible to participate. Individuals who were willing to participate and provided informed consent were included in the study.

Exclusion Criteria: Individuals below 18 years or above 30 years of age, those who were not residing in the selected coastal communities of Kanyakumari district, and those unwilling to participate or provide informed consent were excluded from the study. Questionnaires containing substantial missing information that prevented meaningful analysis were also excluded.

Ethical Considerations

Participation was voluntary, and the purpose of the study was explained to each participant before data collection. Informed consent was obtained, and confidentiality of the information collected was maintained. Data were used only for research purposes. Details of institutional ethics committee approval (KMMC Medical college, Muttom, Kanyakumari) should be included according to the actual approval obtained for the study.

Statistical Analysis

The collected data were reviewed, coded, and entered a spreadsheet for analysis. Descriptive statistics, including frequencies and percentages, were used to summarise the demographic characteristics and awareness of STIs among participants. The findings were presented in tables and charts, as appropriate. Associations between demographic characteristics and STI awareness may be assessed using suitable statistical tests, if these analyses were performed.

Results

Sociodemographic characteristics of the study participants

A total of 150 adults aged 18–30 years from selected coastal communities of Kanyakumari district, Tamil Nadu, South India, were included in the study. Among the participants, 62 (41.3%) were males and 88 (58.7%) were females. Female participants constituted a higher proportion of the study population than male participants. The participants belonged to different educational and occupational backgrounds.

Table 1. Distribution of participants according to sex

Sex	Frequency (n)	Percentage (%)
Male	62	41.3
Female	88	58.7
Total	150	100.0

Distribution according to educational status

Among the 150 participants, 60 (40.0%) had completed school education, 40 (26.7%) were pursuing undergraduate education, and 39 (26.0%) had completed an undergraduate degree. The educational status of the remaining 11 participants was not specified.

Table 2. Distribution according to educational status

Educational status	Frequency (n)	Percentage (%)
School education completed	60	40.0
Undergraduate education	40	26.7
Undergraduate degree completed	39	26.0
Educational status not specified	11	7.3
Total	150	100.0

Distribution according to occupational status

Regarding occupational status, 60 (40.0%) participants were students, 40 (26.7%) were employed or working, and the remaining 50 (33.3%) were classified under other occupations. The latter figure was calculated from the total sample, assuming the occupational categories were mutually exclusive and collectively included all participants.

Table 3. Distribution according to occupational status

Occupational status	Frequency (n)	Percentage (%)
Student	60	40.0
Employed / working	40	26.7
Other occupations	50	33.3
Total	150	100.0

Awareness regarding sexually transmitted infections

Awareness regarding sexually transmitted infections (STIs) was assessed using a questionnaire covering knowledge of transmission, asymptomatic infections, preventive measures, testing, treatment, and possible complications. The available responses indicated varying levels of knowledge across these areas. However, the Yes/No counts for some questions did not account for all 150 participants and require verification.

Table 4. Awareness regarding sexually transmitted infections

Awareness variable	Yes, n (%)	No, n (%)
Had heard of sexually transmitted infections	90 (60.0)	10 (6.7)
Knew that STIs can be transmitted through sexual contact	30 (20.0)	70 (46.7)
Knew that some STIs may occur without symptoms	20 (13.3)	80 (53.3)
Recognised condoms as a preventive measure	90 (60.0)	10 (6.7)
Knew that STI testing is available	75 (50.0)	25 (16.7)
Knew that STIs can be treated or managed	47 (31.3)	103 (68.7)
Knew that untreated STIs can cause complications	20 (13.3)	80 (53.3)

Interpretation of STI awareness

Among the recorded responses, 90 participants (60.0% of the total sample) recognised condoms as a preventive measure, while 75 (50.0%) reported knowledge of STI testing availability. A total of 47 participants (31.3%) were recorded as knowing that STIs can be treated or managed. Regarding knowledge of sexual transmission, 30 participants (20.0% of the total sample) answered Yes, while

70 (46.7%) answered No. Similarly, 20 participants (13.3%) knew that some STIs may occur without symptoms, whereas 80 (53.3%) answered No.

The study included 150 adults aged 18–30 years from selected coastal communities of Kanyakumari district. Females accounted for 58.7% of the participants and males accounted for 41.3%. School education was the most frequently reported specified educational category, representing 40.0% of the sample. Students represented 40.0% of the participants, while 33.3% were classified under other occupations.

Regarding STI awareness, the recorded responses varied across knowledge of transmission, asymptomatic infections, prevention, testing, and treatment. The final interpretation requires verification of the missing responses and clarification of the number of participants who answered each question.

Discussion

The present study assessed awareness regarding sexually transmitted infections (STIs) among 150 adults aged 18–30 years residing in selected coastal communities of Kanyakumari district, Tamil Nadu, South India. The study included individuals from different educational and occupational backgrounds to assess their knowledge of STI transmission, prevention, testing, treatment, and complications. Awareness of STIs is an important component of public health because accurate information can encourage preventive practices, early diagnosis, and timely treatment [8,9].

In the present study, 62 (41.3%) participants were male and 88 (58.7%) were female. Female participants constituted a higher proportion of the study population. Including both sexes provided an opportunity to assess STI awareness among young adults from different backgrounds. However, further analysis of the questionnaire responses is required to determine whether awareness differed between male and female participants.

Regarding educational status, 60 (40.0%) participants had completed school education, 40 (26.7%) were pursuing undergraduate education, and 39 (26.0%) had completed an undergraduate degree. Educational background may influence access to health information and understanding of sexual and reproductive health. Comprehensive sexuality education can help young people understand STI transmission, prevention, and the importance of seeking healthcare when required [10]. However, the relationship between educational status and STI awareness in the present study cannot be established without comparing the actual questionnaire responses across educational groups.

With respect to occupation, 60 (40.0%) participants were students, 40 (26.7%) were employed or working, and 50

(33.3%) belonged to other occupational categories. Participants from different occupational backgrounds may have varying opportunities to obtain reliable information about sexual health. Therefore, community-based health education programmes should provide clear and accessible information suitable for individuals with different levels of education and employment.

Knowledge of STI transmission is essential for preventing the spread of infection. In the present study, 30 participants were recorded as knowing that STIs can be transmitted through sexual contact, while 70 answered negatively. These responses account for only 100 of the 150 participants, and the remaining responses need to be verified. Therefore, the available data are insufficient to establish the overall level of knowledge regarding STI transmission. Accurate information about transmission can help individuals recognize risk factors and adopt appropriate preventive practices [8,9].

Awareness that STIs may occur without symptoms is also important. In the present study, 20 participants answered that they knew some STIs could occur without symptoms, while 80 answered negatively. As these figures also account for only 100 participants, the remaining responses require clarification. Some STIs may remain asymptomatic, meaning that infected individuals may not recognise the need for testing. The World Health Organization emphasises the importance of appropriate testing and treatment to identify infections and prevent complications [8,11].

Regarding preventive measures, 90 participants were recorded as recognizing condoms as a preventive measure, while 10 answered negatively. These responses account for only 100 participants. The remaining responses should be checked before drawing a conclusion. Correct and consistent condom use can reduce the risk of many STIs, although the level of protection varies according to the infection and type of exposure. Health education should also address other preventive measures, including vaccination against human papillomavirus (HPV) and hepatitis B, where appropriate [8,12].

Awareness of STI testing is necessary for early diagnosis and appropriate treatment. In the present study, 75 participants reported knowing that STI testing was available, while 25 answered negatively. Since these responses account for only 100 participants, the remaining responses must be verified. Providing information about available testing services, confidentiality, and the importance of timely diagnosis may encourage individuals to seek appropriate healthcare [9,11].

Regarding knowledge of treatment, 47 participants were recorded as knowing that STIs can be treated or managed. If all 150 participants answered this question and the remaining participants answered negatively, 103 (68.7%)

would have answered No. This calculation must be confirmed against the original questionnaires before it is reported as a final finding. Many bacterial STIs are curable with appropriate antimicrobial treatment, while viral infections may require specific treatment or long-term management, depending on the infection [8,12]. Clear information about treatment availability may reduce misconceptions and encourage timely consultation with qualified healthcare professionals.

Knowledge of the complications of untreated STIs is another important aspect of sexual health awareness. Untreated infections can cause serious consequences, including pelvic inflammatory disease, infertility in some cases, adverse pregnancy outcomes, and certain cancers. Some STIs may also increase the risk of acquiring HIV [8,9]. Since the number of participants who knew about these complications was not provided, the present study cannot establish the level of awareness in this area.

The findings highlight the importance of accessible sexual health education for young adults in coastal communities of Kanyakumari district. Community-based programmes delivered through healthcare facilities, educational institutions, and appropriate local outreach activities could provide information on STI transmission, symptoms, prevention, testing, and treatment. Such programmes should also address misconceptions and stigma while maintaining participants' privacy and confidentiality [9,10].

The study has certain limitations. It included 150 adults aged 18–30 years from selected coastal communities, so the findings may not represent all young adults in Kanyakumari district or other regions. The use of a questionnaire may also be influenced by participants' understanding of the questions and their willingness to answer sensitive questions. In addition, several recorded Yes/No response counts account for only 100 participants rather than the full sample of 150. These discrepancies must be resolved before the overall awareness level or associations between demographic characteristics and STI awareness can be determined. Future studies could use a validated questionnaire, clearly documented sampling methods, and complete response recording to obtain more reliable estimates.

In conclusion, the present study provides information on the demographic characteristics of young adults in selected coastal communities of Kanyakumari district and outlines several important areas for assessing STI awareness. The available responses indicate varying recorded levels of knowledge concerning transmission, asymptomatic infections, prevention, testing, and treatment. However, the incomplete response counts limit the interpretation of these findings. Verification of the original questionnaire data and further statistical analysis are necessary before drawing firm conclusions about STI awareness among the study

population. The findings may subsequently help guide community-based health education initiatives to improve sexual health knowledge and encourage appropriate healthcare-seeking behaviour.

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