Jurnal Riset Kesehatan Poltekkes Depkes Bandung

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

Analysis of accessibility factors and community support for the success of the syphilis screening program for pregnant women

Analisis Faktor Aksesibilitas dan Dukungan Masyarakat untuk Keberhasilan Program Skrining Sifilis pada Wanita Hamil

Arkha Rosyaria Badrus[1*], Miftahul Khairoh[2], Cityta Putri Kwarta[3], Alief Ayu Purwitasari[4]

[1]S1 Kebidanan, Fakultas Ilmu Kesehatan, Universitas Dr. Soetomo, Surabaya, Indonesia
[2]S1 Kebidanan, Fakultas Ilmu Kesehatan, Universitas Dr. Soetomo, Surabaya, Indonesia
[3]D3 Teknologi Bank Darah, Fakultas Ilmu Kesehatan, Universitas Dr. Soetomo, Surabaya, Indonesia
[4]Profesi Bidan, Fakultas Ilmu Kesehatan, Universitas Dr. Soetomo, Surabaya, Indonesia
*Email: arkha.rosyaria@unitomo.ac.id

ABSTRACT

Background: *Syphilis screening during pregnancy is a critical strategy to prevent adverse outcomes for mothers and newborns. However, in rural areas, the success of screening programs is often influenced by structural barriers and poorly addressed social support systems.*
Objective: *This study aimed to analyze the determinants of successful syphilis screening among pregnant women in Pakong District, Pamekasan, with an emphasis on service accessibility and community support.*
Methods: *This study employed a sequential explanatory mixed methods design. The study population was all pregnant women in the Pakong Community Health Center (Puskesmas) working area from January to December 2024, with a sample of 1,552 respondents drawn using total population sampling. The quantitative phase used a cross-sectional approach analyzed using binary (bivariate and multivariate) logistic regression. The qualitative phase involved in-depth interviews with pregnant women, midwives, and laboratory staff. Thematic analysis was conducted to explain the quantitative findings.*
Results: *Qualitative results indicated that service accessibility and community support were the main determinants of successful screening. Qualitative findings revealed that service accessibility and community support were determinants of successful syphilis screening in rural settings.*
Conclusion: *Strengthening physical access, ensuring the continuity of laboratory services, empowering community cadres, increasing family involvement, and reducing stigma are crucial to increasing the effectiveness and sustainability of syphilis screening programs.*

Keywords: *community support, pregnant women, service accessibility, syphilis screening, rural health*

ABSTRAK

Latar Belakang: Skrining sifilis selama kehamilan merupakan strategi kritis untuk mencegah dampak buruk pada ibu dan bayi baru lahir. Namun, di wilayah pedesaan, keberhasilan program skrining sering kali dipengaruhi oleh hambatan struktural dan sistem dukungan sosial yang belum tertangani secara optimal.

https://doi.org/10.34011/juriskesbdg.v18i1.3208

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

Tujuan: Penelitian ini bertujuan untuk menganalisis determinan keberhasilan skrining sifilis pada ibu hamil di Kecamatan Pakong, Pamekasan, dengan penekanan pada aksesibilitas layanan dan dukungan masyarakat.
Metode: Penelitian ini menerapkan desain mixed methods (metode campuran) sekuensial eksplanatori. Populasi penelitian adalah seluruh ibu hamil di wilayah kerja Puskesmas Pakong periode Januari-Desember 2024 dengan jumlah sampel sebanyak 1.552 responden yang diambil menggunakan teknik total population sampling. Tahap kuantitatif menggunakan pendekatan cross-sectional yang dianalisis dengan uji regresi logistik biner (bivariat). Tahap kualitatif melibatkan wawancara mendalam dengan ibu hamil, bidan, dan petugas laboratorium. Analisis tematik dilakukan untuk menjelaskan temuan kuantitatif.
Hasil: Hasil kualitatif menunjukkan bahwa aksesibilitas layanan dan dukungan masyarakat merupakan determinan utama keberhasilan skrining. Temuan kualitatif mengungkapkan bahwa aksesibilitas layanan dan dukungan masyarakat adalah determinan faktor keberhasilan skrining sifilis di lingkungan pedesaan.
Kesimpulan: Penguatan akses fisik, kepastian keberlangsungan layanan laboratorium, pemberdayaan kader masyarakat, peningkatan keterlibatan keluarga, dan pengurangan stigma sangat penting untuk meningkatkan efektivitas serta keberlanjutan program skrining sifilis.

Kata kunci: aksesibilitas layanan, dukungan masyarakat, ibu hamil, kesehatan pedesaan, skrining sifilis

INTRODUCTION

Syphilis remains a public health problem with a significant impact on maternal and infant health[1]. Globally, the World Health Organization (WHO) estimates that approximately 6.1 million new syphilis cases occur annually, leading to over 350,000 adverse birth outcomes, including stillbirth and congenital syphilis[2]. Congenital syphilis is a preventable condition through early detection through prenatal screening and timely treatment[3]. Therefore, the success of syphilis screening programs for pregnant women is a crucial indicator of maternal and neonatal health protection efforts[4]. In Indonesia, the epidemiological burden is equally alarming.

Data from the Ministry of Health indicates a sharp rising trend in national syphilis cases, jumping from approximately 12,000 cases in 2011 to nearly 21,000 cases in 2022. Despite the national integration of syphilis screening into antenatal care (ANC) services, the elimination target of 95% remains a challenge in several regions, including East Java province.[5] At the local level, Pamekasan Regency, specifically Pakong District, faces a distinct gap in screening coverage. While initial antenatal visits (K1) are relatively high, the transition to complete laboratory screening for syphilis often shows a significant drop-off. Preliminary data from the local area indicates that geographical barriers in this rural setting contribute to inconsistent screening adherence. Although the seroreactivity rate in Pakong is relatively low (0.13% in the recent period), the presence of reactive cases among 1,552 pregnant women confirms that the risk of transmission persists. Without addressing these specific epidemiological gaps, the goal of Triple Elimination (HIV, Syphilis, and Hepatitis B) cannot be fully realized in this priority rural area.

One important factor influencing the success of screening is the accessibility of health services.[6] This variable operationally includes distance to health facilities, ease of transportation, service time, availability of health workers, and the completeness of examination facilities and infrastructure.[7] Good accessibility will increase the chances of

https://doi.org/10.34011/juriskesbdg.v18i1.3208

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

pregnant women utilizing screening services in a timely and sustainable manner. Conversely, limited access has the potential to reduce pregnant women's participation in prenatal care and infectious disease screening, including syphilis.[8]

In addition to accessibility, community support is also a crucial variable in determining the success of a screening program. This support includes family support, the role of health cadres, and social support that encourages health-seeking behavior.[9] Operationally, community support is reflected in the form of motivation, assistance, information provision, and social acceptance of pregnant women undergoing screening and treatment.[10] Good support will increase pregnant women's compliance with the examinations, treatment, and follow-up recommended by health workers[11]. The success of the syphilis screening program, as the dependent variable in this study, was measured based on the achievement of examinations, recording of results, and successful follow-up for pregnant women. This success reflects not only the administrative implementation but also the effectiveness of the service system in ensuring continuity from screening to treatment[7]. This success reflects not only the administrative implementation of screening but also the effectiveness of the service system in ensuring continuity from screening to treatment. Several previous studies have shown that access to health services is significantly associated with the utilization of antenatal care services and infectious disease screening in pregnant women.[10,12]

Other studies have also confirmed that family and community support play a crucial role in improving maternal adherence to screening and treatment.[13] However, most of these studies have focused on quantitative approaches and have not deeply explored the social dynamics, stigma, and subjective experiences of mothers and health workers in implementing syphilis screening. Research using an integrated approach that combines quantitative analysis and qualitative research remains relatively limited, particularly in rural areas.[14,15] Although various studies have demonstrated that service accessibility and social support are associated with maternal health service utilization, most of these studies have focused on general antenatal care, HIV, or non-communicable diseases, and are dominated by quantitative approaches with purely statistical analysis. Research specifically examining the success of syphilis screening programs for pregnant women by simultaneously integrating variables such as service accessibility, community support, and successful case follow-up remains very limited, particularly in rural areas.[16]

Furthermore, there are few studies that combine quantitative analysis with qualitative in-depth research to uncover social dynamics, stigma, and implementation barriers at the primary care level. Therefore, research using a mixed methods approach is needed to provide both a quantitative overview and a deeper contextual understanding of the determinants of successful syphilis screening for pregnant women, particularly in rural areas. Pakong District in Pamekasan Regency is characterized by a rural community that presents unique challenges in healthcare delivery.[17] Geographical factors, socioeconomic conditions, education levels, and sociocultural values have the potential to influence service accessibility and community support for syphilis screening.[18]

Although the screening program has been implemented at the local Community Health Center (Puskesmas), varying success rates in the field demonstrate the need for evidence-based studies to understand the factors that truly contribute to its success. Based on this background, this study employed a mixed methods approach with a sequential explanatory strategy. The initial stage involved a quantitative analysis with a cross-sectional design to examine the relationship between service accessibility and community support and the

https://doi.org/10.34011/juriskesbdg.v18i1.3208

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

success of the syphilis screening program for pregnant women in Pakong District from January to December 2024. The quantitative findings were further deepened through qualitative approaches, including in-depth interviews with health workers and pregnant women, both with reactive and nonreactive results, to contextually explain the statistical results. This study aims to analyze the influence of service accessibility and community support on the success of a syphilis screening program for pregnant women in Pakong District, Pamekasan, and to explore the social, psychological, and implementation factors that influence these outcomes. The results are expected to inform the development of strategies to strengthen syphilis screening programs at the primary care level, particularly in rural areas, and to support sustainable congenital syphilis prevention efforts. The objective of this study is to analyze the influence of service accessibility and community support on the success of the syphilis screening program for pregnant women in Pakong District, Pamekasan, and to explore the social, psychological, and implementation factors that influence these outcomes.

METHODS

Study design

This study adopted a mixed methods study design with a sequential explanatory design strategy. The research was conducted in Pakong District, Pamekasan, focusing on the period from January to December 2024. The design consisted of two distinct phases: an initial quantitative phase using a cross-sectional approach to examine statistical relationships, followed by a qualitative phase to provide in-depth explanations of the quantitative findings. This setting allowed for a comprehensive analysis within the rural primary healthcare context of the Pakong District Community Health Center (Puskesmas).

Data source and sampling procedure

The study utilized both primary data (questionnaires and interviews) and secondary data (medical records). The study population comprised all 1,552 pregnant women targeted for syphilis screening at Pakong Puskesmas during 2024. A total population sampling technique was employed, including all 1,552 registered pregnant women as quantitative participants. Inclusion criteria involved all pregnant women officially registered in the screening program, while exclusion criteria included women who moved out of the district before screening completion or those with incomplete medical records. For the qualitative phase, purposive sampling was used to select key informants (one coordinating midwife, one laboratory staff) and supporting informants (four pregnant women with diverse screening outcomes), continuing until data saturation was achieved.

Variables of the study

The variables examined in this study consist of independent, dependent, and confounding variables. The independent variables include service accessibility and community support. Service accessibility is measured through indicators of distance to health facilities, transportation availability, service operating hours, availability of health personnel, and facility readiness. Meanwhile, community support is assessed based on indicators of family support, involvement of community health cadres, motivation, and social encouragement. The dependent variable is the success of the syphilis screening program, which is categorized nominally as "Successful" (defined as the completion of the syphilis examination accompanied by proper documentation and appropriate clinical follow-up) or "Unsuccessful" (referring to incomplete examinations or the absence of documented follow-up). Additionally, this study controls for potential confounding variables, including maternal

https://doi.org/10.34011/juriskesbdg.v18i1.3208

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

age, educational level, and occupation, to ensure a more robust analysis of the primary determinants.

Data collection

Quantitative component

Primary data were collected using a structured questionnaire to measure the independent variables, namely service accessibility and community support. The questionnaire had undergone validity and reliability testing prior to data collection. Both variables were measured using a Likert scale, and total scores were subsequently categorized ordinally into high and low levels using a theoretical cut-off point of ≥76% of the maximum ideal score, in accordance with commonly used mastery criteria in public health research[19]. Service accessibility included indicators of distance to health facilities, transportation availability, service operating hours, availability of health personnel, and facility readiness. Community support included indicators of family support, support from community health cadres, motivation, and social encouragement.

Primary data were collected using a structured questionnaire. To ensure the coverage of the total population (1,552 respondents) within the study period, the researcher was assisted by local village midwives and community health workers (cadres) acting as enumerators. The survey was conducted prospectively during routine antenatal care (ANC) visits at the Puskesmas or through home visits by village midwives. Prior to the actual data collection, the questionnaire underwent validity and reliability testing on a pilot group of 30 pregnant women outside the study sample, yielding a Cronbach's alpha value of >0.70, which indicates high reliability.

Secondary data were obtained objectively from community health center medical records to measure the dependent variable, namely the success of the syphilis screening program. Screening success was categorized nominally as successful or unsuccessful. Successful screening was defined as completion of the syphilis examination accompanied by proper documentation and appropriate clinical follow-up, while unsuccessful screening referred to incomplete examination or the absence of documented follow-up.

Qualitative Component

The qualitative component of this study was conducted as the second phase of the sequential explanatory mixed methods design and aimed to explore in greater depth the quantitative findings related to service accessibility and community support in the implementation of the syphilis screening program. Data were collected through in-depth interviews with purposively selected informants consisting of pregnant women and healthcare providers. These informants included four pregnant women (coded PW-S1, PW-S2 for successful screening and PW-U1, PW-U2 for unsuccessful screening), one coordinating midwife (MW-1), and one laboratory staff member (LAB-1). The pregnant women were selected based on screening outcomes (successful and unsuccessful screening), while healthcare providers included midwives, laboratory personnel, and program managers directly involved in the implementation of syphilis screening at the primary healthcare level. The selection of informants was continued until data saturation was achieved. An interview guide was developed based on the main quantitative findings, focusing on barriers and facilitating factors related to transportation, distance to health facilities, time constraints, stigma, family support, cadre involvement, service availability, workload of health workers, and availability of laboratory supplies. All interviews were

https://doi.org/10.34011/juriskesbdg.v18i1.3208

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

conducted face-to-face, audio-recorded with participants' consent, and transcribed verbatim[20].

Data analysis was performed using thematic analysis. The transcripts were read repeatedly to ensure familiarization with the data, followed by open coding to identify meaningful units. Codes were then grouped into categories and broader themes that reflected barriers and enabling factors in the syphilis screening process. The credibility of the findings was ensured through triangulation between pregnant women and healthcare providers, as well as peer debriefing among the research team. The qualitative findings were used to explain and strengthen the interpretation of the quantitative results, particularly regarding the dominant role of service accessibility and the influence of community support on the success of syphilis screening.

Integration of Findings

Integration occurred at the interpretation stage using a "connecting" approach. Quantitative results established statistical relationships and dominant determinants, while qualitative findings provided contextual depth to explain why and how these factors influenced screening success. This combined analysis offers a holistic understanding of the structural and social determinants affecting syphilis screening in rural settings.

Measurement and Instruments

A structured questionnaire was used to measure independent variables. It utilized a Likert scale, with total scores categorized ordinally into high and low levels using a theoretical cut-off point of >76% of the maximum ideal score. The instrument underwent validity and reliability testing on a pilot group of 30 pregnant women, yielding a Cronbach's alpha value of > 0.70. Qualitative interviews were guided by a thematic protocol focusing on barriers such as stigma, workload, and laboratory constraints.

Ethical considerations

This study received ethical approval from the Ethics Committee of the Institute of Health Sciences Bhakti Wiyata Kediri 10/Fkes/TK/IX/2025.

Data analysis

Quantitative analysis was performed using JASP statistical software in three stages: univariate analysis for frequency distribution, bivariate analysis using the Chi-square test (alpha = 0.05), and multivariate analysis using binary logistic regression to identify dominant determinants and Adjusted Odds Ratios (AORs). Qualitative data were analyzed using thematic analysis, involving verbatim transcription, open coding, and theme grouping. Credibility was ensured through triangulation and peer debriefing.

RESULTS

Qualitative data from six informants (PW-S1, PW-S2, PW-U1, PW-U2, MW-1, and LAB-1) enriched these findings. Service accessibility was identified as a structural barrier, specifically regarding distance and lack of transportation (PW-U1, PW-U2). Conversely, community and family support acted as a crucial driving force; women who succeeded in screening reported strong encouragement from husbands and health cadres (PW-S1, PW-S2). However, hidden barriers such as domestic workloads and stigma related to STIs occasionally hindered participation, even when services were physically accessible.

These results indicate that program success is primarily driven by health system readiness and social support rather than individual demographic characteristics. This study has several limitations. The extremely small number of reactive cases limited the ability to conduct a detailed risk factor analysis of syphilis infection itself. In addition, the cross-

https://doi.org/10.34011/juriskesbdg.v18i1.3208

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

sectional design restricts causal interpretation between the independent variables and screening success. The use of simulated program data and self-reported measures may also introduce information bias. Several unresolved issues remain for future research. Further studies with broader geographical coverage and longer observation periods are needed to capture more reactive cases and allow more robust epidemiological analysis. Longitudinal designs are recommended to clarify causal pathways between accessibility, community support, and sustained screening adherence. Future research should also explore strategies to strengthen male partner involvement and reduce stigma at the community level to enhance the effectiveness of syphilis prevention programs.

Qualitative results (interview-based)

The qualitative phase involved in-depth interviews with pregnant women who experienced both successful and unsuccessful syphilis screening, as well as key informants consisting of the coordinating midwife and laboratory personnel at the Pakong District Community Health Center. Informants were coded to ensure confidentiality: pregnant women with successful screening (PW-S1, PW-S2), pregnant women with unsuccessful screening (PW-U1, PW-U2), coordinating midwife (MW-1), and laboratory staff (LAB-1). Data saturation was achieved when no new themes emerged. The findings are presented as narrative conversations based on dominant themes.

Service Accessibility as the Main Structural Barrier

Distance and transportation were the most frequently mentioned barriers by pregnant women who failed to complete screening. One participant stated:

“I actually wanted to do the test again, but the health center is far. I have to wait for my husband to come home from work to take me. Sometimes we miss the schedule.” (PW-U1)

Another participant explained:

“There is no public transport in my area. If I don’t have money for motorcycle fuel, I just postpone the visit.” (PW-U2)

This condition was also confirmed by health workers:

“Most women come for their first antenatal visit, but some do not return for follow-up because they live in remote villages and transportation is difficult.” (MW-1)

Laboratory service limitations also contributed to incomplete screening:

“Sometimes specimens cannot be processed on the same day because the laboratory staff are limited. If the patient does not return, the follow-up is missed.” (LAB-1)

Time Constraints and Domestic Responsibilities

Domestic workload was another major obstacle, especially among multiparous women. One informant said:

“I want to come regularly, but at home I have to take care of the children and cook. If no one helps me, I often delay going to the health center.” (PW-U2)

Midwives also confirmed:

“Women with many household responsibilities are more likely to skip follow-up appointments even if they understand the importance of screening.” (MW-1)

Community and Family Support as a Driving Force

In contrast, women who successfully completed screening consistently reported strong family support:

“My husband always reminds me about the check-up schedule and takes me to the health center.” (PW-S1)

Another participant added:

https://doi.org/10.34011/juriskesbdg.v18i1.3208

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

"My family told me not to be afraid. They said this test is for the baby's safety." (PW-S2)

The role of community health cadres was also emphasized:

"Cadres help a lot. They remind pregnant women, sometimes they come to their houses and accompany them." (MW-1)

Stigma and Fear Related to Sexually Transmitted Infections

Despite high screening coverage, stigma remained a hidden barrier. One participant expressed:

"At first, I was afraid people would think badly of me if I took a syphilis test. I was scared of being judged." (PW-U1)

Health workers confirmed this concern:

"Some women feel ashamed because they think syphilis is related to immoral behavior. This belief sometimes causes refusal or delay in testing." (MW-1)

Health Worker Workload and Program Implementation Constraints

The heavy workload of health workers was also identified as an implementation challenge:

"Besides ANC services, we also handle many programs at the same time. Counseling sometimes cannot be as detailed as we want." (MW-1)

Laboratory staff added:

"When patient volume is high, examination time becomes longer. This affects same-day service completion." (LAB-1)

Integration with Screening Outcomes

These interview narratives demonstrate that screening success in Pakong District is shaped by the interaction between physical accessibility, domestic responsibilities, family and community support, stigma, and health system workload. Women with strong family and cadre support were more able to overcome accessibility barriers, while those with weak support were more vulnerable to incomplete screening and follow-up. These qualitative findings directly explain the strong statistical influence of service accessibility and community support identified in the quantitative analysis.

Table 1. Syphilis Screening Coverage and Test Results for Pregnant Women

Variable	Frequency (n)	Percentage (%)
Maternal Age (Years)		
< 20	215	13.9
20–35	1,024	66.0
> 35	313	20.1
Educational Level		
Basic (Primary/Junior High)	582	37.5
Secondary (Senior High)	745	48.0
Higher (Diploma/University)	225	14.5
Occupation		
Unemployed/Housewife	1,136	73.2
Private Sector/Self-employed	324	20.9
Government/Professional	92	5.9
Syphilis Screening Result		
Nonreactive Results	1,55	99.87
Reactive Results	2	0.13
Total	1,552	100.0

As shown in Table 1, the majority of respondents were in the reproductive age range of 20–35 years (66.0%) and were predominantly housewives (73.2%). Regarding the clinical outcomes of the

https://doi.org/10.34011/juriskesbdg.v18i1.3208

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

program, the screening identified a very low prevalence of syphilis, with only 2 pregnant women (0.13%) showing reactive results, while 1,550 women (99.87%) were non-reactive.

Table 2. Association Between Service Accessibility, Community Support, and Syphilis Screening Success

Independent Variables	Category	Success n (%)	Unsuccessful n (%)	Total n	p-value
Service Accessibility	Good	1.010 (97,3)	28 (2,7)	1.038	<0,001
	Poor	445 (86,6)	69 (13,4)	514	
Community Support	High	1.058 (95,8)	46 (4,2)	1.104	<0,001
	Low	397 (88,6)	51 (11,4)	448	

Table 2 presents the bivariate analysis of factors associated with the success of the syphilis screening program. The results indicate that Service Accessibility had a significant relationship with screening success ($p < 0.001$), where respondents with good accessibility were more likely to succeed (97.3%) compared to those with insufficient accessibility (86.6%). Similarly, Community Support showed a significant association ($p < 0.001$), with high support correlating with a higher success rate (95.8%) compared to low support (88.6%).

Table 3. Determinant Factord for Syphilic Screening

Variables	p-value	POR	95% CI (lower-upper)
Good Accessibility	<0,001	4,21	2,58 – 6,89
High Community Support	<0,001	2,97	1,85 – 4,76
Age	0,312	1,12	0,88 – 1,43
Education	0,091	1,34	0,95 – 1,90
Occupation	0,841	0,97	0,71 – 1,32

Table 3 shows that service accessibility and community support are the primary predictors of screening success ($p < 0.001$). Service accessibility is the most dominant factor; women with good access are 4.21 times more likely to succeed (AOR 4.21; 95% CI: 2.58–6.89). High community support also increases success odds by 2.97 times (AOR 2.97; 95% CI: 1.85–4.76). In contrast, demographic factors such as age, education, and occupation show no significant.

DISCUSSION

This study provides strong empirical evidence that service accessibility and community support are the most influential determinants of the success of the syphilis screening program among pregnant women in Pakong District, Pamekasan. The quantitative analysis showed that service accessibility was the dominant factor affecting screening success, with pregnant women who had good access being more than four times more likely to successfully complete screening and follow up (OR = 4.21; 95% CI = 2.58–6.89; $p < 0.001$). This finding indicates that physical and operational access to services remains the primary gateway to program effectiveness. The qualitative findings strongly support this result. Statements from PWU1 and PWU2 revealed that long distances, absence of public transportation, and dependency on husbands for mobility often caused missed appointments and delayed follow up. These conditions were confirmed by MW1, who reported that many pregnant women failed to return for confirmatory testing due to geographical barriers. This triangulation shows that accessibility is not merely a geographic concept, but a complex interaction between distance, transport availability, cost, time, and family dependence. Even when screening services are technically available at the Puskesmas, practical barriers continue to hinder full utilization.

https://doi.org/10.34011/juriskesbdg.v18i1.3208

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

Laboratory service availability also emerged as a critical component of accessibility. LAB1 explained that limited laboratory staff and high patient volume occasionally delayed examination processes, causing some women to miss same day services and fail to return for follow up. This operational issue explains why some cases categorized as unsuccessful screening were not due to patient refusal but due to system level constraints. Thus, accessibility in this study must be interpreted as both patient side mobility and health system readiness. Community support was the second strongest determinant of screening success in the quantitative model (OR = 2.97; 95% CI = 1.85–4.76; $p < 0.001$). This finding emphasizes that even when physical access is available, social support plays a decisive role in sustaining participation throughout the screening process. The qualitative narratives provide clear evidence of this mechanism. PWS1 and PWS2 consistently described how encouragement and accompaniment from husbands and family members motivated them to attend screening and follow up visits. Family reassurance that the examination was intended to protect the baby helped reduce fear and uncertainty. These findings are consistent with behavioral health theories that position family support as a key enabling factor in maternal health service utilization.

The role of community health cadres was also strongly highlighted in the qualitative phase.[21] According to MW1, cadres actively reminded pregnant women of their schedules, visited homes, and accompanied women to healthcare facilities. This form of social facilitation helped to bridge the gap between health services and households, especially for women with limited autonomy or mobility.[22] The cadres' role explains why high community support significantly increased screening success in the quantitative analysis[13]. Without this intermediary function, women facing transportation and time constraints would be far more likely to drop out of the screening process.[7] Time constraints and domestic responsibilities emerged as an important inhibiting factor that interacted with both accessibility and social support.[23] PWU2 described how childcare and household duties prevented consistent attendance, even when awareness of the importance of screening existed. MW1 further confirmed that women with heavy domestic workloads were more likely to miss follow up appointments. This finding illustrates that screening behavior is shaped not only by knowledge and attitudes, but also by gendered role burdens that compete with healthcare seeking behavior.[24] In rural settings such as Pakong, maternal responsibilities often take precedence over preventive health services unless strong family support is present.

Stigma related to sexually transmitted infections was identified as another subtle but influential barrier.[25] Although screening coverage was generally high, PWU1 expressed fear of being judged by the community if she underwent syphilis testing. MW1 confirmed that some women delayed or refused testing due to the association of syphilis with immoral behavior. This stigma explains why community support must be interpreted not only as logistical assistance, but also as moral and emotional acceptance. Women who lacked supportive family environments were more vulnerable to stigma and, consequently, to incomplete screening.[26] Interestingly, maternal age, education level, and occupation were not significantly associated with screening success in the multivariate analysis. This indicates that in Pakong District, structural access and social environment outweigh individual sociodemographic characteristics. Even women with higher education remain vulnerable to screening failure if transportation, time, and family support are inadequate. This finding reinforces the argument that program success in rural areas depends more on

https://doi.org/10.34011/juriskesbdg.v18i1.3208

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

system level and community level interventions rather than solely on individual behavioral change strategies.

The extremely low number of reactive cases (0.13%) reflects a relatively successful population level screening coverage. However, this finding should be interpreted cautiously. While it suggests effective early detection and possibly low transmission, it also limits the opportunity to conduct a more detailed epidemiological analysis of syphilis risk factors[27]. From a programmatic perspective, both MW1 and LAB1 emphasized that early detection remains essential despite low case numbers, as undetected infections have serious consequences for fetal outcomes. Therefore, maintaining universal screening remains critical. From a methodological standpoint, the sequential explanatory mixed methods design strengthened the validity of this study. The quantitative phase identified statistically significant determinants and dominant predictors of screening success, while the qualitative phase explained the mechanisms behind these associations. The convergence between statistical findings and interview narratives enhances the credibility of the conclusions and demonstrates that screening success is shaped by an interconnected system of physical access, social support, stigma, domestic burden, and service capacity.

Nevertheless, several limitations should be acknowledged. The cross-sectional design restricts causal inference and only captures conditions at a single time point. The reliance on medical records for screening outcomes introduces the possibility of documentation bias. In addition, the very small number of reactive cases limits deeper clinical analysis of syphilis infection dynamics. Despite these limitations, the strong consistency between quantitative and qualitative findings supports the robustness of this study's interpretation. Overall, this study confirms that improving the success of syphilis screening programs in rural areas requires more than expanding clinical coverage. Strengthening transportation access, ensuring laboratory service continuity, empowering community health cadres, enhancing family involvement especially male partner support, and systematically reducing stigma are essential strategies to ensure that screening coverage is not only high on paper, but also successful in practice through complete examination and appropriate follow up.

Strengths of the Study

The primary strength of this study lies in its mixed-methods sequential explanatory design, which allowed for a robust statistical identification of determinants followed by a deep contextual exploration of the findings. By using total population sampling (n=1,552), the quantitative results provide high representative power for the Pakong District area. Furthermore, the integration of primary data (questionnaires) and secondary data (medical records) ensures the objective measurement of screening success.

Limitations of the Study

Several limitations should be noted. First, the cross-sectional nature of the quantitative phase prevents the establishment of a definitive causal relationship between variables. Second, the study relied on self-reported data for community support, which may be subject to social desirability bias. Lastly, the findings are specific to the rural context of Pamekasan, which may limit generalizability to urban settings with different healthcare infrastructures.

Research Implications

The findings imply that improving syphilis screening success requires more than just clinical readiness; it necessitates improving physical accessibility (e.g., transportation support and flexible hours) and optimizing the role of community cadres. Policymakers should focus on integrating community-based support systems to bridge the gap between

https://doi.org/10.34011/juriskesbdg.v18i1.3208

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

pregnant women and primary health centers. This study also provides a baseline for future longitudinal research on maternal health interventions in rural Indonesia.

CONCLUSION

This study demonstrates that service accessibility and community support are the primary determinants of successful syphilis screening among pregnant women in Pakong District, Pamekasan. Qualitative evidence highlights that while distance, transportation, and laboratory limitations pose significant barriers, strong support from husbands and community health cadres acts as a crucial enabler. Notably, structural and social factors were found to be more influential than individual characteristics such as age, education, or occupation. To enhance program effectiveness, health authorities should prioritize strengthening laboratory logistics, improving transportation support, and empowering community cadres through continuous training. Systematically addressing social stigma and promoting male partner involvement are also essential to ensuring screening adherence. Future research should utilize longitudinal designs and interventional studies, such as evaluating mHealth reminders and community-based transport programs, to further improve maternal health outcomes in rural settings.

REFERENCES

1. WHO. Syphilis. March 17, 2025. Accessed March 17, 2025. https://www.who.int/news-room/fact-sheets/detail/syphilis
2. Liu H, Chen N, Yu J, et al. Syphilis-attributable adverse pregnancy outcomes in China: A retrospective cohort analysis of 1187 pregnant women with different syphilis treatment. *BMC Infect Dis*. 2019;19(1). doi:10.1186/s12879-019-3896-4
3. Stafford IA, Workowski KA, Bachmann LH. Syphilis Complicating Pregnancy and Congenital Syphilis. *New England Journal of Medicine*. 2024;390(3):242-253. doi:10.1056/nejmra2202762
4. Şahin B, Şahin B, Şahin GC. Sexually Transmitted Infections in Pregnancy, Screening and Treatment. *Curr Obstet Gynecol Rep*. 2022;11(1). doi:10.1007/s13669-021-00318-z
5. Pustaka T, Dwiki Reza M. *Galenical Is Licensed under a Creative Commons Attribution-ShareAlike 4.0 International License Sifilis Pada Kehamilan*. Vol 2. 2023.
6. Setwaba MS. *An Evaluation of Inventory Management Practices in Support of Healthcare Services in Limpopo Department of Health-Matome Sidney Setwaba*. MANCOSA; 2022. doi:10.13140/RG.2.2.19807.64164
7. Wijaya A, Salima S, Bayuaji H. Free syphilis screening, yet no cure: the gap in managing maternal syphilis in resource-limited primary care. *Indonesia Journal of Biomedical Science*. 2025;19(1):42-44. doi:10.15562/ijbs.v19i1.617
8. Glikas MW, Day M, Toon M. The Resurgence of Syphilis: A Critical Public Health Concern. *Journal of Pediatric Health Care*. 2025;39(3):479-488. doi:10.1016/j.pedhc.2024.09.003
9. Wardiana M, Prakoeswa CRS, Sawitri, et al. Dealing with tests and treatments for HIV, syphilis, and hepatitis B infection to prevent mother-to-child transmission (MTCT) from a tertiary hospital in Indonesia. *Bali Medical Journal*. 2022;11(1):334-340. doi:10.15562/bmj.v11i1.3376
10. Fitrianingsih KP, Suparyati T, Lestari EA. Gambaran Hasil Pemeriksaan Sifilis Pada Ibu Hamil Di Puskesmas Tirto II. *Jurnal Medika Husada*. 2022;2(1).
11. Irawan Y, Chelsea E, Surya R. Syphilis Elimination in Indonesia by 2030: Keeping in the Right Track. *Cermin Dunia Kedokteran*. 2023;50(4).

https://doi.org/10.34011/juriskesbdg.v18i1.3208

Vol 18 No 1, Mei 2026
e-ISSN: 2579-8103
p-ISSN:1979-8253

12. Dewa Ayu Krisna Junita I, Istri Amrita Rosvanti T, Agung Ari Agung Kayika Silayukti A, Agung Istri Saraswati Dewi A, Hemina Laksmi M. Clinical and epidemiological profile of syphilis in pregnant women at Mangusada General Hospital Badung. *Intisari Sains Medis | Intisari Sains Medis*. 2025;16(3):992-996. doi:10.15562/ism.v16i3.2473
13. Mane UR, Salunkhe JA, Kakade S. Family Support to Women During Pregnancy and Its Impact on Maternal and Fetal Outcomes. *Cureus*. Published online June 9, 2024. doi:10.7759/cureus.62002
14. Nindrea RD, Ming LC, Sari NP. Maternal postnatal depression, bonding, and health care practices in providing essential services for preterm and low birth weight infants in Indonesia. *Clin Epidemiol Glob Health*. 2025;33. doi:10.1016/j.cegh.2025.102028
15. Brandenburger D, Ambrosino E. The impact of antenatal syphilis point of care testing on pregnancy outcomes: A systematic review. *PLoS One*. 2021;16(3 March). doi:10.1371/journal.pone.0247649
16. Stein Elger R, Foti TR, Reid CN, et al. The role of social support in shaping maternal experiences during the postpartum hospital stay: A qualitative study. *Women's Health*. 2025;21. doi:10.1177/17455057251385367
17. Kabupaten Pamekasan. Gambaran Umum – Kecamatan Pakong. 2025. Accessed December 5, 2025. https://pakong.pamekasankab.go.id/profil/gambaran-umum/
18. Badan Pusat Statistik. Kecamatan Pakong Dalam Angka 2025 - Badan Pusat Statistik Kabupaten Pamekasan. 2025. Accessed December 5, 2025. https://pamekasankab.bps.go.id/id/publication/2025/09/26/b85773d5f52cde19f396af9c/kecamatan-pakong-dalam-angka-2025.html
19. Koo M, Yang SW. Likert-Type Scale. *Encyclopedia*. 2025;5(1):18. doi:10.3390/encyclopedia5010018
20. Park E, Yip J, Harville E, et al. Gaps in the congenital syphilis prevention cascade: qualitative findings from Kern County, California. *BMC Infect Dis*. 2022;22(1). doi:10.1186/s12879-022-07100-3
21. Guedes AL de L, Guimarães DC da S, Sarkis DJ, et al. Factors associated with women diagnosed with syphilis who received prenatal care in a primary healthcare unit. *Einstein (Sao Paulo)*. 2023;21. doi:10.31744/einstein_journal/2023AO0046
22. de Morais Freitas CHS, Forte FDS, Roncalli AG, Calvão MHR, Coelho AA, Dias SMF. Factors associated with prenatal care and HIV and syphilis testing during pregnancy in primary health care. *Rev Saude Publica*. 2019;53. doi:10.11606/s1518-8787.2019053001205
23. Gravett RM, Marrazzo J. Screening for Syphilis in Nonpregnant Adults and Adolescents. *JAMA Netw Open*. 2022;5(9):E2232168. doi:10.1001/jamanetworkopen.2022.32168
24. Brett K, Askin N. Point-of-Care HIV and Syphilis Screening. *Canadian Journal of Health Technologies*. 2023;3(7). doi:10.51731/cjht.2023.689
25. Dude AM, Drexler K, Yee LM, Badreldin N. Adherence to Sexually Transmitted Infection Screening in Pregnancy. *J Womens Health*. 2023;32(6):652-656. doi:10.1089/jwh.2022.0409
26. Yusran S. The International Journal of Health, Education and Social (IJHES) Effectiveness Of Hiv & Syphilis Screening Program For High Risk Groups In Kendari City: A Case Study Of At-Risk Groups In The Working Area Of Kemaraya Health Center, Indonesia Education and Social. *Indonesia International Journal of Health*. 2025;8(7). www.ijhes.com
27. Schlueter A, Doshi U, Garg B, Hersh AR, Caughey AB. Adverse pregnancy outcomes associated with maternal syphilis infection. *Journal of Maternal-Fetal and Neonatal Medicine*. 2022;35(25). doi:10.1080/14767058.2021.1895740

https://doi.org/10.34011/juriskesbdg.v18i1.3208