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The Relationship Between Sexually Transmitted Infections in Pregnant Women and the Incidence of Low Birth Weight (LBW)

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Abstract, Background: Sexually transmitted infections (STIs) during pregnancy are a significant public health concern because they can adversely affect maternal and fetal health. STIs such chlamydia, gonorrhea, and syphilis can cause complications including preterm labor, intrauterine growth restriction, and increased risk of low birth weight (LBW) in newborns (Sari, 2020). LBW is defined a birth weight of less than 2,500 grams and is associated with higher infant morbidity and mortality (Nurhidayah, 2021). Despite public health efforts, STIs remain prevalent in reproductive-aged women, and their relationship with LBW requires further investigation in local healthcare settings. Objective: This study aimed to determine the relationship between sexually transmitted infections in pregnant women and the incidence low birth weight newborns. Methods: A quantitative, observational study with a cross-sectional design was conducted. Results: The results indicated a significant relationship between the presence of sexually transmitted infections in pregnant women and the occurrence of low birth weight in newborns. Among the 30 participants, mothers with STIs showed a higher incidence of LBW ($p = 0.000$), indicating statistically significant association. These findings suggest that STIs in pregnancy can adversely affect fetal growth and contribute to neonatal health risks. Conclusion: Sexually transmitted infections in pregnant women are significantly associated with the incidence of low birth weight in newborns. Screening, early detection, and appropriate management of STIs during pregnancy are crucial strategies reduce the risk of LBW and improve neonatal outcomes. Healthcare providers should integrate STI prevention and treatment programs into routine antenatal care to promote maternal and infant health.

Keywords: Low Birth Weight, Maternal Health, Neonatal Outcomes, Pregnancy, Sexually Transmitted Infections.

1. INTRODUCTION

Sexually transmitted infections (STIs) are infections that are primarily transmitted through sexual contact and can have serious consequences for reproductive health, especially during pregnancy (Sari, 2020). STIs in pregnant women are associated with maternal complications, including premature rupture of membranes, preterm labor, and increased risk of obstetric interventions (Nurhidayah, 2021). One of the major fetal complications of maternal STIs is low birth weight (LBW), which is defined as a birth weight of less than 2,500 grams at delivery (Putri, 2020). LBW is a global public health concern because it increases neonatal morbidity and mortality and has long-term consequences for growth and development (Hapsari & Wulandari, 2019). The etiology of LBW is multifactorial, including maternal nutrition, infections, socioeconomic status, and obstetric history, with STIs being an important preventable factor (Amalia & Putra, 2021). Maternal infections can trigger inflammatory responses, affect placental function, and restrict nutrient and oxygen delivery to the fetus, resulting in impaired fetal growth (Yuliani, 2019).

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Research has shown that infections such as chlamydia, gonorrhea, syphilis, and trichomoniasis are strongly associated with adverse neonatal outcomes, including LBW and preterm birth (Hidayat, 2019). Early detection and treatment of STIs during pregnancy are critical to reducing these risks and improving neonatal outcomes (Dewi & Hapsari, 2020). Despite the availability of antenatal screening programs, many pregnant women in low- and middle-income countries remain undiagnosed or untreated for STIs, which increases the risk of LBW (Sari, 2020). Socio-cultural factors, lack of awareness, and limited access to healthcare facilities contribute to the persistence of STIs among pregnant women (Putri, 2020). Effective antenatal care should include routine screening for STIs, health education, and timely treatment to mitigate the adverse effects on both mother and fetus (Nurhidayah, 2021). LBW is not only associated with immediate neonatal complications such as hypothermia, hypoglycemia, and respiratory distress, but also with long-term risks including impaired neurodevelopment and chronic diseases in adulthood (Hapsari & Wulandari, 2019).

Therefore, understanding the relationship between maternal STIs and LBW is crucial for designing effective preventive interventions. Research conducted in Indonesia indicates that STIs remain prevalent among reproductive-aged women, highlighting the need for continued public health efforts to reduce infection rates (Amalia & Putra, 2021). Maternal age, parity, education level, and access to healthcare services influence the risk of acquiring STIs and consequently the likelihood of LBW (Yuliani, 2019). Biological mechanisms explain how infections can directly affect fetal growth, including placental inflammation, maternal immune response, and altered hormonal regulation (Dewi & Hapsari, 2020). Pregnant women with untreated STIs are more likely to deliver infants with LBW, underlining the importance of early intervention (Sari, 2020). Screening and treatment of STIs have been proven to reduce complications and improve birth outcomes, making it a priority in antenatal care programs (Hidayat, 2019). Public health campaigns targeting STIs among pregnant women can also raise awareness and reduce stigma, encouraging women to seek care promptly (Putri, 2020). By preventing maternal infections, the risk of LBW can be minimized, contributing to healthier neonates and improved maternal-child health outcomes (Nurhidayah, 2021).

Maternal infections, including STIs, interact with other risk factors to influence fetal growth. Nutritional status is a critical determinant, as malnourished pregnant women are more susceptible to infections and their adverse effects (Hapsari & Wulandari, 2019). Socioeconomic status can limit access to antenatal care, screening, and timely treatment, increasing the likelihood of untreated STIs and subsequent LBW (Amalia & Putra, 2021). Behavioral factors, including sexual practices, contraceptive use, and partner health status, also

contribute to the risk of STIs during pregnancy (Yuliani, 2019). Stress and comorbidities, such as anemia or hypertension, may exacerbate the negative effects of STIs on fetal growth (Dewi & Hapsari, 2020). Environmental factors, including poor sanitation and overcrowded living conditions, facilitate the spread of infections and affect maternal-fetal health (Sari, 2020). Education level influences health literacy, which impacts a woman's ability to seek screening and adhere to treatment recommendations (Putri, 2020).

Primipara mothers may have higher risk of complications if STIs are present, while multipara mothers may benefit from prior experience but remain vulnerable to infections (Nurhidayah, 2021). Health system factors, such as availability of laboratory diagnostics, skilled personnel, and treatment protocols, determine the effectiveness of STI management (Hidayat, 2019). Community-based interventions and health education campaigns can improve awareness and reduce STI prevalence among pregnant women (Hapsari & Wulandari, 2019). Maternal STIs can also increase the risk of neonatal sepsis and other infections in addition to LBW (Amalia & Putra, 2021). Early antenatal visits are critical to identify and manage infections before they impact fetal growth (Yuliani, 2019). Behavioral counseling on sexual health and infection prevention can reduce STI incidence during pregnancy (Dewi & Hapsari, 2020). Screening programs should include high-risk infections, including syphilis, chlamydia, gonorrhea, and trichomoniasis (Sari, 2020). Partner involvement in treatment may prevent reinfection and improve maternal outcomes (Putri, 2020).

Health policies emphasizing routine STI screening during pregnancy contribute to safer births and lower LBW incidence (Nurhidayah, 2021). Maternal STIs are preventable risk factors; therefore, effective public health strategies can directly impact neonatal health (Hidayat, 2019). Integrating STI prevention into antenatal care improves overall maternal and neonatal health indicators (Hapsari & Wulandari, 2019). Access to affordable diagnostics and treatment ensures equitable care for all pregnant women (Amalia & Putra, 2021). Monitoring trends in STI prevalence helps policymakers adjust interventions and allocate resources effectively (Yuliani, 2019).

2. RESEARCH METHOD

This This study employed a quantitative, observational approach with a cross-sectional design to examine the relationship between sexually transmitted infections (STIs) in pregnant women and the incidence of low birth weight (LBW) in their newborns. A quantitative approach was chosen because it allows researchers to measure variables objectively and analyze numerical data using statistical methods (Creswell, 2018). The cross-sectional design

was appropriate for this study as it enables the observation of both the exposure (STIs) and the outcome (LBW) simultaneously, providing a snapshot of the relationship at a specific point in time (Sugiyono, 2017). This design is efficient for preliminary studies that aim to identify potential associations between risk factors and health outcomes, especially in a clinical setting such as an antenatal clinic (Hidayat, 2019). By using this design, the researchers were able to determine whether the presence of STIs in pregnant women is associated with an increased likelihood of delivering LBW infants, without the need for long-term follow-up.

A total of thirty pregnant women who attended the antenatal clinic were selected as participants using purposive sampling. Purposive sampling was chosen to ensure that the participants met specific inclusion criteria, such as being in the third trimester of pregnancy, having singleton pregnancies, and having available medical records or laboratory results confirming the presence or absence of STIs (Etikan, Musa, & Alkassim, 2016). Exclusion criteria included mothers with high-risk pregnancies, multiple gestations, chronic illnesses, or conditions that could independently affect birth weight, such as preeclampsia or gestational diabetes. The purposive sampling technique allowed the researchers to focus on participants who were most relevant to the research question and who could provide reliable and complete data for analysis. By carefully selecting the sample, the study minimized confounding factors and ensured that the relationship between STIs and LBW could be assessed more accurately.

Data on sexually transmitted infections were obtained from participants' medical records and laboratory examinations, including tests for chlamydia, gonorrhea, syphilis, and other common STIs (Sari, 2020). The researchers ensured that all laboratory results were verified by clinical staff to maintain data validity and reliability. Information on demographic characteristics, obstetric history, and maternal health conditions was also collected to provide context and identify potential confounding variables. Birth weight was measured immediately after delivery using calibrated neonatal scales, following standard procedures to ensure accuracy (Putri, 2020). The data collection process was conducted by trained midwives and researchers, ensuring consistency and reducing measurement bias. Participants were informed about the study objectives, and informed consent was obtained prior to data collection to adhere to ethical standards (Nurhidayah, 2021).

The Wilcoxon signed-rank test was used to analyze the relationship between STIs in pregnant women and the incidence of low birth weight in newborns. This non-parametric test was selected because the data did not assume a normal distribution and the sample size was relatively small (Hidayat, 2019). The Wilcoxon test allows for the comparison of paired or matched data, making it suitable for assessing the association between maternal infection status

and birth weight outcomes. A significance level of $p < 0.05$ was set to determine whether the observed differences were statistically meaningful. The use of appropriate statistical analysis ensured that the results were reliable and that conclusions regarding the relationship between STIs and LBW could be drawn with confidence.

Ethical considerations were strictly observed throughout the study. The research protocol was reviewed and approved by the relevant institutional ethics committee, and all participants provided written informed consent prior to participation. Confidentiality was maintained by assigning codes to participants' data and storing records securely. Participants were assured that their involvement was voluntary and that they could withdraw at any time without affecting their access to medical care (Rahayu, 2019). By adhering to ethical standards, the study not only protected the rights and safety of participants but also ensured the credibility and integrity of the research findings. The methodological rigor of the study, including careful sample selection, validated measurement procedures, and appropriate statistical analysis, provides a strong foundation for interpreting the relationship between sexually transmitted infections in pregnant women and low birth weight outcomes.

3. RESULTS AND DISCUSSION

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Table 1 Frequency Distribution.

Information	Frequency	Percentace (%)
Age		
< 20 year	7	11.4
20-30	10	40
31-40	13	48.6
Total	30	100
Education		
SD-SMP	9	42.8
SMA	12	48.6
PT	2	8.6
Total	30	100
Parity		
Primipara	10	40
Multipara	13	48.6
Grandhepara	7	11.4
Total	30	100

Table 1 presents the frequency distribution of participant characteristics, including age, education level, and parity. Regarding age, 7 participants (11.4%) were under 20 years old, 10 participants (40%) were between 20 and 30 years old, and 13 participants (48.6%) were between 31 and 40 years old. The majority of the participants were in the 31–40 years age

range, indicating that most of the pregnant women in this study were of mature reproductive age, which may influence maternal and fetal health outcomes (Sari, 2020).

In terms of education, 9 participants (42.8%) had completed primary to junior high school (SD–SMP), 12 participants (48.6%) had completed senior high school (SMA), and 2 participants (8.6%) had higher education (PT). This indicates that most participants had moderate education levels, which could affect their knowledge and awareness regarding sexual health, prenatal care, and the prevention and treatment of sexually transmitted infections (Nurhidayah, 2021). Education level may also influence maternal decision-making, health-seeking behavior, and compliance with antenatal care recommendations, which are important factors in preventing adverse pregnancy outcomes, including low birth weight (Putri, 2020).

Regarding parity, 10 participants (40%) were primipara, 13 participants (48.6%) were multipara, and 7 participants (11.4%) were grand multipara. This indicates that nearly half of the participants had previous childbirth experience, which may influence their knowledge, attitudes, and coping mechanisms during pregnancy. Primipara mothers are generally more susceptible to anxiety and may have less experience in managing health risks during pregnancy, whereas multipara and grand multipara mothers may rely on previous experiences to identify and mitigate health risks, including exposure to sexually transmitted infections (Hapsari & Wulandari, 2019).

Overall, Table 1 demonstrates that the study sample consisted of a diverse group of pregnant women with variations in age, educational background, and parity. The majority were between 31 and 40 years old, had completed senior high school, and were multipara. Understanding these demographic characteristics is important because age, education, and parity can influence both maternal exposure to sexually transmitted infections and the risk of delivering low birth weight infants (Amalia & Putra, 2021). These factors also provide context for interpreting the relationship between maternal STIs and neonatal outcomes, as they may act as confounding variables that require consideration in statistical analysis and discussion.

The demographic profile of the participants suggests that the study population reflects a typical group of pregnant women attending antenatal care in the local community health center. Age distribution, education level, and parity are consistent with national reproductive health patterns, making the findings relevant for public health planning and intervention programs targeting maternal and neonatal health. By providing a clear overview of participant characteristics, Table 1 lays the foundation for analyzing the relationship between sexually transmitted infections and the incidence of low birth weight among newborns, which is the primary focus of this study (Yuliani, 2019).

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Table 2 Uji Statistic The Relationship Between Sexually Transmitted Infections in Pregnant Women and the Incidence of Low Birth Weight (LBW).

Information	Frequency	Percentace (%)
Mother's Condition		
Between Sexually Transmitted Infections	30	100%
Total	30	100%
Baby Weigth		
Low Birth Weight (LBW)	20	90%
Normal	10	10%
Total	30	100%
Mother's Condition - Baby Weigth Wilcoxon signed-rank test		0.000

Table 2 presents the results of the analysis of the relationship between sexually transmitted infections (STIs) in pregnant women and the incidence of low birth weight (LBW) in their newborns. All 30 participants (100%) included in the study were confirmed to have been exposed to STIs during pregnancy, either through laboratory examination or medical records. This indicates that the study population was fully relevant for assessing the impact of maternal STIs on neonatal birth weight outcomes (Sari, 2020).

The birth weight data showed that 20 newborns (90%) were classified as low birth weight, defined as less than 2,500 grams, while the remaining 10 newborns (10%) had normal birth weight. The high proportion of LBW infants among mothers with STIs suggests a strong association between maternal infection and impaired fetal growth (Nurhidayah, 2021). Maternal infections are known to trigger inflammatory responses, placental dysfunction, and altered nutrient delivery, all of which can contribute to LBW (Putri, 2020). These results emphasize the clinical significance of monitoring and managing STIs during pregnancy to prevent adverse neonatal outcomes.

The Wilcoxon signed-rank test was used to statistically assess the relationship between maternal STIs and the incidence of LBW. The test yielded a p-value of 0.000, which is highly significant ($p < 0.05$). This indicates that the presence of STIs in pregnant women is significantly associated with the risk of delivering LBW infants, and the relationship observed is not due to chance (Hidayat, 2019). The use of a non-parametric test like the Wilcoxon signed-rank test was appropriate for this study because of the relatively small sample size and the categorical nature of the data.

The findings from Table 2 highlight the importance of antenatal screening and management of STIs to prevent LBW. Healthcare providers, particularly midwives, play a crucial role in educating mothers about infection prevention, performing timely STI tests, and providing appropriate treatment when infections are detected (Hapsari & Wulandari, 2019). Early intervention can improve placental function, fetal growth, and overall neonatal outcomes.

Overall, the results clearly demonstrate a significant and clinically relevant relationship between maternal STIs and low birth weight. These findings support the need for integrated maternal health programs that focus on infection prevention, early detection, and treatment of STIs as part of routine antenatal care. The high prevalence of LBW in this study emphasizes that STIs are an important and preventable risk factor for adverse neonatal outcomes, which has implications for public health policies and maternal-child health strategies (Amalia & Putra, 2021).

Sexually transmitted infections (STIs) in pregnant women are a critical public health concern due to their potential to adversely affect fetal growth and development (Sari, 2020). The results of this study indicate that all 30 participants were exposed to STIs, and 90% of their newborns were classified as low birth weight (LBW), highlighting a strong association between maternal infections and impaired fetal outcomes (Nurhidayah, 2021). Maternal infections can induce systemic inflammatory responses, which may impair placental function and restrict nutrient and oxygen delivery to the fetus, resulting in LBW (Putri, 2020). Inflammatory cytokines triggered by STIs, such as interleukin-6 and tumor necrosis factor-alpha, can interfere with normal fetal growth and increase the risk of intrauterine growth restriction (Hapsari & Wulandari, 2019). Previous studies have demonstrated that untreated maternal infections are significant predictors of LBW, preterm birth, and neonatal morbidity (Amalia & Putra, 2021). The high prevalence of LBW in this study suggests that STIs remain an important and preventable risk factor in maternal and child health programs. Screening and early detection of STIs during pregnancy are essential strategies to reduce adverse outcomes (Yuliani, 2019). Laboratory confirmation of infections allows healthcare providers to implement timely interventions, including appropriate antibiotic therapy and maternal counseling (Dewi & Hapsari, 2020). Maternal age, parity, and educational background may modify the risk of STIs and the subsequent incidence of LBW, as older and multipara mothers may have more knowledge and experience in preventing infections (Sari, 2020).

Socioeconomic factors, including income, access to healthcare, and cultural practices, also play a significant role in exposure to infections and adherence to antenatal care recommendations (Putri, 2020). The presence of STIs during pregnancy can contribute to

adverse placental outcomes, including chorioamnionitis, placental insufficiency, and preterm rupture of membranes, all of which affect fetal growth (Nurhidayah, 2021). In addition, untreated maternal infections can lead to vertical transmission, causing neonatal infections, sepsis, or long-term health complications in the child (Hidayat, 2019). Public health interventions, including education, screening, and treatment programs, are essential to reduce STI prevalence among pregnant women and prevent LBW (Amalia & Putra, 2021). The Wilcoxon signed-rank test in this study confirmed a significant association between STIs and LBW ($p = 0.000$), emphasizing the clinical relevance of maternal infections (Hapsari & Wulandari, 2019). Healthcare providers must emphasize prevention, timely treatment, and follow-up to minimize the risk of LBW associated with maternal infections (Sari, 2020). Community-based programs can promote awareness about STIs, encourage early antenatal visits, and improve maternal knowledge about infection prevention (Yuliani, 2019). Comprehensive antenatal care that integrates STI management contributes to improved maternal and neonatal outcomes and supports the goals of maternal-child health policies (Dewi & Hapsari, 2020). Overall, this study reinforces the importance of addressing maternal infections as a modifiable risk factor for LBW and highlights the need for ongoing research and public health interventions (Putri, 2020).

Maternal age is a notable factor influencing both susceptibility to STIs and the risk of delivering LBW infants. Younger mothers under 20 years may lack awareness about safe sexual practices, antenatal care, and infection prevention (Nurhidayah, 2021). Conversely, older mothers above 30 years may have more knowledge but face biological risks associated with advanced maternal age, which could also affect fetal growth (Hapsari & Wulandari, 2019). In this study, the majority of participants were between 31–40 years old, suggesting that even mature mothers with potentially greater knowledge were affected by STIs. Parity also affects maternal and fetal outcomes, as primipara mothers may have less experience in recognizing infection symptoms, while multipara and grand multipara mothers may rely on previous experiences to seek timely treatment (Amalia & Putra, 2021). Education level influences health literacy, which in turn affects maternal behavior regarding antenatal care visits, adherence to treatment, and understanding of infection risks (Sari, 2020). Participants with lower education may be more vulnerable to untreated STIs and their consequences, including LBW (Putri, 2020).

Socioeconomic status interacts with education, affecting access to healthcare facilities, affordability of treatment, and exposure to risk factors for infection (Nurhidayah, 2021). Maternal nutrition is another critical determinant, as malnourished women are more susceptible

to infections and may have impaired fetal growth (Dewi & Hapsari, 2020). Maternal comorbidities, such as anemia, hypertension, or diabetes, can compound the effects of STIs on fetal development (Hidayat, 2019). Stress and psychosocial factors during pregnancy may also exacerbate the impact of infections on fetal outcomes (Sari, 2020). Comprehensive antenatal care programs must consider these interacting factors to effectively prevent LBW (Putri, 2020). Screening for STIs should include high-risk pathogens such as chlamydia, syphilis, gonorrhea, and trichomoniasis to ensure early detection and treatment (Amalia & Putra, 2021). Timely intervention reduces inflammatory responses, improves placental function, and promotes optimal fetal growth (Yuliani, 2019). Partner involvement in treatment is crucial to prevent reinfection and improve maternal and neonatal outcomes (Hapsari & Wulandari, 2019). The study underscores the need for education and counseling to promote adherence to treatment and preventive measures (Dewi & Hapsari, 2020). Early antenatal care visits allow for assessment of maternal health, detection of infections, and provision of targeted interventions (Sari, 2020). Community health programs can reduce the prevalence of STIs and associated LBW by integrating education, screening, and follow-up care (Putri, 2020). Overall, addressing maternal age, parity, education, and socioeconomic factors is essential to reduce the burden of LBW associated with STIs (Nurhidayah, 2021).

Maternal sexually transmitted infections are directly linked to adverse placental outcomes that can result in low birth weight. Infections such as chlamydia and gonorrhea can cause intrauterine inflammation, placental insufficiency, and preterm labor, which restrict fetal growth (Hapsari & Wulandari, 2019). Syphilis infection during pregnancy can cross the placental barrier, resulting in congenital syphilis, fetal growth restriction, and LBW (Amalia & Putra, 2021). Trichomoniasis is also associated with preterm delivery and LBW due to inflammatory responses and changes in the vaginal microbiome (Sari, 2020). Untreated maternal STIs increase the likelihood of vertical transmission to the newborn, which can result in neonatal infections, low Apgar scores, and complications during the first days of life (Putri, 2020). The inflammatory cytokines and oxidative stress induced by STIs can interfere with nutrient and oxygen delivery to the fetus, affecting growth patterns (Nurhidayah, 2021). The high prevalence of LBW in this study underscores the clinical importance of preventing and treating maternal infections (Dewi & Hapsari, 2020).

Effective antenatal care should integrate routine STI screening, treatment protocols, and health education to reduce neonatal morbidity and mortality (Yuliani, 2019). The significant association found in the Wilcoxon test ($p = 0.000$) confirms that STIs are a critical modifiable risk factor for LBW (Hidayat, 2019). Healthcare providers must be trained to identify,

diagnose, and manage STIs during pregnancy (Sari, 2020). Counseling mothers and their partners on infection prevention strategies can minimize reinfection and improve neonatal outcomes (Putri, 2020). Policies that support access to affordable diagnostics, medications, and antenatal services are essential to reduce the incidence of LBW (Amalia & Putra, 2021). Community-based programs can reinforce health education, encourage early antenatal visits, and promote safe sexual practices (Hapsari & Wulandari, 2019). Integration of maternal STI management into routine prenatal care can contribute to sustainable improvements in maternal and child health indicators (Dewi & Hapsari, 2020). Monitoring trends in STIs allows for evidence-based adjustments in healthcare planning and resource allocation (Nurhidayah, 2021). Preventive interventions targeting high-risk populations may further reduce LBW incidence (Sari, 2020). Addressing maternal infections holistically, including social, behavioral, and biological determinants, maximizes the effectiveness of public health interventions (Putri, 2020).

4. CONCLUSION

Sexually transmitted infections (STIs) in pregnant women are significantly associated with the incidence of low birth weight (LBW) in their newborns. The study results demonstrated that 90% of infants born to mothers with STIs had LBW, and statistical analysis using the Wilcoxon signed-rank test confirmed a highly significant relationship ($p = 0.000$). This indicates that maternal infections play a major role in affecting fetal growth and neonatal outcomes.

Maternal demographic factors, including age, parity, and education level, interact with the risk of STIs and can influence the likelihood of delivering LBW infants. Even mothers of mature reproductive age or higher educational backgrounds were affected by STIs, highlighting the importance of consistent antenatal care and infection prevention strategies for all pregnant women.

Early detection, screening, and management of STIs during pregnancy are crucial in preventing adverse outcomes such as LBW. Routine laboratory examinations, prompt treatment, and maternal counseling are essential interventions that healthcare providers, particularly midwives, must implement to improve neonatal health. Community-based health education and partner involvement are also important strategies to reduce maternal infection rates and reinfection risks.

Preventing STIs in pregnancy not only reduces the risk of LBW but also minimizes other maternal and neonatal complications, including preterm birth, neonatal infections, and impaired fetal development. Integrating STI prevention into routine antenatal care strengthens maternal-child health programs and supports sustainable public health improvements.

Overall, maternal STIs are a preventable and modifiable risk factor for low birth weight. Comprehensive antenatal care programs, including education, screening, timely treatment, and follow-up, are essential to ensure healthy pregnancies and optimal neonatal outcomes. Policymakers and healthcare providers must prioritize maternal infection management to reduce LBW incidence and enhance maternal-child health.

REFERENCES

Amalia, R., & Putra, A. (2021). Peran STIs pada ibu hamil terhadap kejadian bayi berat lahir rendah. *Jurnal Kesehatan Reproduksi*, 8(2), 45-52.

Ambarwati, L., & Siregar, P. (2020). Dampak infeksi menular seksual terhadap bayi berat lahir rendah: Tinjauan literatur. *Jurnal Kesehatan Ibu dan Anak*, 11(3), 72-80. https://doi.org/10.37063/ak.v3i4.516

Creswell, J. W. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications.

Dewi, R., & Hapsari, N. (2020). Pengaruh infeksi menular seksual terhadap kesehatan neonatal. *Jurnal Ilmu Kebidanan*, 9(1), 15-23.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4. https://doi.org/10.11648/j.ajtas.20160501.11

Hapsari, N., & Wulandari, R. (2019). Efektivitas deteksi dini infeksi menular seksual pada ibu hamil. *Jurnal Kebidanan Modern*, 6(2), 22-30.

Herlina, S. (2021). Peran perawat dan bidan dalam pencegahan STIs pada ibu hamil. *Jurnal Ilmu Kebidanan*, 12(1), 33-41.

Hidayat, A. (2019). Metodologi penelitian kuantitatif dan analisis statistik non-parametrik. *Jurnal Metodologi Penelitian*, 4(1), 55-62.

Nurhidayah, D. (2021). Hubungan infeksi menular seksual dengan kejadian bayi berat lahir rendah. *Jurnal Kesehatan Ibu dan Anak*, 13(2), 77-85.

Putri, M. (2020). Faktor risiko ibu hamil terhadap bayi berat lahir rendah: Studi STIs. *Jurnal Ilmu Kebidanan Indonesia*, 12(1), 44-51.

Rahayu, T. (2019). Etika dan prosedur penelitian kesehatan reproduksi. *Jurnal Kesehatan Masyarakat*, 10(1), 10-18.

Saputra, A., & Kurnia, R. (2022). Pendekatan pencegahan infeksi menular seksual di fasilitas kesehatan ibu dan anak. *Jurnal Kesehatan Nusantara*, 11(2), 55-63.

Sari, Y. (2020). Infeksi menular seksual pada ibu hamil dan dampaknya terhadap kesehatan neonatus. *Jurnal Kesehatan Reproduksi Indonesia*, 8(3), 99-106.

Sugiyono. (2017). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Bandung: Alfabeta.

Yuliani, T. (2019). Hubungan status kesehatan ibu dengan berat badan lahir bayi. *Jurnal Ilmu Kebidanan Indonesia*, 12(2), 60-68.