

The Relationship Between Early Pregnancy and Premature Birth at RSD dr. Soebandi Jember

Ana Abelatuz Zahro¹, Ernawati Anggraeni^{2*}

¹Student of Department of Midwifery, Faculty of Sciences, Universitas dr. Soebandi, Indonesia

²Department of Midwifery, Faculty of Sciences, Universitas dr. Soebandi, Indonesia

***Corresponding Author:**

Ernawati, midwifery Department Faculty of sciences, Universitas dr. Soebandi, Indonesia B Building 1st Floor
Kampus Universitas dr. Soebandi, Indonesia, E-mail: ernawati_anggraeni@uds.ac.id, Phone: +6281216744681

Submitted:12/2/12026

Accepted:26/7/2026

Terbit:30/06/2026

Kata Kunci:

Hamil usia dini; Prematur

ABSTRAK

Kehamilan pada usia remaja terjadi ketika seorang wanita hamil di bawah usia 20 tahun. Pada usia ini, ibu hamil cenderung memiliki risiko tinggi terhadap kekurangan asupan gizi yang diperlukan bagi perkembangan janin. Selain itu, ukuran panggul dan rahim yang masih belum berkembang sempurna serta organ reproduksi yang belum matang turut menambah risiko komplikasi. Secara psikologis, remaja juga dinilai belum memiliki kesiapan mental yang cukup, sehingga kemampuan mereka untuk merawat diri sendiri maupun bayinya masih sangat terbatas. Tujuan pada penelitian ini untuk menganalisis Hubungan Hamil Usia Dini dengan Kelahiran Prematur di RSD dr. Soebandi Kabupaten Jember. Penelitian ini adalah kuantitatif dengan metode *korelasional* menggunakan desain *cross sectional*. Populasi penelitian ini merupakan seluruh ibu bersalin di RSD dr. Soebandi periode Januari-Desember 2024 yaitu sebanyak 580. Pengambilan sampel dengan metode *total sampling* menggunakan rumus *slovin* didapatkan 85 responden. Analisa data yang digunakan adalah uji *Chi Square*. Hasil penelitian ini menunjukkan bahwa analisa hubungan hamil usia dini dengan kelahiran prematur di RSD dr. Soebandi Jember diperoleh hasil uji signifikansi (p value) = 0,000 yang berarti $< 0,05$ maka H^1 diterima, dan menunjukkan bahwa adanya hubungan yang bermakna antara hamil usia dini dengan kelahiran prematur. Menurut uji *Chi Square* didapatkan bahwa terdapat hubungan yang signifikan antara hamil usia dini dengan kelahiran premature. Diharapkan ibu hamil usia dini untuk rutin memeriksakan kehamilan ke fasilitas kesehatan, menjaga asupan gizi seimbang, menghindari stres, serta mendapatkan dukungan keluarga dan pendampingan dari tenaga kesehatan untuk meminimalkan risiko kelahiran prematur.

ABSTARCT

Teenage pregnancy occurs when a woman becomes pregnant under the age of 20. At this age, pregnant women tend to be at high risk of lack of nutritional intake necessary for fetal development. In addition, the size of the pelvis and uterus that are still not fully developed and the immature reproductive organs also increase the risk of complications. Psychologically, adolescents are also considered not to have sufficient mental readiness, so their ability to take care of themselves and their babies is still very limited. The purpose of this study was to analyze the Relationship between Early Pregnancy and Premature Birth at dr. Soebandi Hospital, Jember Regency. This research is quantitative with a correlational design. The population of this study is all maternity mothers at dr. Soebandi for the January-December 2024 period is 580. Sampling using the total sampling method using the slovin formula was obtained by 85 respondents. The data analysis used was the Chi Square test. The results of this study show that the analysis of the relationship between early pregnancy and premature birth at dr. Soebandi Jember Hospital obtained the results of the significance test (p value) = 0.000 which means that < 0.05 then H^1 is accepted, and shows that there is a

meaningful relationship between premature pregnancy and premature birth. According to the Chi Square test, it was found that there was a significant relationship between early pregnancy and premature birth. It is expected that pregnant women of early age will routinely check their pregnancy at health facilities, maintain a balanced nutritional intake, avoid stress, and get family support and assistance from health workers to minimize the risk of premature birth.

Introduction

Premature birth is a condition in which a baby is born before the gestational age reaches 37 weeks (WHO, 2023). Mothers who are pregnant at the age of less than 20 years tend to have small pelvis and uterus as well as not yet fully developed reproductive organs. On the other hand, at the age of 35 years and above, the function of the reproductive organs begins to decline when compared to the ideal fertile period, which is the age of 20–35 years. This condition can increase the risk of complications during childbirth, including premature birth (Manuaba, 2019). Premature babies themselves are categorized based on gestational age at birth, namely very early preterm, early preterm, and late preterm. Although many factors influence, the exact cause of premature birth cannot be determined with certainty. Complications due to premature birth are the leading cause of death for children under the age of five, with the number of deaths reaching around one million cases each year (WHO, 2023). Risk factors associated with preterm labor include diseases during pregnancy, twin

pregnancies, mental and physical disorders, problems with the placenta, nutritional deficiencies, infections, and other medical conditions. Epidemiologically, preterm birth is also related to socioeconomic conditions, uterine abnormalities, history of premature delivery or previous miscarriage, smoking habits, race, and age of the mother who are considered at risk, namely under 20 years and over 35 years old (Purba et al., 2016).

According to WHO data (2023), there are 13.4 million premature births globally. The world's preterm birth rate has not changed significantly since 2010, which was recorded at 9.8%, and increased slightly to 9.9% in 2020. South Asia and Sub-Saharan Africa are the regions with the highest number of cases, reaching 65% of the total global cases. In Indonesia, based on the Basic Health Research of the Ministry of Health of the Republic of Indonesia in 2018, the prevalence of premature babies is 29.5 per 1,000 live births. Indonesia occupies the fifth position globally with the number of premature births of around 657,700 cases per year, or about 15% of the total births. In East Java, 11,525 cases of premature birth



were recorded in 2023, with Jember Regency as the highest region, namely 858 cases. At dr. Soebandi Jember Hospital, 105 mothers were recorded to have premature births according to research (Dewi, 2023).

Some of the main causes of premature birth include infections, sexually transmitted diseases, and high rates of teenage pregnancy. Every year, about 14 million adolescent girls experience pregnancy, with more than 90% occurring in developing countries (Sari, 2019). Premature causative factors are generally grouped into idiopathic factors, demographics, fetal conditions, maternal factors, and psychosocial aspects. Previous research has shown that maternal age, distance between pregnancies, number of previous children (parity), and regularity of pregnancy checks (ANC) are factors that also affect preterm birth. Pregnancy in adolescence, namely under 20 years old, and over 35 years old, also increases the risk of nutritional insufficiency for the fetus. High parity can have a negative impact on the uterus's ability to supply nutrients, so that fetal growth is disrupted (Rusmiati, 2019). Teenage pregnancy can be caused by various things, ranging from relationships with partners, marital relationships, to rape cases. Physically, pregnant women under the age of

20 usually have a uterus and pelvis that are not fully developed, so the safety of the fetus can be threatened. In addition, non-optimal mental maturity causes mothers to have difficulty caring for themselves and their babies (Zulaikha & Minata, 2021).

One of the long-term effects of premature birth is intellectual impairment or developmental delay. According to the March of Dimes organization, premature babies are at risk of physical developmental disorders, learning difficulties, and barriers to communication and socializing. The immune system of babies born prematurely is not fully mature, making it susceptible to infections such as pneumonia, sepsis, and meningitis (Manuaba, 2019). Premature babies with severe complications are at risk of long-term growth and development disorders, even premature death. Babies born in very premature conditions or with very low body weight tend to require intensive care and repeated hospitalizations, which of course have an impact on high medical costs (Sari, 2019).

Considering the high incidence rate and the serious impact it causes, premature birth is still an unresolved health problem. If not addressed immediately, this has the potential to increase the number of pain in mothers

and children and reduce the quality of human resources in the future (Herman & Jaewono, 2020). One solution that can be applied is to provide comprehensive education about reproductive health to adolescents, including information about contraception and the risk of pregnancy at a young age. In addition, more intensive antenatal care, at least eight visits during pregnancy, and early detection of the risk of prematurity through ultrasound are also very important. Psychosocial support from couples and families also plays a role in preventing premature birth. Based on this, the researcher took the initiative to conduct further studies related to the relationship between early pregnancy and premature birth, especially at dr. Soebandi Hospital, Jember Regency. It is hoped that this research can be the basis for designing more effective promotive, preventive, and curative interventions in handling cases of preterm birth.

Results

This type of research is quantitative with a correlational method using a cross sectional design. The research was conducted at dr. Soebandi Hospital, Jember Regency in May 2025. The population in this study is all maternity mothers at dr.

Soebandi Jember Hospital for the January-December 2024 period. Sampling of this study used a total sampling technique calculated with the slovin formula and a sample of 85 respondents was obtained. The measuring tool used is the medical records of maternity patients at dr. Soebandi Jember Hospital. This research has received an ethical feasibility test at dr. Soebandi with number: No.718/KEPK/UDS/I/2025. The statistical analysis used in this study was univariate and bivariate, univariate was used in identifying respondent characteristics while bivariate was used in determining the relationship between the variable of early pregnancy and birth using the Chi Square Test using SPSS version 25.

General Data

General data that will be discussed in this study with the characteristics of the respondents, namely education and employment.

Table 1. Characteristics of respondents based on Maternity Education at dr. Soebandi Jember Hospital for the January-December 2024 Period

Characteristics	Frekuensi	Persentase (%)
Education		
No School	39	45.9
SD	17	20.0
SMP	16	18.8
SMA	10	11.8
Sarjana	3	3.5
Total	85	100

Source : Secondary Data 2024

In table 1. It shows that less than half of the respondents, namely 39 mothers (45.9%), a small part of elementary education as many as 17 mothers (20%), a small part of junior high school education as many as 16 mothers (18.8%), a small part of high school education as many as 10 mothers (11.8%), and a small part of bachelor's education as many as 3 mothers (3.5%).

Table 2. Respondents' characteristics based on the Work of Maternity Mothers at dr. Soebandi Jember Hospital for the January-December 2024 Period

Characteristics	Frekuensi	Persentase (%)
Pekerjaan		
IRT	74	87.1
Wiraswasta	11	12.9
PNS	0	0
Total	85	100

Source : Secondary Data 2024

In table 2. The above shows that most of the respondents' jobs as IRTs are 74 mothers (87.1%), a small part as Entrepreneurs as many as 11 people (12.9%) and none of the respondents work as civil servants.

b. Custom Data

In the data presented specifically, the topic discussed was Respondent Characteristics based on the age of the maternity mother and the gestational age of premature birth.

Tabel 3. Characteristics of respondents based on the Age of Maternity at dr. Soebandi Jember Hospital for the

January-December 2024 Period

Characteristics	Frekuensi	Persentase (%)
Usia		
Age <20 years old	26	30.6
Age ≥20 years old	59	69.4
Total	85	100

Source : Secondary Data 2024

In table 3. The above shows that less than half of the respondents aged <20 years are 26 mothers (30.6%) and more than half of the respondents aged ≥20 years are 59 mothers (69.4%).

Tabel 4. Characteristics of respondents based on Gestational Age of Premature Birth at dr. Soebandi Jember Hospital for the January-December 2024 Period

Source : Secondary Data 2024

In table 4. The above shows that a small

Characteristics	Frekuensi	Persentase (%)
Gestational Age		
Gestational Age <37 Weeks	18	21.2
Gestational Age ≥37 Weeks	67	78.8
Total	85	100

number of respondents with a gestational age of <37 weeks were 18 mothers (21.2%) and most of the respondents with a gestational age of ≥37 weeks were 67 mothers (78.8%).

Tabel 5. Cross-tabulation of Early Pregnancy with Premature Birth at dr. Soebandi Jember Hospital for the January-December Period 2024

Age		Prematur				Total	
		Gestational		Gestational			
		Age <37		Age ≥37			
		Weeks		Weeks			
		N	%	N	%	N	%
Age <20 years old		15	17,6	11	12,9	26	30,6
Age ≥20 years old		3	3,5	56	65,9	59	69,4
Total		18	21,2	67	78.8	85	100
Chi Square Test				Asymp. Sig = .000			
Symmetric Measures				Contingency Coefficient = .510			

Source : Secondary Data 2024

From the data in table 5. It presents data on the relationship between maternal age and gestational age of the baby (premature or full-term). Of the total 85 respondents, 26 mothers (30.6%) were <20 years old and 59 mothers (69.4%) were ≥20 years old. Among mothers aged <20 years, 15 people (17.6%) gave birth to babies with a gestational age of <37 weeks (premature), while 11 people (12.9%) gave birth to full-term babies (≥37 weeks). On the other hand, of mothers aged ≥20 years, only 3 people (3.5%) gave birth preterm babies and 56 people (65.9%) gave birth to full-term babies. Overall, there were 18 babies (21.2%) who were born prematurely and 67 babies (78.8%) who were born at full

term.

The analysis in the table was obtained from the chi-square test in this study, which is a value of 0.000 which means $p = \text{value} < 0.05$ and shows that there is a meaningful relationship between early pregnancy and premature birth. So it can be concluded from the results of the data above, namely H_0 rejected and H_a accepted, which means that there is a relationship between early pregnancy and premature birth at dr. Soebandi Jember Hospital.

Discussion

1. Identification of Early Childhood Pregnancy Data at dr. Soebandi Jember Hospital

Based on the results of research obtained at dr. Soebandi Jember Hospital, it was obtained that 26 mothers (30.6%) were pregnant at an early age or <20 years old. Pregnancy in adolescence can increase the risk of health problems, both for the mother and the fetus. This is because adolescents' bodies are still in the growth stage and are not yet fully physically ready to face pregnancy and childbirth. During this period, pregnancy can hinder the physical development of the adolescent itself. Some of the



negative impacts that can arise from early pregnancy include high blood pressure during pregnancy (preeclampsia), anemia due to iron deficiency, to the risk of death during childbirth due to the body's overall unpreparedness. One of the causes of anemia in pregnant women is pregnancy at a young age, because physically and mentally they are not ready to bear the burden of pregnancy. Pregnancy among adolescents generally occurs simultaneously with a lack of physical and mental readiness, such as suboptimal pelvic size and insufficient nutritional intake. This can trigger premature birth and low birth weight (BBLR) in babies (Agustina, 2023). Wahyudi and colleagues (2024) also stated that adolescents' limited access to reproductive health information and antenatal care (ANC) services exacerbates this condition. Young pregnant women are more prone to complications such as anemia and preeclampsia which also increase the risk of BBLR. Social and economic pressures, including stigma from the surrounding environment, also hinder pregnant adolescents' access to proper health services. This condition not only has an

impact on the high number of babies born with low weight, but can also affect the quality of children's growth and development in the future. Therefore, efforts to prevent pregnancy at a young age and improve health services for pregnant adolescents are needed (Wahyudi et al., 2024).

Based on the researchers' opinion, pregnancy in adolescence is often associated with a high risk of complications, both caused by the physical and psychological unpreparedness of the mother who is still in the developmental stage. A number of studies reveal that adolescents who are pregnant generally have limited knowledge related to reproductive health, nutritional fulfillment during pregnancy, and pregnancy symptoms that need to be watched out. This lack of understanding has a negative impact on the health condition of the mother and fetus, and can increase the risk of anemia, preeclampsia, premature birth, and death during childbirth. The research also highlights that low education levels and lack of access to information are inhibiting factors for adolescents in making the right decisions to maintain



their pregnancy. Teenage mothers who do not understand the importance of adequate nutritional intake, regular pregnancy checkups, and childbirth preparations tend to be more prone to serious complications. Therefore, health education is a crucial aspect in prevention efforts to reduce the adverse effects of pregnancy at a young age.

2. Identification of Premature Birth Data at dr. Soebandi Jember Hospital

Based on the results of the research obtained at dr. Soebandi Jember Hospital, it was obtained that respondents with premature birth or gestational age <37 weeks were 18 mothers (21.2%). This is likely due to the education and work factors of pregnant women. In this study, it was found that most of the respondents were out of school, namely 39 mothers (45.9%). In the sense that the average respondent does not go to school, so that a person experiences a lack of good knowledge in pursuing health during his pregnancy. This is in line with research conducted by Tanjung & Lubis (2021) that the low level of mothers' knowledge about childbirth is caused by their ignorance about the definition, prevention, and handling of premature

birth (Tanjung & Lubis, 2021). Mothers with low educational backgrounds tend to have difficulty receiving health counseling due to a lack of awareness of the importance of information about pregnancy. As a result, they do not know the right way to maintain health during pregnancy. Minimal education is one of the triggers for premature birth because the mother's knowledge, awareness, and ability to apply health information are very limited, so that pregnancy risk factors are difficult to prevent (Rusmiati, 2019). In terms of employment, most of the respondents in this study were housewives (IRT), which was 74 people (87.1%). Supposedly, with this status, mothers have more flexible time to maintain their pregnancy. However, this type of work during pregnancy can still trigger the risk of premature birth, especially if it causes physical and mental fatigue. This condition is at risk of causing stress, depression, or anxiety in the mother (Loviana et al., 2021). Occupational factors that increase the risk of preterm labor are related to the type of activity, daily work duration, physical load, and stress level during work (Usman et al., 2021).



According to Herman & Jaewono (2020), premature babies generally have a lower body weight than babies born full-term, weighing less than 2,500 grams. In fact, babies weighing less than 1,000 grams are categorized as immature neonates or babies with very low birth weight (BBLSR). The term premature is often associated with low birth weight (BBLR) conditions, although not all BBLR babies are born before 37 weeks. Premature birth itself is triggered by various factors such as multiple pregnancies, fetal growth inhibition, premature rupture of membranes (KPD), history of prematurity or miscarriage, distance between pregnancies, number of previous births, regularity of ANC, maternal stress level, type of work, age, education, preeclampsia, and anemia. The preterm birth category is divided into extremely preterm, very preterm, and moderate to late preterm (Herman & Jaewono, 2020).

The researchers suggest that most cases of premature birth are caused by risk maternal age factors, as seen in the data of this study, where as many as 26 pregnant women (30.6%) are under 20 years old. Young age is considered not

ideal for pregnancy because the reproductive organs have not developed optimally and emotional and psychological stability is still immature. In addition, at that age, the mother's body still needs nutrients to support its own growth, so there can be nutritional competition between the mother and the fetus. This is certainly different from pregnant women at the ideal age or reproductive age (20–34 years) who are physically and mentally more prepared to undergo pregnancy and childbirth.

In addition to the age factor, low education levels are also another cause of the high rate of premature births. Based on data in this study, as many as 39 respondents (45.9%) were recorded as not receiving formal education. Researchers argue that maternal education greatly affects preparedness in dealing with pregnancy. The lack of knowledge about the pregnancy process, childbirth, and how to care for premature babies makes it difficult for mothers to take preventive measures and prepare themselves optimally to face the risk of childbirth at a young age.

3. Analysis of the Relationship between Early Pregnancy and Premature Birth at dr. Soebandi



Jember Hospital

Based on the results of the study and the results of the analysis, it shows that the analysis of the relationship between early pregnancy and premature birth at dr. Soebandi Jember Hospital obtained the results of the significance test (p value) = 0.000 which means that < 0.05 then H_1 is accepted, and shows that there is a meaningful relationship between premature pregnancy and premature birth. According to the results of this study, it is known that there is a relationship between age and the incidence of premature birth. Pregnant women with the age of < 20 years will have a higher risk of experiencing premature birth. This is in line with research by Bali et al., (2024) showing a relationship between early pregnancy and the incidence of premature birth, although the correlation rate is moderate with a p -value of 0.403 (Bali et al., 2024). These results are in line with the findings of Carolin & Widiastuti (2021) at Muhammadiyah Hospital, which found a significant relationship between maternal age and the risk of premature delivery. The findings support the theory that the risk of preterm birth tends to increase in

mothers who are ≤ 19 years old and ≥ 35 years old. At ≤ 19 years of age, the blood supply to the uterus and cervix is not fully developed, so the supply of nutrients to the fetus is less than optimal. On the other hand, the age of 20–35 years is considered the most ideal reproductive period because the maturity of the reproductive organs and psychological readiness have already been formed. However, the risk of premature delivery can still occur in this age group, which is likely influenced by other factors such as stress. Variations in results between studies may also occur due to differences in sample composition, where the number of mothers from the non-risk age group is more dominant than the risk age group (Carolin & Widiastuti, 2021).

Based on the analysis, researchers concluded that pregnancy at a young age is closely related to an increased risk of premature birth. Pregnant women under the age of 20 are considered more vulnerable due to the unpreparedness of the reproductive organs, both physically and emotionally. At this age, blood flow to the uterus and cervix is not optimal, so it can have an impact on the lack of nutritional intake for the fetus.



Adolescent girls' low understanding of the risks of early pregnancy also exacerbates this situation. Although the age of 20-35 years is considered ideal for pregnancy, the risk of premature birth remains, especially if the mother is experiencing mental stress, excessive stress, or certain health problems. Therefore, stress management during pregnancy becomes an important part of pregnancy care (Anjani et al., 2025). The researcher emphasized the importance of reproductive health education from adolescence as a preventive effort. This education is considered very important to reduce the number of pregnancies and prevent risks that can arise, including premature birth.

Conclusion

1. Based on the results of the study, it can be concluded that less than half of the women are pregnant at early age or <20 years old at dr. Soebandi Jember Hospital, as many as 26 mothers (30.6%).
2. Based on the results of the study, it can be concluded that a small part of them were born prematurely or gestational age at <37 weeks at dr. Soebandi

Jember Hospital, as many as 18 mothers (21.2%).

3. Based on the results of the study and the results of the analysis, it shows that the analysis of the relationship between early pregnancy and premature birth at dr. Soebandi Jember Hospital obtained the results of the significance test (p value) = 0.000 which means that < 0.05 then H_1 is accepted, and shows that there is a meaningful relationship between premature pregnancy and premature birth.

Ethics Approval and Consent to Participate

This research has received an ethical feasibility test at dr. Soebandi with number: No.718/KEPK/UDS/I/2025.

Acknowledgment

The researcher would like to thank :

1. Thank you to the research place, namely the Regional Hospital in Jember (RSD dr. Soebandi Jember).
2. Thank you to the institution, namely dr. Soebandi University.

References

- Agustina, F. 2023. "Faktor-Faktor Risiko Terjadinya Kehamilan Usia Muda Di Wilayah Kerja Puskesmas Loa Kulu Kabupaten Kutai Kartanegara."



- Sikontan Journal* 1(3):239–46.
- Anjani, Arum Dwi, Devy Lestari, Nurul Aulia, Nayala Wulandari, and Jihan Fia Berlianti. 2025. “Hubungan Stres Pada Ibu Hamil Dengan Risiko Kelahiran Prematur.” 5:1732–41.
- Bali, Andi Azizah Nabila Tenri, Arni Isnaini Arfah, Irna Diyana Kartika Kamaluddin, Mona Nulanda, and Andi Husni Esa Darussalam. 2024. “Hubungan Kehamilan Usia Dini Dengan Kejadian Bayi Lahir Prematur Periode Tahun 2019 – 2023.” *Ayan* 15(1):37–48.
- Carolyn, bunga tiara, and Ika Widiastuti. 2021. “Faktor-Faktor Yang Berhubungan Dengan Kejadian Persalinan Preterm Di Rumah Sakit Muhammadiyah Taman Puring Kebayoran Baru Jakarta Selatan Periode Januari-Juni Tahun 2017.” *Jurnal Ilmu Keperawatan Dan Kebidanan Nasional* 1(1):12.
- Dewi, Puji Teresia Putri. 2023. “Gambaran Faktor Kejadian Bayi Prematur Di Wilayah Pertanian Kabupaten Jember.”
- Herman, Sriyana, and Hermanto Tri Jaewono. 2020. *Buku Acuan Persalinan Kurang Bulan (Prematur)*. Maret, 202. edited by W. Anasari. Sulawesi Tenggara: Yayasan Avicenna Kendari.
- Loviana, Noza, Ninik Darsini, and Aditiawarman Aditiawarman. 2021. “Faktor Yang Berhubungan Dengan Kejadian Persalinan Prematur Di RSUD Dr Soetomo.” *Indonesian Midwifery and Health Sciences Journal* 3(1):85–97. doi:10.20473/imhsj.v3i1.2019.85-97.
- Manuaba, Ida Bagus Gde. 2019. *Ilmu Kebidanan, Penyakit Kandungan Dan Keluarga Berencana Untuk Pendidikan Bidan*. edited by Setiawan. Jakarta: Buku Kedokteran EGC.
- Purba, Edy Marjuang, Theodola Baning Rahayujati, and Mohammad Hakimi. 2016. “Kehamilan Usia Remaja Dan Kejadian Bayi Berat Lahir Rendah Di Gunungkidul.” *Berita Kedokteran Masyarakat* 32(1):25. doi:10.22146/bkm.7645.
- Rusmiati. 2019. “Determinan Persalinan Prematur.” *Jurnal Ilmu Kesehatan Karya Bunda Husada* 5(2):8–18.
- Sari, Erna Puspita. 2019. “Kejadian Persalinan Prematur Di Rumah Sakit Umum Daerah Lahat Tahun 2017.” *Jurnal Masker Medika* 7(67):67–74.
- Tanjung, Wiwi Wardani, and Ayu Ulfah Nur Lubis. 2021. “Hubungan Pengetahuan Dan Riwayat Penyakit Dengan Kelahiran Prematur Di Rumah Sakit Umum Daerah Kota Padangsidimpuan.” *Jidan (Jurnal Ilmiah Kebidanan)* 1(2):72–76. doi:10.51771/jdn.v1i2.90.
- Usman, Arifa, Rosdiana, and Andi Misnawati. 2021. “Faktor Risiko Kejadian Persalinan Prematur Di Rumah Sakit Umum Polewali Tahun 2021.” *Jurnal Kesehatan LENTERA ACITYA* 8(2):63–68.
- Wahyudi, Udi, Uyu Wahyudin, Ace Suryadi, and Elih Sudiapermana. 2024. “FOOD LOSS , FOOD Waste : Peluang , Tantangan , Dan Ancaman Dalam Pencegahan Stunting Di Indonesia :” 16(2).
- WHO. 2023. “Preterm Birth.” <https://www.who.int/news-room/fact-sheets/detail/preterm-birth>.
- Zulaikha, Nanik, and Fika Minata. 2021. “Analisa Determinan Kejadian Kelahiran Prematur Di RSIA Rika Amelia Palembang.” *Jurnal Kesehatan Saelmakers PERDANA* 4:24–30.