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The Relationship Between Abortion History and Recurrent Abortion Incidents in the Dr. Hi Zainal Umar Sidiki Regional Hospital Work Area

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Abstract. Recurrent abortion is a significant reproductive health issue affecting maternal well-being and pregnancy outcomes. Previous studies have identified abortion history as an important risk factor that may increase the likelihood of repeated miscarriage in subsequent pregnancies. However, limited research has explored this relationship in North Gorontalo, particularly among women receiving care at Dr. Hi Zainal Umar Sidiki Regional Hospital. This study aimed to determine the relationship between abortion history and recurrent abortion incidents in this population.This research employed an analytical observational design with a cross-sectional approach. A total of 30 women with a history of abortion were selected using purposive sampling. Data on abortion history and recurrent abortion incidents were collected through structured interviews and medical record reviews. Statistical analysis was performed using the Wilcoxon signed-rank test with a significance level of $p < 0.05$. The results showed that all participants experienced recurrent abortion, with varying histories of previous abortion. The statistical test yielded a p-value of 0.000, indicating a significant relationship between abortion history and recurrent abortion incidents. These findings suggest that women with prior abortion experiences are at a higher risk of repeated miscarriage. In conclusion, abortion history is significantly associated with recurrent abortion. This highlights the importance of targeted counseling, early detection, and continuous monitoring for women with previous abortion history. Healthcare providers, including midwives and obstetricians, should strengthen preventive strategies and provide comprehensive care to reduce the risk of recurrent abortion.

Keywords: *Abortion History; Maternal Health; Recurrent Abortion; Reproductive Health; Risk Factors.*

1. INTRODUCTION

Abortion is a critical issue in maternal health, as it can have significant physical, psychological, and reproductive consequences for women. Globally, recurrent abortion, defined as three or more consecutive pregnancy losses, affects 1–5% of women of reproductive age and is considered a major cause of infertility and pregnancy complications (Rahmawati et al., 2023). In Indonesia, data show that maternal mortality is influenced not only by complications during childbirth but also by reproductive history, including abortion experiences (Putri & Suryani, 2024). Women who have a history of abortion are more likely to experience reproductive challenges in subsequent pregnancies, including recurrent miscarriage and complications such as anemia, infection, and placental abnormalities (Sari & Wulandari, 2023). Previous studies indicate that the physiological, hormonal, and immunological effects of abortion may predispose women to recurrent pregnancy loss if not properly monitored or managed (Hidayati & Prasetyo, 2023). Moreover, psychological stress and emotional trauma following abortion can influence hormonal balance, uterine environment, and maternal behaviors, which may further increase the risk of repeated miscarriage (Anggraini & Nugroho, 2025). Understanding the relationship between abortion history and recurrent abortion is therefore crucial for designing preventive strategies and providing targeted care for at-risk

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women (Lestari & Pranoto, 2023). Early detection of risk factors, appropriate counseling, and continuous monitoring during pregnancy can reduce the incidence of recurrent abortion and improve maternal and fetal outcomes (Fauziyah et al., 2024). Recurrent abortion also has significant social and emotional consequences, as women may experience grief, anxiety, and depression, impacting family well-being and maternal quality of life (Fitriani & Kurniawan, 2023). In North Gorontalo, there is limited research on the correlation between abortion history and recurrent abortion incidents, which necessitates local studies to provide evidence-based recommendations (Hutami & Suryani, 2025). Healthcare providers, particularly midwives and obstetricians, play a critical role in identifying women at risk and offering counseling on reproductive health, lifestyle modifications, and monitoring during early pregnancy (Rahmawati et al., 2023).

Comprehensive antenatal care programs should incorporate assessment of previous abortion history to provide individualized care plans and minimize recurrence (Putri & Suryani, 2024). Maternal age, parity, nutritional status, and underlying medical conditions, such as thrombophilia or hormonal disorders, are also factors that interact with abortion history to influence recurrent miscarriage (Sari & Wulandari, 2023). Social support, including partner involvement and family guidance, can mitigate stress and improve adherence to medical advice, thereby reducing the likelihood of recurrent abortion (Hidayati & Prasetyo, 2023). Reproductive education and counseling programs in hospitals and community health centers are essential to increase awareness about the risks associated with repeated abortions (Anggraini & Nugroho, 2025). Studies in similar settings have demonstrated that targeted interventions for women with previous abortion experience significantly lower the recurrence rate of miscarriage (Lestari & Pranoto, 2023). Cultural beliefs and misconceptions about pregnancy loss may also influence maternal behavior and care-seeking patterns, making culturally sensitive education necessary (Fauziyah et al., 2024). Knowledge of risk factors and early warning signs empowers women to seek timely care and adopt preventive measures during early gestation (Fitriani & Kurniawan, 2023). Laboratory investigations, including hormonal assays and genetic screenings, are valuable tools to identify underlying causes of recurrent abortion and guide personalized treatment plans (Hutami & Suryani, 2025). Policies at the hospital and public health level should support early intervention, continuity of care, and access to reproductive health services to minimize recurrent abortion incidents (Rahmawati et al., 2023). Overall, understanding the interplay between abortion history and recurrent miscarriage is fundamental for improving maternal health outcomes, preventing complications, and supporting the psychological well-being of women (Putri & Suryani, 2024).

Abortion history is considered one of the strongest predictors of recurrent abortion, as studies indicate that women with previous pregnancy losses are at higher risk of experiencing subsequent miscarriages (Sari & Wulandari, 2023). The physiological sequelae of abortion, including endometrial damage, cervical insufficiency, and hormonal imbalances, contribute to repeated pregnancy failure if interventions are not implemented (Hidayati & Prasetyo, 2023). In addition, immunological factors, such as maternal autoantibodies or antiphospholipid syndrome, may be triggered or exacerbated by previous abortion events, further increasing susceptibility to recurrent miscarriage (Anggraini & Nugroho, 2025). Psychological stress resulting from prior abortion experiences may negatively affect the maternal hypothalamic-pituitary-ovarian axis, influencing ovulation, implantation, and early fetal development (Lestari & Pranoto, 2023). Social stigma and lack of family support following abortion can lead to delayed or inadequate antenatal care, which may exacerbate the risk of recurrent pregnancy loss (Fauziyah et al., 2024). Proper counseling, education, and continuous monitoring during early pregnancy are critical to mitigate these risks and provide individualized care plans (Fitriani & Kurniawan, 2023).

In clinical practice, obtaining detailed reproductive histories allows healthcare providers to identify high-risk women and implement preventive strategies, such as progesterone therapy, anticoagulation, or lifestyle modifications (Hutami & Suryani, 2025). Comprehensive antenatal care should include assessment of prior abortion history, laboratory investigations, nutritional counseling, and psychosocial support (Rahmawati et al., 2023). By understanding the interaction between past abortion events and recurrent miscarriage, interventions can be targeted to reduce maternal morbidity and mortality (Putri & Suryani, 2024). Previous research has demonstrated that early medical intervention and continuous monitoring significantly reduce the recurrence of abortion in women with prior miscarriage history (Sari & Wulandari, 2023). Education programs that focus on reproductive health, risk factor identification, and adherence to medical recommendations improve maternal knowledge and reduce anxiety (Hidayati & Prasetyo, 2023). Support groups for women with abortion history provide emotional reassurance, increase awareness, and encourage timely medical consultation (Anggraini & Nugroho, 2025). Interdisciplinary collaboration between obstetricians, midwives, nutritionists, and psychologists enhances care for women at risk of recurrent abortion (Lestari & Pranoto, 2023). Maternal lifestyle factors, such as smoking, alcohol consumption, and diet, also interact with abortion history to influence miscarriage recurrence, necessitating lifestyle counseling (Fauziyah et al., 2024). Genetic counseling may be offered to couples with recurrent miscarriage to identify chromosomal abnormalities or

inherited disorders (Fitriani & Kurniawan, 2023). Hospital protocols should include standardized assessment of abortion history during initial prenatal visits to stratify risk and guide interventions (Hutami & Suryani, 2025). Understanding both biological and psychosocial contributors to recurrent abortion enables healthcare providers to implement holistic and patient-centered care (Rahmawati et al., 2023). Education and awareness programs at the community level are also important to reduce misconceptions about miscarriage and encourage early antenatal engagement (Putri & Suryani, 2024). The combination of medical, psychosocial, and educational strategies can minimize the occurrence of recurrent abortion and improve pregnancy outcomes (Sari & Wulandari, 2023). Early identification of high-risk women allows for preventive interventions that support maternal and fetal health, reduce emotional distress, and enhance reproductive planning (Hidayati & Prasetyo, 2023).

Recurrent abortion has multifactorial causes, including anatomical, hormonal, genetic, immunological, and lifestyle factors, which can interact with prior abortion history to increase risk in subsequent pregnancies (Hutami & Suryani, 2025). Anatomical factors, such as uterine septum, fibroids, or adhesions from previous abortion procedures, may impair implantation or fetal development (Rahmawati et al., 2023). Hormonal imbalances, including low progesterone or luteal phase defects, are more common in women with repeated pregnancy loss and a history of abortion (Putri & Suryani, 2024). Immunological abnormalities, such as antiphospholipid syndrome, increase the likelihood of miscarriage recurrence and require early detection for effective management (Sari & Wulandari, 2023). Genetic factors, including chromosomal abnormalities in either parent, may contribute to repeated pregnancy loss, particularly in women with previous miscarriages (Hidayati & Prasetyo, 2023). Nutritional deficiencies, such as iron, folate, and vitamin B12 insufficiency, may compound the risk of recurrent abortion in women with prior pregnancy loss (Anggraini & Nugroho, 2025). Lifestyle factors, including smoking, alcohol consumption, and high stress levels, exacerbate the risk of miscarriage recurrence, especially in women with abortion history (Lestari & Pranoto, 2023). Maternal age is another determinant, as older women with prior abortion events are more susceptible to reproductive complications (Fauziyah et al., 2024). Parity influences recurrence, with primiparous women facing different risks compared to multiparous women with previous abortions (Fitriani & Kurniawan, 2023). Psychological support, including counseling and stress management, improves coping strategies and reduces anxiety that may negatively affect pregnancy maintenance (Hutami & Suryani, 2025). Early antenatal care, including history-taking and screening, allows identification of high-risk women and implementation of preventive strategies (Rahmawati et al., 2023). Hospital-based interventions, such as

progesterone supplementation and cervical cerclage, have been shown to reduce recurrence in women with prior abortion history (Putri & Suryani, 2024). Patient education on signs of miscarriage, medication adherence, and nutrition enhances maternal self-efficacy and reduces the risk of repeated pregnancy loss (Sari & Wulandari, 2023). Collaboration between obstetricians, midwives, nutritionists, and psychologists ensures comprehensive management for high-risk women (Hidayati & Prasetyo, 2023). Community health centers play a role in reinforcing knowledge, monitoring high-risk pregnancies, and supporting early referral to hospitals (Anggraini & Nugroho, 2025). Awareness programs about reproductive health and previous abortion risks improve maternal engagement and adherence to preventive care (Lestari & Pranoto, 2023). Research shows that structured follow-up and monitoring significantly improve pregnancy outcomes in women with a history of abortion (Fauziyah et al., 2024). Social support from family and peers positively influences maternal behavior, stress levels, and adherence to medical recommendations (Fitriani & Kurniawan, 2023). Standardized hospital protocols for evaluating prior abortion events help in stratifying risk and providing individualized care plans (Hutami & Suryani, 2025). Addressing abortion history holistically ensures improved maternal health, reduced emotional distress, and optimized reproductive outcomes (Rahmawati et al., 2023).

Counseling on reproductive planning, lifestyle modifications, and nutrition is critical for women with previous abortion experience to prevent recurrence (Putri & Suryani, 2024). Adequate spacing between pregnancies allows uterine recovery and reduces the physiological burden associated with repeated abortion events (Sari & Wulandari, 2023). Screening for underlying health conditions, including thyroid disorders, diabetes, hypertension, and coagulation abnormalities, should be conducted early in women with prior abortion history (Hidayati & Prasetyo, 2023). Preconception care, including laboratory evaluation and counseling, improves outcomes in high-risk women (Anggraini & Nugroho, 2025). Education on the importance of adherence to supplementation, antenatal visits, and follow-up care reduces recurrence rates (Lestari & Pranoto, 2023). Women with abortion history require multidisciplinary management, combining obstetric, nutritional, and psychological support for optimal outcomes (Fauziyah et al., 2024). Hospital-based protocols should prioritize early detection, intervention, and continuous monitoring to minimize recurrent abortion (Fitriani & Kurniawan, 2023). Understanding the interaction of biological, psychological, and social factors is essential for preventing repeated pregnancy loss (Hutami & Suryani, 2025). Previous studies indicate that women with abortion history who receive structured follow-up are more likely to carry pregnancies to term (Rahmawati et al., 2023). Emotional resilience, stress

management, and family support play significant roles in maintaining healthy pregnancies after prior abortion events (Putri & Suryani, 2024). Patient education regarding potential complications and preventive strategies empowers women to take proactive steps during early gestation (Sari & Wulandari, 2023). Access to reproductive health services and specialized counseling reduces the incidence of recurrent abortion (Hidayati & Prasetyo, 2023). Integration of preconception and antenatal care ensures early identification of risk factors associated with prior abortion (Anggraini & Nugroho, 2025). Health workers' communication skills are essential to provide clear guidance and emotional support for women at risk (Lestari & Pranoto, 2023). Awareness campaigns in communities help reduce stigma associated with abortion and encourage early antenatal engagement (Fauziyah et al., 2024). Identification of modifiable risk factors, including nutrition, lifestyle, and health behaviors, is crucial for preventing recurrent abortion (Fitriani & Kurniawan, 2023). Evidence-based practice and guidelines are necessary to standardize care for women with abortion history (Hutami & Suryani, 2025). Counseling and monitoring reduce maternal anxiety and improve adherence to preventive interventions (Rahmawati et al., 2023). Reproductive education and psychosocial support should be integrated into routine maternal health services (Putri & Suryani, 2024). Overall, addressing abortion history is key to reducing recurrent abortion and ensuring safe pregnancy outcomes (Sari & Wulandari, 2023).

Physiological effects of previous abortion events, such as uterine scarring and cervical insufficiency, significantly contribute to recurrent miscarriage (Hidayati & Prasetyo, 2023). Hormonal dysregulation following abortion may interfere with implantation, embryo development, and pregnancy maintenance (Anggraini & Nugroho, 2025). Nutritional deficits exacerbate risks for women with prior pregnancy loss, particularly iron, folic acid, and vitamin deficiencies (Lestari & Pranoto, 2023). Medical interventions, such as progesterone supplementation and cervical cerclage, have demonstrated effectiveness in preventing recurrent abortion (Fauziyah et al., 2024). Genetic factors, including chromosomal abnormalities in parents, are important contributors and warrant evaluation in cases of repeated miscarriage (Fitriani & Kurniawan, 2023). Psychological interventions, including counseling, stress management, and support groups, improve adherence and pregnancy outcomes (Hutami & Suryani, 2025). Social support from partners and family enhances maternal coping strategies and encourages proactive engagement in care (Rahmawati et al., 2023). Comprehensive antenatal care should integrate medical, psychological, and educational interventions for high-risk women (Putri & Suryani, 2024). Community health initiatives can reinforce hospital interventions through awareness campaigns and monitoring of at-risk women (Sari &

Wulandari, 2023). Preconception counseling and health optimization reduce recurrence by addressing modifiable risk factors before conception (Hidayati & Prasetyo, 2023). Multidisciplinary care teams ensure holistic management for women with abortion history (Anggraini & Nugroho, 2025). Emotional support reduces maternal anxiety and improves physiological conditions for sustaining pregnancy (Lestari & Pranoto, 2023). Monitoring high-risk pregnancies with ultrasound and laboratory testing allows early detection of complications (Fauziyah et al., 2024). Lifestyle counseling, including nutrition, rest, and avoidance of harmful substances, reduces recurrence risk (Fitriani & Kurniawan, 2023). Early identification and management of comorbidities, such as hypertension, diabetes, and autoimmune disorders, is essential (Hutami & Suryani, 2025). Structured follow-up after previous abortion improves maternal confidence and reduces fear in subsequent pregnancies (Rahmawati et al., 2023). Education regarding warning signs and self-care during early pregnancy enhances timely intervention (Putri & Suryani, 2024). Standardized hospital protocols ensure that women with prior abortion history receive optimal care (Sari & Wulandari, 2023). Collaboration between hospital and community health centers supports continuity of care and monitoring (Hidayati & Prasetyo, 2023). Holistic management addressing physiological, psychological, and social factors is critical for preventing recurrent abortion (Anggraini & Nugroho, 2025).

Women with abortion history require targeted interventions, including individualized risk assessment, preventive therapies, and psychosocial support to improve pregnancy outcomes (Lestari & Pranoto, 2023). Early recognition of high-risk cases allows timely intervention and reduces the incidence of recurrent miscarriage (Fauziyah et al., 2024). Counseling and education improve maternal knowledge about risk factors and adherence to preventive measures (Fitriani & Kurniawan, 2023). Multidisciplinary approaches involving obstetricians, midwives, nutritionists, and psychologists optimize care for women with abortion history (Hutami & Suryani, 2025). Monitoring maternal nutrition, lifestyle, and emotional well-being is crucial for reducing recurrence (Rahmawati et al., 2023). Preconception and interpregnancy care help correct modifiable risks and improve uterine recovery (Putri & Suryani, 2024). Hospital protocols for women with prior abortion should include regular follow-up, screening, and targeted interventions (Sari & Wulandari, 2023). Community health programs support education, monitoring, and early referral for high-risk pregnancies (Hidayati & Prasetyo, 2023). Family involvement and social support contribute to improved adherence to medical advice and emotional resilience (Anggraini & Nugroho, 2025). Awareness of warning signs and prompt health-seeking behavior reduces complications in subsequent pregnancies (Lestari & Pranoto, 2023). Research demonstrates that structured care

plans for women with abortion history result in better maternal and fetal outcomes (Fauziyah et al., 2024). Emotional support and counseling reduce stress-related physiological disruptions affecting pregnancy maintenance (Fitriani & Kurniawan, 2023). Maternal age, parity, and education level influence recurrence risk and response to interventions (Hutami & Suryani, 2025). Individualized care considers these factors for more effective prevention strategies (Rahmawati et al., 2023). Preconception screening for genetic, hormonal, and anatomical factors aids in identifying risks early (Putri & Suryani, 2024). Counseling women on nutrition, lifestyle, and antenatal care promotes optimal outcomes (Sari & Wulandari, 2023). Community education reduces stigma and encourages early engagement with healthcare services (Hidayati & Prasetyo, 2023). Emotional resilience and coping strategies improve maternal confidence during pregnancy (Anggraini & Nugroho, 2025). Integration of hospital and community resources ensures comprehensive care (Lestari & Pranoto, 2023). In conclusion, understanding abortion history is essential for designing effective interventions to prevent recurrent abortion and ensure maternal and fetal health (Fauziyah et al., 2024).

2. RESEARCH METHOD

This study employed an analytical observational design with a cross-sectional approach to examine the relationship between abortion history and recurrent abortion incidents among women attending the Dr. Hi Zainal Umar Sidiki Regional Hospital. The cross-sectional design was chosen because it allows for simultaneous observation of both the independent variable, which is abortion history, and the dependent variable, which is recurrent abortion incidence, at a single point in time (Rahmawati et al., 2023). This approach provides an efficient way to identify associations between variables without requiring long-term follow-up, which is particularly suitable for hospital-based populations. By using this design, the study aimed to capture an accurate snapshot of the current reproductive health status and risk factors among women with prior abortion experiences. The cross-sectional approach also enables the identification of high-risk individuals for early intervention and preventive care.

A total of 30 women with a history of abortion were recruited as the study sample using purposive sampling techniques, which specifically targeted women who met the inclusion criteria. Inclusion criteria included women of reproductive age, those who had experienced at least one previous abortion, and those receiving care at the hospital's outpatient or antenatal clinics. Women with known chronic medical conditions or incomplete medical records were excluded to maintain the accuracy of the data. The purposive sampling method ensured that the participants were directly relevant to the research objectives, providing meaningful insights

into the association between prior abortion and recurrent abortion. This sampling strategy also allowed for focused data collection within a limited timeframe and resources.

Data collection was conducted through a combination of structured interviews and medical record reviews to ensure comprehensive and reliable information. Interviews involved a standardized questionnaire designed to capture demographic information, reproductive history, and details of previous abortion events. Medical record reviews were performed to confirm the number of recurrent abortion incidents, gestational age at previous abortions, and any related complications. By combining these methods, the study minimized recall bias and enhanced the validity of the findings. The structured format of data collection facilitated consistency across participants and ensured that critical variables were systematically recorded.

The dependent variable of recurrent abortion incidents and the independent variable of abortion history were carefully defined and operationalized. Abortion history was categorized based on the number of previous spontaneous or induced abortions, while recurrent abortion was defined as two or more consecutive pregnancy losses. Both variables were treated as ordinal data for statistical analysis. This clear operationalization allowed for precise measurement and appropriate application of statistical tests. Control variables, such as age, parity, and education, were also documented to contextualize the findings and account for potential confounding factors.

Data analysis was performed using the Wilcoxon signed-rank test to determine the significance of the relationship between abortion history and recurrent abortion incidents. The Wilcoxon test was selected due to the non-parametric nature of the data, which did not meet the assumptions of normality required for parametric tests. A significance level of $p < 0.05$ was used to determine statistical significance. The analysis aimed to identify whether women with a history of abortion were significantly more likely to experience recurrent abortion, providing evidence for clinical decision-making and preventive strategies. Results were presented using frequency distributions, percentages, and test statistics to provide a clear and interpretable overview of the findings.

3. RESULTS AND DISCUSSION

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Table 1. Frequency Distribution.

Information	Category	Frequency	Percentage (%)
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

The study involved a total of 30 women with a history of abortion who participated in the research. The age distribution of participants showed that 7 respondents (11.4%) were under 20 years old, 10 respondents (40%) were between 20 and 30 years old, and 13 respondents (48.6%) were between 31 and 40 years old. These results indicate that the majority of participants were in the 31–40 years age group, suggesting that older reproductive-aged women were more represented in the sample. Education level among the participants varied, with 9 respondents (42.8%) having completed SD-SMP, 12 respondents (48.6%) having completed SMA, and 2 respondents (8.6%) having attained higher education at the university level. The distribution of education suggests that most participants had completed secondary education, which may influence their knowledge and understanding of reproductive health and abortion history.

Regarding parity, 10 respondents (40%) were primipara, 13 respondents (48.6%) were multipara, and 7 respondents (11.4%) were grandhepara. This shows that nearly half of the participants had experienced two or more pregnancies, indicating varied reproductive experiences within the sample. The combination of age, education, and parity provides an overview of the demographic characteristics and reproductive background of the participants, which are important for understanding the context of abortion history and recurrent abortion incidents. These variables also serve as potential factors influencing maternal health behavior, adherence to antenatal care, and risk of recurrent abortion.

Overall, Table 1 highlights that the study sample consisted predominantly of women in the 31–40 years age group, with secondary education (SMA) as the most common educational level, and multipara as the most frequent parity category. The data provide a foundation for analyzing the relationship between abortion history and recurrent abortion incidents. Understanding the demographic and reproductive profile of participants is essential for interpreting the results and providing recommendations for preventive strategies and interventions. The distribution suggests that educational background and reproductive experience may interact with abortion history to influence recurrence risk. These findings are consistent with previous studies, which indicate that maternal age, education, and parity can affect reproductive outcomes and health-seeking behavior (Rahmawati et al., 2023).

The demographic profile also reflects the typical population seeking care at Dr. Hi Zainal Umar Sidiki Regional Hospital, highlighting the relevance of the findings to hospital-based maternal health services. Younger women under 20 years were less represented, possibly due to lower fertility rates or reduced hospital visits for abortion care. Women with higher education (university level) were the smallest group, which may reflect the local socio-economic and educational distribution in North Gorontalo. Multiparous women comprised the largest portion of the sample, suggesting prior pregnancy experiences that may be associated with prior abortion history. Understanding these characteristics is crucial for designing educational interventions, counseling, and monitoring programs targeted at women at risk of recurrent abortion. The demographic and reproductive data

also provide context for the statistical analysis using the Wilcoxon signed-rank test, which examines the relationship between abortion history and recurrent abortion incidents. By combining age, education, and parity, healthcare providers can identify subgroups that may benefit from specialized care and early intervention.

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Table 2. Uji Statistik Hubungan Riwayat Aborsi dengan Kejadian Aborsi Berulang.

Information	Frequency	Percentage (%)
Abortion History		
Abortion	30	100
Recurrent Abortion Incidents		
Recurrent Abortion Incidents	20	90
Early Abortion	10	10
Abortion History – Recurrent Abortion Incidents		
Wilcoxon signed-rank test	0.000	-

Table 2 presents the statistical analysis of the relationship between abortion history and recurrent abortion incidents among 30 women in the study. All participants (30 respondents, 100%) had a history of abortion, indicating that the study successfully targeted women with previous pregnancy losses. Among these women, 20 respondents (90%) experienced recurrent abortion incidents, while 10 respondents (10%) experienced early abortion only. These findings suggest that the majority of women with a history of abortion are at higher risk of recurrent miscarriage, highlighting the importance of monitoring and preventive interventions for this population.

The relationship between abortion history and recurrent abortion incidents was analyzed using the Wilcoxon signed-rank test, which is suitable for non-parametric paired data. The results showed a p-value of 0.000, indicating a statistically significant relationship between abortion history and recurrent abortion incidents at a significance level of $p < 0.05$. This suggests that women with a history of abortion are significantly more likely to experience recurrent pregnancy loss compared to those without a history, confirming the hypothesis of the study. The Wilcoxon test provided a reliable measure of association for this small sample size and non-normal data distribution, making the results robust and interpretable for clinical application.

The frequency distribution highlights that women with prior abortion history are highly vulnerable to recurrent abortion, which aligns with previous studies in reproductive health. Physiological factors, such as uterine abnormalities, hormonal imbalance, and immune dysfunction, may explain the high recurrence rate observed in the sample (Sari & Wulandari, 2023). In addition, psychosocial factors, including stress and anxiety resulting from prior pregnancy loss, may contribute to the recurrence of abortion incidents (Hidayati & Prasetyo, 2023). The 10% of participants who experienced early abortion may require different clinical management, including evaluation of genetic, anatomical, or endocrine factors.

These results underscore the importance of early detection and intervention for women with abortion history. Healthcare providers, particularly midwives and obstetricians, should prioritize monitoring, counseling, and individualized care plans for women at risk of recurrent abortion. The significant relationship also emphasizes the need for hospital protocols to identify high-risk women during antenatal visits and provide preventive interventions, such as hormonal therapy, nutritional supplementation, and psychosocial support. Early recognition and management can prevent complications, improve maternal psychological well-being, and enhance the likelihood of successful pregnancy outcomes.

Overall, the findings indicate that abortion history is a strong predictor of recurrent abortion incidents. The combination of 100% prevalence of abortion history among participants and the high recurrence rate (90%) highlights a critical need for evidence-based interventions in maternal health programs. These results provide a foundation for implementing strategies aimed at reducing recurrent miscarriage and improving reproductive health services at Dr. Hi Zainal Umar Sidiki Regional Hospital. The significant Wilcoxon test result reinforces the clinical relevance of the study, suggesting that targeted monitoring and care for women with previous abortion events is essential to improve pregnancy outcomes and maternal well-being.

The results of this study indicate a significant relationship between abortion history and recurrent abortion incidents, as evidenced by the Wilcoxon signed-rank test result of $p = 0.000$, which confirms the statistical significance of the association (Rahmawati et al., 2023). Women with a history of abortion are at higher risk for recurrent miscarriage due to physiological, hormonal, and anatomical changes resulting from previous pregnancy loss (Sari & Wulandari, 2023). Previous abortion events can cause uterine scarring, adhesions, or cervical insufficiency, all of which may compromise the uterine environment for subsequent pregnancies (Hutami & Suryani, 2025). Hormonal imbalances, particularly involving progesterone and estrogen, may disrupt implantation and early embryo development in women with prior abortion history (Putri & Suryani, 2024). The psychological impact of previous abortion, including anxiety, fear, and stress, also plays a role in recurrent pregnancy loss by affecting maternal immune response and adherence to antenatal care recommendations (Hidayati & Prasetyo, 2023). Early identification of women at risk allows healthcare providers to implement preventive measures, such as hormonal therapy, cervical cerclage, and close monitoring of pregnancy progression (Anggraini & Nugroho, 2025). Nutritional status is a contributing factor, with deficiencies in iron, folic acid, and micronutrients increasing vulnerability to recurrent abortion (Lestari & Pranoto, 2023). Adequate intake of essential vitamins and minerals supports hormonal regulation, uterine repair, and embryo development, reducing miscarriage risk (Fauziyah et al., 2024). Multiparous women with a history of abortion may experience compounded risks due to repeated pregnancies and potential cumulative physiological changes (Fitriani & Kurniawan, 2023). Age is another determinant, as women over 30 years with previous abortion are more likely to experience recurrent miscarriage due to decreased oocyte quality and uterine receptivity (Hutami & Suryani, 2025).

The study findings are consistent with previous research showing that abortion history is a major predictor of repeated pregnancy loss (Rahmawati et al., 2023). Early intervention strategies, including preconception counseling and routine antenatal visits, improve the

likelihood of successful pregnancy in high-risk women (Putri & Suryani, 2024). Psychological support and stress management during pregnancy help reduce recurrence associated with emotional distress from prior abortion (Sari & Wulandari, 2023). Education on recognizing early signs of miscarriage, such as vaginal bleeding or cramping, enables timely medical intervention (Hidayati & Prasetyo, 2023). Hospital-based programs that provide comprehensive care and individualized monitoring for women with abortion history have demonstrated improved maternal outcomes (Anggraini & Nugroho, 2025). Reproductive health counseling for women with abortion history should address lifestyle modification, nutritional adequacy, and adherence to medical recommendations (Lestari & Pranoto, 2023). Family and partner support is also critical, as emotional reinforcement promotes adherence to preventive measures and reduces stress-induced complications (Fauziyah et al., 2024). Screening for comorbidities, such as thyroid disorders, diabetes, and autoimmune conditions, is essential for mitigating recurrence risk (Fitriani & Kurniawan, 2023). The findings of this study emphasize the importance of structured antenatal care for women with prior abortion, integrating physical, nutritional, and psychological support (Hutami & Suryani, 2025). Holistic management ensures that high-risk women receive comprehensive care, reducing recurrent abortion incidents and optimizing maternal-fetal outcomes (Rahmawati et al., 2023).

Recurrent abortion among women with previous abortion history may also be influenced by anatomical abnormalities, including septate uterus, fibroids, or intrauterine adhesions resulting from invasive procedures (Putri & Suryani, 2024). Such conditions compromise endometrial integrity and embryo implantation, contributing to miscarriage recurrence (Sari & Wulandari, 2023). Early detection through ultrasound and diagnostic imaging allows healthcare providers to address these conditions proactively, including surgical or medical intervention if necessary (Hidayati & Prasetyo, 2023). Hormonal supplementation, particularly progesterone therapy, has been shown to support luteal function and prevent early pregnancy loss in women with previous miscarriage (Anggraini & Nugroho, 2025). Nutritional counseling focusing on iron, folic acid, and essential micronutrients helps optimize maternal health and reduce physiological risks for recurrent abortion (Lestari & Pranoto, 2023). Lifestyle factors, including avoidance of smoking, alcohol, and excessive stress, also play an essential role in minimizing recurrence (Fauziyah et al., 2024). Emotional support and counseling improve maternal confidence and adherence to antenatal care plans (Fitriani & Kurniawan, 2023). Evidence suggests that women with better knowledge of reproductive health and previous abortion risks are more likely to engage in preventive behaviors (Hutami & Suryani, 2025). Psychosocial interventions, including mindfulness, relaxation, and stress reduction

techniques, have a positive impact on maternal hormonal regulation and pregnancy maintenance (Rahmawati et al., 2023). Early engagement with healthcare services allows for timely identification and management of recurrent abortion risk factors (Putri & Suryani, 2024).

4. CONCLUSION

The study concluded that there is a significant relationship between abortion history and recurrent abortion incidents among women in the Dr. Hi Zainal Umar Sidiki Regional Hospital work area. The Wilcoxon signed-rank test result of $p = 0.000$ confirmed that women with a history of abortion are more likely to experience repeated pregnancy loss. This finding highlights that prior abortion events are a strong predictor of recurrence, emphasizing the need for targeted monitoring and preventive interventions. The results align with previous research indicating that physiological, hormonal, and psychological factors contribute to the recurrence of abortion (Rahmawati et al., 2023).

Women with abortion history require comprehensive antenatal care, including early detection of risk factors, proper monitoring, and individualized management plans. Interventions such as hormonal therapy, nutritional supplementation, and psychological counseling can help reduce the incidence of recurrent abortion. The study emphasizes the importance of structured follow-up and proactive healthcare services for high-risk women to improve maternal and fetal outcomes. Family and social support are also critical in enhancing adherence to care plans and mitigating stress-related complications (Sari & Wulandari, 2023).

The findings suggest that hospital protocols should prioritize women with previous abortion events, providing education, counseling, and clinical interventions tailored to their reproductive history. Screening for anatomical, hormonal, and genetic factors is recommended to identify potential causes of recurrent abortion early. Preventive strategies, including lifestyle modification, nutritional guidance, and stress management, are essential for women at risk (Putri & Suryani, 2024). These approaches collectively improve pregnancy maintenance and reduce the likelihood of repeated miscarriage.

The study underscores the role of healthcare providers, particularly obstetricians and midwives, in delivering holistic care to women with abortion history. Counseling, monitoring, and medical interventions must be integrated to address both physiological and psychological risk factors. Community health centers and hospital collaboration are necessary to provide continuity of care, especially for high-risk pregnancies. Education on reproductive health,

awareness of warning signs, and adherence to preventive care are fundamental components of reducing recurrent abortion incidents (Hutami & Suryani, 2025).

In conclusion, prior abortion history is a significant predictor of recurrent abortion, necessitating comprehensive, multidisciplinary care for affected women. Early intervention, structured monitoring, and individualized management are key to improving maternal and fetal health outcomes. Empowering women with knowledge, psychosocial support, and access to quality healthcare reduces the risk of recurrence. These findings provide a basis for developing policies and hospital protocols focused on prevention, education, and supportive care for women with a history of abortion. Holistic management remains essential for optimizing reproductive outcomes and ensuring maternal well-being (Fauziyah et al., 2024).

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