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DETERMINANT FACTORS OF ABORTION OCCURRENCE AMONG PREGNANT WOMEN AT HAJI GENERAL HOSPITAL MEDAN, NORTH SUMATRA PROVINCE, IN 2025

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ABSTRACT

Abortion is one of the leading causes of maternal morbidity and mortality, particularly in developing countries such as Indonesia(Kesehatan et al. 2023). Risk factors such as maternal age, education, economic status, history of abortion, and underlying diseases may contribute to the incidence of abortion.(Dikes Prov.Sumut 2024) This study aimed to identify the determinant factors associated with abortion among pregnant women at Haji Hospital in Medan City. Method: This was a quantitative analytic study using a cross-sectional approach. The sample consisted of all pregnant women who experienced abortion in 2024. (Kemenkes RI 2022) totaling 50 individuals, selected using total sampling. Data were obtained from medical records and analyzed using the Chi-Square test. Results: Bivariate analysis showed significant associations between abortion and maternal age (p = 0.046), education level (p = 0.041), economic status (p = 0.041), and history of previous abortion (p = 0.034). However, there was no significant association between medical history and abortion (p = 0.684). Conclusion: Maternal age, education, economic status, and previous abortion history are significantly associated with abortion. In contrast, medical history was not significantly related.(Fatem Hamama 2019) It is recommended that healthcare providers enhance screening and provide education to pregnant women at high risk to prevent abortion.(Nurmawan, Siti. Medan 2022)

Keywords: Abortion, Maternal Age, Education, Economic Status, Medical History

Introduction

Abortion is a major health problem among pregnant women and is one of the main causes of maternal deaths, primarily due to severe bleeding. The World Health Organization(WHO 2024) estimates that approximately 287,000 maternal deaths occurred worldwide in 2022, equating to almost 800 deaths per day. In Indonesia, abortion is among the leading causes of maternal mortality, alongside hemorrhage, hypertensive disorders, and infections.(Kesehatan et al. 2023) In Medan, North Sumatra, the maternal mortality rate remains high. Data from 2023 show 27 maternal deaths out of 33,497 live births, indicating an increasing trend compared to previous years.(Wulandari, Jannah & Ludin 2025) Various studies have identified

maternal age, education, economic status, and previous abortion as major risk factors contributing to abortion.(Rundjan et al. 2020)

Maternal age is one of the most influential factors associated with the risk of abortion. Women who conceive at a very young age (<20 years) or at an advanced maternal age (>35 years) are more likely to experience pregnancy complications, including miscarriage and spontaneous abortion. Younger mothers tend to have immature uterine and hormonal functions that may hinder pregnancy maintenance, whereas older mothers face declining oocyte quality and an increased risk of chromosomal abnormalities. This highlights the importance of pregnancy planning within the optimal reproductive age to minimize complications.

Furthermore, education level and economic status play crucial roles in abortion occurrence. Women with lower education levels generally have limited knowledge about reproductive health, antenatal care, and early recognition of pregnancy danger signs. Poor economic conditions may also restrict access to quality healthcare services, including regular antenatal check-ups. In addition, a mother's medical history, such as previous abortions, chronic diseases, or obstetric complications, significantly increases the likelihood of recurrent abortion. Therefore, preventive and promotive efforts through reproductive health education, consistent antenatal care, and improved access to maternal healthcare services are essential to reduce abortion incidence and its contribution to maternal mortality.

Research Method

This study employed a quantitative analytic method with a cross-sectional design.(Siregar et al. 2022) The sample consisted of 50 pregnant women who experienced abortion in 2024 at Haji Hospital Medan, selected through total sampling. Data were obtained from medical records and analyzed using univariate and bivariate analysis, particularly the Chi-square test, to identify relationships between variables.(Sitanggang et al. 2022)

The independent variables studied included maternal age, educational level, economic status, abortion history, and medical history, while the dependent variable was the occurrence of abortion.(Sari Sembiring et al. 2022)

Result

The results of Determinant Factors of Abortion Occurrence Among Pregnant Women at Haji General Hospital Medan, North Sumatra Province, in 2025. This study was conducted among 50 pregnant women who experienced abortion at Haji Hospital Medan in 2024. The research used a cross-sectional design with total sampling technique. The majority of respondents were aged <20 and >35 years (72%), had low educational attainment (SD, SMP, SMA) (68%), and had economic status below the provincial minimum wage (68%). Regarding abortion history, 42% had experienced previous abortion, while 14% had a medical history.(Evi et al. 2023)

1. Respondent characteristics based on maternal age

The majority of respondents were in the age groups <20 years and >35 years, accounting for 36 women (72%), while only 14 women (28%) were in the 20–35 years age group. According to WHO (2023), extreme maternal ages are associated with higher risks of pregnancy complications, including abortion. Younger women (<20 years) may still be in a growth phase, which can affect fetal development, while older women (>35 years) face age-related reproductive challenges (Ertiana et al., 2024).

2. **Respondent characteristics based on educational level**

A total of 34 women (68%) had low educational levels (elementary to high school), and 16 women (32%) had higher education (diploma, bachelor's, master's). Low education is closely linked to poor awareness and knowledge regarding antenatal care and reproductive health, which may increase abortion risk (Yani et al., 2024).

4. **Respondent characteristics based on economic status**

Most respondents (34 women or 68%) had incomes below the Provincial Minimum Wage (UMP), while 16 women (32%) had higher incomes. Limited economic resources reduce access to adequate nutrition, routine antenatal examinations, and quality healthcare services, factors that increase abortion risk (Gultom et al. 2025); Profil Dinas Kesehatan Kota Medan, 2023).

3. **Respondent characteristics based on abortion history**

A total of 21 women (42%) had a history of previous abortion, while 29 women (58%) had no abortion history. According to previous studies, women with a history of abortion have a higher risk of recurrence due to possible anatomical or hormonal abnormalities.(Marlina. et al. 2020)

5. **Respondent characteristics based on medical history**

Most respondents (86%) did not have a medical history, while only 7 women (14%) had a history of medical conditions such as infections, anemia, diabetes, or heart disease. The analysis showed no significant relationship between medical history and abortion occurrence (p = 0.684), similar to findings by Dzakiyah (2021)

Table 1. Operational Definition Table Determinant Factors of Abortion Occurrence Among Pregnant Women at Haji General Hospital Medan, North Sumatra Province, in 2025

Variable	Operational Definition	Indicator	Measuring Tool	Scale
Maternal Age	The age of the mother during pregnancy that can affect the risk of abortion.	1. <20 years and 20–35 years 2. 20-35 years	Medical Record	Ordinal
Education Level	The highest level of formal education completed by the mother, which affects her knowledge and behavior in	1. Low (Elementary, Junior High, Senior High School) 2.High (Diploma,	Medical record	Ordinal

	maintaining pregnancy health.	Bachelor, Master)		
Economy Status	The mother's average monthly income compared to the Provincial Minimum Wage (UMP), influencing access to nutrition and health services.	1. < Provincial Minimum Wage 2.> Provincial Minimum Wage	Medical Record	Nominal
History of abortion	History of having experienced abortion in previous pregnancies, increasing the risk of recurrence	1. Yes 2. No	Medical Record	Ordinal
Medical History	The presence of any medical conditions or diseases in the mother that may affect pregnancy outcomes.	1. Yes 2. No	Medical Record	Ordinal

Discussion

The results of this study show that maternal age, educational level, economic status, and history of abortion have significant associations with the incidence of abortion among pregnant women at Haji General Hospital Medan. Meanwhile, medical history was found to have no significant relationship.

1. Maternal Age

This study found that mothers who were <20 years and >35 years old had a higher risk of experiencing abortion compared to mothers aged 20–35 years. According to Manuaba (2018), maternal age below 20 years is considered biologically immature, and the reproductive organs are not fully ready for pregnancy, which can lead to a higher risk of abortion. Similarly, mothers aged above 35 years have decreased reproductive organ function, a higher risk of chromosomal abnormalities, and poorer general health status, all of which contribute to increased abortion risk.

2. Educational Level

Low educational level (elementary, junior high, and senior high school) was significantly associated with abortion in this study. Mothers with low education tend to have limited knowledge regarding pregnancy care, nutritional needs, and danger signs during pregnancy. According to Notoatmodjo (2012), education influences an individual's ability to understand and apply health information.

Poor knowledge may result in delayed or inadequate antenatal care, increasing the risk of abortion.

3. Economic Status
The results indicated that mothers with economic status below the Provincial Minimum Wage (UMP) were more likely to experience abortion. Economic constraints can limit access to quality health services and adequate nutrition, both of which are essential for a healthy pregnancy. Notoatmodjo (2012) explains that economic status is closely related to the ability to meet health needs, including the ability to attend regular antenatal care visits and purchase necessary supplements.

4. History of Abortion
A significant relationship was found between history of abortion and abortion occurrence. Mothers with a previous history of abortion are more susceptible to experiencing abortion again in subsequent pregnancies. This could be due to the presence of anatomical defects, hormonal imbalances, or underlying chronic health conditions (Prawirohardjo, 2016).

5. Medical History
In this study, medical history did not show a significant association with abortion occurrence. Although some diseases such as hypertension, diabetes mellitus, anemia, and infections can affect pregnancy outcomes, most respondents in this study did not have a significant disease history. Similar findings were also reported by Dzakiyah (2021), who found that other factors such as age and education had a stronger influence on abortion than disease history.

Comparison with Previous Studies

These findings are consistent with research by Yani et al. (2024) and Ertiana et al. (2024), which both reported that maternal age, education, and economic status significantly influence abortion incidence. The consistency of results across different studies strengthens the evidence that these factors are critical determinants of abortion.

Conclusion and Suggestion

Conclusion

Based on the research results and the previous discussion, the following conclusions can be drawn:

1. There is a significant relationship between maternal age and the incidence of abortion. The Chi-square test showed a p-value of 0.046, which is less than 0.05, indicating a significant association between age and abortion occurrence.
2. There is a significant relationship between educational status and the incidence of abortion. The Chi-square test showed a p-value of 0.041, which is less than 0.05, indicating a significant association between educational status and abortion occurrence.
3. There is a significant relationship between economic status and the incidence of abortion. The Chi-square test showed a p-value of 0.041, which is less than 0.05, indicating a significant association between economic status and abortion occurrence.
4. There is a significant relationship between abortion history and the incidence of abortion. The Chi-square test showed a p-value of 0.034, which is less than 0.05, indicating a significant association between abortion history and abortion occurrence.
5. There is no significant relationship between medical history and the incidence of abortion. The p-value obtained was 0.684, which is greater than 0.05, indicating no significant association between medical

history and abortion occurrence Suggestions

1. For Health Workers

It is expected that health workers will enhance reproductive health education and be more active in providing education to women of reproductive age regarding reproductive health. This aims to reduce the incidence of pregnancy complications, especially abortion cases, by providing knowledge to pregnant women and explaining the possible risks they may face during pregnancy.

2. For Educational Institutions

Educational institutions are expected to strengthen promotive and preventive efforts toward abortion incidence by reinforcing antenatal care learning programs. This can help improve midwifery students' skills, knowledge, and insight, and this report can serve as a reference and reading material to support their academic process.

3. For Future Researchers

Future researchers are suggested to conduct studies with a larger sample size and use more complex analytical designs to strengthen research data. This is expected to provide a more in-depth understanding of factors associated with abortion incidence and to encourage more specific studies.

References

Dinas Kesehatan Provinsi Sumatera Utara, 2024, 'Provinsi Sumatera Utara Tahun 2024_'.

Evi, F., Waris Nainggolan, A., Purba, E.M., Manurung, H.R., Tinggi, S., Kesehatan, I. & Medan, M.H., 2023, *Faktor-Faktor Yang Mempengaruhi Terjadinya Baby Blues Pada Ibu Postpartum Di Puskesmas Idi Rayeuk Kabupaten Aceh Timur Tahun 2023*.

Fatem Hamama, 2019, 'Adminjurnalojs,+2'.

Gultom, F.M., Simamora, L., Situmorang, T.S. & Sembiring, M.B., 2025, 'Hubungan Pengetahuan Ibu Tentang Kb Pasca Salin Dengan Keikutsertaan Menjadi Akseptor Kb Di Rsu Balimbingan Kota Pematang Siantar', *Inovasi Kesehatan Global*, 32–39.

Kementrian Kesehatan Republik Indonesia, 2022, *Profil Kesehatan Indonesia 2022*.

Kesehatan, J., Medis Dan Farmasi, R., Sebayang, W.B., Magdalena Tbolon, C., Ritonga, F., Pasaribu, D., S-, P., Universitas Imelda Medan, Kebidanan & Universitas Imelda Medan, Keperawatan, 2023, 'Juk-Medifa The Relationship Between Age Of The Mother With The Incidence Of Abortion And Types Of Delivery In Imelda Rsu Indonesia Workers In Medan-Wellina Br Sebayang, Et All The Relationship Between Age Of The Mother With The Incidence Of Abortion And Types Of Delivery In Imelda Rsu Indonesia Workers In Medan'.

Miring, E.P., Posisi, D., Duduk, S., Persalinan, P., Ii, K., Mengurangi, U., Dalam, T., Normal, P., Rhidos, D.R., Simbolon, Marina L, All, E., Simbolon, Marlina L,

Pangaribuan, I.K. & Sinaga, K., 2020, 'Efektifitas Posisi Miring Dan Posisi Setengah Duduk Pada Persalinan Kala Ii Untuk Mengurangi Trauma Dalam Persalinan Normal Di Rsu. Rhidos', *Dinamika Kesehatan Jurnal Kebidanan Dan Keperawatan*, 11(2), 2549–4058.

Nurmawan, Siti . & Medan, M.H., 2022, *Science Midwifery Factors Influencing Knowledge Of Postpartum Mothers About Baby Blues In Desmawati Clinic Pancur Batu District, District Deli Serdang Year 2020*, Vol. 10, Online.

Rundjan, L., Wahyuningsih, R., Oeswadi, C.A., Marsogi, M. & Purnamasari, A., 2020, 'Oral Nystatin Prophylaxis To Prevent Systemic Fungal Infection In Very Low Birth Weight Preterm Infants: A Randomized Controlled Trial', *Bmc Pediatrics*, 20(1).

Sari Sembiring, I., Sakdiyah, H., Dani, S. & Mitra, Stik., 2022, *Science Midwifery*, Vol. 10, Online.

Siregar, A.E., Sinaga, R., Surbakti, I.S., Sari, J., Sari, R.P. & Sari, D.P., 2022, 'Faktor-Faktor Yang Berhubungan Dengan Minat Kunjungan Ulang Antenatal Care Di Klinik Pratama Sahabat Bunda Tahun 2022', *Jurnal Medika Husada*, 3(1), 2023.

Sitanggang, T., Dalimunthe, T., Marjuang Purba, E., Nurmawan Sinaga, S., Natalia Sinuhaji, L., Purnama Sari, E. & Tinggi Ilmu Kesehatan Mitra Husada Medan, S., 2022, 'Factors Associated With Compliance Of Pregnant Women In Consuming Fe Tablets In The Working Area Of The Pardamean Health Center, Pematang Siantar City In 2022', *Jurnal Eduhealth*, 13(02), 2022.

Who, 2024, *Preventing Unsafe Abortion*.

Wulandari, Rr.C.L., Jannah, M. & Ludin, P.F., 2025, 'The Effectiveness Of Using The Modern Reminder My Therapy Application On Fe Tablet Consumption Adherence', *Jurnal Kebidanan*, 14(2).