


## Analysis Of The Relationship Between Risk Factors Hemorrhoids In Pregnant Women In Sinjai District

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Article Info	ABSTRACT
<b>Keywords:</b> Hemorrhoids, Pregnancy, Constipation	Pregnancy often causes various changes in a woman's body , one of which is hemorrhoids , which generally occur in the second and third trimesters . This study aims to analyze the relationship between risk factors such as trimester of pregnancy , defecation position , and constipation with the incidence of hemorrhoids in pregnancy women in Sinjai Regency. The method used is an analytical observational approach with a case-control design at the Restu Ibu Maternity Clinic , with the case group consisting of pregnant women who experienced hemorrhoids and a control group who did not experience them . Data collection was carried out through medical records and direct interviews , and statistical analysis using the Chi- square test . The results showed that constipation had been significant relationship with the incidence of hemorrhoids ( $p = 0.003$ ), while parity and defecation position factors did not show a significant relationship . This study suggests that constipation management should be the main step in preventing hemorrhoids in pregnancy women , as well as providing important insights for health workers and the community to increase awareness of hemorrhoid prevention during pregnancy .
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### INTRODUCTION

Pregnancy is a natural process experienced by a woman, but it brings various significant changes, both physically and psychologically. These changes occur as a form of body adaptation to the growth and development of the fetus in the womb. Physically, pregnant women experience weight gain, hormonal changes, and adjustments to internal organs to support pregnancy. Meanwhile, from a psychological perspective, pregnant women can also experience emotional changes influenced by hormones, mental readiness to face childbirth, and concerns about the condition of the fetus they are carrying.

Along with the changes that occur during pregnancy, various complaints are often experienced by pregnant women, both in the first, middle, and final trimesters of pregnancy. In the first trimester , one of the most common complaints is nausea and vomiting or what is known as morning sickness. sickness , which can interfere with daily activities. Entering the

second and third trimesters, hormonal changes and pressure from the growing fetus can cause various other disorders such as constipation, varicose veins, urinary disorders, and hemorrhoids. This condition often causes discomfort and, in some cases, can affect the overall quality of life of pregnant women.

One of the problems that is quite often experienced during pregnancy is hemorrhoids or piles, which occur due to increased pressure on the blood vessels around the anus. This condition can be triggered by various factors, such as constipation that often occurs during pregnancy, increased blood volume, and pressure from the uterus that is getting bigger. Hemorrhoids in pregnant women can cause pain, itching, and even bleeding during bowel movements, which of course can interfere with the comfort of pregnant women. Therefore, it is important for pregnant women to understand the risk factors that can cause hemorrhoids and how to prevent them so that they can go through pregnancy more comfortably and healthily.<sup>1</sup>

Hemorrhoids are a disease of the anorectal region, which is abnormal with general symptoms of bleeding from the anus. Hemorrhoids are a marked abnormality with existence dilation and inflammation of the veins in the anus from the hemorrhoidal plexus.<sup>2</sup> Hemorrhoids are divided into two, namely internal hemorrhoids in the form of dilation of the submucosal veins above the linea dentata, while external hemorrhoids are in the form of dilation of the subcutaneous veins below or outside the linea dentate.<sup>3</sup>

Hemorrhoids located near the anal canal is known as hemorrhoids. Both men and also woman prone to experience hemorrhoids, hemorrhoids can occur at the age of whatever, and usually No show symptoms. Young woman often experience hemorrhoids, but more general happen is during pregnancy and postpartum period. Hemorrhoids in pregnant women are common and are a physiological condition that accompanies pregnancy. Pregnancy will increase the incidence of hemorrhoids, where more than 50% of pregnant women are found to have this case. The risk will increase by 20-30% after the second or more pregnancies.<sup>4</sup>

Hemorrhoids are common in pregnant women in the second or third trimester of pregnancy. Increased intra-abdominal pressure due to fetal growth and changes in the hormone progesterone causes hemorrhoidal veins to widen. Progesterone also contributes to constipation by slowing down bowel movements.<sup>5</sup>

Hemorrhoids are not too dangerous, either for the mother or the fetus. Although blood often comes out of the anus, it will not transmit disease to the fetus because hemorrhoids are not directly related to the fetus that comes out of the vagina. The danger of hemorrhoids in pregnant women is the occurrence of bleeding that can cause anemia. In most women, hemorrhoids caused by pregnancy are temporary hemorrhoids, which means they will disappear some time after giving birth.<sup>4</sup>

Based on a case study conducted in the pregnancy class of the Balong Health Center, Ponorogo Regency in January 2020, through interviews with 10 pregnant women, 7 of them said they had hemorrhoids around the anus. 4 of them had bloody bowel movements and 4 of them had discomfort and itching around the anus.<sup>5</sup>

Based on considerations of data on the incidence of hemorrhoids in pregnant women which is quite high and the high pregnancy rate at the Restu Ibu Maternity Clinic, the author is interested in conducting research on the characteristics of risk factors for hemorrhoids in pregnant women.

Based on this study, it is expected that the results obtained can strengthen existing theories regarding risk factors for hemorrhoids in pregnant women. With this study, it is also expected to provide a deeper understanding of the relationship between parity, defecation position, and constipation with the incidence of hemorrhoids in pregnant women. This can be the basis for further research to explore more deeply into other factors that may contribute to the incidence of hemorrhoids.

In addition, this study is also expected to provide practical benefits for health workers in providing education to pregnant women regarding hemorrhoid prevention. By understanding the risk factors that contribute to the occurrence of hemorrhoids, health workers can develop more effective prevention strategies, either through changes in diet, physical activity, or recommended defecation positions. This evidence-based education will be very useful in increasing awareness and understanding of pregnant women regarding the importance of maintaining health during pregnancy.

Finally, this study can also be a useful reference for the wider community, especially pregnant women and their families. The information obtained from this study can be used as a guideline in taking preventive measures to reduce the risk of hemorrhoids during pregnancy. Thus, this study not only contributes to the academic field, but also has a direct impact on the health of pregnant women and improving their quality of life.

## RESEARCH METHODS

This study uses an analytical observational method with a case study approach. control to determine the relationship between risk factors for hemorrhoids in pregnant women at the Restu Ibu Maternity Clinic, Sinjai Regency. In this study, the case group consisted of pregnant women who experienced hemorrhoids, while the control group was pregnant women who did not experience hemorrhoids. With this approach, it is expected to find a relationship between independent variables, such as trimester of pregnancy, position during defecation, and constipation, to the incidence of hemorrhoids in pregnant women.

This study was conducted at the Restu Ibu Maternity Clinic, Sinjai Regency, with the implementation period from August to September 2024. The sample in this study consisted of pregnant women who experienced hemorrhoids and pregnant women who did not experience hemorrhoids, who were selected using non- probability sampling techniques for case groups and simple random sampling for the control group. The sampling process was carried out in the period from May to September 2024 to obtain an adequate number of samples for statistical analysis.

The variables in this study are divided into independent variables and dependent variables. Independent variables include the occurrence of pregnancy trimester , position during defecation, and constipation, while the dependent variable is the occurrence of hemorrhoids in pregnant women. The data used in this study came from medical records and

direct interviews with respondents. Data analysis was carried out univariately to see the distribution of each variable, and statistical tests were carried out using the Chi- square method using SPSS Statistics software to determine the relationship between the variables studied.

Inclusion and exclusion criteria were applied to ensure data validity. For the case group, inclusion criteria included pregnant women who experienced hemorrhoids with medical record evidence, were in the first to third trimester , and were willing to participate in the study. While exclusion criteria included patients who experienced hemorrhoids but were not pregnant, pregnant women with a history of hemorrhoids before pregnancy, and pregnant women who were not willing to participate in the study. Meanwhile, the control group consisted of pregnant women who did not experience hemorrhoids, were undergoing pregnancy control at the clinic, and were willing to participate in the study.

In this study, operational definitions of variables were outlined to ensure uniformity in data measurement. Hemorrhoids in pregnant women were measured based on anamnesis with the categories "Yes" and "No". The occurrence of constipation was identified through interviews with the same categories. Trimesters of pregnancy were divided into three groups based on gestational age, namely the first trimester (0-13 weeks), the second trimester (14-26 weeks), and the third trimester (27-40 weeks). Defecation positions were categorized into sitting and squatting positions, while parity was measured based on the number of births experienced, classified into primigravida and multigravida.

The flow of this research begins with planning, including the preparation of the research design, identification of variables, and determination of samples and inclusion- exclusion criteria . Furthermore, data collection was carried out through medical records and interviews with respondents. After the data was collected, statistical analysis was carried out using the Chi- square test to test the relationship between risk factors and the incidence of hemorrhoids in pregnant women. The results of this study are expected to provide useful information for health workers, academics, and the community in efforts to prevent and treat hemorrhoids in pregnant women.

## RESULTS AND DISCUSSION

### Results

#### Univariate Analysis

**Table 1** Distribution of Respondents by Age

Age	Hemorrhoids				Total	
	Control		Case		n	%
	n	%	n	%		
< 30 Years	15	53.6	13	46.5	28	100
> 30 Years	13	46.5	15	53.6	28	100
Total	28	50.0	28	50.0	56	100

(Source: Secondary Data, 2024)

Based on table 1, the total number of respondents reached a total of 56 pregnant women. There were control groups and case groups in this study. The age of respondents

who experienced hemorrhoids in the case group was 13 (46.5%) respondents aged <30 years and for ages > 30 years the number of respondents was 15 (53.6%) people. While in the control group, respondents aged <30 years were 15 (53.6%) respondents and for ages > 30 years there were respondents with a total of 13 (46.5%) respondents.

**Table 2** Respondent Trimester Distribution

Trimester	Hemorrhoids				Total	
	Control		Case		n	%
	n	%	n	%		
Trimester 1	10	90.9	1	9.1	11	100
Trimester 2	10	52.6	9	47.4	19	100
Trimester 3	8	30.8	18	69.2	26	100
Total	28	50.0	28	50.0	56	100

(Source: Secondary Data, 2024)

Based on table 2, regarding the distribution of trimesters of pregnancy in pregnant women consisting of trimester 1, trimester 2 and trimester 3, it was found that most of the samples in pregnant women were in the 3rd trimester in the case group totaling 18 respondents (69.2%) and in the control group totaling 8 respondents (30.8%). Meanwhile, in the 2nd trimester, several respondents were also obtained with the case group totaling 9 respondents (47.4%) and the control group totaling 10 respondents (52.6%). While in the 1st trimester, only 1 respondent (9.1%) was obtained and in the control group totaling 10 respondents (90.9%).

**Table 3** Frequency Distribution of Respondents' Degree of Hemorrhoids

Degrees Hemorrhoids	Frequency (n)	Percentage (%)
Normal	28	50.0
Grade 1	10	17.9
Grade 2	11	19.6
Grade 3	6	10.7
Grade 4	1	1.8
Total	56	100

(Source: Secondary Data, 2024)

Based on table 3, respondents have a diagnosis of hemorrhoid degrees consisting of grade 1, grade 2, grade 3 and grade 4. With a sample size of 56, including 28 control groups (normal) and 28 case groups (hemorrhoids). In the case sample, the majority of respondents experienced hemorrhoids with grade 1-2. In grade 1, there were 10 respondents (17.9%), grade 2 had 11 respondents (19.6%), grade 3 had 6 respondents (10.7%) and grade 4 had only 1 respondent (1.8%).

## Bivariate Analysis

### The Relationship Between Parity and Hemorrhoids

**Table 4** Relationship between Parity and Hemorrhoids

Parity	Hemorrhoids				Total	p-value *	
	Normal		Hemorrhoids				
	n	%	n	%			
Primigravida	10	55.6	8	44.4	18	100	0.567

Parity	Hemorrhoids				Total	p-value *
	Normal		Hemorrhoids			
	n	%	n	%		
Multigravida	18	47.4	20	52.6	38	100
Total	28	50.0	28	50.0	56	100

(\* Chi square test)

Based on table 4, the results of the chi square test on SPSS showed insignificant results with a significance value of  $p = 0.567$  ( $p > 0.05$ ), which means that there is no significant relationship between parity and hemorrhoid cases in pregnant women.

#### Relationship between Defecation Position and Hemorrhoids

**Table 5** Relationship between Defecation Position and Hemorrhoids

Bowel Movement Habits	Hemorrhoids				Total	p-value *
	Normal		Hemorrhoids			
	n	%	n	%		
Squat	22	52.4	20	47.6	42	100
Sit	6	42.9	8	57.1	14	100
Total	28	50.0	28	50.0	56	100

(\* Chi square test)

Based on table 5, the results of the chi square test on SPSS showed insignificant results with a significance value of  $p = 0.537$  ( $p > 0.05$ ), which means that there is no significant relationship between bowel habits and hemorrhoid cases in pregnant women in Sinjai Regency.

#### The Relationship Between Constipation and Hemorrhoids

**Table 6** Relationship between Constipation and Hemorrhoids

Constipation	Hemorrhoids				Total	p-value *
	Normal		Hemorrhoids			
	n	%	n	%		
Yes	9	31.0	20	69.0	29	100
No	19	70.4	8	29.6	27	100
Total	28	50.0	28	50.0	56	100

(\* Test Chi square)

Based on table 6, the results of the chi square test on SPSS show significant results with a significance value of  $p = 0.003$  ( $p < 0.05$ ), which means that there is a significant relationship between constipation and cases of hemorrhoids in pregnant women.

### Discussion

#### Discussion of Research Sample Characteristics

Based on research conducted at the Restu Ibu Maternity Clinic in Sinjai Regency, the study sample consisted of 56 pregnant women with characteristics categorized based on age, trimester of pregnancy, and degree of hemorrhoids. From the results of the study, it is known that the majority of respondents were over 30 years old. This result is in line with the research of Angela D (2024) in Italy, which found that 57.3% of pregnant women with hemorrhoids were in the age group >30 years. This can be explained by the process of degeneration of body tissue which causes weakening of the sphincter muscle tone, coupled

with repeated pressure from feces and the habit of straining. In addition, hormonal and mechanical factors such as the growth of the uterus which is getting bigger during pregnancy also increase the risk of hemorrhoids.

In the category of pregnancy trimester, the results of the study showed that the majority of pregnant women who experienced hemorrhoids were in the third trimester, with a total of 26 people, of which 69.2% came from the case group. The Boughton RS study (2024) in Dublin also supports this finding, where 77% of patients with anorectal symptoms related to hemorrhoids were in the third trimester. The main factor causing this condition is pressure from the enlarging uterus, which causes compression of the blood vessels around the anus, increases intra-abdominal pressure, and causes venous stasis in the pelvic area. The combination of these factors increases the prevalence of hemorrhoids in the last trimester of pregnancy.

Based on the severity of hemorrhoids, the majority of samples experienced grade II hemorrhoids, which was 19.6% of the total respondents. Grade II hemorrhoids are characterized by lumps that appear during bowel movements but can return spontaneously. According to research by D Alfonso (2024), many hemorrhoid sufferers do not immediately seek medical help because they feel embarrassed or consider the condition to be normal in pregnancy. As a result, hemorrhoids are often only treated when the symptoms are more severe.

### **The Relationship between Parity, Defecation Position, and Constipation with the Incidence of Hemorrhoids in Pregnant Women**

Based on the results of the correlation test, there was no significant relationship between parity and the incidence of hemorrhoids in pregnant women ( $p = 0.567$ ). This result is in line with the study by Aminu B (2020) in Nigeria, which also found no significant relationship between parity and hemorrhoids during pregnancy. However, several other studies, such as that conducted by Iriyanto SF (2018), found a significant relationship between parity and hemorrhoids with  $p = 0.001$ . Although the results of this study do not show a direct correlation, some literature states that a greater number of pregnancies can increase the risk of hemorrhoids due to repeated physiological changes and increased intra-abdominal pressure due to previous pregnancies.

The results of the study also showed that the position of defecation did not have a significant relationship with the incidence of hemorrhoids in pregnant women ( $p = 0.537$ ). The majority of respondents in this study used the squatting position when defecating, both in the case group and the control group. Fridolin W's study (2014) at Dr. Soedarso Pontianak Hospital also obtained similar results with a  $p$  value of 0.639. In theory, the squatting position when defecating is more beneficial because it improves the anorectal angle, facilitates the excretion of feces, and reduces the risk of constipation. Conversely, the sitting position can cause greater pressure on the veins in the rectal area, which has the potential to increase the risk of hemorrhoids. However, because the majority of the population in Sinjai Regency still uses squatting toilets, this factor may not be a significant variable in this study.

Meanwhile, constipation was found to have a significant relationship with the incidence of hemorrhoids in pregnant women ( $p = 0.003$ ). This result is supported by the study of Togo

A (2024) in Mali, which showed a significant relationship between constipation and hemorrhoids with  $p = 0.001$ . Constipation is defined as difficulty defecating with symptoms such as hard stools, a frequency of bowel movements less than three times a week, and excessive straining. During pregnancy, constipation often occurs due to hormonal changes, especially increased progesterone which causes relaxation of intestinal smooth muscles and slows down gastrointestinal motility.

hormonal factors, changes in diet with low fiber consumption and decreased physical activity during pregnancy also contribute to constipation. Anatomical changes due to uterine growth that presses on the digestive tract further worsen this condition. The accumulation of these factors causes difficulty in defecating, which ultimately encourages excessive straining behavior. As a result, pressure in the blood vessels around the anus increases, causing venous stasis and the development of hemorrhoids in pregnant women.

## CONCLUSION

Based on the results of this study, it can be concluded that age, trimester of pregnancy, and degree of hemorrhoids play a role in the occurrence of hemorrhoids in pregnant women. Age over 30 years tends to increase the risk of hemorrhoids due to tissue degeneration and mechanical pressure during pregnancy. The third trimester is also the most risky phase due to increased intra-abdominal pressure due to uterine enlargement, which causes compression of the blood vessels around the anus. In addition, the majority of hemorrhoid cases in pregnant women are grade II, which is characterized by lumps that appear during bowel movements but can return spontaneously. Psychological factors, such as embarrassment to consult, are also obstacles to early treatment of hemorrhoids during pregnancy. In addition to these factors, this study also found that constipation had a significant relationship with the incidence of hemorrhoids, while parity and defecation position did not show a significant correlation. Constipation during pregnancy can be triggered by hormonal changes, diet, and decreased physical activity that contribute to difficulty defecating, thereby increasing the risk of excessive straining that leads to hemorrhoids. Thus, it is important for pregnant women to adopt a healthy lifestyle, such as consuming high-fiber foods, maintaining hydration, and doing light physical activity to reduce the risk of constipation and hemorrhoids. Awareness of risk factors and early prevention efforts can help reduce the incidence of hemorrhoids during pregnancy and improve the quality of life of pregnant women.

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