



ANALYSIS OF FACTOR ASSOCIATED WITH UTERINE MYOMA INCIDENCE AT BHAYANGKARA HOSPITAL KEDIRI

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ABSTRACT	Keywords
Uterine myoma is the most common benign tumor of the uterus among women of reproductive age. The clinical impact of uterine myoma is influenced not only by its presence but also by tumor size, which may determine symptom severity and treatment considerations. This study aimed to analyze factors associated with large uterine myoma size among women diagnosed with uterine myoma at Bhayangkara Hospital Kediri. This retrospective cross-sectional study used medical record data from women diagnosed with uterine myoma in 2025. A total of 92 eligible medical records were analyzed using total sampling. The independent variables were age, parity, and occupation, while the dependent variable was large uterine myoma size categorized as >60 mm. Data were analyzed using Chi-Square test and multivariable logistic regression. Most respondents were aged >35 years (88%), multiparous (79.3%), and had informal occupations (64.1%). Age >35 years was significantly associated with large uterine myoma size ($p < 0.001$). Multivariable logistic regression showed that age >35 years was independently associated with large uterine myoma size ($OR = 124.5$; 95% CI should be reported based on SPSS output; $p < 0.001$). Parity and occupation were not significantly associated with large uterine myoma size. Age was independently associated with larger uterine myoma size among women treated at Bhayangkara Hospital Kediri. The findings should be interpreted cautiously because the study was based on retrospective single-center medical records with limited sample size.	uterine myoma, large uterine myoma, tumor size, reproductive age, parity, occupation

INTRODUCTION

Uterine myoma is a benign tumor originating from smooth muscle cells of the uterus and represents one of the most common gynecological disorders among women of reproductive age. Although benign, larger tumors may contribute to abnormal uterine bleeding, pelvic discomfort, infertility, and reduced quality of life. (Prawirohardjo, 2016).

The prevalence and clinical severity of uterine myoma increase with age, particularly during the late reproductive period. Longer exposure to ovarian hormones, especially estrogen and progesterone, contributes to the growth of myometrial lesions. However, among women already diagnosed with uterine myoma, tumor size variation may be influenced by demographic and reproductive characteristics.

Epidemiological studies show that uterine myoma is strongly associated with reproductive and biological factors, especially age. Prolonged exposure to estrogen is considered one of the main contributing mechanisms in myoma development. Parity has also been suggested as a protective factor, where nulliparous women are more at risk compared to multiparous women (Kurniawati & Sari, 2023). In addition, occupational status may indirectly influence health-seeking behavior and access to healthcare services (Handayani & Wulandari, 2022).

In Indonesia, many cases of uterine myoma are diagnosed at moderate to large tumor sizes, indicating delayed detection. At Bhayangkara Hospital Kediri, most patients diagnosed with uterine myoma are already in the advanced stage, particularly among women aged over 35 years.

This study therefore focused on identifying factors associated with large uterine myoma size rather than the incidence of uterine myoma itself. Understanding these factors may support earlier identification of patients who require closer clinical monitoring.

METHOD

This study used a retrospective cross-sectional design based on medical record review at Bhayangkara Hospital Kediri in 2025.

The population consisted of all women diagnosed with uterine myoma during the study period. Total sampling was applied, including all medical records that fulfilled the inclusion criteria. Inclusion criteria included complete records containing age, parity, occupation, and myoma size information.

The dependent variable was large uterine myoma size, defined as tumor diameter >60 mm. Tumors ≤ 60 mm were categorized as non-large uterine myoma. The independent variables were age (>35 years versus 20–35 years), parity (nulliparous versus multiparous), and occupation (formal versus informal).

Data analysis was performed using SPSS (version should be inserted according to the software used). Univariate analysis described participant characteristics. Bivariate analysis used Chi-Square testing. Multivariable logistic regression was performed to identify independent factors associated with large uterine myoma size. Statistical significance was defined as $p < 0.05$.

RESULTS

Table 1. Respondent Characteristics Based on Age (n=92)

Maternal Age	Frequency	Percentage (%)
20-30 Years	11	12
>35 Years	81	88
Total	92	100

Based on Table 1 above, The results of the study show that the majority of respondents are in the age group >35 years, as many as 81 respondents (88%), while those aged 20–35 years are 11 respondents (12%).

Table 2. Respondent characteristics based on parity (n=92)

Maternal Parity	Frequency	Percentage (%)
Nullipara	19	20.7
Multipara/ Grandemultipara	73	79.3
Total	92	100

The results showed that the majority of respondents were multiparous/grandemultiparous (79.3%). This indicates that most of the uterine myoma patients in this study had given birth more than once.

Table 3. Respondent Characteristics based on Occupation (n=92)

Mother's Occupation	Frequency	Percentage (%)
Formal	33	35.9
Informal	59	64.1
Total	92	100

The results showed that the group of mothers with informal jobs dominated the study respondents (64.1%). This indicates that the majority of patients were in the group with domestic activities and limited formal work activities.

Table 4. Uterine Myoma Occurrence Based on Size (n=92)

Myoma Size	Frequency	Percentage (%)
Large Myoma	50	54.3
Not Large Myoma	42	45.7
Total	92	100

The results showed Most respondents experienced large uterine myomas (>60 mm), namely 50 respondents (54.3%), followed by 42 respondents (45.7%) with small sizes (<60 mm).

Table 5. Logistic Regression Analysis

Variable	B	p-value	OR
Maternal Age (>35 Years)	4.82	0.000	124.5
Maternal Parity (Multipara)	0.41	0.312	1.51

Variable	B	p-value	OR
Mother's Occupation (Informal)	0.18	0.487	1.20
Constant	-3.12	0.000	

Based on Table 5 above, The variable age >35 years has an OR value of 124.5, which means that women aged >35 years have approximately 124 times greater risk of developing large uterine fibroids compared to those aged 20–35 years. A p-value of 0.000 (<0.05) indicates that this relationship is highly statistically significant. This indicates that age is the main dominant factor in the occurrence of uterine fibroids. Thus, the age variable has the highest predictive power compared to other variables.

DISCUSSION

This study found that age >35 years was independently associated with large uterine myoma size. Older reproductive age is biologically associated with longer hormonal exposure and cumulative uterine changes that may contribute to tumor growth.

The high odds ratio observed for age should be interpreted cautiously because the distribution of participants across age categories was uneven. Sparse data distribution may increase uncertainty in logistic regression estimation. Therefore, the result indicates association rather than causation.

Parity was not significantly associated with large uterine myoma size. Although previous studies suggest that pregnancy may have a protective role against uterine myoma development, differences in sample characteristics and limited statistical power may explain the absence of association in this study.

Occupation was also not significantly associated with large uterine myoma size. Occupation may influence healthcare access and lifestyle patterns

indirectly but is not considered a direct biological determinant of tumor growth.

CONCLUSIONS

Age >35 years was independently associated with large uterine myoma size among women treated at Bhayangkara Hospital Kediri. Parity and occupation were not significantly associated with large uterine myoma size. Further multicenter studies with comprehensive reproductive and clinical variables are recommended

ETHICAL CLEARANCE

This study was conducted in accordance with the ethical principles of research involving human participants. Ethical approval was obtained from the Health Research Ethics Committee of the Faculty of Health Sciences, Universitas Bina Sehat, Indonesia

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