

Level of Awareness About Myoma Among Women in Barangay Busbus

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Abstract

This study aimed to assess the awareness of myoma among women in Barangay Busbus. It specifically sought to determine the socio-demographic profile of the respondents (age, ethnicity, education, marital status), their level of awareness regarding myoma (etiology, signs, symptoms, treatment, prevention, and management), and whether significant differences in awareness exist across different socio-demographic groups. A quantitative research method with a descriptive survey design was employed, using primarily primary data. Two hundred participants were selected through non-probability purposive sampling. Numerical data were analyzed quantitatively using frequency counts, percentages, weighted means, standard deviations, one-way ANOVA, and T-tests. The

respondents were primarily young, early-age adult Tausug women, mostly married, with a secondary level of education. The findings indicate a moderate level of myoma awareness among these women, suggesting gaps in knowledge that need attention. The study found no significant difference in awareness across socio-demographic data, highlighting the importance of other factors like healthcare access, communication channels, or cultural beliefs in shaping myoma awareness. The results underscore the physical, emotional, and social impacts of myoma, emphasizing the need for enhanced education and outreach to empower women with the knowledge to manage myomas effectively. Addressing the moderate awareness in Barangay Busbus requires a comprehensive

strategy involving policy changes, community programs, and further research. Implementing these recommendations can empower women with the necessary knowledge and resources to

manage myoma, improve their health, and seek timely medical care, ultimately leading to better health outcomes and well-being in the community.

Keywords: *myoma awareness, uterine fibroids, women's health, reproductive health, Barangay Busbus*

INTRODUCTION

Myoma, also known as uterine fibroids or leiomyomas, is a prevalent health concern among women of reproductive age. These non-cancerous tumors can vary in size and grow within or around the uterus. While generally benign, myomas can lead to complications if left unmanaged or detected late, including pain, abdominal swelling, excessive bleeding, anemia, and infertility. According to Cleveland Clinic, the global incidence and prevalence of uterine fibroids have increased in the past decade, with an average annual percentage change of 0.27% in the incidence rate. Research indicates that Asian women of Chinese descent have a higher risk of fibroid prevalence (21.8%). In the Philippines, leiomyoma uteri is the most frequent indication for gynecologic admissions, accounting for over 24% of reported cases nationwide in 2019. In 2022, IPHO Sulu Hospital reported approximately 18 cases of myoma, increasing by 19 cases the following year. However, due to limited access to health information, many women remain unaware of this condition until it progresses significantly. There is limited research on uterine fibroid awareness in Jolo, which has unique socio-economic, cultural, and healthcare contexts. Women's health issues, particularly those related to reproductive health, may not receive adequate attention due to cultural standards, resource limitations, or other barriers. This lack of awareness and knowledge about myoma can delay diagnosis and treatment, leading to severe health consequences. This study aims to address this gap and serve as a valuable resource to raise awareness about myoma. The findings will provide evidence of the need to educate and inform women about myoma in Jolo, empowering them to make informed decisions about their health and seek appropriate medical care. Prioritizing this issue and ensuring women have the knowledge and resources to control their reproductive health is crucial. This study will investigate women's knowledge about myoma, including its etiology, signs, symptoms, treatment, management, and prevention, specifically in Barangay Bus-bus. The results will aid healthcare workers in creating better health plans and actions and assist healthcare providers and community leaders in developing targeted efforts, such as education programs, improved healthcare access, and integrating myoma screening into routine services. By addressing the gap, healthcare professionals and policymakers can develop targeted interventions and public health strategies to improve awareness, early detection, and treatment options for women in Barangay Bus-bus or in Jolo, in general.

METHODOLOGY

This section details the methods, data sources, data collection instruments, sampling techniques, study procedures, and statistical analyses used in this research. The descriptions are comprehensive, aiming to enhance the reader's understanding of the statements made. This information is intended to guide those interested in applying the study's findings.

Research Design

This study employed a descriptive-quantitative research design, a method used to collect data to describe a phenomenon, situation, or population. This approach systematically describes and analyzes a population, phenomenon, or situation using numerical data, making it a valuable tool for understanding and describing a wide range of phenomena.

Research Locale

The study was conducted in Barangay Bus-bus, Jolo, Sulu, which had a total population of 38,650 according to the 2020 census, representing 28.16% of Jolo's total population. The area consists of 5,144 households, with an average of 7.12 members per household, and is ethnically diverse, including Sama or Badjao and Tausug groups. Bus-bus is located at approximately 6.0580, 121.0077 on the island of Jolo, with an elevation of approximately 5.6 meters or 18.4 feet above sea level. It shares a border with four other barangays: Asturias, Jolo, Sulu; Mauboh, Patikul, Sulu; San Raymundo, Jolo, Sulu; and Walled City (Poblacion), Jolo, Sulu.

Research Respondents

The study primarily focused on gathering data from primary respondents—individuals providing original, firsthand information directly to the researcher. These respondents included 200 women of reproductive age, ranging from 13 to 65 years old, from Barangay Bus-bus, irrespective of their marital status, educational background, and ethnicity. The interviews were conducted in their homes or comfortable locations, using a survey form developed between February and March 2024.

Sampling Design

A non-probability purposive sampling method was employed to select respondents and validate the study's outcomes. Unlike random sampling, this technique involves choosing participants based on specific criteria or characteristics relevant to the research. Purposive sampling, also known as judgmental, selective, or subjective sampling, allows the researcher to deliberately select participants with particular characteristics pertinent to the research question. The selected respondents were considered representative of their population, enabling an assessment of the level of awareness about myoma among women of reproductive age in Barangay Bus-bus.

Research Instrument

This research utilized a self-constructed survey questionnaire to measure the variables under study. The questionnaire's content was based on literature reviews and validated by three experts in the field. Data collection involved providing a letter to the validation team, a sample questionnaire, copies of related literature reviews, and the problem statement. The survey questionnaire was rated for relevance to the research objective using a scale: 3- Relevant (to be included); 2- Least Relevant (to be revised); 1- Not Relevant (to be removed). The survey questionnaires included socio-demographic information such as name, age, ethnicity, marital status, and educational attainment in the first part. The second part consisted of checklists to determine the level of awareness about myoma among women in Barangay Bus-bus, subdivided into four dimensions: etiology, signs and symptoms, treatment and management, and prevention. Each dimension included one-to-five questions. A 5-point Likert Scale was used to gather responses in Part II, where respondents indicated their level of awareness by selecting a score from one (1) to five (5), with 1 indicating not aware, 2 less aware, 3 moderately aware, 4 aware, and 5 well aware.

Ethical Standards

To ensure the well-being of participants, ethical procedures were strictly followed to prevent any discomfort, embarrassment, or physical harm. Informed consent was obtained in both written and verbal forms from all respondents. The study's purpose and objectives were thoroughly explained to each participant, with guarantees that all information provided would be protected. The privacy and confidentiality of the respondents were maintained, and any breach of information would result in consequences. Data collected was securely sealed, with access limited to the researchers to prevent leaks or third-party access. Participation in the study was voluntary, and respondents had the autonomy to refuse involvement.

Data Gathering Procedure

Following proposal approval, the initial step involved presenting a survey questionnaire translated into the Tausug language to the researchers' advisor for feedback and corrections. The questionnaire's content was validated by three experienced researchers, achieving a Cronbach's Alpha score of .609. Additionally, pilot testing was conducted to ensure reliability, resulting in a score of 8.12 in Cronbach's Alpha testing. After confirming the validity and reliability of the survey questionnaire, the researchers sought informed consent from the Barangay chairwoman of Bus-bus, which was promptly approved by the respected representative of the barangay. Subsequently, the survey questionnaires were distributed to the target participants in various locations within Barangay Bus-bus. Two hundred (200) copies of the questionnaires were successfully distributed and completed. Respondents were assured of the confidentiality and anonymity of their responses. The collected data were analyzed using the Statistical Package for Social Science (SPSS), along with various statistical tools, to address the questions outlined in the problem statement.

Statistical Treatment of Data

To facilitate data analysis, the Statistical Package for Social Science (SPSS) version 16 was utilized to answer the questions in the problem statement. Frequency distributions and percentages were used to describe the socio-demographic profile of the respondents. To determine the women's level of awareness about myoma, the researchers used weighted mean and standard deviation. One-way ANOVA and a T-test were employed to determine significant differences in the levels of awareness about myoma when data were grouped according to socio-demographic profile.

RESULTS AND DISCUSSIONS

This chapter presents the analysis and discussion of the key findings of the study, organized according to the variables in the conceptual framework, which also served as the analytical framework. The discussion is structured around the problem and its corresponding hypotheses. Quantitative data was collected using self-devised questionnaires.

Socio-Demographic Profile of the Respondents

The socio-demographic profile of the healthcare professionals includes factors such as age, civil status, educational attainment, employment status, number of trainings attended, and length of service. Table 1 indicates that 60% of the respondents are between 19 and 39 years old, 30% are between 40 and 65 years old, and 9% are between 13 and 18 years old. Approximately 98% of the respondents are from the

Tausug group, and only 2% are from the Badjao group. Regarding educational attainment, 41% of the respondents have reached the secondary level, 30% have reached the tertiary level, 11% are college graduates, and 7% are uneducated. Concerning marital status, 71% are married, and 29% are single.

The data from Table 1 suggests that the majority of the respondents in this study are in the 19-39 age bracket, representing young and early adulthood. Most are Tausug, married, and primarily have a secondary level of education. The study indicates that the respondents are in a group transitioning into traditional adult roles, highlighting the importance of education in shaping life course transitions, and facing unique challenges and opportunities regarding healthcare access (Lopez, M. et al. 2020).

Table 1. Socio-Demographic profile of the Respondents

VARIABLES	FREQUENCY	PERCENT
Age		
13-18 years old	19	9.5%
19-39 years old	121	60.5%
40-65 years old	60	30%
TOTAL	200	100%
Ethnicity		
Tausug	196	98%
Badjao	4	2%
TOTAL	200	100%
Education Attainment		
None	14	7%
Elementary Level	20	10%
Secondary Level	82	41%
Tertiary Level	61	30.5%
College Graduate	23	11.5%
TOTAL	200	100%
Marital Status		
Single	58	29%
Married	142	71%
TOTAL	200	100%

Level of Awareness about Myoma

In terms of Etiology

Table 2.1 presents the respondents' level of awareness regarding the etiology of myoma. The respondents indicated they were "moderately aware" of the following: Myoma are benign pelvic tumors in females that grow monoclonally from the smooth muscle cells of the uterus (M=2.86, SD=1.62). Myoma is a common tumor among women of reproductive age (M=2.69, SD=1.57). However, the respondents indicated they were "less aware" of the following: Myoma prevalence increases during the reproductive phase due to hormone-stimulated growth (M=2.53, SD=1.53). Nulliparous women are more commonly

affected by myoma than multiparous women ($M=2.47$, $SD=1.47$). Myoma could also lead to the end of pregnancy ($M=2.55$, $SD=1.44$). The total mean obtained was 2.622, corresponding to the "moderately aware" category, indicating that, in terms of etiology, the respondents have moderate knowledge or are moderately aware in general.

While women may have a basic understanding of the role of hormones in myoma development, they may not be fully aware of other contributing factors such as genetics, family history, and lifestyle choices. The data shows that women in Barangay Bus-bus have moderate awareness regarding the etiology of myoma, suggesting some understanding of these aspects. However, it also implies that there are gaps in knowledge that need to be addressed.

Table 2.1 Level of awareness in terms of Etiology

n=200

	Mean	Std. Deviation	Description
1. I am aware that myoma benign pelvic tumors in females that grow monoclonally from the smooth muscle cells of the uterine.	2.8600	1.62283	Moderately aware
2. I am aware myoma is common tumor among women at a reproductive age.	2.6950	1.57620	Moderately aware
3. I am aware that myoma increased prevalence during the reproductive phase due to hormone-stimulated growth.	2.5350	1.53314	Less aware
4. I am aware that nulliparous women are more commonly affected by myoma than multiparous women.	2.4700	1.47307	Less aware
5. I am aware that myoma could also end pregnancy.	2.5500	1.44497	Less aware
Total	2.622	1.3271	Moderately aware

(Legend: 1.00-1.50 not aware; 1.51-2.50 less aware; 2.51-3.50 moderately aware; 3.51-4.50 aware; 4.51-5.00 well aware)

In terms of Signs and Symptoms

Table 2.2 shows how well women know the signs and symptoms of myoma. People generally answered "less aware" about these signs: Long, heavy periods ($M=2.44$, $SD=1.43$) Pelvic pain and pressure ($M=2.42$, $SD=1.43$) Frequent urination and constipation ($M=2.22$, $SD=1.5$) Infertility ($M=2.31$, $SD=1.43$) Poor pregnancy outcomes, without birth control ($M=2.19$, $SD=1.37$) Overall, the average score was 2.317, meaning people are "less aware" of myoma symptoms. This is concerning because knowing the symptoms helps with early detection and treatment. If women don't know the signs, they might not get help early, which can lead to more problems.

The insufficient awareness of myoma symptomatology among the surveyed population presents a significant clinical implication. Delayed recognition of these indicators may impede timely diagnosis and intervention, potentially exacerbating disease progression and increasing the likelihood of adverse health outcomes. Given the established correlation between early detection and improved prognosis, these findings

underscore the need for targeted educational initiatives to enhance symptom recognition and promote prompt medical consultation.

Table 2.2 *Level of awareness in terms of Sign & Symptoms*

n=200

	Mean	Std. Deviation	Description
1. I am aware that prolonged and heavy bleeding during menstruation is significant symptoms of myoma.	2.4400	1.43061	Less aware
2. I am aware that pelvic pain and pressure are another significant symptom of myoma.	2.4250	1.43691	Less aware
3. I am aware that frequent urination and constipation are also symptoms of myoma.	2.2200	1.53407	Less aware
4. I know that infertility can also be sign of presence of myoma.	2.3100	1.43674	Less aware
5. am aware that poor obstetric results (Without the use of any birth control) have been accompanied by myoma.	2.1900	1.37234	Less aware
Total	2.317	1.1948	Less aware

(Legend: 1.00-1.50 not aware; 1.51-2.50 less aware; 2.51-3.50 moderately aware; 3.51-4.50 aware; 4.51-5.00 well aware)

In terms of Treatment and Management

Table 2.3 shows how aware people are of myoma treatments and prevention. They are "less aware" that: Herbal remedies can increase myoma growth ($M=2.12$, $SD=1.33$). Myomectomy is usually the surgery for myoma ($M=3.04$, $SD=1.56$). However, they are "moderately aware" that: Surgery might be needed for myoma ($M=3.08$, $SD=2.07$). Hysterectomy might be needed if myoma is found late ($M=2.83$, $SD=1.58$). MRI-focused ultrasound is another way to manage myoma ($M=2.88$, $SD=1.49$). Overall, people have "moderate awareness" of treating and managing myoma (average score of 2.791).

Analysis of Table 2.3 reveals significant deficiencies in the respondents' understanding of myoma treatment modalities. While a baseline awareness of conventional interventions such as surgical procedures is evident, critical knowledge gaps exist regarding the potential adverse effects of herbal remedies and the therapeutic benefits of myomectomy. Although respondents demonstrated moderate familiarity with surgical options and alternative approaches like MRI-guided focused ultrasound, a comprehensive understanding of the diverse range of available treatment strategies remains limited. This knowledge deficit may impede informed decision-making processes, potentially resulting in suboptimal treatment selections. Consequently, these findings underscore the imperative for targeted educational initiatives designed to enhance awareness of the full spectrum of myoma management strategies and to emphasize the importance of consistent engagement with healthcare providers for ongoing monitoring and care.

Table 2.3 *Level of awareness in terms of Treatment & Management*

n=200

	Mean	Std. Deviation	Description
1. I am aware that herbal remedies might increase the growth of myoma.	2.1200	1.33962	Less aware
2. I understand the need for surgery for myoma.	3.0850	2.07347	Moderately aware
3. I am aware that myomectomy is usually the surgery to be done to treat myoma.	3.0400	1.56546	Less aware
4. I am aware that I might need hysterectomy due to late detection of this disease.	2.8300	1.58228	Moderately aware
5. I am aware that MRI focused ultrasound surgery is an alternative to manage myoma.	2.8800	1.49222	moderately aware
Total	2.791	1.2768	Moderately aware

(Legend: 1.00-1.50 not aware; 1.51-2.50 less aware; 2.51-3.50 moderately aware; 3.51-4.50 aware; 4.51-5.00 well aware)

In terms of Prevention

Table 2.4 presents an evaluation of respondents' awareness regarding myoma prevention strategies. Participants generally indicated an understanding that: Adopting a healthy lifestyle can mitigate the risk of myoma development (M=3.68, SD=3.30). A regimen of healthy diet and regular exercise can reduce the likelihood of developing myoma (M=3.69, SD=1.42). Respondents exhibited moderate awareness regarding the following: Avoiding obesity can decrease the risk of myoma (M=3.05, SD=1.52). Early detection can reduce the risk of complications associated with myoma (M=3.31, SD=1.56). Regular medical check-ups are necessary, particularly when symptoms such as prolonged bleeding are present (M=3.57, SD=1.50). Overall, respondents demonstrated a moderate level of awareness concerning myoma prevention (mean score of 3.413). This suggests that women possess some knowledge of lifestyle modifications that can aid in myoma prevention, such as maintaining a healthy weight and managing stress. However, they may lack comprehensive knowledge of all available preventive measures or the significance of early detection in mitigating disease risk.

These findings reveal a critical vulnerability: despite some awareness, women are not fully equipped with the knowledge to proactively prevent myomas. The lack of comprehensive understanding regarding all preventive measures and the importance of early detection represents a significant gap. This exposes a failure in current health communication, potentially leading to preventable cases and delayed diagnoses, ultimately compromising women's health outcomes.

Table 2.4. *Level of awareness in terms of Prevention*

n=200

	Mean	Std. Deviation	Description
1. I am aware that keeping a healthy lifestyle would decrease my risk of developing myoma.	3.6850	3.30003	Aware
2. I am aware that healthy diet and exercise can reduce my chance of developing myoma.	3.6950	1.42200	Aware

3. I am aware that I should avoid obesity to decreased my risk of having myoma.	3.0550	1.52763	Moderately aware
4. I am aware that early detection could decreased risk for complications of this disease.	3.3100	1.56079	Moderately aware
5. I am aware that I need regular check-ups for my reproductive system especially when I have symptoms of prolonged and heavy bleeding and others.	3.5700	1.50880	moderately aware
Prevention Total	3.413	1.3276	Moderately aware

(Legend: 1.00-1.50 not aware; 1.51-2.50 less aware; 2.51-3.50 moderately aware; 3.51-4.50 aware; 4.51-5.00 well aware)

Significant differences between the level of awareness about myoma when grouped according to their socio demographic profile.

This study examined the potential association between socio-demographic variables and awareness levels concerning myoma. The variables under consideration included age, ethnicity, educational attainment, and marital status. Statistical analysis, employing ANOVA and t-tests, revealed that educational attainment was the sole significant predictor of myoma awareness ($F(4, 195) = 9.490 < 0.05$). Age ($F(2, 197) = .631 > 0.05$), ethnicity ($F(1, 198) = .126 > 0.05$), and marital status ($F(1, 198) = .047 > 0.05$) did not demonstrate statistically significant relationships with myoma awareness. Consequently, the findings suggest a relatively homogenous level of myoma awareness among women, irrespective of age, ethnicity, or marital status. The null hypothesis is therefore accepted. These results underscore the need for further investigation into specific determinants of myoma awareness to inform the development of targeted interventions and educational programs. Women in Barangay Busbus may have a relatively homogenous level of knowledge about myoma regardless of individual characteristics. Such initiatives are crucial for enhancing knowledge and empowering women to proactively seek appropriate healthcare services.

This study's findings deliver a clear message: education is the key to unlocking greater myoma awareness among women. While age, ethnicity, and marital status show little influence, education stands out as a potent lever for change. The implication is profound: Targeted educational interventions hold the greatest promise for improving women's understanding of myoma. For instance, implementing community-based workshops with accessible information on symptoms, prevention, and treatment, tailored to different educational levels, could be transformative. This underscores the need to prioritize educational initiatives that cut across demographic lines, focusing instead on delivering clear, understandable information that empowers women, regardless of their background, to take control of their health.

Table 3.1. *Significant Differences on women level of awareness about myoma in Barangay Bus-bus Street Jolo when grouped according to their socio demographic profile.*

$N=200$

		Sum Squares	of Df	Mean Square	F	Sig.	Interpretation
Age	Between Groups	1.546	2	.825	.631	.628	Not Significant

	Within Groups	325.882	197	1.771			
	Total	327.428	199				
Ethnicity	Between Groups	4.631	1	.068	.126	.467	Not Significant
	Within Groups	322.731	198	1.503			
	Total	284.102	199				
Educational Attainment	Between Groups	53.370	4	.845	9.490	.000	Significant
	Within Groups	274.058	195	1.638			
	Total	324.424	199				
Marital Status	Between Groups	.068	1	.068	.047	.839	Not Significant
	Within Groups	327.360	198	1.503			
	Total	350.726	199				

Legend: p-value less than 0.05 mean significant; otherwise, it is not significant.

Summary

Uterine leiomyomas, commonly known as fibroids, are prevalent benign neoplasms affecting women during their reproductive years. Despite their high incidence, a knowledge deficit persists regarding leiomyomas, their associated clinical manifestations, and available therapeutic modalities. This lack of awareness can contribute to delayed diagnoses and potentially suboptimal clinical management. The present study aimed to ascertain the degree of leiomyoma awareness among women residing in Barangay Busbus, utilizing a descriptive, cross-sectional survey methodology. The study cohort comprised 200 participants, selected via purposive non-probability sampling. Data were analyzed using descriptive statistics, including frequency distributions, percentages, weighted means, and standard deviations. Inferential statistical analyses, specifically one-way ANOVA and independent samples t-tests, were employed to assess potential associations.

The socio-demographic profile of the respondents included variables such as age, ethnicity, educational attainment, and marital status. The majority of participants were between 19 and 39 years of age, of Tausug ethnicity, married, and possessed a secondary level of education. The study findings indicated a moderate level of awareness among respondents regarding leiomyoma etiology ($M=2.622$, $SD=1.3271$), treatment and management ($M=2.791$, $SD=1.2768$), prevention ($M=3.413$, $SD=1.3276$), and signs and symptoms ($M=2.317$, $SD=1.1948$). These results suggest a foundational understanding of these aspects, while also highlighting extant knowledge gaps that warrant attention to empower women and enhance health outcomes. Statistical analysis at a significance level of 0.05 indicated no significant differences in myoma awareness among women when grouped by socio-

demographic profiles. This finding underscores the need for further investigation into specific factors influencing knowledge and understanding of myoma. Exploring the interplay of community dynamics, healthcare access, and cultural influences may enable researchers to develop targeted interventions and educational programs to improve myoma awareness and empower women to seek appropriate healthcare when needed.

Conclusion

The findings reveal that women in Barangay Busbus possess only a moderate understanding of myomas, signaling a critical gap in knowledge that affects a substantial segment of the female population. Contrary to expectations, socio-demographic factors like age, ethnicity, education, and marital status do not significantly dictate awareness levels. This suggests that other, more nuanced factors—such as access to healthcare, effective communication channels, and deeply ingrained cultural beliefs—may exert a more profound influence on shaping perceptions and understanding of myomas. Further research is essential to unravel these underlying influences and gain a comprehensive understanding of the dynamics at play in Barangay Busbus. Addressing this lack of awareness is paramount, necessitating robust education and outreach initiatives. By empowering women with the knowledge and resources needed to understand and proactively manage myomas, we can pave the way for improved health outcomes and an enhanced sense of well-being throughout the community.

REFERENCES

- Asmaa Abd El-Razik Abd El-Hakim 1, Manal Farouk Moustafa 2, Amany Hassan Abd El-Rahim 3) June 2022 “Effect of Educational Program on Knowledge Regarding Leiomyomas among Women in Reproductive Age, Minia Scientific Nursing Journal (Print - ISSN 2537-012X) (- ISSN 2785-9797) Vol. (11) No. (1)
- Campbell KH, Dennerstein L, Finch S, Szoek C (2017) “Impact of menopausal status on negative mood and depressive symptoms in a longitudinal sample spanning 20 years. *Menopause*” 24(5):490–496.
- Cao CD, Rico-Castillo J, De Cotiis D, Richard SD, Rosenblum NG, Chan JSY. Digital quantification of Ki-67 and PHH3 in the classification of uterine smooth muscle tumors. *Int J Gynecol Pathol.* (2021) 40:549–55. 10.1097/PGP.0000000000000739
- Choi HG, Rhim CC, Yoon JW, Lee S (2020) Association between hysterectomy and depression: A longitudinal follow-up study using a national sample cohort. *Menopause* 27(5):543–549.
- Cleveland Clinic “Uterine Fibroids” (2024) 9500 Euclid Avenue, Cleveland, Ohio 44195 | [800.223.2273](tel:800.223.2273) |
- Erdogan E, Demir S, Çalışkan B, Bayrak NG (2020) Effect of psychological care given to the women who underwent hysterectomy before and after the surgery on depressive symptoms, anxiety and the body image levels. *J ObstetGynaecol* 40(7):981–987.
- Ebbi Donald Robinson, ChidinmaWekhe, Jeremiah Ebere, Peace Wilson) Knowledge and perception of uterine fibroid among teenage girls with routine pelvic Ultrasonographic evaluation of teenagers [Vol 8, No 3 \(2023\)](#) (Hellenic Journal of Radiology
- Emma Giuliani and Sawsan As-Sanie and Erica E. Marsh “Epidemiology and management of uterine fibroids” Giuliani2020. *Epidemiology AM, International Journal of Gynecology \& Obstetrics*, vol.149. <https://api.semanticscholar.org/CorpusID:210842764>}

- Hassan SS, Elhady HA, Fathy N (2022) Relation between sexual function, body image and depression among women undergoing total versus partial hysterectomy. *Egypt J Health Care* 13(4):1682–1696.
- Huang, David, [Mitchell P. Rosen, Md, Hcld](#), [Marcelle I. Cedars, Md](#), “Fibroid Prevalence And Burden By Race In An Asymptomatic, Diverse Cohort Of Reproductive-Age Women fertility And Sterility”, Volume 118, Issue 4, E37 - E38
- Hsieh C, Lu Y, Liang S (2021) The health concerns related to hysterectomy among Taiwanese women with uterine fibroids-a mixed-methods study. *Women Health* 61(6):581–590.
- Kendra Cherry, MSED (November 14, 2022), An Overview of Sigmund Freuds’s theories, Very Well Mind
- Kirsten A. Riggan, MA, MS, Elizabeth A. Stewart, MD Joyce E. Balls-Berry, PhD, MPE Sateria Venable, BArch & Megan A. Allyse, PhD “Patient Recommendations for Shared Decision-Making in Uterine Fibroid Treatment Decisions” (October 20, 2021). <https://doi.org/10.1177/23743735211049655>
- Marissa S. Ghant, Katherine S. Sengabo, Robert Vogelzang, Angela K. Lawson, and Erica E. Marsh (Aug, 2016) An altered Perception of Normal: Understanding Causes for treatment Delay in Women with Symptomatic Uterine Fibroids. Mary Ann Liebert, Inc. publishers
- Neelima Venugopal, Nissy Jacob, Venkateswaramurthy Nallasamy, Sambathkumar Ramanathan Department of Pharmacy Practice, J.K.K. Nattraja College of Pharmacy, Tamil Nadu, India Awareness and knowledge of uterine fibroid among women in Kerala, India Vol. 11, No. 3, September 2022, pp. 877~883) (*International Journal of Public Health Science (IJPHS)* Vol. 11, No. 3, September 2022, pp. 877~883)
- Lou, Z., Huang, Y., Li, S. *et al.* Global, regional, and national time trends in incidence, prevalence, years lived with disability for uterine fibroids, 1990–2019: an age-period-cohort analysis for the global burden of disease 2019 study. *BMC Public Health* 23, 916 (2023). <https://doi.org/10.1186/s12889-023-15765-x>
- Marsh EE, Al-Hendy A, Kappus D, Galitsky A, Stewart EA, Kerolous M. “Burden, prevalence, and treatment of uterine fbroids: a survey of U.S. women. *J Women’s Heal.*” 2018;27:1359–67.
- Malcolm G. Munro, Hilary O.D. Critchley, Ian S. Fraser, the FIGO Menstrual Disorders Committee, "The two FIGO systems for normal and abnormal uterine bleeding symptoms and classification of causes of abnormal uterine bleeding in the reproductive years: 2018 revisions" and Outi Heikinheimo volume 143, pages 393-408 published september 10, 2018 <http://doi.org/10.1002/ijgo.12666>
- Mohamed Ali, Maria Victoria Bariani, Somayeh Vafaei, Mervat M. Omran, Qiwei Yang, Obianuju Sandra Madueke-Laveaux, Ayman Al-Hendy, “Prevention of uterine fibroids: Molecular mechanisms and potential clinical application, *Journal of Endometriosis and Uterine Disorders,*” Volume 1, 2023,100018, ISSN 2949- 8384, <https://doi.org/10.1016/j.jeud.2023.100018>. <https://www.sciencedirect.com/science/article/pii/S2949838423000063>)
- Navarro A, Bariani MV, Yang Q, Al-Hendy A. Understanding the Impact of Uterine Fibroids on Human Endometrium Function. *Front Cell Dev Biol.* 2021 May 25;9:633180. doi: 10.3389/fcell.2021.633180. PMID: 34113609; PMCID: PMC8186666.
- Neelima Venugopal, Nissy Jacob, Venkateswaramurthy Nallasamy, Sambathkumar Ramanathaneelima Venugopal, Nissy Jacob, Venkateswaramurthy Nallasamy, Sambathkumar Ramanathan. DOI: <http://doi.org/10.11591/ijphs.v11i3.21269>

- Olawande Olayinka Jaiyeola Westcliff University, Irvine, CA. 92614 Vol. 108, 2023, Modeling the Incidence of Uterine Fibroids among Women in the US. An International Peer-reviewed Journal” September 2022 vol. 11no.3
- Orellana, M., Riggan, K. A., DSouza, K., Stewart, E. A., Venable, S., Balls-Berry, J. E., & Allyse, M. A. (2022). Perceptions of Ethnoracial Factors in the Management and Treatment of Uterine Fibroids. *Journal of Racial and Ethnic Health Disparities*, 9(4), 1184-1191. <https://doi.org/10.1007/s40615-021-01059-8> Skorupska K, Wawrysiuk S, Bogusiewicz M, Miotla P, Winkler I, Kwiatkowska A, Rechberger T (2021) Impact of hysterectomy on quality of life, urinary incontinence, sexual functions and urethral length. *J Clin Med* 10(16):3608.
- Pavone D, & Clemenza S, 2018" refers to a research article titled "Epidemiology and Risk Factors of Uterine Fibroids." Volume 46, pages 3-11, published January 2018
<https://doi.org/10.1016/j.bpobgyn.2017.09.004>
- Rubisz P, Hirnle L, Kobierzycki C. The Immunohistochemical Expression of MCM-3, -5, and -7 Proteins in the Uterine Fibroids. *Curr Issues Mol Biol*. 2021 Jul 25;43(2):802-817. doi: 10.3390/cimb43020058. PMID: 34449552; PMCID: PMC8929156.
- S. Senthilkumar, K Sai Grisha (2017), A Prospective Study on Knowledge, Attitude and Perception towards Uterine Fibroids. *Research Journal of Pharmacy and technology*
- Sharma, S., & Khaund, A., (2020). Age as is Risk Factor for uterine fibroids: insights from Retrospective Studies. *Journal of Gynecological Research*, 42(2), 87-95.
- Somayeh Vafaei; Alkhrait, S.; Yang, Q.; Ali, M.; Al-Hendy, A. Empowering Strategies for Lifestyle Interventions, Diet Modifications, and Environmental Practices for Uterine Fibroid Prevention; Unveiling the LIFE UP Awareness. *Nutrients* 2024, 16, 807. <https://doi.org/10.3390/nu16060807>
- Tinelli A, Vinciguerra M, Malvasi A, Andjić M, Babović I, Sparić R. Uterine Fibroids and Diet. *Int J Environ Res Public Health*. 2021 Jan 25;18(3):1066. doi: 10.3390/ijerph18031066. PMID: 33504114; PMCID: PMC7908561.
- VanNoy, B., Bowleg, L., Marfori, C., Moawad, G., & Zota, A. (2021). Black Women's Psychosocial Experiences with Seeking Surgical Treatment for Uterine Fibroids: Implications for Clinical Practice. *Women's Health Issues*, (). <http://dx.doi.org/10.1016/j.whi.2021.01.001>
- Yang, Qiwei, Michal Ciebiera, Maria Victoria Bariani, Mohamed Ali, Hoda Elkafas, Thomas G Boyer, Ayman Al-Hendy “Endocrine Reviews”, Volume 43, Issue 4, August 2022, Pages 678–719, <https://doi.org/10.1210/endrev/bnab039>