

Research Article

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Assessing Symptom Severity and Quality of Life Implications in Women of Reproductive Age with Uterine Fibroids and Related Conditions in Lahore

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ABSTRACT

Uterine fibroids (UFs) represent the most common benign neoplasms of the uterus and an important cause of morbidity in women of reproductive age. The study is a cross-sectional study carried out in Lahore, Pakistan, between March and June 2025, to determine the symptom burden and impact on health-related quality of life (HRQOL) among women with UFs through a validated Uterine Fibroid Symptom and Quality of Life (UFS-QOL) questionnaire. Among the 423 women surveyed, 81 (19.1%) had symptomatic fibroids. Most of these women experienced moderate (66%) and severe (9%) symptoms, especially excessive menstrual bleeding, pelvic pressure, and fatigue. The highest functional impairment was observed in the areas of energy/mood, concern, self-consciousness, and perceived control over daily life. The mean symptom severity score was 52.7 ± 17.3 . The multivariate logistic regression model served as the predictors of fibroid diagnosis age 30-40 years, very early menarche (<10 years), and high parity, which highlighting the contribution of reproductive history to UF risk. Social, emotional, and physical functioning was seriously impaired in most of the affected women with over two-thirds of them showing moderate to very important impacts in several HRQOL domains. The results agree with global statistics and show the dire need for early diagnosis, community education, and culturally specific management options to reduce the physical and psychosocial impacts of uterine fibroids in low- and middle-income environments.

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Introduction

Uterine Fibroids are the most prevalent benign neoplasms of the uterus and a significant cause of morbidity among women of reproductive age [1]. Uterine Leiomyoma, which are also known as uterine fibroids, are nonmalignant tumors that are composed of fibroblasts and smooth muscles [2]. Nulliparity, premenopausal age, socio-economic status, and time since last birth are the primary **risk factors** that have been identified [3]. Possible **symptoms** include impaired fertility, Pelvic pressure or pain, heavy or prolonged menstrual bleeding, and subsequent interference with psychological well-being and daily life [4]. Patients and the healthcare system are affected by uterine leiomyoma that is a significant public health concern, as patients with apparent clinical symptoms requiring treatment have an overall prevalence of approximately 25% and in women of reproductive age approximately 70% [5]. Women suffering from uterine fibroids globally are approximately 20-30%; most often in women aged 30–50 [6]. The estimated incidence of UFs is 77% between 20 and the anticipated prevalence is 60% between 40 and among women under the age of 35 and 70% to 80% among women over the age of 50 according to the recent study [6]. The study estimated an overall prevalence in the study

was 38%, and the greatest prevalence rate was observed in 30-39 years of the age group [7]. Through ultrasound fibroids are detected in over 80% of women of African ancestry and nearly 70% of white women by the age of 50 according to the recent research conducted in the United States [8]. In Lahore, the prevalence of uterine fibroids was seen to be 32.7% in women of reproductive age [9]. UF-related symptoms significantly impact the health-related quality of life (HRQOL) of women with UF. The effect became more noticeable as the number and intensity of symptoms increased [10]. The majority of women who had fibroids reported concerns regarding sexual function, hopelessness, body image, relationships, and loss of control. These concerns included the possibility that the fibroids would expand and necessitate a hysterectomy [11]. Because of their symptoms, almost two-thirds of women were worried that they might miss work days and 24% of employed respondents thought that their symptoms made it harder for them to reach their job goals [12]. For women who have serious pain from fibroids, not being able to leave their beds for long periods of time or go to work may make it hard for them to talk to their friends and coworkers [13].

Aim of Study

The aim of the study is to evaluate the severity of symptoms linked to uterine fibroids and other relevant reproductive health issues and their impact on the patient's quality of life.

Methodology

The study design is cross sectional study conducted in Lahore from March 2025 to June 2025 to assess the symptom severity, effects of uterine fibroids and related health condition on quality of life of women. The study participants are women of reproductive age (15-50 years) residing in Lahore, either diagnosed with Uterine Fibroids or at the risk of diagnosing. Women outside the age range, pregnant women (because symptoms of UF are altered) and those women that are diagnosed with other diseases (PCOS, endometriosis (because symptoms of these dominate or overlap and who are unable to diagnose UF)) are not a part of study. After a thorough literature review data was collected using **two tools: (Tool I) A Questionnaire** was designed, it consists of **three sections**, first section consists of demographics (age, socioeconomic status, parity, fibroid diagnosis history), second section consists of symptoms severity (bleeding characteristics, fatigue), third section involves Quality of life Impact (physical, social, and emotional). Respondents were asked to rate level of symptom severity (Mild, Moderate, Severe) for any symptom they experienced. Those who did not have the symptoms during the month before to survey administration as well as those who never had the condition were put in the "no symptom" category. **(Tool II) Scale of HRQOL:** six subsections make up this part: Self-conscious (Questions 18, 21, 33), Concern (Questions 9, 15, 22, 28, 32), Energy/mood (Questions 12, 17, 23, 24, 25, 31, 35), Control (Questions 14, 16, 26, 30, 34), Actions (Questions 10, 11, 13, 19, 20, 27, 29), and Sexual function (Questions 36 and 37). The subscales assess feelings and experiences regarding how uterine fibroid symptoms influence many facets of every participant's life [14]. Statistical tests were run using the Statistical Package for Social Sciences (SPSS) version 27. Sample size is calculated using **Daniel's Formula** which turns out to be 423 with 20% dropout ratio [11].

$$n = Z^2 \cdot P \cdot (1-P) / d^2$$

n= required sample size, **Z**= desired confidence level (commonly 1.96 for 95% confidence interval), **P**= estimated prevalence (32.7%=0.327), **d**= desired precision (commonly 0.05 or 5%). The questionnaires were used to gather data, which was then inputted and exported into Stata Version 27. Using summary statistics, the participants were described. The sociodemographic traits of women with and without uterine fibroids were among the possible factors linked to uterine fibroids that we compared. Analysis using the chi-squared test was done for categorical variables. P-values less than .05 were deemed statistically significant. Multivariable logistic regression analysis was employed to determine the independent factors linked to uterine fibroids. Women who had ever encountered any of the following symptoms heavy bleeding during periods, spotting/bleeding between periods, passage of clots, pelvic pressure, and bloating

were asked if they had ever experienced any of these symptoms to identify those who had uterine fibroid disease symptoms. The survey was divided into two sections. The first portion gathered data that could be utilized to calculate the prevalence of uterine fibroids and the burden of symptoms associated with them, while the second part offered data more specifically connected to HRQL, or health-related quality of life.

The survey's initial section gathered data on demographics, whether respondents had ever been diagnosed with uterine fibroids, whether they had ever encountered any of a long list of gynecological and non-gynecological symptoms, and whether they had any coexisting conditions. Out of all the symptoms that were asked about, the following were thought to be typical of uterine fibroids: pelvic pressure, spotting or bleeding between periods, constipation, bloating, or diarrhea, and heavy bleeding during periods. After reporting symptoms, women were asked to rate the severity of their symptoms. The techniques used to diagnose uterine fibroids were also questioned by women who had been diagnosed with them. The respondents were asked to rank the intensity of any symptoms they had (mild, moderate, or severe). Respondents who did not experience the symptom during the survey were assigned to the "no symptom" group. Logistic regression analysis was used to determine the odds ratios of experiencing each symptom and the associated 95% CIs.

As part of the survey, respondents were asked "Have you ever been diagnosed with uterine fibroids (or leiomyoma) by a doctor?" Only women who answered yes were considered in the UF population. The Uterine Fibroid Symptom-QoL (UFS-QoL) questionnaire, which consists of 37 items and has been validated to measure disease-specific symptoms and health-related QoL (HRQL) for UF, was used to find out how fibroids affected perceived quality of life. The UFS-QoL comprises 29 HRQL items with six subscales: Sexual Function, Activities, Energy/Mood, Control, Concern, and Self-consciousness. It also includes an 8-item Symptom Severity scale. The HRQL and Symptom Severity subscale values are added together and converted to a 0-100 point rating system. Better health-related quality of life is indicated by higher HRQL subscale scores, while higher symptom Severity scores suggest more symptoms.

Result

In the survey, 81 of the 423 women (19.1%) shared that they were diagnosed with uterine fibroids. Most of the people diagnosed were between 31 and 40 (35.8%), followed by women aged 41 to 50 (25.9%). On the other hand, just 18.5% of women with fibroids were aged 21–30, and a mere 4.9% were less than 20 years old. In addition, people with lower education, middle to upper-middle income, menarche, ssparity and being married were more likely to be diagnosed with fibroids, as can be seen in Table 1.

Table 1: Demographic Characteristics of Study Participants

Characteristics	All N=423	With uterine fibroids n=81	Without uterine fibroids n=342	P-value
Age in years				
<20	104 (24.5)	20 (24.6)	84 (24.5)	<0.001
21-30	184 (43.9)	21 (25.9)	163 (47.6)	
31-40	93 (21.9)	26 (32.0)	67 (19.5)	
41-50	42 (9.9)	14 (17.2)	28 (8.1)	
Socio-Economics				
Lower class	27 (6.3)	11 (13.5)	16 (4.6)	0.005
Middle class	134 (31.6)	31 (38.5)	103 (30.1)	
Upper middle class	208 (49.1)	30 (37.0)	178 (52.0)	
High class	54 (12.7)	9 (11.1)	45 (13.1)	
Educational level				
Illiterate	15 (3.5)	7 (8.6)	8 (2.3)	<0.001
Primary	37 (8.7)	12 (14.8)	25 (7.3)	
Secondary	83 (19.6)	23 (28.3)	60 (17.5)	
Higher	288 (68.0)	39 (48.1)	249 (72.8)	
Marital status				
Single	224 (52.9)	26 (32.0)	198 (57.8)	<0.001
Married	106 (25.0)	29 (35.8)	77 (22.5)	
Divorced	60 (14.1)	14 (17.2)	46 (13.4)	
Widow	33 (7.8)	12 (14.8)	21 (6.1)	
Parity				
Nullipara (0)	236 (55.7)	27 (33.3)	209 (61.1)	<0.001
Primipara (1)	64 (15.1)	15 (18.5)	49 (14.3)	
Multipara (2-4)	70 (16.5)	20 (24.6)	50 (14.6)	
Grand multipara (>5)	53 (12.5)	19 (23.4)	34 (9.9)	
Menarche				
Very Early (<10)	40 (9.4)	12 (14.8)	28 (8.1)	0.044
Early (<12)	76 (17.9)	20 (24.6)	56 (16.3)	
Normal (13-15)	227 (53.6)	34 (41.9)	193 (56.4)	
Late (16+)	80 (18.9)	15 (18.5)	65 (19.0)	

Age and when menarche occurred were found to be important factors in predicting uterine fibroid diagnosis through multivariate logistic regression analysis. Women aged between 31 and 40 years had a higher chance of being diagnosed with uterine fibroids than those under 20 years old (OR = 0.343; CI: 0.146–0.806; p = 0.014). Also, women who started menstruating before the age of 10 were nearly four times more likely to report uterine fibroids than women with normal menarche (OR = 3.548; CI: 1.278–9.847; p = 0.015) (Table 2)

Table 2: Factors that are Associated with Uterine Fibroids

Characteristics	Univariate OR (95% CI)	P-value	Multivariate OR (95%CI)	P-value
Age in years				
<20	Ref			
21-30	0.476 (0.213 - 1.066)	0.071	0.617 (0.248- 1.534)	0.299
31-40	0.258(0.117 - 0.566)	<0.001	0.343 (0.146 – 0.806)	0.014
41-50	0.776 (0.354 - 1.702)	0.527	0.745 (0.328 – 1.693)	0.482
Marital Status				
Single	Ref			
Married	0.230 (0.101 - 0.521)	<0.001	0.853 (0.270 – 2.689)	0.786
Divorced	0.659 (0.288 - 1.508)	0.324	0.916 (0.369 – 2.274)	0.850
Widow	0.533 (0.211 - 1.327)	0.183	0.767 (0.280 – 2.100)	0.605
Parity				
Nullipara (0)	Ref			
Primipara (1)	0.231 (0.166 - .461)	<0.001	0.231 (0.81 – 0.655)	0.006
Multipara (2-4)	0.548 (0.245 – 1.227)	0.143	0.469 (0.199 – 1.106)	0.084
Grand Multipara (>5)	0.716 (0 .333 – 1.537)	0.391	0.607 (0.269 – 1.373)	0.231
Menarche				
Very Early (<10 yrs)	Ref			
Early (<12 yrs)	1.857 (0.771 – 4.473)	0.167	3.548 (1.278 – 9.847)	0.015
Normal (13-15 yrs)	1.548 (0 .725 – 3.305)	0.259	1.991 (0.879 – 4.510)	0.099
Late (16+ yrs)	0.763 (0.391 – 1.499)	0.429	1.072 (0.522 – 2.201)	0.850

Ninety percent of patients and 95.3% of controls experienced menstrual pelvic pain or cramping (OR = 2.34, 95% CI: 0.82–6.67). Pain while having intercourse was experienced by 71.6% of patients and 40.9% of controls (OR = 0.32, 95% CI: 0.17–0.60). Of the patients, 83.9% experienced heavy menstrual bleeding, while 92.1% of the controls did (OR = 1.55, 95% CI: 0.66–3.62). According to Table no 3, 83.9% of patients and 79.8% of controls reported spotting or bleeding between their periods (OR = 1.09, 95% CI: 0.52–2.31).

Table 3: Distribution of Uterine Fibroid-Related Symptoms in Patients with Uterine Fibroids and Controls

Symptoms	Patient with uterine fibroids (n=81)	Control (n=342)	Odds ratio (95% CI)
Menstrual pelvic pain or cramping	73 (90.1)	326 (95.3)	2.341 (0.821- 6.672)
Non-menstrual pelvic pain or cramping	68 (83.9)	279 (81.5)	1.005 (0.475 - 2.127)
Pain during intercourse	58 (71.6)	140 (40.9)	0.320 (0.172 - 0.596)
Heavy menstrual bleeding	68 (83.9)	315 (92.1)	1.550 (0.664 - 3.617)
Spotting or bleeding between periods	68 (83.9)	273 (79.8)	1.090 (0.515 - 2.307)
Passage of clots	73 (90.1)	304 (88.8)	0.783 (0.302 - 2.030)
Irregular periods	68 (83.9)	255 (74.5)	0.665 (0.313 - 1.416)
Pelvic pressure	74 (91.3)	299 (87.4)	0.681 (0.264 - 1.759)
Lower back pain	70 (86.4)	316 (92.3)	2.127 (0.859 - 5.262)
General abdominal pain	71 (87.6)	313 (91.5)	1.099 (0.433 - 2.790)
Constipation, bloating, diarrhea	66 (81.4)	275 (80.4)	1.303 (0.633 - 2.686)
Difficulty in bowel movements	65 (80.2)	252 (73.6)	0.736 (0.346 - 1.564)
Fatigue / weariness / anemia	62 (76.54)	273 (79.8)	1.277 (0.652 - 2.499)
Infertility	58 (71.6)	170 (49.7)	0.705 (0.368 - 1.351)

Among patients with severe symptoms, spotting or bleeding between periods was detected in 28.3% and 14.9% of controls (OR = 0.34, 95% CI: 0.17–0.70). Thirty percent of patients said their irregular periods were severe, while 17.8% of controls did (OR = 0.46, 95% CI: 0.25–0.86). There were no other severe symptoms that showed significant differences (Table no 4).

Table 4: Distribution of Symptom Severity Levels

Severe Symptoms	Patient with uterine fibroids (n=81)	Control (n=342)	Odds ratio (95% CI)
Menstrual pelvic pain or cramping	24 (29.6)	117 (34.2)	1.481 (0.770 - 2.847)
Non-menstrual pelvic pain or cramping	14 (25.9)	64 (18.7)	1.312 (0.616 - 2.794)
Pain during intercourse	13 (16.0)	42 (12.2)	1.019 (0.469 - 2.213)
Heavy menstrual bleeding	15 (18.5)	66 (19.2)	1.738 (0.812 - 3.718)
Spotting or bleeding between periods	23 (28.3)	51 (14.9)	0.344 (0.169 - 0.700)
Passage of clots	23 (28.3)	63 (18.4)	0.541 (0.274 - 1.070)
Irregular periods	25 (30.8)	61 (17.8)	0.461 (0.247 - 0.860)
Pelvic pressure	26 (32.0)	69 (20.1)	0.583 (0.303 - 1.123)
Lower back pain	29 (35.8)	111 (32.4)	0.967 (0.544 - 1.718)
General abdominal pain	14 (17.2)	90 (26.3)	1.748 (0.851 - 3.589)
Constipation, bloating, diarrhea	15 (18.5)	65 (19.0)	1.367 (0.666 - 2.807)
Difficulty in bowel movements	15 (18.5)	52 (15.2)	1.015 (0.471 - 2.189)
Fatigue / / weariness / anemia	16 (19.7)	75 (21.9)	0.991 (0.502 - 1.956)
Infertility	12 (14.8)	57 (16.6)	1.972 (0.901 - 4.314)

The survey involved 423 women who were 18 years or older, and among them, 342 did not have uterine fibroids and 81 had symptomatic uterine fibroids (Table 5).

Table 5: Characteristics of Survey Population

Characteristics of survey population	Overall (n=423)	Women with symptomatic UF (n=81)
Age (mean $\pm$ standard deviation in years)	27.84 $\pm$ 8.38	30.31 $\pm$ 9.65
<20	104 (25%)	20 (25%)
21-30	184 (43%)	21 (26%)
31-40	93 (22%)	26 (32%)
41-50	42 (10%)	14 (17%)
Marital status (n, %)		
Single	224 (53%)	26 (32%)
Married	106 (25%)	29 (36%)
Divorced	60 (14%)	14 (17%)
Widow	33 (8%)	12 (15%)
Socio-economic status (n, %)		
Lower Class	27 (6%)	11 (14%)
Middle Class	134 (32%)	31 (38%)
Upper Middle Class	208 (49%)	30 (37%)
High Class	54 (13%)	9 (11%)
Parity (n, %)		
Nullipara	236 (56%)	27 (32%)
Primpara	64 (15%)	15 (36%)
Multipara	70 (17%)	20 (17%)
Grand multipara	53 (13%)	19 (15%)

Out of the 81 women examined with uterine fibroids, 66% had moderate symptoms, 25% had mild symptoms, and 9% had severe symptoms, giving them a mean severity score of 52.7 ± 17.3 . Around 15% of people were very concerned, 19% mildly concerned, 30% significantly concerned, and 36% moderately concerned, with an average score of 52.0 ± 20.7 . More than half of the women said they were moderately or very concerned.

In half of the women, activity impact was moderate, in another one-third it was important, and in the remaining one-sixth it was very important, with a mean activity score of 52.6 ± 20.6 . Only a small number (17%) of the women said their activity impairment was mild, which suggests that more than 4 in 5 women had at least moderate trouble with their day-to-day activities.

About 45% of women said their energy and mood were somewhat affected, 29% found them very important, and 6% said they were very important, while 20% said the changes were mild (mean score: 55.5 ± 17.6). This means that about two-thirds of women suffered from major energy and mood changes.

In 37% of women, control over their lives was moderately affected, in 33% it was extremely important, and in 13% it was very important. People who rated control-related impact as mild formed just 17% of the group, with a mean score of 50.6 ± 19.8 . It means that over 4 out of 5 women lost a significant amount of control over their lives because of UF.

Around 30% of the subject's said self-consciousness was mild, 27% said moderate, 19% said important, and 24% said very important, with a mean score of 51.2 ± 26.5 . So, almost three-quarters of women reported that their self-consciousness was affected by this in some way.

More than two-thirds of the women experienced moderate to very important effects on their energy, sense of control, level of concern, ability to do things, and self-consciousness due to UF.

Table 6: UFS-QOL Severity Domain Distribution among Women with Uterine Fibroids (n=81)

Symptom Severity Score	Mild [0-40] Moderate [40-80] Severe [80-100] Mean $\pm$ SD	25% (n = 20) 66% (n = 54) 9% (n = 7) 52.7 ± 17.3
Concern Score	Mild [75-100] Moderate [50-75] Important [25-50] Very Important [0-25] Mean $\pm$ SD	19% (n = 15) 36% (n = 29) 30% (n = 24) 15% (n = 13) 52.0 ± 20.7
Activity Score	Mild [75-100] Moderate [50-75] Important [25-50] Very Important [0-25] Mean $\pm$ SD	17% (n = 14) 43% (n = 34) 28% (n = 23) 12% (n = 10) 52.6 ± 20.6

Energy / Mood Score	Mild [75-100] Moderate [50-75] Important [25-50] Very Important [0-25] Mean $\pm$ SD	20% (n = 15) 45% (n = 37) 29% (n = 24) 6% (n = 5) 55.5 $\pm$ 17.6
Control Score	Mild [75-100] Moderate [50-75] Important [25-50] Very Important [0-25] Mean $\pm$ SD	17% (n = 14) 37% (n = 30) 33% (n = 27) 13% (n = 10) 50.6 $\pm$ 19.8
Self-conscious Score	Mild [75-100] Moderate [50-75] Important [25-50] Very Important [0-25] Mean $\pm$ SD	30% (n = 24) 27% (n = 22) 19% (n = 15) 24% (n = 20) 51.2 $\pm$ 26.5

Table 7: UFS-QOL Questionnaire Responses among Women Diagnosed with Uterine Fibroids (n=81)

Sr no	During the last 3 months how distressed were you by ...	None of the time (%)	A little of the time (%)	Some of the time (%)	Most of the time (%)	All of the time (%)
1	How often did you experience heavy bleeding during your menstrual period?	18	15	41	22	4
2	How often did you pass clots during your menstrual period?	6	25	35	26	8
3	How often did you experience variations in the length of your menstrual period?	9	12	33	38	8
4	How often did you experience variations in the number of days between each menstrual period?	7	20	32	28	13
5	How often did you feel tightness or pressure in your pelvic area (lower part of the belly)	7	19	36	31	7
6	How often do you experience frequent urination during your daytime?	10	20	23	32	15
7	How often did you experience frequent nighttime urination?	10	25	28	31	6
8	How often did you feel tired?	9	19	26	30	16

9	How often did you worry because you did not know when your period would start or how long it would last?	21	17	28	22	12
10	How often did your period make you anxious about travelling?	25	12	19	22	22
11	How often did your period interfere with your physical activities?	10	17	31	30	12
12	How often did your period cause you to feel tired or worn out?	10	11	25	41	13
13	How often did your period make you spend less time on exercise or other physical activities?	9	21	23	32	15
14	How often did your period make you feel as if you are not in control of your life?	16	12	31	35	6
15	How concerned are you about soiling your outer clothing due to unexpected menstrual bleeding?	11	21	23	35	10
16	How often did your period make you feel less productive?	14	11	35	28	12
17	How often did you feel drowsy or sleepy during the day due to your period?	12	32	16	25	15
18	How often did your period make you feel self-conscious of weight gain?	17	16	26	27	14
19	How often did you feel that it was difficult to carry out your usual activities during your period?	11	19	32	27	11

20	How often did your period interfere with your social activities (e.g., going out to the cinema, restaurants, parties, etc)?	9	12	28	33	18
21	How often did your period make you feel conscious about the size and appearance of your stomach?	17	27	19	31	6
22	How often were you concerned about soiling bed linen during your period?	11	27	26	30	6
23	How often did your period make you feel sad, discouraged, or hopeless?	7	21	20	38	14
24	How often did your period make you feel down-hearted and blue?	10	17	35	27	11
25	How often did your period make you feel exhausted?	9	21	20	27	23
26	How often did your period cause you to be concerned or worried about your health?	11	26	22	25	16
27	How often did your period cause you to plan activities more carefully?	14	20	27	32	7
28	How often did you feel inconvenienced by always having to carry extra pads, tampons, and clothing in case of accidents during your period?	11	16	27	31	15
29	How often did your period cause you embarrassment?	16	35	14	23	12
30	How often did your period make you feel uncertain about your future?	12	25	30	26	7
31	How often did your period make you feel irritable?	11	19	21	36	13

32	How often were you concerned about soiling your outer clothes during your period?	7	25	31	25	12
33	How often did your period affect the size of clothing you wear during your periods?	16	16	20	41	7
34	How often did your period make you feel that you are not in control of your health?	12	23	27	31	7
35	How often did your period make you feel weak as if energy was drained from your body?	9	23	23	28	17

Discussion

Our cross-sectional study looked at symptom severity and health-related quality of life (HRQOL) in 423 women, of whom 81 had been diagnosed with uterine fibroids in Lahore. Our goal was to determine the impact of uterine fibroid symptoms on people in our community in several ways. Because of the standardized instrument, it was possible to measure symptoms and related functional problems accurately, making comparison with worldwide research possible.

We found that most women experienced significant symptoms, as 66% reported moderate symptoms and another 9% severe ones. Areas that were most affected were concern, energy/mood, and self-consciousness. Most women with fibroids reported that symptoms like heavy bleeding, lack of energy, pain in the pelvis, and bowel disturbances affected their daily functions, a pattern that has been seen before [15].

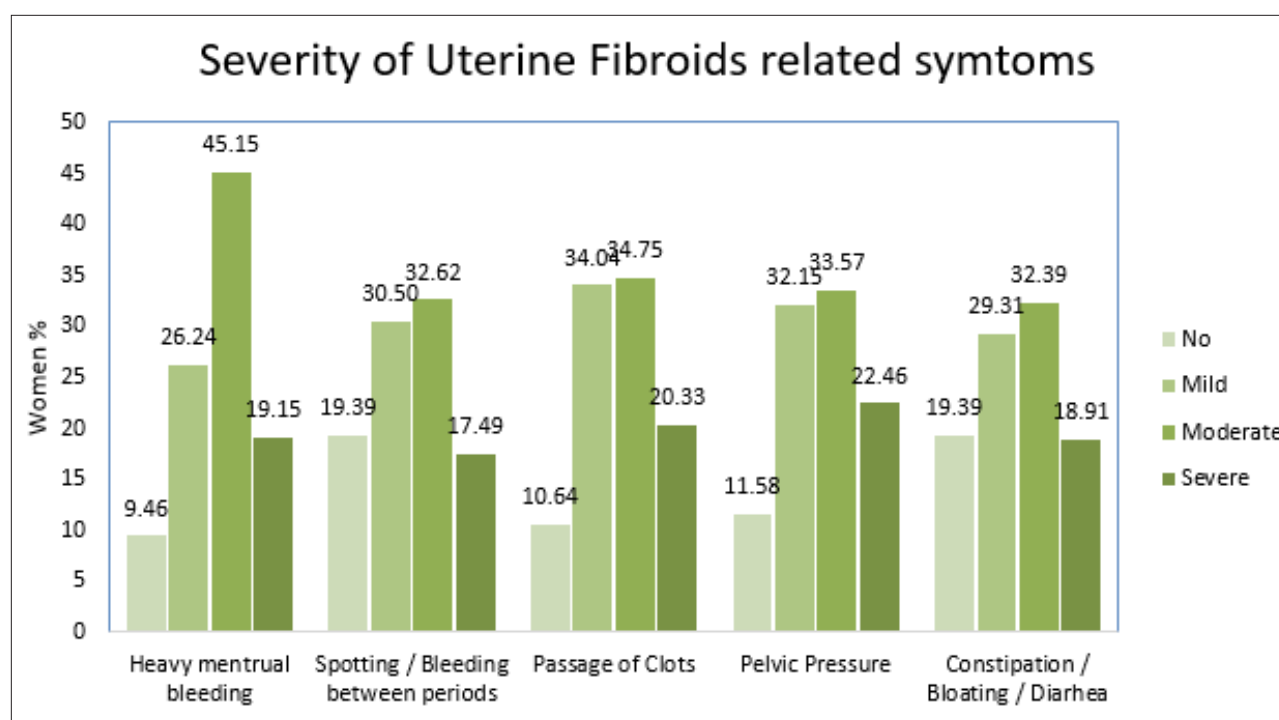


Figure 1: Illustrate the Distribution of Symptom Severity among Women with Uterine Fibroids

According to Fuldeore and Soliman (2017), more than 60% of women with uterine fibroids experienced tiredness and pain-related symptoms, along with a lot of psychological distress [16]. In the same way, a research study from France by Fernandez et al. (2018) found that about two-thirds of women with symptomatic fibroids noticed significant effects on their quality of life, especially in areas including worry, mood/energy, and feelings of self-consciousness. It implies that women worldwide are greatly affected by fibroid symptoms and that HRQOL issues are a key concern for them [14]. Downes et al. (2010) used the UFS-QOL in a clinical trial and found that various symptom domains showed similar decreases in HRQOL scores before treatment, proving that the UFS-QOL is useful for different groups [17].

Our research also pointed out that certain demographic and reproductive factors can predict the diagnosis of fibroids. Importantly, the likelihood of fibroid diagnosis was greatest in those aged 31–40 and less common in those under 20, which matches what is seen in the United States and Europe. Besides, menarche and primipara were both linked to a higher risk of fibroids, which supports previous ideas about the effect of long-term estrogen exposure and reproductive history on fibroids [18].

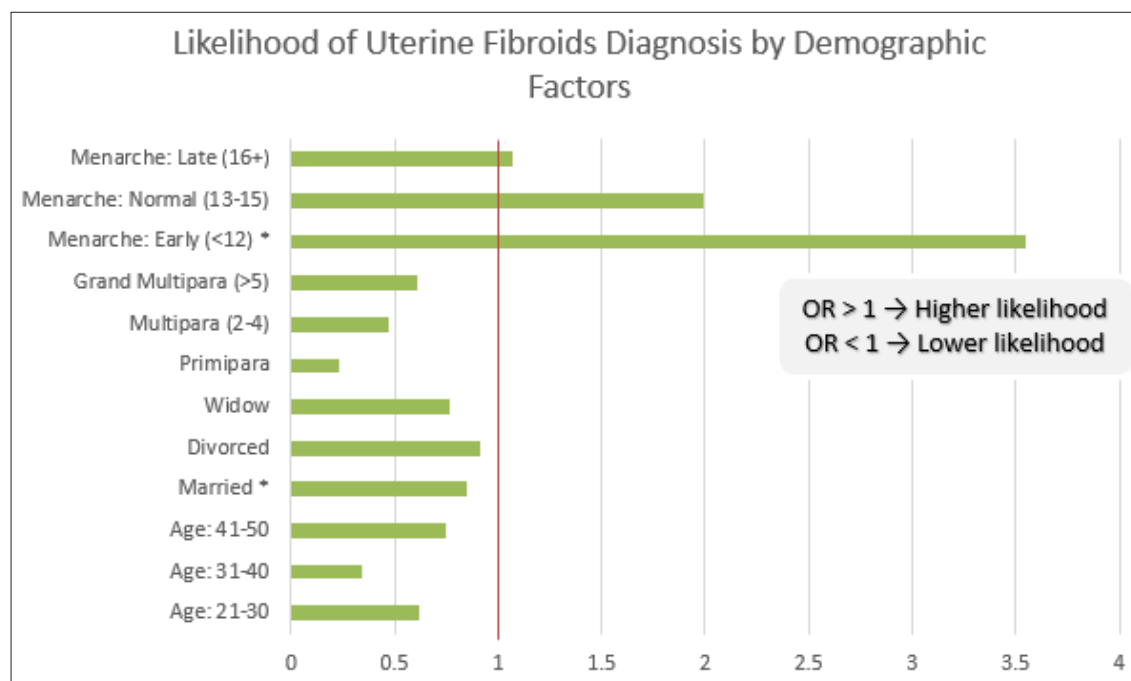


Figure 2: Shows the Odds Ratios (OR) for Uterine Fibroid Diagnosis across Various Demographic Factors, With OR = 1 serving as the reference point. Values above 1 Indicate Higher Likelihood, While Values Below 1 Suggest Lower Likelihood Compared to the Reference

Two-thirds of the women in our cohort with symptoms had moderate to severe symptoms. Their average scores in UFS QoL subscores for energy/mood, activity, and concern were 55.5 ± 17.6 , 52.6 ± 20.6 , and 52.0 ± 20.7 , respectively, which shows that their QoL was greatly disrupted. Nearly half of the women in this study said that it was important or very important for them to deal with loss of control and being self-conscious because of fibroids. Such findings show that it is important to use cultural sensitivity when screening and treating patients.

In addition, age 31–40, early menarche, and primiparity were still important predictors in the multivariate model, while marital status was not, which suggests that biological reproductive characteristics have a bigger impact on fibroid development than social or marital status.

There are several important strengths to this study. By relying on the Uterine Fibroid Symptom and Quality of Life (UFS-QOL) questionnaire, it allows for a fair comparison of symptoms and HRQOL with other international results. Working with a large number of cases improves the study’s statistical strength and supports the analysis of groups based on age, parity, and reproductive history. In addition, using both univariate and multivariate logistic regression helps identify the factors that play a role in diagnosing fibroids. Evaluating different aspects of symptom burden, such as concern, energy/mood, and self-consciousness, gives a better grasp of the effects of uterine fibroids on a woman’s life, not only physically.

Still, some weaknesses in this area cannot be ignored. Since the study is cross-sectional, it does not allow for clear connections between fibroid symptoms and HRQOL. Since the data were gathered through self-reporting, there might be a chance of inaccurate or biased answers, mainly when discussing reproductive history and mental health. Also, because convenience sampling was used, the findings may not apply to all females in Pakistan. Beliefs and attitudes about menstruation and reproductive health in society might have made it more likely for women to hide their symptoms and emotional difficulties. No clinical or imaging testing was used to confirm fibroids, which might have affected the accuracy of the study’s findings and introduced a risk of misclassifying cases.

Conclusion

According to this study, uterine fibroids place a major burden on women's physical, emotional, and daily living. Most of the women with symptoms had moderate to severe issues that affected their energy, mood, self-esteem, and ability to control their lives. It was found that age 31-40, early menarche, and having children were important in predicting fibroid diagnosis. This information is in line with studies worldwide, stressing the significance of early detection and careful cultural management of fibroid-related symptoms. UFS-QOL is a standardized tool that can be used to fully assess symptoms and plan personalized treatment approaches. Taking care of both the medical and emotional aspects of uterine fibroids is important for improving the quality of life of these women.

Ethical Consideration

Participation was both anonymous and voluntary. Informed verbal consent was obtained from all participants.

Limitations

The information on menstrual and reproductive history was self-reported, so it may not be completely accurate leading to recall bias. As the study design is cross sectional, causality between uterine fibroids symptoms and quality of life outcomes cannot be established [7].

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