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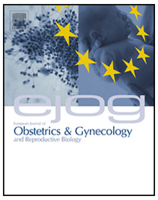

Full length article

# Impact of uterine fibroids on quality of life: a national cross-sectional survey

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ABSTRACT

*Objective:* To study clinical impact of symptomatic uterine fibroids on women's health-related perceived quality of life regarding several dimensions.
*Study Design:* A prospective cross-sectional web-based survey was conducted from August 18th to September 2nd 2016 among the general French population of women. A total of 1287 French women over the age of 18, among which 302 reported symptomatic uterine fibroids were surveyed. Data concerning demographics, symptoms and health-related quality of life (HRQL) using the UFS-QoL questionnaire, an overall well-being score and overall discomfort score were collected.
*Results:* Almost two thirds of surveyed women (n = 193; 64%) reported moderate to severe fibroid-related symptoms (symptom severity score between 40 and 100). The global HRQL score showed that 64% of women (n = 193) reported a moderate to very important impact of fibroids on quality of life (HRQL global score between 0 and 50). The worse HRQL scores were reported for concern (57.5 ± 26.7), energy (58.1 ± 23.2) and self-conscious subscales (63.4 ± 24.3). The mean overall well-being score was lower in women with symptomatic uterine fibroids (6.6 ± 1.7) than in women without (7.3 ± 1.5). The mean overall discomfort score rated by women with symptomatic uterine fibroid was 5.7 ± 2.5 with a score between 6 and 10 reported by 56% of them.
*Conclusions:* We observed that 64% of surveyed women reported a moderate to very important impact of fibroids on their quality of life. This perceived alteration of quality of life together with the severity of symptomatic fibroids have a significant impact on the overall level of discomfort perceived by women and on their personal quality of life.

## Introduction

Uterine fibroids (UF) are benign, smooth muscle tumors [1] and currently the most common benign gynecologic tumors, affecting 20–40% of women of reproductive-age [2]. Even though many fibroids remain asymptomatic, 30% can result in heavy uterine bleeding, anemia, abdominal pain or pressure, increased urinary frequency, and infertility or recurrent miscarriage [3–5]. In a French epidemiological survey, almost 10% of women experienced symptomatic UF and reported on average 2.8 different symptoms over the last 3 months [6]. Another survey conducted in the US also highlighted that the more women reported a high number of symptoms, the greater the impact on quality of life (QoL) was important [7]. Another survey concluded that UF are associated with impairment of QoL and productivity at work [8]. When reaching menopause, symptom burden is likely to decrease in most women [9]. Yet, UF remain a leading cause of hysterectomy in France [6]. Some procedures which are less invasive and preserve fertility are increasingly offered to patients and performed.

Despite the evidence that UF significantly impact women's QoL [8,10,11], to date, little work has been conducted to examine in detail this impact and compare their overall well-being to women without UF. Quality of life is a major issue since it might influence therapeutic management and is a major endpoint for long term follow-up. Also, it is a key outcome of condition severity and most trials assessing novel treatments take it into account as a secondary or even as a primary outcome [12–15].

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Thus, the aim of this survey was to provide a deep analysis regarding specific domains of QoL affected by symptomatic UF and compare their level of well-being to women without UF.

## Material and methods

A prospective cross-sectional web-based survey was conducted by Ipsos, a largest company in market and public opinion research, from August 18th to September 2nd 2016 among the general French population of women.

The overall study sample has been targeted and investigated throughout the Ipsos Access panel composed of 314 077 panellists in France. Regarding the Ipsos online surveys, extensive quality procedures are in place to ensure that the survey inputs allow for high quality survey outputs.

83 053 panelists have been selected thanks to statistical sampling following the adjustments criteria on age, socio-professional category, geographical area and type of city based on the National Institute of Statistics and Economic Studies census data for the population of women in a pre-targeted population of female aged 18 and over.

Inclusion criteria were elaborated with the steering committee of the survey. Diagnosis of UF was confirmed among participants by the response to the questions: “Have you ever had one or more UF?” and for women answering “Yes”, “Have your UF (s) been diagnosed by a doctor thanks to an MRI or an echography?”. Only women who answered yes by MRI or yes by an echography were considered in the UF population.

French women pre-targeted within the Access Panel have been invited to participate until the number of 1200 respondents. An over-representation of women with symptomatic UF has been assumed at the beginning of the project with the objective to recruit 300 women with symptomatic UF among the national sample of 1 200 respondents. Women pre-targeted within the Access Panel have been invited to participate until the number of 300 women with symptomatic UF has been reached.

The questionnaire collected data regarding demographics, medical and gynecological history, mental state and QoL, knowledge and perception of fibroids, history and symptoms of fibroids, and their medical management. The impact of fibroids on perceived QoL was assessed by the Uterine Fibroid Symptom-QoL questionnaire (UFS-QoL), a 37-item questionnaire that has been validated to measure disease-specific symptoms and health related QoL (HRQL) for UF [10]. The UFS-QoL consists of an 8-item Symptom Severity scale and 29 HRQL items comprising 6 subscales: Concern, Activities, Energy/Mood, Control, Self-consciousness, and Sexual Function. Symptom Severity and HRQL subscale scores are summed and transformed into a 0-100-point scale. Higher Symptom Severity scores indicate greater symptoms while higher HRQL subscale scores indicate better health-related QoL.

The overall discomfort score was measured by a numeric scale with rates ranging from 0 to 10/10 (rate 0 for no discomfort, to rate 10 for very high discomfort); an overall well-being score was evaluated from 0 to 10/10 (rate 0 for very low well-being, to rate 10 for very high well-being).

The current article will focus on these indicators to describe and analyze how the HRQL score and the symptom severity score impact women reporting symptomatic UF in their overall level of well-being and also in the various areas of their daily life.

All statistical analyses were performed using COSI software. Descriptive statistics include frequency tables, mean and standard deviations.

## Results

A total of 24 103 panelists accessed the survey with a response rate of 29%.

**Table 1**
Characteristics of the survey population.

| | Overall (n = 1287) | Women with symptomatic UF (n = 302) |
|---|---|---|
| Age (mean ± standard deviation in years) | 47.9 ± 15.8 | 43.0 ± 7.5 |
| Age groups (n, %) | 129 (10%) | 7 (2%) |
| 18–24 | 193 (15%) | 37 (12%) |
| 25–34 | 219 (17%) | 113 (38%) |
| 35–44 | 335 (26%) | 143 (47%) |
| 45–59 | 412 (32%) | 2 (1%) |
| ≥ 60 | 476 (23%) | 106 (24%) |
| Marital status (n, %) | 811 (63%) | 197 (65%) |
| Single | 180 (14%) | 33 (11%) |
| Married/civil union/living with partner | 940 (73%) | 176 (50%) |
| Divorced/separated/ widow | 180 (14%) | 89 (26%) |
| Number of children under 18 at home (n, %) | 103 (8%) | 46 (14%) |
| None | 51 (4%) | 31 (9%) |
| 1 | 13 (1%) | 5 (1%) |
| 2 | 245 (19%) | 58 (19%) |
| 3 | 296 (23%) | 74 (24%) |
| 4 or more | 283 (22%) | 54 (18%) |
| Geographic locations (n, %) | 142 (11%) | 39 (13%) |
| Paris / Paris area | 322 (25%) | 77 (26%) |
| Northwest | 180 (14%) | 44 (15%) |
| Northeast | 270 (21%) | 68 (22%) |
| Southwest | 335 (26%) | 87 (29%) |
| Southeast | 296 (23%) | 69 (23%) |
| Net annual household income after deduction of income taxes (n, %) | 206 (16%) | 34 (11%) |
| 15.000 € or less | | |
| 15.001–24.000 € | | |
| 24.001–36.000 € | | |
| More than 36.000 € | | |
| Refusal to answer | | |