Self-Reporting of Symptoms' Severity and Functional Capacity among Patients with Fibromyalgia: A Cross-Sectional Study.

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Abstract

Background: Fibromyalgia (FM) is a complex clinical condition marked by widespread muscle and joint pain, tenderness, fatigue, disrupted sleep, and cognitive difficulties. The severity of these symptoms can vary greatly among patients, making the experience of living with fibromyalgia unpredictable and challenging. **Aim:** Assess self-reporting of symptoms' severity and functional capacity among patients with fibromyalgia. **Design:** Descriptive cross-sectional study. **Setting:** Three private support fibromyalgia groups on Facebook. **Subjects:** A convenience sample of 385 patients with fibromyalgia. **Study tools:** Two tools were utilized: (I) Symptom severity scale with attached demographic, clinical data sheet for patients with fibromyalgia, and (II)Revised fibromyalgia impact questionnaire. **Results:** Among the participants, 90.9% were female, 34.1% aged from 30 to less than 40 years, 57.4% were married, and 48.0% had been diagnosed with FM for 5 to less than 10 years. (58.4%) of FM patients had reported severe symptom levels. Additionally, a significant positive moderate correlation was found between patients' overall fibromyalgia symptoms' severity and their overall functional capacity (r=0.465, and p=<0.001). **Conclusion:** Fibromyalgia patients reported severe FM symptoms and reduced functional capacity, with a strong correlation between both of them. **Recommendations:** The nursing staff should focus on an individualized care plan for FM patients, prioritizing self-reported symptom severity and functional limitations to enhance symptom management, functional capacity, and patient satisfaction.

Keywords: Fibromyalgia, Patient Self-Report, Symptom Severity, & Functional Capacity.

Introduction:

Fibromyalgia (FM) is a chronic syndrome marked by various physical and psychological symptoms including widespread musculoskeletal pain, fatigue, sleep disruptions, cognitive impairment, anxiety, and depression, all of which negatively impact daily activities and quality of life **(Perrot, 2019)**. This clinical condition is challenging to define, as it often overlaps with other disorders that exhibit similar symptoms. As a result, FM imposes a significant burden on both social and healthcare systems, since patients frequently seek more medical consultations in general medicine and specialized fields such as pain management and psychology. They also require more prescriptions and diagnostic tests compared to the general population **(Montoro & Galvez-Sánchez, 2022)**.

This syndrome affects 2% - 8% of the global population, predominantly impacting individuals of working age, and occurs three times more frequently in women than in men **(Filipovic et al., 2025)**. The exact causes of fibromyalgia are still unclear and are quite complex. It is not attributed to a single factor; instead, it is thought to result from a combination of genetic susceptibility, immune and neuroendocrine system dysfunctions, along with environmental influences, particularly psychological or physical stressors **(Malatji et al., 2019; Filipovic et al., 2025)**.

Unlike inflammatory disorders, FM lacks tissue damage or deformities that could explain the pain experienced by the patients **(Brummett, & Clauw, 2018)**. However, current research indicates that central sensitization (CS) causes dysregulation in the peripheral and central nervous systems, leading to abnormal pain amplification. This is associated with elevated pro-inflammatory interleukins, such as IL-1β and IL-6. Consequently, patients experience hypersensitivity of the normal tissues to painful and non-painful stimuli, lowered thermal and mechanical pain thresholds, exaggerated pain responses, and tenderness upon palpation. This explains the chronic nature of widespread musculoskeletal pain, which is the hallmark of fibromyalgia **(O'Brien et al., 2018; Nazlikul & Nazlikul, 2025)**.

Besides, increased levels of glutamate and substance P, along with decreased serotonin and norepinephrine in the spinal cord, may sensitize pain signals. Consequently, patients often experience symptoms beyond pain, including morning stiffness, cognitive dysfunction, headache, fatigue, sleep disturbances, gastrointestinal issues, interstitial cystitis, and mood disorders, such as stress and depression

(Kimura et al., 2021; Maria, 2025). Additionally, stressful life events, such as physical trauma from surgery, traffic accidents, and certain infections, along with chronic stress, can intensify serotonergic activity, thereby increasing the risk of FM development and worsening symptoms **(Filipovic et al., 2025)**.

The 2010 American Rheumatology Criteria (ARC) has focused on patient self-reporting of somatic symptoms and cognitive difficulties in both diagnosis and management of FMS. This is crucial because individuals with fibromyalgia are generally more aware of their symptoms and tend to experience a higher true prevalence of these symptoms compared to the references **(Brummett & Clauw, 2018)**.

Fibromyalgia patients often report a wide range of symptoms, with predominance of musculoskeletal pain that is typically described as a deep muscle ache that may be associated with morning stiffness. This pain can be throbbing, intense, and persistent, frequently accompanied by sensations of generalized burning and tingling, with an average increase in its intensity prominently in the morning and evening. Additionally, FM patients may experience fatigue, which is reported as a sense of tiredness or exhaustion, along with difficulty initiating or sustaining physical activities or completing any task. Besides a variety of other symptoms, such as sleep disturbance, cognitive impairment, and depressive feelings **(Dailey et al., 2016; D’Amuri et al., 2024)**.

The self-reporting of fibromyalgia manifestations varies according to the symptoms’ intensity and nature. These symptoms can fluctuate significantly over time in the same patient and between different patients. As a result, assessing the severity of these symptoms remains one of the most significant challenges in the diagnosis and clinical evaluation of FM. Therefore, the fully patient-reported instruments were designed for assessing the severity of FM symptoms experienced by patients, as these symptoms can impair a patient’s overall functioning and diminish their quality of life **(Costa et al., 2016; Salaffi et al., 2021)**.

Also, fibromyalgia patients frequently report difficulty with their daily functional tasks, secondary to FM symptoms, which are illustrated in disabling pain, fatigue, and emotional disturbance. They are considered the most significant factors among other clinical FM symptoms that affect overall functionality and reduce work capacity, resulting in decreased productivity and intense sedentary behavior due to limiting the ability to carry out daily routines that in turn diminish their quality of life. The functional capacity of FM patients is measured by several self-report validated instruments designed to evaluate how fibromyalgia adversely impacts patient performance and participation in activities at home, work, or social situations **(Dailey et al., 2016; Montoro & Galvez-Sánchez, 2022)**.

Significance of the study:

Managing FM is complex and often yields unsatisfactory results because this significant clinically challenging condition adversely affects patients' lives, hindering their overall functions and reducing their quality of life. So, effective treatment and the patient's response to therapy require personalized adjustments and adaptations based on the assessment of the patient's self-reporting symptoms severity along with its impact on their functional capacity.

The study aimed to: Assess self-reporting of symptoms severity and functional capacity among patients with fibromyalgia.

Research question: What are the levels of self-reported symptoms severity and functional capacity among patients with fibromyalgia?

Materials and Method:

Study design: Descriptive cross sectional research design was utilized to conduct this study.

Study Setting: This study was conducted on three private peer support fibromyalgia groups on Facebook.

Study Sample:

A convenience sample of 385 fibromyalgia patients was included in this study from Facebook support groups for individuals with fibromyalgia; they were recruited according to the following inclusion criteria: age ranged from 18 ≥ 60 years, had been diagnosed with fibromyalgia by a rheumatologist, and were free from chronic pain related to active cancer, infection, inflammatory joint diseases. Additionally, none of the patients had neurological disorders, psychiatric diseases, or drug abuse. (Galvez-Sánchez, 2020, Galvez-Sánchez, et al., 2020)

The following formula was used to calculate the sample size required for the unknown population: n0 = z2. p (1 – p) / e2 ; Calculating sample size at a confidence level of 95%, margin of error 5%, z = 1.96, e =0.05, p = 0.5, (1- p) = 0.5. The sample size was estimated to be n0 = 1.96 2. 0.5 (0.5) /0.052 = 384, 16. **So,** 385 fibromyalgia patients were included.

Tools of the study:

Tool I: Symptom Severity Scale (SSS).

This tool was adapted from **(Wolfe et al., 2016; Galvez-Sánchez, 2020)**. It is a self-report scale designed for assessing the severity of fibromyalgia symptoms experienced in the past week before filling it out. In prior validation studies, this tool demonstrated strong internal consistency (Cronbach’s α = 0.82) **(Galvez-Sánchez et al., 2020)**. It consists of two parts:

Part 1: **Widespread Pain Index (WPI)** includes a list of 19 painful non-articular body areas, organized across four quadrants plus an axial region with a maximum score of 19.

Part 2: Symptom Severity (SS), this part has two subdivisions.

- **Part 2a** assesses severity of fatigue, waking un-refreshed and cognitive difficulties on a 4-point Likert scale (0 to 3).
- **Part 2b** includes a list of 41 additional symptoms (e.g., irritable bowel syndrome, fatigue/tiredness, muscle weakness, Raynaud's phenomenon, and tinnitus). Patients are categorized into four score groups based on the number of symptoms they report: 0 symptoms (score = 0), 1 to 10 symptoms (score = 1), 11 to 24 symptoms (score = 2), and 25 or more symptoms (score = 3). The overall score for Part 2 ranges from 0 to 12, calculated by summing the scores from Part 2a (score range: 0 to 9) and Part 2b (score range: 0 to 3).

The overall fibromyalgia symptoms severity score is derived from the sum of WPI score (up to 19) and the SS score (up to 12), resulting in a maximum possible score of 31. The overall score is subsequently converted into a percentage to categorize the severity of fibromyalgia symptoms as follows:

- Less than 33.3% indicate mild symptoms.
- From 33.3% to less than 66.6% indicate moderate symptoms.
- Equal to and more than 66.6% indicate severe symptoms.

In addition, a demographic and clinical data sheet was attached to gather information about the participants' demographic and clinical data such as gender, age, education level, marital status, residential area, job status, and income. Additionally, the clinical data concerning number of years since diagnosis and any associated comorbid conditions were collected (Montoro & Galvez-Sánchez, 2022).

Tool II: Fibromyalgia Impact Questionnaire Revised (FIQR)

This tool is one of the most widely used validated instruments for assessing fibromyalgia's functional capacity, overall impact, and associated symptoms. Recently, it has been translated from English into various languages. The Jordanian Arabic version (FIQR_A) shows high reliability (r = 0.93) and strong internal consistency, with a Cronbach's alpha of (a= 0.91), and it was adopted from **(Costa et al., 2016 & Alaujan et al., 2024)** for use in this study.

The FIQR was designed to evaluate how fibromyalgia affects three key domains including function (9 items), overall impact (2 items) and symptoms (10 items) within the past 7 days. A total of 21 items are rated on an 11-point numeric scale ranging from 0 to 10, where 10 indicating the worst level. The score for each domain is calculated by summing the scores of the corresponding items and dividing it by 3 (for function), 1 (for overall impact), and 2 (for symptoms).

The score ranges for the function, impact, and symptoms domains are 0–30, 0–20, and 0–50, respectively. The total score, which ranges from 0 to 100, is derived from the summed scores of the three domains. Higher scores indicate greater functional difficulties, increased symptom intensity, and a greater overall impact of fibromyalgia on the individual's life.

Validity and reliability of the tools:

The original and Arabic versions of the tools were evaluated by five experts of medical-surgical nursing from the Faculty of Nursing – Damanhour University to assess its content validity, completeness, and clarity. Accordingly, modifications, corrections, and clarifications of the items were made. The test Cronbach's α was used to assess the reliability and internal consistency of the Arabic-translated study tools, it was 0.84 and 0.91 for tool I and II respectively.

Pilot study:

A pilot study was carried out on 10% of the total sample (39 patients), who were not included in the main study to test the clarity, feasibility, and applicability of the study tools, modifications needed were done.

Fieldwork:

Data were collected from January 2025 to March 2025 using an online Arabic questionnaire developed via Google Forms. The questionnaire link was shared through private Facebook support groups for fibromyalgia patients to facilitate self-reporting of their living experiences with this challenging condition. The researchers provided an explanation of the study's aim, outlined the various components of the questionnaire, and included relevant instructions. Respondents were asked to provide their email addresses to ensure that each response was unique and to prevent duplicate submissions. The time required to complete the questionnaires typically ranged from 10 to 15 minutes.

Ethical considerations:

Written ethical approval to conduct the study was granted by the Ethical Committee of the Faculty of Nursing, Damanhour University on September 15, 2022. The study was assigned the ethical approval code (61-c). Each fibromyalgia patient enrolled in the study received comprehensive information regarding the nature and aim of the study. Participants were informed that their involvement in the study was entirely voluntary, and they had the right to refuse participation and could withdraw at any time. The participants' were assured about their privacy by not collecting any identifying information. Their data confidentiality as well as anonymity of the collected responses were guaranteed.

Statistical analysis:

After data collection, data were entered into a computer and analyzed using IBM SPSS software package version 26.0**.** Qualitative data were presented using numbers and percentages, while quantitative data were presented using range (minimum and maximum), mean, and standard deviation. A significance level of 5% was used to evaluate the results. The correlation between two normally distributed quantitative variables was determined by Pearson's coefficient test while Linear Regression test was used to detect the effect of symptom severity on functional capacity of participants.

Results:

Table (1) shows that most of the studied FM patients (90.9%) were female. As regards age, more than one-third (34.1%) of them were between the ages of 30 to less than 40 years. Concerning marital status, 57.4% of the patients were married. Regarding the level of education, it was found that 56.6% of the patients had secondary education. Regarding place of residence, more than three-quarters (78.7%) of patients were from urban areas. Concerning occupation, more than one-third (39.7%) of them had manual work. In terms of income sufficiency, 66.8% had insufficient income. Regarding the number of years of being diagnosed with FM, nearly half of patients (48.0%) had been diagnosed with FM from 5 to less than 10 years. Concerning associated comorbid conditions, it was observed that (52.7%, 41.8%, and 34.0%) of patients respectively had anemia, rheumatoid autoimmune disorders, and hypertension.

Table (2) illustrates that the mean percent scores of fibromyalgia symptoms severity was (84.91±14.93) for part 2 (SS) regard fatigue, waking un-refreshed, and cognitive difficulties with other additional 41 symptoms that involved within Part 2a, and part 2b with (82.5±18.5, and 92.2±15.7) respectively, compared to (63.58±33.17) for Part 1 concerning widespread pain index. While the overall symptoms severity mean percent scores was (71.84±22.42).

Figure (1) presents that more than half of the studied patients (58.4%) had severe levels of fibromyalgia symptoms in the last 7 days.

Table (3) indicates the mean percent scores of functional capacity impact among studied FM patients. It was noticed that the Mean ±SD for FIQR three domains was (82.81±16.37) for the overall impact, followed by (80.52±15.04 and 72.97±20.34) respectively for symptoms, and function, with the overall mean percent scores of FIQR was 78.77±15.64.

Table (4) and **Figure (2)** shows a positive significant moderate correlation between overall fibromyalgia symptoms' severity and overall functional capacity experienced by patients in the last week where $r=0.465^*$ and $p=<0.001^*$.

Table (5) illustrates that part 2 of SSS concerning fatigue, waking un-refreshed, and cognitive difficulties and other additional symptoms have a higher effect on functional capacity as $t=11.042^*$ followed by part 1 of SSS concerning widespread pain index as $t=5.830^*$. Moreover, both parts of SSS reflected a highly statistical effect of fibromyalgia on the patients' functional capacity experienced in the last 7 days where $p<0.001^*$.

Table (1): Distribution of demographic and clinical data of the studied fibromyalgia patients.

Demographic and clinical data	(n = 385) No	 %
Sex		
Male	35	9.1
Female	350	90.9
Age		
18-<30	124	32.2
30-<40	131	34.1
40 - <50	111	28.8
50 - <60	19	4.9
Marital status		
Single	116	30.1
Married	221	57.4
Widowed	21	5.5
Divorced	27	7.0
Level of Education		
Read & write	2	0.5
Primary education	4	1.0
Preparatory education	6	1.6
Secondary education	218	56.6
University education	83	21.6
Postgraduate education	72	18.7
Residence area		
Urban	303	78.7
Rural	82	21.3
Occupation		
Employee	48	12.5
Manual work	153	39.7
Retired	3	0.8
Housewife	100	26.0
Not working	81	21.0
Income		
Enough	128	33.2
Not enough	257	66.8
Number of years of being diagnosed with FM		
<5	172	44.7
5 - <10	185	48.0
10 - <20	28	7.3
≥ 20	0	0.0
Associated comorbid conditions #		
Adrenal dysfunction	24	6.2
Anemia	203	52.7
Hypothyroidism	99	25.7
Psychiatric conditions	69	17.9
Rheumatoid autoimmune disorders	161	41.8
Systemic inflammation or infection	91	23.8
Vitamin and/or mineral deficiency	72	18.7
Diabetes	114	29.6
Hypertension	131	34.0
Heart disease	33	8.6
Kidney disease	55	14.3

Responses are NOT mutually exclusive.

Table (2): Mean percent scores of fibromyalgia symptoms' severity among the studied patients.

Symptom Severity Scale (SSS)	**Total score**		**Mean percent score**	
	Min. – Max.	**Mean ±SD**	**Min. – Max.**	**Mean ±SD**
▪ Widespread Pain Index (Part 1)	0.0 – 19.0	12.08±6.30	0.0 – 100.0	63.58±33.17
▪ Symptom Severity (Part 2)	5.0-12.0	10.19±1.79	41.7-100.0	84.91±14.93
➢ Part 2a	2.0 – 9.0	7.4±1.7	22.2 – 100.0	82.5±18.5
➢ Part 2b	1.0 – 3.0	2.8±0.5	33.3 -100.0	92.2±15.7
Overall symptoms severity scores:	**5.0-31.0**	**22.27±6.95**	**16.1-100.0**	**71.84±22.42**

Figure (1): Percentages of the severity levels of fibromyalgia symptoms among the studied patients (n = 385).

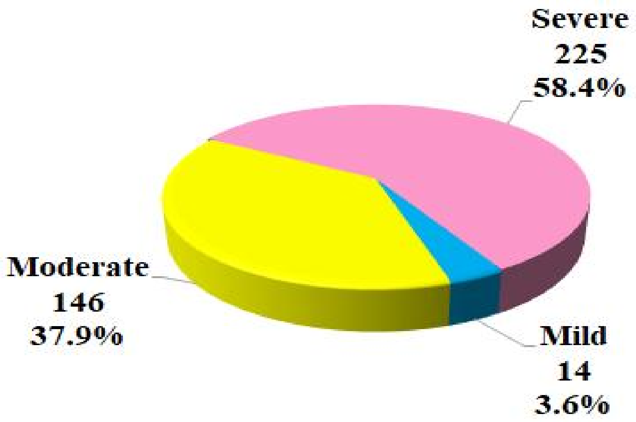

Table (3): Mean percent scores of fibromyalgia functional capacity impact among the studied patients.

Fibromyalgia functional capacity assessed by (FIQR)	**Total score**		**Mean percent score**	
	Min. – Max.	**Mean ±SD**	**Min. – Max.**	**Mean ±SD**
• Domain 1 (Function)	3.0 – 90.0	65.68±18.31	3.3 – 100.0	72.97±20.34
• Domain 2 (Overall impact)	2.0 – 20.0	16.56±3.27	10.0 – 100.0	82.81±16.37
• Domain 3 (Symptoms)	14.0 – 70.0	56.37±10.53	20.0 – 100.0	80.52±15.04
Overall scores of FIQR	**38.0 – 265.0**	**205.24±42.89**	**15.9 – 100.0**	**78.77±15.64**

Table (4): Correlations between fibromyalgia symptoms severity and functional capacity among the studied patients.

Fibromyalgia symptoms severity		**Fibromyalgia functional capacity assessed by (FIQR)**			
		Domain 1	Domain 2	Domain 3	**Overall FIQR**
▪ Widespread Pain Index (Part 1)	**r**	0.385*	0.236*	0.290*	0.362*
	p	<0.001*	<0.001*	<0.001*	<0.001*
▪ Symptom Severity (Part 2)	**r**	0.458*	0.471*	0.540*	0.532*
	p	<0.001*	<0.001*	<0.001*	<0.001*
Overall symptoms severity	**r**	0.467*	0.336*	0.402*	0.465*
	p	<0.001*	<0.001*	<0.001*	<0.001*

r: Pearson coefficient

*: Statistically significant at $p \leq 0.05$

Figure (2): Correlations between overall fibromyalgia symptoms' severity and overall functional capacity among the studied patients.

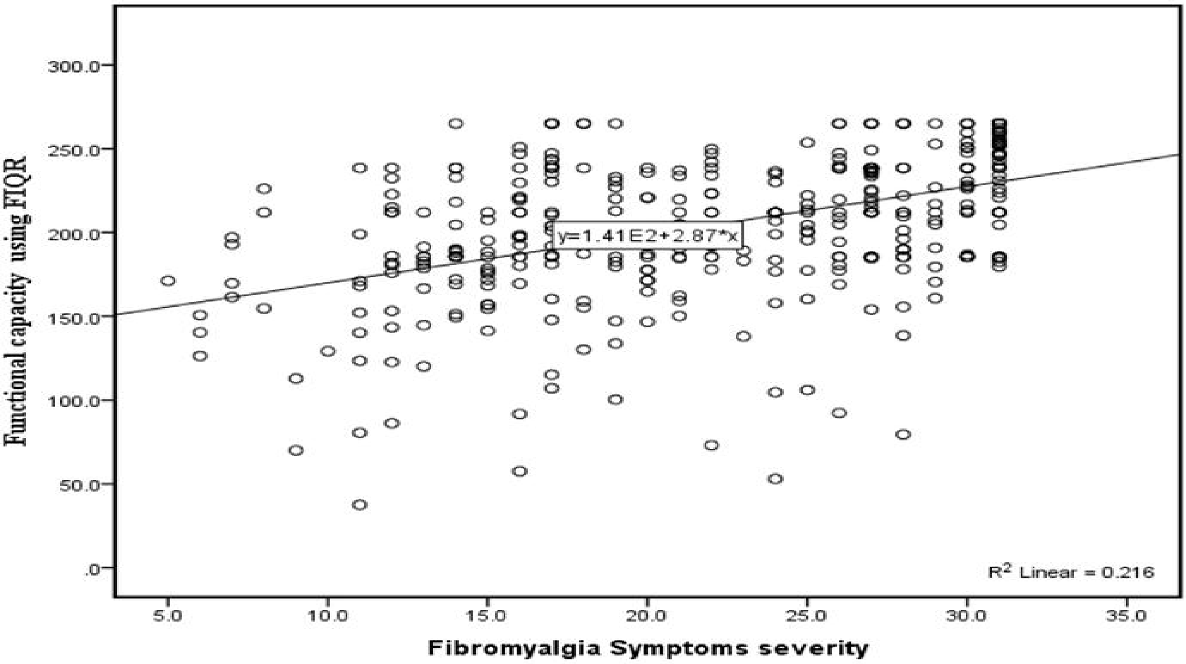

Table (5): Linear Regression Models of the effect of fibromyalgia symptoms' severity on functional capacity among the studied patients.

Factors	B	Beta	t	p	95% CI	
					LL	UL
▪ Widespread Pain Index (Part 1)	1.697	0.249	5.830*	<0.001*	1.125	2.269
▪ Symptom Severity (Part 2)	11.300	0.472	11.042*	<0.001*	9.287	13.312
R^2= 0.341, **Adjusted R^2=** 0.338, **F=** 98.936*, **p<0.001***						

F,p: f and p values for the model
R^2: Coefficient of determination
B: Unstandardized Coefficients
Beta: Standardized Coefficients
t: t-test of significance
CI: Confidence interval
LL: Lower limit
UL: Upper Limit
*: Statistically significant at $p \leq 0.05$

Discussion:

Fibromyalgia is a long-term musculoskeletal condition marked by widespread pain, sleep disturbances, persistent fatigue as well as cognitive and psychological challenges. Due to the absence of definitive biomarkers, the diagnosis and treatment of FM largely rely on patient-reported symptoms. Understanding the relationship between self-reported symptom severity and functional capacity is crucial for optimizing clinical management, personalizing treatment strategies, and improving patients' health outcomes. Therefore, this study was conducted to assess self-reporting of symptoms severity and functional capacity among patients with fibromyalgia.

The socio-demographic profile of the studied FM patients revealed that the majority of patients were a predominantly females. This may be due to hormonal changes, differences in pain processing, higher levels of anxiety and depression, and sociocultural factors that may contribute to increased reporting of FM among females. This finding is consistent with **(Moshrif et al., 2022; Alzabibi et al., 2022)** who reported a higher prevalence and intensity of FM symptoms in women.

The age distribution showed a significant proportion of participants were in the age group from 30 to 40 years old, highlighting the impact of FM during peak productive years. This suggests that FM can interfere with daily activities, work performance, and overall quality of life at an age when individuals are typically engaged in career development and family responsibilities. In the same line (**Ersoy et al., 2024)** found that 36% of their studied patients were in the 30–49 years old which is parallel to the age range where fibromyalgia syndrome is frequently observed. In contrast **(Costa & Ferreira, 2024)** in their study entitled "Knowledge and strategies for coping with fibromyalgia" found that 67% of the studied sample was between 41 and 60 years old.

Most FM patients were married, lived in urban areas, and had a secondary level of education. These findings agree with **(Navarro et al., 2024)** who found that the majority of FM patients were married, lived in urban areas, and had secondary or higher education. In addition, nearly half of the patients were diagnosed with FM from 5 to less than 10 years. This was not similar to that of **(Martín-Borràs et al., 2024)** as nearly half of their patients were diagnosed from 1 to less than 5 years.

Regarding the severity of fibromyalgia symptoms, the results illustrated that most patients reported severe levels of fibromyalgia symptoms. This can be attributed to the multifactorial causes of fibromyalgia, which include genetic predisposition, immunological and neuroendocrine dysfunctions, as well as various physiological, psychological, environmental, and lifestyle-related stressors. These factors contribute to severe intensity levels of symptoms commonly reported by FM patients, such as musculoskeletal pain, anxiety, fatigue, disturbed sleep, and cognitive difficulties **(Elsaid, 2025).** This finding agrees with **(Singh et al., 2024; Jiao et al., 2021)** who found that most patients had reported moderate to severe pain, severe fatigue, moderate to severe depression and stress.

Furthermore, the present study showed that fibromyalgia significantly impacted patients' functional capacity as reflected by high mean percent scores across all FIQR domains, which reflect that FM patients experienced considerable limitations in their daily functioning, alongside substantial symptoms burden and overall disease impact. As FM symptoms often lead to decreased independence and functional performance, limiting the patient's ability to carry out activities of daily living. This finding is supported by **(Favretti et al., 2023)** who found that total FIQR scores and the scores of physical function domain were significantly higher in females.

The results also revealed a significant positive correlation between the severity of fibromyalgia symptoms and the extent of functional impairment experienced by patients in the last week prior to the study. It is consistent with **(Ahmed & Mohammed, 2024)** as they found that the majority of FM patients faced significant challenges in daily functioning as a result of disease-related disability. The same was reported by **(Khallaf et al., 2020)** as they found that fatigue and reduced functional ability are frequently observed in all FM patients and are closely correlated to the level of disease progression and severity.

Finally, the findings of this study put an emphasis on the importance of regular assessment of symptom severity and functional limitations in FM care. Nurses should therefore prioritize individualized nursing care plan for FM patients based on self-reported symptoms, which can improve symptom management and increase patient satisfaction.

Conclusion:

This study provided valuable insights into fibromyalgia patients' subjective experience regarding the severity of symptoms and its impact on functional capacity. The findings revealed that most FM patients had severe fibromyalgia symptoms, and there was a moderate correlation between overall fibromyalgia symptoms severity and overall functional capacity. These results emphasize the importance of patient self-reporting in capturing the true burden of the disease, and the strong association between symptom severity and functional limitation underscores the importance of comprehensive assessment and patient-centered care approaches.

Recommendations:

Based on the findings of this study, it is recommended that nurses and health care providers should integrate validated self-reported assessment tools into routine clinical practice to effectively capture the subjective symptom experiences and functional limitations among FM patients. Empowering patients through educational programs on self-management, lifestyle modifications, and stress reduction is required to improve their ability to manage FM symptoms and daily functioning. A multidisciplinary approach to care is essential to address the physical, psychological, and social dimensions of FM. Finally, personalized care plans tailored to each patient's symptoms and functional status are recommended to improve health outcomes.

Strengths and Limitations of the study:

The study's main strength lies in its insightful exploration of fibromyalgia patients' experiences through self-reported symptoms severity and functional limitations. The study limitations can be outlined in a limited sample size as many administrators of online fibromyalgia support groups were reluctant to share the research questionnaire to their members.

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Conflict of interest

The authors confirm that they have no conflicts of interest, ensuring transparency and integrity in their research.

References:

Ahmed, Z. M., & Mohammed, M. M. A. E. (2024). Effect of Fibromyalgia on Patient's Quality of Life and Disability. *Egyptian Journal of Health Care*, *15*(1), 1273-1288. https://doi.org/10.21608/ejhc.2024.345601

Alaujan, S. S., Almalag, H. M., Almazrou, S. H., Alkhudair, N. A., Alodaibi, F. A., & Omair, M. A. (2024). Translation, Cross-Cultural Adaptation, and Psychometric Properties of the Revised Fibromyalgia Impact Questionnaire (FIQR) for Use in Arabic-Speaking Patients in Saudi Arabia. *Patient preference and adherence*, 1017-1025. https://doi.org/10.2147/PPA.S452067

Alzabibi, M.A., Shibani, M., Alsuliman, T. *et al.* Fibromyalgia: epidemiology and risk factors, a population-based case-control study in Damascus, Syria. *BMC Rheumatology* 6, 62 (2022). https://doi.org/10.1186/s41927-022-00294-8

Costa, C., Pinto, A.M., Pereira, A.T., Marques, M., Macedo, A., & Pereira da Silva, J.A. (2016). Psychometric properties of the Revised Fibromyalgia Impact Questionnaire (FIQR)-a contribution to the Portuguese validation of the scale. *Acta reumatologica portuguesa*, *41*(3):240-250.

Brummett, C., & Clauw, D. J. (2018). Fibromyalgia and centralized pain states. In Essentials of Pain Medicine (pp. 213-222). Elsevier.

Costa, L. P., & Ferreira, M. A. (2024). Knowledge and strategies for coping with fibromyalgia. *Revista gaucha de enfermagem*, *45*, e20230213. https://doi.org/10.1590/1983-1447.2024.20230213.en.

D'Amuri, A., Greco, S., Pagani, M., Presciuttini, B., Ciaffi, J., & Ursini, F. (2024). Common Non-Rheumatic Medical Conditions Mimicking Fibromyalgia: A Simple Framework for Differential Diagnosis. *Diagnostics (Basel, Switzerland)*, *14*(16), 1758. https://doi.org/10.3390/diagnostics14161758.

Dailey, D. L., Frey Law, L. A., Vance, C. G., Rakel, B. A., Merriwether, E. N., Darghosian, L., Golchha, M., Geasland, K. M., Spitz, R., Crofford, L. J., & Sluka, K. A. (2016). Perceived function and physical performance are associated with pain and fatigue in women with fibromyalgia. *Arthritis research & therapy*, 18, 68. https://doi.org/10.1186/s13075-016-0954-9

Elsaid, N. Y. (2025). Understanding fibromyalgia: A comprehensive review of the literature. *The Egyptian Rheumatologist,* 47(2), 90-97. https://doi.org/10.1016/j.ejr.2025.02.001

Ersoy, S., Kesiktas, F. N., Sirin, B., Bugdayci, D., & Paker, N. (2024). The effect of vitamin D treatment on quality of life in patients with fibromyalgia. *Irish journal of medical science*, *193*(2), 1111–1116. https://doi.org/10.1007/s11845-023-03521-4.

Favretti, M., Dolcini, G., Iannuccelli, C., Franculli, D., Gioia, C., Sarzi-Puttini, P., Conti, F., & Di Franco, M. (2023). Gender differences in the revised Fibromyalgia Impact Questionnaire: a pilot study. *Clinical and experimental rheumatology*, *41*(6), 1310–1316. https://doi.org/10.55563/clinexprheumatol/4mlktj.

Filipovic, T., Filipović, A., Nikolic, D., Gimigliano, F., Stevanov, J., Hrkovic, M., & Bosanac, I. (2025). Fibromyalgia: Understanding, Diagnosis and Modern Approaches to Treatment. *Journal of clinical medicine*, *14*(3), 955. https://doi.org/10.3390/jcm14030955.

Galvez-Sánchez, C. M. (2020). Diagnostic Criteria for Fibromyalgia: Critical Review and Future Perspectives. *Journal of Clinical Medicine*, *9*(4), 1219. https://doi.org/10.3390/jcm9041219

Galvez-Sánchez, C. M., de la Coba, P., Duschek, S., & Reyes Del Paso, G. A. (2020). Reliability, Factor Structure and Predictive Validity of the Widespread Pain Index and Symptom Severity Scales of the 2010 American College of Rheumatology Criteria of Fibromyalgia. *Journal of clinical medicine*, *9*(8), 2460. https://doi.org/10.3390/jcm9082460.

Jiao, J., Cheng, Z., Wang, W., Zhao, Y., & Jiang, Q. (2021). Demographic Characteristics and Clinical Features of Fibromyalgia in China: A Cross-Sectional Study. *Rheumatology and Therapy,* 8, 817–831. https://doi.org/10.1007/s40744-021-00303-1

Khallaf, M. K., AlSergany, M. A., El-Saadany, H. M., Abo El-Hawa, M. A., & Ahmed, R. A. M. (2020). Assessment of fatigue and functional impairment in patients with rheumatic diseases. *The Egyptian Rheumatologist,* *42*(1), 51–56. https://doi.org/10.1016/j.ejr.2019.04.009

Kimura, A., Yamasaki, H., Ishii, H., Yoshida, H., Shimizu, M., & Mori, T. (2021). Effects of Polymorphisms in the Serotonin Transporter Promoter-Linked Polymorphic Region on Postthoracotomy Pain Severity. *Journal of pain research*, *14*, 1389–1397. https://doi.org/10.2147/JPR.S298685.

Malatji, B. G., Mason, S., Mienie, L. J., Wevers, R. A., Meyer, H., van Reenen, M., & Reinecke, C. J. (2019).

The GC-MS metabolomics signature in patients with fibromyalgia syndrome directs to dysbiosis as an aspect contributing factor of FMS pathophysiology. *Metabolomics : Official journal of the Metabolomic Society*, *15*(4), 54. https://doi.org/10.1007/s11306-019-1513-6.

Maria, L. S. C. L., Magali, D. A., Fernanda, R. P., Andrea, R. C., & Vitor, H. P. (2025). Can Fibromyalgia Treatment Be Performed with Photo Bio-modulation? Clinical Case Report. *Western Journal of Dental Science*, 2(1), 102.

Martín-Borràs, C., González Serra, G., Carrasco-Querol, N., Sansano-Nadal, O., Bueno Hernández, N., Bestraten Del Pino, P., Pastor Cazalla, M., Caballol Angelats, R., Montesó-Curto, P., Castro Blanco, E., Pozo Ariza, M., Fernández-Sáez, J., Dalmau Llorca, M. R., Gonçalves, A. Q., & Aguilar Martín, C. (2024). Effectiveness of a brief multicomponent intervention to improve physical activity level and functional capacity in fibromyalgia and chronic fatigue syndrome (Synchronize+). *Frontiers in physiology*, *15*, 1441076. https://doi.org/10.3389/fphys.2024.1441076

Montoro, C. I., & Galvez-Sánchez, C. M. (2022). The Mediating Role of Depression and Pain Catastrophizing in the Relationship between Functional Capacity and Pain Intensity in Patients with Fibromyalgia. *Behavioural neurology*, *2022*, 9770047. https://doi.org/10.1155/2022/9770047.

Moshrif, A., Shoaeir, M. Z., Abbas, A. S., Abdel-Aziz, T. M., & Gouda, W. (2022). Evaluating Gender Differences in Egyptian Fibromyalgia Patients Using the 1990, 2011, and 2016 ACR Criteria. *Open access rheumatology: research and reviews*, *14*, 67–74. https://doi.org/10.2147/OARRR.S358255

Navarro, A. M., Salazar, C. A. S., Krikorian, A., Cortina, C. C., & Marin, M. L. (2024). Suffering in patients with fibromyalgia and its relationship with impact on quality of life, loneliness, emotional state, and vital stress. *Revista Colombiana de Reumatología (English Edition)*, *31*(2), 193-204.

Nazlikul, H., & Nazlikul, U. Neural Therapy as a Key to Pain Reduction and Quality of Life. *International Clinical and Medical Case Reports Journal*. 2025; 4 (2): 1-25. https://doi. org/10.5281/zenodo, 14843500.

O'Brien, A. T., Deitos, A., Triñanes Pego, Y., Fregni, F., & Carrillo-de-la-Peña, M. T. (2018). Defective Endogenous Pain Modulation in Fibromyalgia: A Meta-Analysis of Temporal Summation and Conditioned Pain Modulation Paradigms. *The journal of pain*, *19*(8), 819–836. https://doi.org/10.1016/j.jpain.2018.01.010.

Perrot S. (2019). Fibromyalgia: A misconnection in a multiconnected world?. *European journal of pain (London, England)*, *23*(5), 866–873. https://doi.org/10.1002/ejp.1367.

Salaffi, F., Di Carlo, M., Bazzichi, L., Atzeni, F., Govoni, M., Biasi, G., Di Franco, M., Mozzani, F., Gremese, E., Dagna, L., Batticciotto, A., Fischetti, F., Giacomelli, R., Guiducci, S., Guggino, G., Bentivegna, M., Gerli, R., Salvarani, C., Bajocchi, G., Ghini, M., … Sarzi-Puttini, P. (2021). Definition of fibromyalgia severity: findings from a cross-sectional survey of 2339 Italian patients. *Rheumatology (Oxford, England)*, *60*(2), 728–736. https://doi.org/10.1093/rheumatology/keaa355.

Singh, R., Rai, N. K., Pathak, A., Rai, J., Pakhare, A., Kashyap, P. V., Rozatkar, A. R., Mishra, S., & Mudda, S. (2024). Impact of fibromyalgia severity on patients mood, sleep quality, and quality of life. *Journal of neurosciences in rural practice*, *15*(2), 320–326. https://doi.org/10.25259/JNRP_14_2024

Wolfe, F., Clauw, D. J., Fitzcharles, M. A., Goldenberg, D. L., Häuser, W., Katz, R. L., ... & Walitt, B. (2016, December). 2016 Revisions to the 2010/2011 fibromyalgia diagnostic criteria. In *Seminars in arthritis and rheumatism* (Vol. 46, No. 3, pp. 319-329). WB Saunders.