Correlation Between Self-esteem, Body image and Sleep Quality among Patients with Fibromyalgia

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Abstract

Background: Fibromyalgia is a clinical entity characterized by the combination of ill-defined symptoms including chronic widespread pain, with concomitant fatigue, sleeping disorders, and cognitive disturbances. **Aim of study**: Was to assess the correlation between self-esteem, body image and sleep quality among patients with fibromyalgia. **Design**: A descriptive correlational research design was utilized to fulfill the aim of the study. **Setting**: This study was carried out in outpatient clinic of Rheumatology, Rehabilitation and Physical medicine at Benha University Hospital in Benha city, Qalyubia Governorate. **Sample**: A convenient sample of 95 patients with FM, was included in the study. **Tools**: Four tools were utilized to collect data; **Tool I**: structured interview questionnaire sheet, **Tool II**: Self-esteem scale to measure self-esteem of patients with FM, **Tool III**: Body Image Scale (BIS) to measure fibromyalgia patient's perception of their body image), **Tool IV**: Sleep Quality Scale (SQS) to assess the characteristic of sleep quality of patients with FM. **Results**: Findings reflected that less than half of the studied patients had moderate self-esteem. More than half of the studied patients had moderate negative body image. More than half of the studied patients had poor sleep quality. **Conclusion**: Based on the results of this study, it was concluded that there was a positive statistically significant correlation between total self-esteem score, total body image and sleep quality scores. **Recommendations**: Stress management and assertiveness training program should be given to patients with fibromyalgia.

Keywords: Self-esteem, Body image, Sleep quality, Fibromyalgia.

Introduction

Fibromyalgia is a complex and heterogeneous clinical syndrome, mainly characterized by the presence of widespread pain. Severe fatigue, morning stiffness, sleep disturbances (including insomnia, frequent awakenings and non-restorative sleep), autonomic disturbances, hypersensitivity to external stimuli, memory deficits and psychological and cognitive symptoms may also be present **(Erdrich & Harnett, 2025)**. This varied clinical picture has occasionally caused doubt to doctors about its presence as they supposed that it could be a reflection of patients' anxiousness or attention-seeking behaviors **(Viceconti et al., 2022)**.

Patients with FM are frequently unable to provide explanations about the cause of their symptoms to others, because healthcare professionals experience problems with providing explanations when symptoms are medically unexplained. Many FM patients experience that the feelings of being physically ill are not validated, either by people important to them (for example, parents, siblings) or healthcare professionals, and that their condition is dismissed as an emotional problem., which in turn led to lower levels of self-esteem **(Ko et al., 2022).**

In addition, FM is characterized by other various symptoms including sensorimotor deficits and distortions of body

representation. These symptoms could partly stem from an altered processing of sensory information **(Augière et al., 2021).** The bodily experience in FM during a pain crisis. With increasing pain changes in patients' body perception were found. Patients felt pain and fatigue and the body becomes an unfamiliar presence that has an effect on QoL, social life, function and prevents daily life activities **(Aslan, 2023).**

Sleep is an important physiologic process to maintain homeostasis and function of the body. One of the most common anxieties of patients with FM is difficulty sleeping, as reported by over 65% of them. Numerous mental and physical issues can result from sleep problems, which include trouble falling asleep, inadequate sleep, and poor sleep quality**.** There is a direct relationship between the degree of sleep issues and the intensity of pain. For instance, FM can significantly alter the architecture of sleep **(Duo et al., 2023).**

Managing FM requires interdisciplinary care that takes into account the social, emotional, and physical aspects of pain. In this context, nurses, as part of an interdisciplinary team, play a crucial role in pain management, as the nurses are responsible for conducting an assessment, preparing nursing diagnoses, administering therapeutic interventions, and assessing the outcomes of those interventions **(Oliveira et al., 2023).**

Recognizing the conception of sleep quality is related to nursing since nurses play a vital role in encouraging sufficient sleep and assisting patients in avoiding sleep issues that may negatively impact their health **(Nelson et al., 2022).** Also, nurses help patients to gain confidence and improve their ability to interact with others, learn how to recognize and change negative thoughts about their body and develop skills to help them to gain confidence **(Rostiano et al., 2021).**

Significance of the study:

Fibromyalgia with a global incidence of 2.7%-4.7%, with women accounting for an estimated 70 % to 90 % of diagnosed cases. While the pooled regional prevalence of FM in the Eastern Mediterranean region is 4.43%. In Egypt, the prevalence of FM was evaluated in patient cohorts with concurrent illnesses, revealing that 1.9% of individuals with chronic liver disease also had FM **(Varallo et al., 2024).**

Patients with FM often have a long journey to correct diagnosis and management. FM is a poorly understood condition of widespread pain, fatigue, multiple somatic symptoms, and associated comorbidities. Accumulating data suggests that FM incurs a high clinical and economic burden on both patients and societies, comparable with other chronic diseases such as diabetes and hypertension **(Gharibpoor et al., 2021).** Therefore, it became necessary to assess self-esteem, body image and sleep quality among patients with FM.

Aim of the study:

This study aimed to assess the correlation between self-esteem, body image and sleep quality among patients with fibromyalgia.

Research Questions:

1-What are the levels of self-esteem and sleep quality among patients with fibromyalgia?

2-What is the perception of body image among patients with fibromyalgia?

3-What is the correlation between self-esteem, body image and sleep quality among patients with fibromyalgia?

Subject and Methods:

Research design:

A descriptive correlational design was utilized to fulfill the aim of this study.

Research setting:

This study was conducted at outpatients' clinic of Rheumatology, Rehabilitation and

Physical medicine at Benha University Hospital, Qalubia Governorate, which is affiliated to the Ministry of High Education.

Research subject:

Type of sample: A convenient sample of fibromyalgia patients.

Sample size:

The study sample included (95) patients medically diagnosed with FM.

Tools of data collection:

The data was collected using the following tools:

Tool (I): A structured interview questionnaire sheet: It was developed by researchers based on scientific review of literature; it consisted of two parts: Socio-demographic data and clinical data.

Part one: Socio- demographic data (age, sex, marital status, educational level, occupation, residence and family income).

Part two: **Clinical data that included** (age at onset of disease, duration of disease, family history of fibromyalgia, seasons in which fibromyalgia symptoms increase in, number of patient's visits to outpatient clinic in hospital monthly, suffering from any other diseases, regularity of taking medications, effects of fibromyalgia on job performance).

Tool (II): Rosenberg self-Esteem scale: Rosenberg Self-Esteem scale was developed by **Rosenberg, (1965).** It was used to measure self-esteem of fibromyalgia patients. The statements are rated on a 4-point Likert scale, as following, strongly disagree = (1), disagree = (2), agree = (3), strongly agree = (4) for positive items and vice versa for negative items.

Scoring system: Scoring ranged from 10 to 40, with 40 indicating the height score. Scoring for a negative answer was reversed, i.e., (1) for strongly agree and (4) for strongly disagree, and so on. Total scores were graded to total scoring system for self-esteem as follows:

- Low self-esteem (10–20)
- Moderate self-esteem (21–30)
- High self-esteem (31–40)

Tool (III): Body Image Scale: Body Image Scale adopted by **Gamal, (2016)** to measure fibromyalgia patient's perception of their body image. It consisted of 21 items such as (I feel that my body parts are different from others; I am sad when I look at my shape in a mirror). Each question is answered from 0 to 3 grade where never = 0, scarcely = 1, sometimes = 2, much = 3. A higher score indicates a greater degree of negative body image.

Scoring system:

- Positive body image (0–21)

- Moderate negatively body image (22–42)

- Negative body image (43–63)

Tool IV: Sleep Quality Scale (SQS):

Sleep quality scale was developed by **Yi et al., (2006).** It aimed to assess the characteristic of sleep quality of patients with fibromyalgia. It consists of (28) items grouped under six subscales: daytime dysfunction (12) items, restoration after sleep (4) items, difficulty in falling asleep (4) items, difficulty in getting up (3) items, satisfaction with sleep (3) items, difficulty in maintaining sleep (2) items. using a four-point, Likert-type scale, respondents indicate how frequently they exhibit certain sleep behaviors from ("Rarely" = 0, to "almost always" =3).

Scoring system: Good sleep quality (0–28), Average sleep quality (29–56) and Poor sleep quality (57–84)

Validity of tools:

The tools were revised by a Jury of five experts from the Psychiatric Nursing field to ensure the validity of the tools and check the relevancy, comprehension clarity and applicability of the questions and modifications

were done according to their opinions such as adding questions (do you take medications regularly and does fibromyalgia affect your job performance). According to their opinion, some modifications were done and the final form was developed. The modification in the Arabic form of the four tools was modification of some words to give the right meaning of the phrases.

Ethical consideration:

An official permission was obtained from the Scientific Research Committee, Faculty of Nursing, Benha University (Code REC-PSYN-M1). An informed consent for participation in the study will be taken from the patients after complete explanation of the purpose of the study. Before data collection, the participant will be informed that participation in the study is voluntary, and no name will be included in the questionnaire sheet. They will be given an opportunity to refuse to participate, and they will be notified that they can be withdrawn at any time. Moreover, they will be assured that the information will remain confidential and will be used for research purposes only.

Pilot study:

Before staring of data collection pilot study was carried out after the development of the tools and before embarking the field work on 10% of the total sample to ascertain the clarity and applicability of the study tools and identifying time needed for each patient to fill the tools and to find out any problems that might interfere with data collection. According to the result of pilot study no modification was done. Therefore, the pilot study sample was included in the total sample.

Field work:

- Before starting data collection an official permission was obtained from the Director of the Benha University Hospital. Next the researchers started the process of data collection, by including patients to fill the questionnaire according to the following:

-The researchers started the process of data collection by introducing herself to the patients.
-An oral consent was obtained from each patients.
-A brief description for the purpose of the study and the type of questionnaires required to fill was given to each patients.
-Data collection was done through interviewing with the patients in outpatients' clinic of Rheumatology, Rehabilitation and Physical medicine.
-The researchers collected data from patients two days/ week every (Saturday and Monday) from 9 Am to 1 PM.
- The average number of interviewed of the studied patients was between 4-6 patients / week.
- The collecting data started from beginning of February to end of July 2024 after taking acceptance of permission from Director of Benha University hospital.

Statistical analysis:

Upon completion of data collection, the collected data were organized, tabulated; statistically analyzed by Computerized data entry and statistical analysis were fulfilling scored using Statistical Package for Social Science (SPSS), version (22). Quantitative data were expressed as mean± standard deviation (SD). Qualitative data were expressed as frequency and percentage.

The following tests were done: Chi-square (x2) test of significance was used in order to compare proportions between two qualitative parameters. Spearman's rank correlation coefficient (r) was used to assess the degree of association between two sets of variables if one or both of them was skewed. The confidence interval was set to 95% and the margin of error accepted was set to 5%. So, the p-value was considered significant as the following: Probability (P-value): P-value <0.05 was considered significant, P-value <0.001 was

considered as highly significant, and P- value >0.05 was considered insignificant.

Results:

Table (1): Shows the socio-demographic data of the studied patients, in which that less than half (43.2%) of the studied patients their age with a mean of 41.60±8.33 years and that all (100.0%) of the studied patients are females. Also, about two-thirds (66.3%) of them were married. Regarding educational level, more than half (53.7%) of patients have intermediate education. In addition, regarding occupation, the results show that less than two-thirds (60.0%) of studied patients are working. According to residence, nearly three-quarters (72.6%) of patients live in rural areas. finally, more than two-thirds (68.4%) of studied patients have non-sufficient family income.

Table (2): Illustrate the clinical data of the studied patients, in which that there is less than one half (48.4%) of the studied patients are in the age group of 30 < 40 years at onset of disease. As well as, more than half (57.9%) of them have disease duration less than 5 years; and the majority (80.0%) of them didn't have family history of fibromyalgia. Furthermore, near two-thirds (63.2%) of them visit the outpatient hospital one visit monthly. Increasingly, the majority (89.5%) of them suffered from some diseases such as obesity and rheumatoid arthritis (49.5%, 35.8%) respectively.

Also, more than one half (56.8%) of them took their medications regularly. Additionally, the majority (84.2%) of employed patients, their job performance affected by fibromyalgia.

Figure (1): Illustrates that, less than half (42.1%) of the studied patients have moderate level of self-esteem, and more than one third (34.7%) have high self-esteem level, while less than one-quarter (23.2%) of the them have low self-esteem.

Figure (2): Illustrates that, more than half (50.5%) of the studied patients have moderate negatively body image while, more than one quarter (29.5%) have positive body image and one-fifth (20.0%) of the them have negative body image.

Figure (3): Illustrates that, more than one half (60.0%) of the studied patients have poor sleep quality, and less than nearly one quarter (21.1%) have average sleep quality, while less than one-fifth (18.9%) of the them have good sleep quality.

Table (3): Clarifies that, there is a positive statistical significant correlation between total self-esteem score, total body image and total sleep quality scores ($p \leq 0.001$).

Table (1): Distribution of the studied patients according to their socio-demographic data (N=95).

Socio- demographic data	No	%
1- Age in (years):		
- 20 < 30	6	6.3
- 30 < 40	33	34.7
- 40< 50	41	43.2
- 50 – 60	15	15.8
Mean ± SD = 41.60 ± 8.33		
2.Sex		
- Male	0	0
- Female	95	100
3- Marital status:		
- Single	15	15.8
- Married	63	66.3
- Widow	6	6.3
- Divorced	11	11.6
4- Educational level:		
- Illiterate	5	5.3
- Basic education	12	12.6
- Intermediate education	51	53.7
- University education	27	28.4
5- Occupation:		
- Housewife	38	40.0
- Worked	57	60.0
In case of work, type of work: (n=57)		
- Public sector	37	64.9
- Private sector	18	31.6
- Free works (clothes seller)	2	3.5
6- Residence:		
- Rural	69	72.6
- Urban	26	27.4
7- Family income:		
- Non- sufficient	65	68.4
- Sufficient	21	22.1
- Sufficient & save	9	9.5

(*) statistically significant correlation at P-value <0.05
(**) Highly statistically significant correlation at P-value <0.01

Table (2): Distribution of the studied patients according to their clinical data (N=95).

Clinical Data	No	%
1- Age during onset of disease (years):		
- 20 < 30	2	2.1
- 30< 40	46	48.4
- 40< 50	36	37.9
- 50-60	11	11.6
Mean ± SD = 27.3 3± 5.01		
2- Duration of disease:		
- < 5 years	55	57.9
- 5<10 years	30	31.6
- ≥ 10 years	10	10.5
3- Family history of fibromyalgia:		
- Yes	19	20.0
- No	76	80.0
In case of yes: (n=19)		
- First degree relatives	16	84.2
- Second degree relatives	3	15.8
4.Number of patient visits to outpatient hospital clinic monthly:		
-One visit monthly	60	63.2
-Two visits monthly	12	12.6
-Three visits monthly	2	2.1
-Irregular monthly follow-up	21	22.1
5.Suffering from any other diseases:		
Yes	85	89.5
No	10	10.5
If the answer is yes: (n=85*)		
Osteoporosis	5	5.3
Rheumatoid arthritis	34	35.8
Lupus erythematosus	2	2.1
Ankylosing spondylitis	6	6.3
Obesity	47	49.5
Hypertension disease	9	9.5
Heart diseases	3	3.2
Diabetes	11	11.6
6- Do you take medications regularly:		
- Yes	54	56.8
- No	41	43.2
If the answer is yes, to what extent getting better (n=54)		
- No improvement	18	33.3
- Improvement with a slight degree	24	44.5
- Improvement with a moderate degree	12	22.2
7- Does fibromyalgia affect your job performance: (n=57)		
- Yes	48	84.2
- No	9	15.8
If the answer is yes, to what extent affecting (n-48)		
- It affects to a moderate degree	33	68.8
- It affects to a high degree	15	31.3

(*) statistically significant correlation at P-value <0.05

(**) Highly statistically significant correlation at P-value <0.01

***responses aren't mutually exclusive**

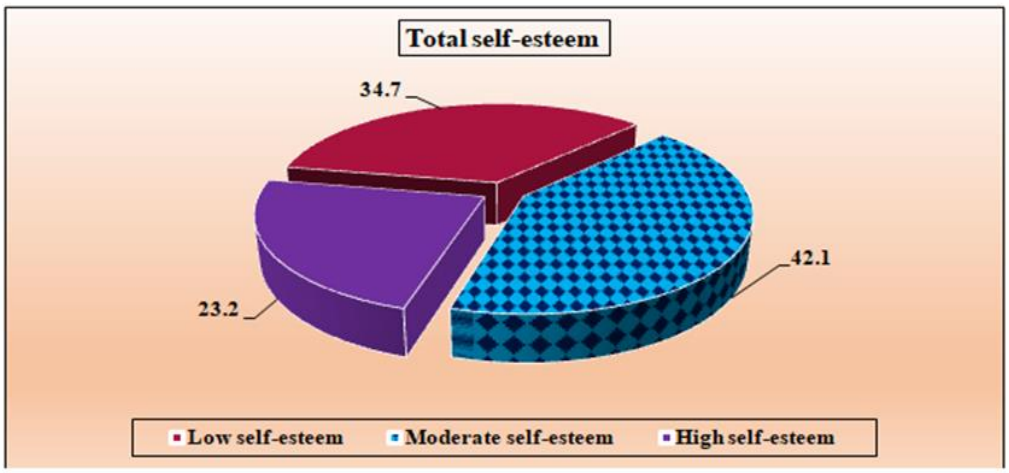

Figure (1): Percentage distribution of studied patients according to their total self-esteem score (N=95).

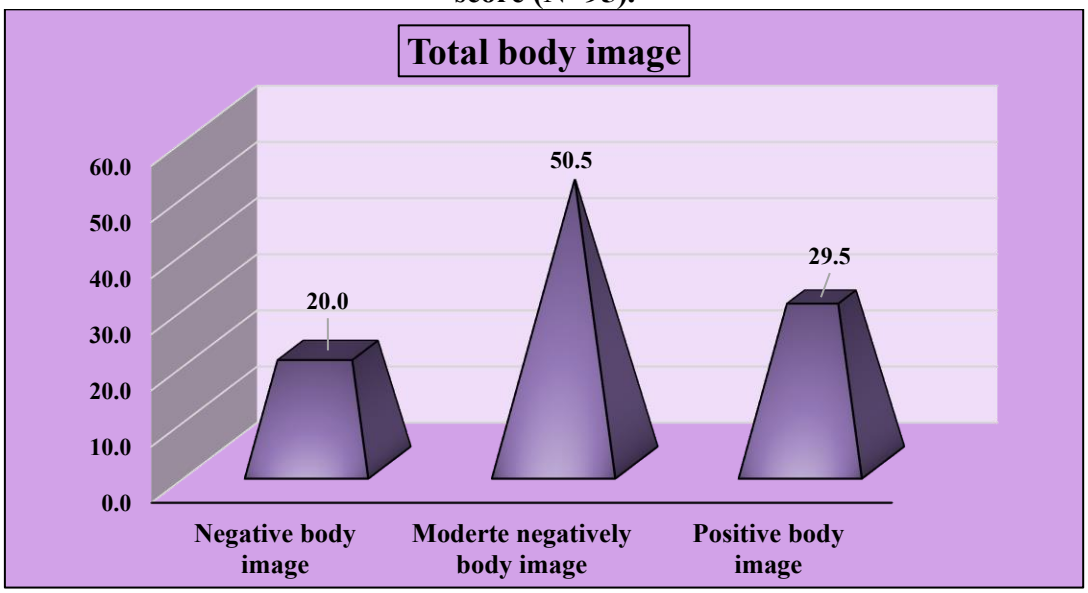

Figure (2): Percentage distribution of studied patients according to their total body image score (N = 95).

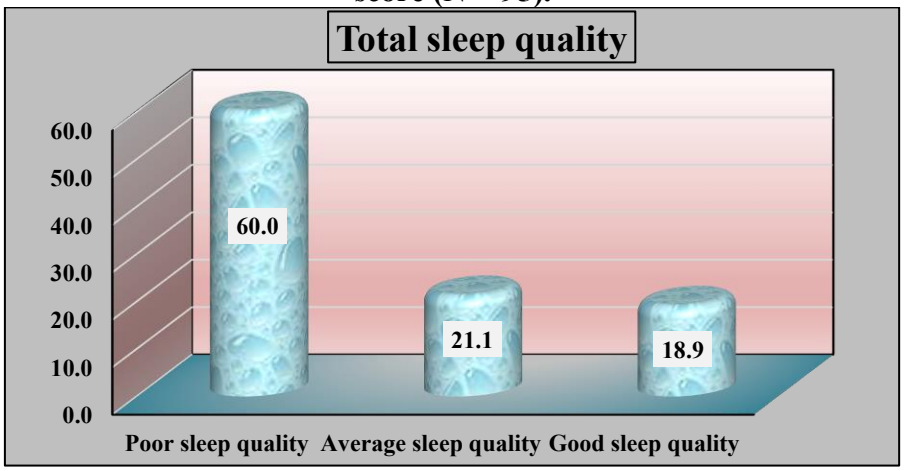

Figure (3): Distribution of studied patients according to their total sleep quality score (N = 95).

Table (3): Matrix correlation between total self-esteem, body image and sleep quality among studied patients.

Variables	Total body image		Total sleep quality		Total self-esteem	
	R	P value				
Total body image	**1**	**----**	0.412	0.000**	0.696	0.000**
Total sleep quality	0.412	0.000**	**1**	**----**	0.473	0.000**
Total self-esteem	0.696	0.000**	0.473	0.000**	**1**	**----**

***A Statistically significant p ≤ 0.05 **A Highly Statistical significant p ≤ 0.001.**

Discussion:

Fibromyalgia has been a stigmatizing disease that cannot be definitively diagnosed. Patients appear to perceive themselves as victims of an undiscovered disease and continue to seek medical help in anticipation that symptoms will be validated by a diagnosis **(Montesó-Curto et al., 2023)**. FM can result in considerable physical and psychosocial impairments that impact significantly on wellbeing, and on health and social care services **(Bacon et al., 2023)**.

Regarding age, the result of the current study revealed that less than half of the studied patients were in the age group of 40 < 50 years with a mean age of 41.60±8.33 years. From the researchers point view, this may be because FM is common in the middle aged women. These results were similar to a study conducted by **Yang et al., (2023)** who found that the mean age of participants ranged from 36 to 59.

Concerning sex, the findings of this study showed that all the studied patients were females. From the researchers point view, women and men react differently to pain, as women often exhibit higher levels of pain sensitivity and a higher probability of developing clinical pain. Additionally, the difference in FM prevalence and diagnosis between men and women seems to be linked to the social stigma associated with it being often a female illness as well as the social and cultural traits of Western nations, where men are less likely to seek medical attention for symptoms of chronic pain, which restricts the ability to make an accurate diagnosis. These findings were similar to what has been reported by **Campos et al. (2024)** who noted that the majority of the sample consisted of women.

Regarding marital status, the findings of the current study revealed that about two-thirds of the patients were married. According to the researchers, this might be due to the studied sample reaching the mature and productive age, as the patients were middle-aged This outcome was consistent with the findings of **El-afandy, (2024)**, who found that more than half of the studied patients were married. Also, **Külekçioğlu, (2022)** noted that the majority of patients with FM were married.

Regarding educational level, the findings of this study indicated that more than half of the patients have intermediate levels of education. From the researchers' point of view, there are two possible reasons for this. First, this might be attributed to lower income. Second, the fact that the study was conducted in a public hospital that is preferred by individuals with lower educational status who have poorer access to medical facilities. This result was consistent with the findings of **El-**

Afandy, (2024) who detected that slightly more than half of the patients had secondary school education.

Regarding occupation, out of all the patients in the current study, less than two-thirds were employed. From the researchers point of view, employment is advantageous because it increases financial stability and provides access to better quality medical treatment, all of which improve social provisions, mental health, health status, and quality of life. These findings were consistent with a study by **Mohabbat et al. (2023)**, which found that less than two-thirds of the patients were employed. **According to residence**, nearly three-quarters of patients live in rural areas. The researchers believes that this may be related to the sample taken from Benha University Hospital, which treats many rural areas. In addition, rural areas lack access to healthcare and knowledge about FM symptoms. This result aligned with the findings of **Sauch - Valmaña et al., (2022)** who noted that most FM patients lived in rural areas.

According to family income, more than two-thirds of studied patients have non-sufficient family income. From the researchers' point of view, FM entails a high cost for the social and health system, since patients with FM attend more consultations both at the level of general medicine and specialized cohort in pain medicine and psychology and are subjected to more prescriptions and neuroimaging and laboratory tests than the rest of the population.

This result was in harmony with a study by **Oliva-Moreno & Vilaplana-Prieto, (2024)** who reported that the economic burden associated with this disease is heavy.

Regarding age at onset of disease, the finding of this study indicates that less than half of the studied patients are in the age group of 30 < 40 years at onset of disease. From the researchers' point of view, this might be due to with the growing responsibilities of life at this age, as well as stressful life events that could act as triggers for FM development. This outcome was consistent with **Di Carlo et al., (2022)** who mentioned that while it can happen at any age, it is more prevalent in those between the ages of 30 and 35.

Regarding the duration of the disease, the results of the current study showed that more than half of the patients have the disease for less than five years. From the researchers' point of view, this might be due to the chronicity of the illness. This result was consistent with **Mohamed & Mohammed, (2024)** who reported that half of the patients had a disease duration of less than five years.

Regarding to family history of FM, the majority of patients didn't have family history of FM. From the researchers' point of view, this could be because of other aspects that contribute to the etiopathology of FM, including physical trauma, infection, surgery, or significant psychological stressors. These findings contradicted a study carried out by **Yang et al., (2023)** who noted that more than half had a family history of FM.

Regarding to number of patients' visits to outpatient clinic monthly, near two-thirds of them visit the outpatients' clinic of hospital one visit monthly. From the researchers' point of view, this may be attributed to the hospital's regulations and policies. These results contradicted with

Mohamed & Mohammed, (2024) who mentioned that more than three quarter have Erratic follow up.

Regarding to suffering from any other diseases, the results of the present study showed that, the majority of patients suffered from some diseases such as obesity and rheumatoid arthritis. From the researchers point of view, this may be due to that the purported risk factors for FM is the presence of musculoskeletal disorders and increase body mass index (obesity). These results were come in the same line with a study conducted by **Weinstein et al., (2024)** who found that more than two third had obesity.

These results were disagreed with a study conducted by **Mezhov et al., (2023)** who found that FM occurs in approximately less than one third of various rheumatological condition.

Concerning regularity of taking medications, more than half of patients took their medications regularly. From the researchers' point of view medication adherence is limited by symptom relief, side effects, satisfaction and costs, also given the disease's lack of understanding, patients report poor adherence to medication and mistrust of medical services. These results were in disagreement with the study result that conducted by **Prikhodkina & Melnikov, (2024)** who found that above half of the participants reported a low adherence to medications.

Regarding to effects of FM on job performance, the majority of employed patients, their job performance affected by FM. From the researchers' point of view, the productivity of people with FM at work is significantly impacted because they have physical and cognitive restrictions, a low health-related quality of life, and other effects on many aspects of their daily lives.

These results came in the same line with a study conducted by **Mohamed& Mohammed, (2024)** who found that approximately two-thirds of the patients reported that almost two-thirds of the patients said that pain made it difficult for them to perform their daily tasks, including both housework and work outside the home.

Concerning to level of self-esteem, the result of the present study revealed that, less than half of the studied patients have moderate level of self-esteem, and more than one third have high self-esteem level, while less than one-quarter of the them have low self-esteem. From the researchers point of view, this may be due to experience of rejection, disbelief, misunderstanding, and non-acceptance could also be perceived by FM patients from other people sources such as spouse, family, or work environments.

These results were in disharmony with a study carried out by **Galvez-Sánchez & Montoro, (2023)** who stated that FM patients also tend to exhibit lower self-esteem, difficulties in pain-related self-efficacy, a negative self-image, higher levels of pain catastrophizing, and altered emotional processing.

Concerning to the studied patients' body image, the results of the present study illustrated that, more than half of the studied patients have moderate negatively body image while, more than one quarter have positive body image and one-fifth of the them have negative body image. From the researchers' point of view FM is a syndrome of multifactorial etiology, the clinical presentation of which is mainly characterized by the occurrence of chronic physical pain unrelated to bodily injuries and the

presence of changes in mood, memory, and sleep. Therefore, it can be assumed, that women with fibromyalgia will present a body image influenced by the way they relate to their body, experienced as a source of persistent pain and a vector of dissatisfaction and displeasure.

These results were in harmony with a study carried out by **Staud et al, (2022)** who found that FM patients seem to perceive their total body size as altered during exacerbations of pain, suggesting a relationship between distortions of their body and pain.

Regarding to the studied patients' sleep quality, the results of the current study illustrated that, more than one half of the studied patients have poor sleep quality, and less than nearly one quarter have average sleep quality, while less than one-fifth of the them have good sleep quality. From the researchers' point of view experiencing pain prevents patients from finding a resting position that facilitates sleep, the inability to find a comfortable sleep position results in a constant movement that ends up impacting the quality of the sleep.

These results were consistent with a study conducted by **Navarro-Ledesma et al., (2024)** who stated that poor sleep quality is a key factor for individuals suffering from chronic pain, such as (FM).

The result of the present study illustrated that there was a positive statistical significant correlation between total self-esteem score, total body image and sleep quality scores ($p \leq 0.001$). From the researchers' point of view, this may be due to self-esteem is very important psychological factor and strongly linked to mental health where low self-esteem related to social, behavioral and health issues as poor body image and body dissatisfaction and anxiety.

Furthermore, positive body apperception perceptions can positively affect individuals' psychological well-being, life satisfaction, self-acceptance, healthy lifestyle choices and social relationships. However, negative body appreciation perceptions have been associated with psychological problems such as low self-esteem, depression and anxiety.

Also, these findings can be seen to account for the specific challenges facing these women which generate anxiety and distress, such as distrust and non-acceptance of the body, significant functional impairment and disability, and overweight and obesity. Moreover, they seem to support the shame–self-criticism vicious cycle, according to which high levels of shame and self-criticism represent serious disruptions to the capacity for stimulating the inner affiliative systems that are so important for emotion regulation and well-being. Thus, for women with FM, the sick body, which constantly fails to meet societal standards of beauty and function, promotes the adoption of a critical and self-deprecating attitude which may, in turn, increase maladaptive defensive responses of distress focused on body image shame.

Women's body perception is in interaction with society's beauty standards, media and other environmental factors. These factors can create emotional and mental pressure on women's bodies and body appreciations. Sleep quality is an essential component of physical and mental health and can have profound effects on body appreciation perception.

Furthermore, poor sleep quality can increase individuals' stress levels, lead to emotional imbalances and reduce overall life satisfaction. This situation may also affect body appreciation perceptions. This is because a weakened mental state may increase negative body valence perceptions and cause individuals to have more critical thoughts about their own physical appearance. On the other hand, a good sleep quality may support general mental health and positively affect body appreciation perceptions. A good sleep can help individuals cope better with stress, maintain emotional balance and increase overall life satisfaction. Therefore, it can enable individuals to approach their bodies and physical appearance in a more positive picture.

Also, poor sleep quality causes negative effects on one's mood, and daytime function. Due to the poor sleep quality during the night, patient often feels tired and it is difficult for patients to focus on daily activities. Accordingly, physical activity is decrease and physiological performance is decreased and finally self-esteem is affected

These findings were consistent with a study carried out by **Levy et al., (2024)** who reported that in FM patients lower levels of body appreciation alongside lower levels of self-compassion were related to greater self-criticism.

Also, these findings supported by a study done by **Scandola et al., (2022)** who found that with regard to Disownership-like sensations, the FM participants reported both sensations that certain body parts did not belong to their body. In particular, these seem to occur during stressful or anxious moments, but also when they are half-asleep, tired or at the moment when the pain is exacerbated.

In addition to, these findings supported by a study done by **Climent-Sanz et al., (2021)** who found that poor sleep quality in patients with FM generates negative responses, such as feelings of helplessness, despair, and frustration.

Conclusion:

Less than one half of the studied patients had moderate self-esteem, while more than half of the studied patients had moderate negative body image and more than half of the studied patients had poor sleep quality. Also, there was a positive statistically significant correlation between total self-esteem score and total (body image & sleep quality) and, there was a positive statistical significant correlation between total body image score and total sleep quality score.

Recommendations:

- Counseling sessions can be planned at governmental clinics for fibromyalgia patients.
- Comprehensive health educational programs for all fibromyalgia patients that include psychological, social, rehabilitation and follow up.
- Provide awareness about the disease through social media, television and magazines.

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العلاقة بين تقدير الذات وصورة الجسم وجودة النوم لدي مرضي الفيبروميالجيا

زهراء مصطفي الغريب صالح – فتحية سعيد سيد إبراهيم – هدى عبد المعطي محمود عرفة

الفيبروميالجيا هواضطراب مزمن يسبب آلامًا عضلية هيكلية واسعة النطاق، بالإضافة إلى التعب واضطرابات النوم والضعف الإدراكي ومشاكل في المزاج .فهو يزيد من الإحساس بالألم عن طريق تغيير كيفية تفسير الدماغ والحبل الشوكي للإشارات المؤلمة وغير المؤلمة. وأيضا تشمل الأعراض المصاحبة التعب ، وضعف التركيز ، غالبا أيضا اضطرابات في ادراك المريض لصورة الجسم،يؤدي وجود العديد من الأعراض ، وخاصة الألم ، لدى الأفراد المصابين بالالم الليفي العضلي إلى انخفاض جودة الحياة ، مما يقلل من أنشطتهم اليومية ويؤثر علي الثقه بالنفس. لذلك هدفت الدراسة الي تقييم العلاقة بين تقدير الذات وصورة الجسم وجودة النوم لدي مرضى الفيبروميالجيا. وقد اجريت الدراسة في العيادة الخارجية للروماتيزم والتأهيل والطب الطبيعي بمستشفى بنها الجامعي بمحافظة القليوبية التابعة لوزارة التعليم العالي علي ٩٥ مريض فيبروميالجيا . وقد كشفت النتائج وجود علاقة ارتباط موجبة ذات دلالة إحصائية بين درجة تقدير الذات الكلية ودرجة صورة الجسم وجودة النوم الكلية لدي المرضي الخاضعين للدراسة. كما أوصت الدراسة إجراء وتقديم برنامج تدريبي لإدارة الإجهاد والثقة بالنفس للمرضى الذين يعانون من الألم العضلي الليفي.