



## LEVELS OF STRESS AND DEPRESSION AMONG ADULTS SUFFERING FROM FIBROMYALGIA SYNDROME

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**ABSTRACT** Fibromyalgia is the second most common diagnosis made in rheumatology clinics, yet its etiology remains a source of controversy. The present study is aimed to measure the correlation of stress with fibromyalgia and also the correlation of depression with fibromyalgia. The present study is also aimed to measure the correlation of stress with fibromyalgia syndrome in between young aged and middle aged adults and then also the correlation of depression with fibromyalgia in between young aged and middle aged adults. Tools used during the assessment were fibromyalgia impact questionnaire, Beck's Depression Inventory (BDI), Cohen perceived stress scale (CPSS) and General Assessment Proforma (GAP). The results further proved that impact of FMS on stress is mild to moderate while impact of FMS on depression is moderate to severe in terms of percentage. Although, statistically no such significance was found among the relation of two variables. The study further goes on proving that correlation of stress with fibromyalgia is more prominent in young aged adults as compared to middle aged adults while correlation of depression with FMS is more prominent in middle aged adults as compared to young aged adults. **SUMMARY** The research was carried out by collecting data from 120 patients having FMS, stress and depression. This included 60 males and 60 females of both stress and depression and of both young aged adult group (19 to 39) and middle aged adult group (40 – 65). Study proved that high impact of FMS is seen on depression ranging from moderate to severe while impact of FMS on stress is mild to moderate in terms of percentage but there is no statistical significance found in favour of this statement. Also correlation of stress with FMS is more prominent in Young aged adult group than the Middle aged adult group. Then, finally correlation of depression with FMS is more prominent in Middle aged adult group than Young aged adult group.

**KEYWORDS :** Young aged adults , middle aged adults, Fibromyalgia syndrome, Cohen perceived stress scale, Beck's depression inventory, General assessment proforma.

### INTRODUCTION

Pain with its devastating and demoralizing effects remains a challenging problem for both patients and care givers.

Fibromyalgia syndrome (FMS) is characterized by widespread pain, hyper sensitivity to palpation at specific body locations (tender points) and a range of co-morbid physical symptoms and functional limitations, including persistent fatigue, sleep disturbance, feel-ings of stiffness, headaches and irritable bowel syndrome. Fibromyalgia is one of the most common diseases affecting the muscles manifested with pain, stiffness, and tenderness of the muscles, tendons, and joints. The painful tissues involved are not accompanied by tissue inflammation. Therefore, despite potentially disabling body pain; patients with fibromyalgia do not develop tissue damage or deformity. The pain of fibromyalgia is generally widespread, involving both sides of the body. Pain usually affects the neck, buttocks, shoulders, arms, the upper back, and the chest. "Tender points" are localised tender areas of the body that can bring on widespread pain and muscle spasm when touched.

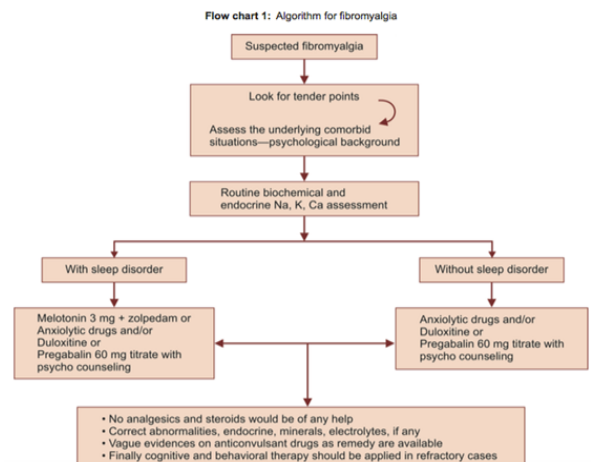
The exact incidence of the disease is yet to get worked out in India. However, it affects 2–4% of people worldwide. Women with fibromyalgia outnumber men by a ninefold factor. In rheumatology clinics, the rate of new diagnosis is approximately 10% to 20%, whereas in non-specialized settings, the rate is 2.1% to 5.7%. yet its aetiology remains a source of controversy. It has been suggested that fibromyalgia is a functional/psychological disorder and that the symptoms of fibromyalgia are simply due to somatisation of distress. In support of this construct, there is definite evidence from population-based studies that psychological distress, particularly early life trauma such as parental loss and abuse, can predict the future development of chronic widespread pain and fibromyalgia. However, such observations leave unanswered the question of exactly how psychological factors translate into chronic physical pain.

Fibromyalgia is a medical diagnosis used to describe the diminished quality of life related to generalised body pains and physical and psychological symptoms that occurs in the absence of a clear pathologic cause. To be diagnosed with fibromyalgia requires that symptomatic persons seek health care from clinicians and that those clinicians interpret the described symptoms as being fibromyalgia. A person cannot have a fibromyalgia diagnosis unless they took the effort to see a clinician who is willing to make that diagnosis. For this reason, the clinical diagnosis of fibromyalgia is necessarily confounded by health care seeking behaviour and clinical selection. Our current

understanding of the epidemiology of fibromyalgia is primarily derived from research studies taking place in clinical settings. To date, fibromyalgia studies have not considered symptomatic persons in the population that have not been diagnosed. Being able to approximate fibromyalgia symptoms in a large, representative population outside the context of the clinical setting can provide new insight into the illness and its nature.

The alternative hypothesis is that fibromyalgia has an organic basis. The possible neuroendocrine origins of fibromyalgia have been extensively investigated, based on the specific hypothesis that abnormalities of various endocrine axes, and certain neurotransmitters, might be responsible for the development of the fibromyalgia syndrome.

Factors that contribute to the pathophysiology of fibromyalgia include biologic and genetic influences, environmental triggers, and abnormal function of the neuroendocrine and autonomic nervous systems. These factors are frequently shared by persons with disorders that co-occur with fibromyalgia, such as chronic fatigue syndrome, irritable bowel syndrome, and MDD. Enhanced pain sensitivity occurs not only in patients with fibromyalgia but also more frequently in their first-degree relatives than in the relatives of both healthy people and persons with other painful illnesses. Both central augmentation of sensory input and deficits in central pain inhibitory mechanisms appear to contribute to enhanced pain sensitivity in persons with fibromyalgia.



**METHODS**

A cross-sectional and comparative study was conducted at Geetanjali Medical College and Hospital, Udaipur, Rajasthan, with a total sample of 120 cases, 60 males and 60 females each of stress and depression and of both young aged and middle aged adulthood. All patients were first examined by the physiotherapists, psychiatrist and orthopaedic consultants to confirm diagnosis of fibromyalgia. Diagnosis of depressive and anxiety disorder was confirmed by consultant psychiatrist. After obtaining informed consent, the socio-demographic variables were recorded in a specific proforma prepared for the study. In the present study all the subjects were then screened using fibromyalgia impact questionnaire and assessment and severity of symptoms was done using beck's depression inventory (Hindi version) and Cohen perceived stress scale. The data obtained was subjected to suitable statistical analysis using SPSS version 16.

**RESULTS**

During the period of study, 60 patients diagnosed with anxiety disorder ;specifically stress, 60 patients diagnosed with depression and then both having prediagnosed FMS were taken into consideration. This included both male and female group and both young aged adult group and middle aged adult group. The flow of study is depicted in Table 1,2,3,4.

**TABLE 1**

Group	N	%
Stress	60	50.0%
Depression	60	50.0%
Total	120	100.0%

**TABLE 2**

Age group (yrs)	Stress	Depression
<= 30	21	18
31-40	9	12
41-50	13	11
51-65	17	19
Total	60	60

**TABLE 3**

Age group (yrs)	Stress	Depression
Young age adults (19-39 yrs)	30	30
Middle age adults (40-65 yrs)	30	30
Total	60	60

**TABLE 4**

Gender	Stress	Depression
Female	30	30
Male	30	30
Total	60	60

Baseline characteristics were similar across all groups.

The results in context to the impact of FMS were as follows :-

**TABLE 7**

FIQR	Depression		Stress		p- value
	Mean	SD	Mean	SD	
Functions	15.9	4.5	13.8	4.1	0.47
Pain	12.3	3.2	10.7	3.0	0.33
Symptoms	28.9	7.1	26.1	6.2	0.19
Total	57.1	14.8	50.6	13.3	0.09

Hence, statistically mean for depression is 57.1 while for stress is 50.6. Standard deviation for depression is 14.8 while that for stress is 13.3 that gives the p value >0.05.

That is, 0.09 which shows variables of stress and depression with FMS are statistically insignificant for stress and depression. BUT in terms of percentage the results demonstrated were:- BDI scale for depression inhibited the following pattern

**TABLE 5**

Depression (BDI)	N	%
Minimal (0-9)	1	1.7%
Mild (10-18)	10	16.7%
Moderate (19-29)	31	51.7%
Severe (30-63)	18	30.0%
Total	60	100.0%

Out of total patient group selected only 1.7% lied on minimal depression range ( n=1),16.7% on Mild range 10 to 18 (n=10) ,51.7% on Moderate level 19 to 29(n=31) while 30% on severe range 30 – 63 (n=18).

Considering stress , assesment was done using CPSS scale with patients having Fibromyalgia Syndrome. The results showed the following pattern.

**TABLE 6**

Stress (CPSS)	N	%
Low (0-13)	28	46.7%
Moderate (14-26)	20	33.3%
High (27-40)	12	20.0%
Total	60	100.0%

The results demonstrated that out of total patients 46.7 % lied on a low range 0-13(n=28) 33.3% lied on moderate range of 14-26 (n=20) while only 20% lied on a high range of 27-40 (n=12).

**RESULTS ACROSSAGE GROUPS :-**

As in context of age, the young aged adult group was of 19 to 39 years individuals while middle aged adults comprised of the age of 40 to 65 years of adults

The results of the study demonstrate:-

**TABLE 7**

Depression	Group		Total
	Young age	Middle age	
Minimal/ Mild	9	2	11
	30.0%	6.7%	18.3%
Moderate/ Severe	21	28	49
	70.0%	93.3%	81.7%
Total	30	30	60
	100.0%	100.0%	100.0%

p- value - 0.0419

**TABLE 8**

Stress	Group		Total
	Young age	Middle age	
Low/ Moderate	21	27	48
	70.0%	90.0%	80.0%
High	9	3	12
	30.0%	10.0%	20.0%
Total	30	30	60
	100.0%	100.0%	100.0%

p- value - 0.104

**TABLE 9**

Pearson co-relation		
FIQR	r-value	p- value
Depression (BDI)	0.71	<0.01
Stress (CPSS)	0.56	<0.01

Results demonstrate that the correlation of stress with fibromyalgia for young aged adult group with middle aged adult group is insignificant with p value of 0.104 ( p-value>0.05) which is statistically insignificant.

But in terms of percentage it shows some significance

Results also demonstrate that correlation of depression with fibromyalgia for young aged with middle aged adults is significant with p value of 0.0419 which is statistically significant.

The data provided shows that FMS with stress largely impacts young aged group than middle aged group while depression with FMS impacts largely middle aged group than young aged adult group.

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