

# Psychiatric Morbidity, Social Support, and Coping Mechanisms among Individuals with Fibromyalgia

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## Abstract

**Introduction:** This research examines the variables of psychiatric morbidity, social support, and coping strategies among Fibromyalgia (FM) patients and explores the relationships across study variables and aims to find potential disparities across age, socioeconomic status, and illness duration between these study variables.

**Method:** This descriptive correlational study was conducted on FM patients (30 patients), aged 30 to 60 years, recruited through convenience sampling from hospitals in the Ernakulam district of Kerala in 2020. Psychiatric morbidity was measured using the Self-Reporting Questionnaire (SRQ), social support was assessed by the Multidimensional Scale of Perceived Social Support (MSPSS), and coping by the Brief COPE Scale.

**Results:** The study showed moderate psychiatric morbidity and inadequate social support among FM patients, with a negative association ( $p < .01$ ). Psychiatric morbidity had a negative correlation with adaptive coping strategies ( $p < .01$ ) and a positive correlation with self-blame ( $p < 0.05$ ). Adaptive coping strategies were positively linked to social support ( $p < 0.01$ ). Furthermore, behavioral disengagement coping differed significantly among FM patients of different ages.

**Conclusion:** Psychiatric morbidity is associated with minimal social support and non-adaptive coping among FM patients. This study underscores the need for culturally specific treatment approaches that address social support and coping strategies.

**Keywords:** Psychiatric, Morbidity, Social Support, Coping, Fibromyalgia Patients

## Introduction

Fibromyalgia (FM) is a nociplastic pain syndrome with idiopathic pathophysiology [1]. It is characterized by pervasive pain in the musculoskeletal system, allodynia, and concomitant symptoms, and predominantly affects women, with a global prevalence of 2%-8% [2]. The diagnostic criteria of the American College of Rheumatology (2016) stipulate an accurate diagnosis of FM requires the patient to score seven or higher on the Widespread Pain Index (WPI), five or above on the Symptom Severity Score (SSS), exhibit symptoms for at least three months, present at least four out of five painful areas, and the pain should be independent of other disorders [3]. However, the presence of multifocal pain, fatigue, cognitive dysfunction, and sleep disruption for three months satisfies the criteria outlined in the revised ICD-11 for diagnosing FM [4]. Subsequently, the increasing prevalence and comorbidities of FM necessitate thorough research on its psychological aspects.

A plethora of existing research has addressed these aspects of FM in populations with individualistic cultural origins, leaving a vacuum to collectivistic populations. Research on psychiatric morbidity, social support, and coping with FM in Kerala has not yet been

conducted. Kerala's collectivistic, vast, traditional, and sociocultural resources develop a distinct cultural context. Therefore, it is crucial to understand the unexplored psychological aspects of FM in this unique context.

A substantial corpus of research shows a high occurrence of psychiatric diagnoses among FM patients [5, 6], which is often linked to elevated levels of neuroticism and insufficient social support [7]. Researchers in Iran have identified that FM patients suffer from at least one kind of mental illness [8]. Ramteke et al. [9] discovered geographical differences in the frequency of comorbid mental health issues in patients with FM. The most frequently diagnosed psychiatric comorbidities in individuals with FM comprise somatic disorders, sleep disorders, suicidal behavior, PTSD, dissociation, cognitive deterioration, social dysfunction [10, 11], alexithymia [12], and personality disorders [8]. However, depression and anxiety are prominent diagnoses among these individuals in the Indian Context [13]. The presence of comorbid conditions significantly impacts functionality, diagnosis, and standard of living in patients with FM [5, 14, 15]. The Covid-19 pandemic further highlighted these challenges, as observed in recent research, where nearly all patients discontinued their treatment, reporting heightened concomitant psychiatric disturbances, pain, and a personal sense of deterioration [16]. Additionally, aggravation has an explicit connection with symptom intensity. Covert symptoms of FM contribute to invalidation, shame, and distress. However, social support can serve as a moderator in emotional experiences [17].

Social support can be defined as a subjective perception of care and assistance received from social circles, and is closely related to the well-being of FM patients. Relationships with family, partners, and friends, as well as with other FM patients, are significant determinants of how individuals accept and manage their condition [18]. While a strong network of social support can increase self-assurance to manage pain and improve patient outcomes, the severity of symptoms determines how patients perceive this support, and inadequate support may contribute to more severe affective and physical symptoms, economic challenges, higher stigma rates, and greater impairments [19-21]. Research indicates that positive social relationships enhance cognitive performance, reduce psychiatric comorbidities, minimize pain levels, ease sleep disturbances, and promote healthy coping among individuals with FM [16, 22]. However, cultural differences exist in the extent and form of support they receive. The function of social support may be more prominent in India than in Western nations because of its strong social capital. Social support and coping are inextricably linked, with the former enabling the latter.

Coping refers to cognitive behavioral strategies for managing intrinsic and extrinsic tribulations [23]. These strategies range from problem-centered coping, which addresses problems with emotion-centered coping, which focuses on managing emotions rather than the problems themselves, to dysfunctional coping, which researchers have considered an ineffective coping approach. Research has shown that dysfunctional coping is more prevalent

than problem- and emotion-centered coping in patients with FM [24]. Moreover, psychiatric comorbidity and limited support exacerbate maladaptive coping, such as avoidance coping, which involves escape behaviors, apathy, and catastrophizing [25]. Adequate social support networks contribute to adaptive coping in patients [26]. Traska et al. [27] found that female FM patients who engage in appropriate coping measures had a lower risk of being diagnosed with psychiatric conditions. Consequently, coping strategies utilized by patients with FM are imperative for managing psychiatric morbidity and their condition. The nature of coping strategies depends on cultural and situational factors. Methods that have proven successful in other rheumatic conditions may fail to work for FM patients and cause distress [21]. Probing the literature shows that a combination of emotional, practical, and social coping methods alleviates psychiatric morbidity, pain, and related symptoms [28]. In contrast to other nations, where the emphasis may be on problem-oriented coping [27], the Indian population may prefer more acceptance-oriented coping [29]. These variations emphasize the importance of comprehending cultural variations unique to coping mechanisms and how well they work.

Despite copious research on these psychosocial influences, there is a substantial information gap persisting in understanding how social support and mechanisms of coping relate to psychiatric morbidities in FM patients within this population. Bridging this gap comes with implications across borders, as it advances the understanding of culture laid distinctions in psychological experience of FM, as well as fostering the development of culturally appropriate assessment instruments, management strategies and research.

Therefore, this study examines the associations between psychiatric morbidity, social support, and coping strategies in FM patients. It also aimed to explore the correlations among these variables and assess potential differences based on age, socioeconomic status, and illness duration.

## Method

This descriptive correlational study focused on FM patients (30 patients), aged 30 to 60 years, from three hospitals in Ernakulam district, Kerala, India. The study was conducted in hospitals with departments specializing in rheumatology and pain-related cases. The convenience sampling approach was utilized for sample selection, with the sample size determined by referring to prior studies and patient availability. To be included in the study, participants must have had FM diagnosed by medical experts (including rheumatologists, pain specialists, and primary care physicians) based on the ICD-10 criteria, be between the ages of 30 and 60, regardless of socioeconomic background, and be willing to provide informed consent. Patients with other physical and neurological issues as well as comorbid illnesses such as rheumatoid arthritis and osteoarthritis, who were both below and above the targeted age range and unwilling to provide informed consent, were excluded to maintain

homogeneity.

The diagnosis was confirmed using a comprehensive list and medical records. Prior to administering the test, both the participants and institutional authorities were briefed on its purpose and procedure. A positive relationship was established with respondents in the population. All the participants provided informed consent. They were instructed to complete three self-report questionnaires and a personal data sheet, without disclosing their identities. Participants were guaranteed that their information would remain confidential and would be solely used for research purposes. The study was performed in compliance with the laws and institutional policies. It was hypothesized that there will be no significant relationship between psychiatric morbidity, social support, and variables of coping among FM patients (H01) and there will be no significant difference in psychiatric morbidity, social support, and variables of coping among FM patients across age, socioeconomic status, and illness duration (H02).

The data collection tools used in this study are as follows:

**Self-Report Questionnaire (SRQ):** The SRQ is a 20-item self-assessment questionnaire developed by the World Health Organization (WHO) in 1975 to measure psychiatric morbidities. It encompasses 20 dichotomous questions with two probable answers: 'yes' or 'no' and scores of 0 or 1. The highest score a respondent can obtain is 20. A score of 1 indicates the existence of symptoms, whereas a score of 0 indicates the absence of symptoms. The scale possesses sufficient psychometric characteristics, with a Cronbach's alpha of 0.82 [30].

**Multidimensional Scale of Perceived Social Support (MSPSS):** This instrument is a self-report questionnaire formulated by Gregory D. Zimet in 1988 that measures subjective social support. The scale has three subscales: friends, family, and significant others. To determine the total score for the 12 statements on the scale, add all items and divide the total score by 12. The Cronbach's alpha for the scale was 0.88. The family, friends, and significant other subscales had Cronbach's alpha values of 0.87, 0.85, and 0.91, respectively, confirming the instrument's strong internal reliability. This scale

demonstrates both factorial and construct validity [31].

**Brief COPE Scale:** This is a 28-item questionnaire with 14 subscales developed by Carver. C.S. in 1989 to assess the various coping mechanisms utilized by the participants. The 14 subscales are self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religion, and self-blame. Each subscale had two items, which were added to responses 1 to 4 to obtain the total score. The scale's reliability and validity were excellent, with Cronbach's alpha values of 0.82 and 0.90, respectively, for domains such as religion and substance use. Other domains with acceptable Cronbach's values were active coping (0.68), planning (0.73), positive reframing (0.64), acceptance (0.57), humor (0.73), emotional support (0.71), denial (0.54), venting (0.50), behavioral disengagement (0.65), and self-blame (0.69) [32].

SPSS version 25 software was used for data analysis. Preliminary investigation using the Shapiro-Wilk test and one-sample Kolmogorov-Smirnov test revealed that the data departed from a normal distribution. Therefore, the non-parametric alternative Spearman's rank correlation test was adopted for correlational analysis, and the Kruskal-Wallis H test was employed to assess significant differences in the research variables based on age, socioeconomic status, and illness duration. A significance value (p-value) <0.05 and 0.01 demonstrate statistical significance.

## Results

The demographic profile shows a predominance of participants aged between 30 and 40 years from a middle-class socioeconomic background with an illness duration of 0-1-year. A significant proportion of participants exhibited low social support and moderate psychiatric morbidity (Table 1).

Spearman's rank correlations were run to examine the relationship between psychiatric morbidity and social support and the results have been reported in Table 2. There was a strong negative correlation between psychiatric morbidity and social support ( $r = -.540, p < 0.01$ ).

**Table 1. Baseline Characteristics of Participants**

Variables	Range	N (%)
Age	30-40	13 (43%)
	41-50	11 (36.6%)
	51-60	6 (20%)
Socioeconomic status	High	4 (13%)
	Middle	25 (83%)
	Low	1 (3%)
Illness duration	0-1	19 (63%)
	1-2	7 (23%)
	2-3	4 (13%)
Psychiatric morbidity	Below (0-5)	5 (16.6%)
	Average (6-12)	17 (56.6%)
	High (13-20)	8 (26.6%)
	Low (1-2.9)	14 (46.6%)
Social support	Moderate (3-5)	11 (36.6%)
	High (5.1-7)	5 (16.6%)

Note N=30

Table 3 shows Spearman's rank correlation between psychiatric morbidity, social support, and coping variables among patients with FM. Psychiatric morbidity had a moderate positive correlation with self-blame ( $r = .39$ ,  $p < 0.05$ ), while the correlation with substance use ( $r = .11$ ,  $p > 0.05$ ) was statistically insignificant and weak. In addition, a strong inverse correlation was observed between psychiatric morbidity and the following coping variables: self-distraction ( $r = -.84$ ,  $p < .001$ ), active coping ( $r = -.84$ ,  $p < 0.001$ ), emotional support ( $r = -.72$ ,  $p < .001$ ), instrumental support ( $r = -.651$ ,  $p < .001$ ), venting ( $r = -.81$ ,  $p < .0001$ ), positive reframing ( $r = -.81$ ,  $p < .001$ ), humour ( $r = -.62$ ,  $p < .001$ ), acceptance ( $r = -.59$ ,  $p < .001$ ), and religion ( $r = -.67$ ,  $p < .05$ ). Planning ( $r = -.33$ ,  $p < .058$ ) had a moderate inverse relationship with psychiatric morbidity. This is while, behavioral disengagement ( $r = -.13$ ,  $p > 0.05$ ) and denial ( $r = -.13$ ,  $p > 0.05$ ) exhibited a weak inverse relationship. However, these relationships accounted for statistical insignificance. Furthermore, the analysis revealed a moderate positive

relationship between social support and self-distraction ( $r = .54$ ,  $p < .001$ ), active coping ( $r = .55$ ,  $p < .001$ ), venting ( $r = .38$ ,  $p < .01$ ), positive reframing ( $r = .39$ ,  $p < .001$ ), and humour ( $r = .38$ ,  $p < .001$ ), and negative relationships with self-blame ( $r = -.30$ ,  $p < .05$ ), behavioral disengagement ( $r = -.05$ ,  $p > 0.05$ ), substance use ( $r = -.10$ ,  $p > 0.05$ ), and denial ( $r = -.03$ ,  $p > 0.05$ ). Social support demonstrated a favourable and insignificant association with emotional support, instrumental support, acceptance, and religion (Table 3). Significant differences in study variables across different demographic factors were tested using the Kruskal–Wallis H test, and the results are presented in Table 4. There were no significant differences in psychiatric morbidity, social support, and coping variables across the different age groups, socioeconomic status, and duration of illness ( $p > 0.05$ ). However, behavioral disengagement coping in patients with FM varied significantly across the age groups ( $p < 0.05$ ). Younger age groups are more inclined to employ behavioral disengagement coping than older age groups of patients with FM.

**Table 2.** Correlations between Psychiatric Morbidity and Social Support among FM Patients

Variables	1	2
1. Psychiatric morbidity	-	-.54**
2. Perceived social support (Total)	-.54**	-

Note: \* $p < .05$ , \*\* $p < 0.01$

**Table 3.** Correlation between Psychiatric Morbidity, Social Support, and Variables of Coping among FM Patients

Variables	Psychiatric morbidity	Social support
Self-distraction	-.84**	0.54**
Active coping	-.84**	0.55**
Denial	-0.13	-0.03
Substance use	0.11	-0.10
Use of emotional support	-0.72**	0.21
Use of instrumental support	-0.65**	0.17
Behavioral disengagement	-0.13	-0.05
Venting	-0.81**	0.38*
Positive reframing	-0.81**	0.39*
Planning	-0.33	0.16
Humor	-0.62**	0.38*
Acceptance	-0.59**	0.19
Religion	-0.67**	0.27
Self-blame	0.39*	-0.30

Note: \* $p < .05$ , \*\* $p < .01$

**Table 4.** Kruskal–Wallis H Test of Study Variables by Age, Socioeconomic Status, and Illness duration among FM Patients

Variables	Age		Socioeconomic status		Illness duration	
	H	p	H	p	H	p
Psychiatric morbidity	2.00	0.367	1.88	0.390	1.88	0.389
Self-distraction	0.58	0.746	1.87	0.392	0.15	0.925
Active coping	1.07	0.585	1.31	0.517	0.45	0.797
Denial	0.82	0.662	1.46	0.480	1.89	0.387
Substance use	0.84	0.657	1.28	0.526	2.07	0.354
Emotional support	0.60	0.741	1.42	0.491	0.05	0.975
Instrumental support	0.92	0.631	3.68	0.158	0.29	0.864
Behavioral disengagement	8.30	0.016*	2.83	0.242	1.57	0.455
Venting	0.24	0.884	2.55	0.279	0.07	0.962
Positive reframing	0.18	0.912	3.74	0.154	0.11	0.943
Planning	0.51	0.775	3.12	0.209	0.15	0.926
Humour	0.83	0.657	3.39	0.183	0.03	0.984
Acceptance	0.01	0.992	3.12	0.210	0.00	0.999
Religion	0.14	0.929	1.64	0.439	1.62	0.443
Self-blame	1.87	0.393	2.78	0.249	2.18	0.336
Social Support	2.42	0.297	2.70	0.259	2.49	0.288

Note: \* $p < .05$

## Discussion

The principal aim of this study was to investigate the relationship between psychiatric morbidity, social support, and coping among FM patients, with an ancillary aim to examine significant differences in these variables in terms of their age, socioeconomic status, and illness duration. The study investigated 30 female FM patients in Kerala, the majority belonging to a middle-class socioeconomic background, between the ages of 30 and 40 years, with an illness duration of 0 to 1 year. The existing literature is constrained by insufficient consideration of cultural disparities in understanding the relationship between psychological factors in FM. This may have obscured the unique experiences and coping strategies of individuals from different cultural backgrounds.

Consistent with earlier research [33, 34], a high proportion of patients reported low social support and moderate psychiatric morbidity, and both variables were found to have an inverse association. FM patients with moderate psychiatric morbidity are susceptible to severe psychiatric illnesses. A lack of social support exacerbates the severity and symptomatology of FM. The observed reciprocal relationship between social support and psychiatric morbidity in this cultural context underscores the need for additional research on the effective management of FM. Probable factors that contribute to these findings include healthcare disparities, insufficient awareness of resources, and stigma related to seeking help. Shuster et al. [35] reported psychiatric morbidity in FM patients with external attribution and perceived lack of family support. Researchers in Brazil discovered that patients with inadequate social support experience psychological discomfort and reduced pain tolerance [19]. The mere perception of support can greatly affect patients. In a Spanish study, patients who had a supportive partner reported lower levels of psychological distress and pain [36].

The results revealed a significant influence of coping methods on psychiatric morbidity among FM patients. Psychiatric diagnosis intensified in patients who relied on self-blame and substances for coping, showing a positive correlation. Previous studies have indicated that substance use may have analgesic effects. However, these benefits are transient and may aggravate the risk of addiction and related mental health issues [37]. Jannati et al. [38] revealed a strong correlation between psychological discomfort and self-blame. The negative correlation between psychiatric morbidity and adaptive coping mechanisms was significant, with stronger correlations for self-distraction, active coping, emotional and instrumental support, venting, positive reframing, humour, acceptance, and religion. Self-distraction entails an intentional shift of attention away from the stressor, whereas venting is an outward expression of emotions. Both are adaptive; however, overuse might have detrimental effects on one's health. Psychiatric morbidity has declined in FM patients who actively cope by addressing problems, accepting reality, soliciting emotional and practical assistance, engaging in religious

activities such as prayers, reframing stressful situations with humour, and seeing the positive aspects of problems. According to Marino et al. [39], FM patients with insufficient adaptive coping approaches show psychiatric morbidity.

Additionally, this study identified a strong inverse relationship between social support and non-adaptive coping strategies among patients with FM. Patients with low social support are more inclined to engage in behavioral disengagement and self-blame. Conversely, those with strong social support employ adaptive coping strategies, such as active coping and self-distraction. These findings suggest that access to resources, perceived inequalities in assistance, and cultural differences in coping strategies may play significant roles in the management of FM. Consistent with this interpretation, Da et al. [39] found lower mental health in patients having emotion-centered coping and decreased satisfaction with social support. A negative correlation was found between avoidance-coping strategies and social support among individuals with FM. Research has shown a negative correlation between avoidance coping strategies and social support among FM patients. As demonstrated in the study of Savelkoul et al., FM patients who employ avoidance coping mechanisms have inadequate social support [40]. Thermally sensitive FM patients who utilized self-distraction as a coping mechanism reported an improved quality of life [41].

Therefore, the results indicate a significant relationship between psychiatric morbidity, social support, and coping among patients with FM in Kerala.

Behavioral disengagement coping was employed to a greater extent across different age groups of FM patients in Kerala. Patients in younger age groups were more prone to disengage from addressing stressful situations compared to FM patients among the elderly. Young adults are more susceptible to societal pressure. In addition, poor support, limited access to resources, and lack of awareness of coping mechanisms may drive patients to use ineffective coping strategies. There is a predominance of non-adaptive coping strategies and heightened psychological discomfort in young female FM patients compared to older patients [42]. FM patients showed no discernible variations in psychiatric morbidity, social support, and other variables of coping based on age, socioeconomic status, and duration of illness. This lack of substantial differences can be attributed to sample size limitations and heterogeneity. A previous study [13] revealed that there was no disparity in illness duration with psychiatric morbidity in FM patients. Cronan, Serber and Walen [43] reported no age difference in psychosocial variables among FM patients.

A study by Fidel et al., [44] confirmed significant age difference in FM patients coping strategies. Patients resorted to non-adaptive coping struggles to adapt to their condition. Fitzcharles et al. [45] discovered that FM patients with lower educational and socioeconomic backgrounds experience severe symptoms and a reduced quality of living.

Psychiatric morbidity was correlated with insufficient

social support and non-adaptive coping strategies of FM patients. Additionally, the age of the patient influences their choice of behavioral disengagement coping. Overall, the research underscores the critical function of social support and coping strategies in alleviating psychiatric morbidity in FM patients.

Although the findings are noteworthy, there are limitations to the present study. It was hard for the authors to find participants who met the specified inclusion criteria. Consequently, a convenience sampling approach was adopted, which led to a limited participant pool. The study was conducted in a unique socio-cultural and health care milieu in Kerala, distinct from other regions of the Indian population. Thus, incorporating culturally insensitive measuring instruments may restrict generalizability. Therefore, it is advised to pursue further research to gain deeper insights into the experience of FM patients by expanding the sample size, including a matched control group, and employing qualitative methods such as interview, observation, and case studies. Examining the prevalence of psychological disorders in FM patients in this specific context as well as exploring a broader range of socioeconomic characteristics could be beneficial.

## Conclusion

Regarding the present investigation findings, the analysis revealed a significant relationship between psychiatric morbidity, social support and coping among FM patients in Kerala. A notable difference was shown in behavioral disengagement coping across different age groups of FM patients. This study underscores the pivotal role of social support and coping strategies in managing psychiatric morbidity among FM patients in Kerala. It serves as an aid for healthcare professionals to become more cognizant of psychosocial factors associated with FM and its cultural influences, and helps them to design culturally specific treatment approaches that foster social support and adaptive coping skills, in achieving positive treatment outcomes. Psychoeducation and a comprehensive treatment strategy will be beneficial for the management of FM.

## Conflict of Interest

None of the authors declared any conflict of interest.

## Ethical Approval

The research followed the ethical principles for human experimentation outlined in the Declaration of Helsinki, which included informed consent, approval from the hospital administration, and ensuring privacy and confidentiality.

## Declaration of Generative AI and AI-Assisted Technologies

During the preparation of this work the authors did not use any AI tools

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