

T.C.

YEDİTEPE UNIVERSITY

INSTITUTE OF HEALTH SCIENCES

MASTER'S PROGRAM IN PHYSIOTHERAPY AND
REHABILITATION

**COMPARISON OF THE EFFECTS OF CONNECTIVE
TISSUE MASSAGE AND TAPING ON PAIN,
DEPRESSION AND QUALITY OF LIFE IN PATIENTS
WITH FIBROMYALGIA**

MASTER THESIS

Gizem TRKEN, PT.

İSTANBUL-2022

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GİZEM TÜRKŞEN, PT

SUPERVISOR
PROF. DR. RASMÎ MUAMMER

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This study have approved as a Master Thesis in regard to content and quality by the Jury.

	Title, Name-Surname (Institution)
Chair of the Jury:	Asst. Prof. Dr. Eif Develi Yeditepe University
Supervisor:	Prof. Dr. Rasmi Muammer Yeditepe University
Member/Examiner:	Asst. Prof. Dr. Anıl Tosun Fenerbahçe University

APPROVAL

This thesis has been deemed by the jury in accordance with the relevant articles of Yeditepe University Graduate Education and Examinations Regulation and has been approved by Administrative Board of Institute with decision dated and numbered

Prof. Dr. Bayram YILMAZ
Director of Institute of Health Sciences

DECLARATION

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree except where due acknowledgment has been made in the text.

05.06.2022

GİZEM TÜRKŞEN

DEDICATION

I would like to dedicate this thesis to my parents Nalan Türkşen and Haldun Türkşen, and to my brother Orhan Türkşen.



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As a woman, I would like to thank Mustafa Kemal Atatürk for writing this thesis thanks to the rights he gave us.

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TABLE OF CONTENTS

APPROVAL	ii
DECLARATION	iii
DEDICATION	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	vi
LIST OF TABLES	x
LIST OF FIGURES	xiii
LIST OF SYMBOLS AND ABBREVIATIONS	xiv
ABSTRACT	xv
ÖZET	xvi
1. INTRODUCTION AND PURPOSE	1
2. LITERATURE REVIEW	4
2.1. History	4
2.2. Definition	4
2.3. Epidemiology	4
2.4. Etiopathogenesis	4
2.4.1. Genetic Factors	4
2.4.2. Environmental Factors	5
2.4.3. Central Sensitization	5
2.4.4. Autonomic Dysfunction	5
2.4.5. Psychological Disorders	5
2.5. Clinical Presentations	6

2.5.1. Pain	6
2.5.2. Depression	6
2.5.3. Fatigue	6
2.5.4. Slepp Disorders	6
2.5.5. Trigger Points	6
2.5.6. Irritable Bowel Syndrome	7
2.6. Diagnosis	7
2.7. Treatment	8
2.7.1. Pharmacological Treatment	8
2.7.2. Exercises	8
2.7.3. Physical Therapy Modalities	9
2.7.3.1. Infrared	9
2.7.3.2. Transcutaneous Electrical Stimulation	9
2.7.3.3 Laser	9
2.7.3.4. Ultrasound	9
2.7.3.5. Acupuncture	9
2.7.3.6. Kinesiotaping	10
2.7.3.7. Massage Therapy	10
3. MATERIALS AND METHODS	11
3.1. Individuals	11
3.1.1. Inclusion Criteria	11
3.1.2.Exclusion Criteria	11
3.2. Identifying Individuals and Forming Groups	11

3.3. Method	11
3.3.1. Evaluations	11
3.3.1.1. Sociodemographic Evaluation Form	12
3.3.1.2. Fibromyalgia Impact Questionnaire	12
3.3.1.3. McGill - Melzack Pain Questionnaire	12
3.3.1.4. Beck's Depression Scale	13
3.3.1.5. Visual Analogue Scale	13
3.3.1.6. SF-36 Quality of Life Scale	13
3.3.2. Applications for First Group	14
3.3.2.1. Kinesio Tape Application	14
3.3.3. Applications for Second Group	14
3.3.3.1. Connective Tissue Massage	14
3.3.4. Statistical Analysis	16
4. RESULTS	17
5. DISCUSSION and CONCLUSIONS	52
6. REFERENCES	57
7. APPENDIXES	65
7.1. Appendix 1. Structured Questionnaire	65
7.2. Appendix 2. McGill-Melzeck Questionnaire	66

7.3. Appendix 3. VAS	67
7.4. Appendix 4. Beck's Depreession Invantery	68
7.5. Appendix 5. Fibromyalgia Impact Questionnaire	71
7.6. Appendix 6. SF-36 Quality of Life Questionnaire	73
7.7. Appendix 7. Informed Written Consent	76
7.8. Appendix 8. Ethical Approval	77



LIST OF TABLES

Table1. Distortion Kurtosis Analysis.....	16
Table 2. Distribution by Socio-demographic Data.....	17
Table 3. Analysis of Pre-Treatment McGill Pain Questionnaire Scores of Patients Receiving CTM and Taping Therapy.....	17
Table 4. Analysis of Pre-Treatment VAS Scores of Patients Receiving CTM and Taping Therapy.....	17
Table 5. Analysis of Pre-Treatment Beck's Depression Inventory Scores of Patients Receiving CTM and Taping Therapy.....	18
Table 6. Analysis of Pre-Treatment Fibromyalgia Impact Questionnaire Scores of Patients Receiving CTM and Taping Therapy.....	18
Table 7. Analysis of Pre-Treatment sf-36 Quality of Life Questionnaire Scores of Patients Receiving CTM and Taping Therapy.....	19
Table 8. Analysis of the Difference Between Pre-Post Treatment Scores of Participants on McGill Pain Questionnaire.....	20
Table 9. Analysis of the Difference Between Pre-Post Treatment Scores of Participants on VAS	20
Table 10. Analysis of the Difference Between Pre-Post Treatment Scores of Participants on Beck's Depression Inventory.....	21
Table 11. Analysis of the Difference Between Pre-Post Treatment Scores of Participants on Fibromyalgia Impact Questionnaire.....	22
Table 12. Analysis of the Difference Between Pre-Post Treatment Scores of Participants on SF-36 Quality of Life Questionnaire.....	23
Table 13. Compare of the Rate of Change in Score from McGill Pain Questionnaire.....	24
Table 14. Compare of the Rate of Change in Score from VAS.....	24
Table 15. Compare of the Rate of Change in Score from Beck's Depression Inventory.....	25
Table 16. Compare of the Rate of Change in Score from Fibromyalgia Impact Questionnaire.....	25
Table 17. Compare of the Rate of Change in Score from SF-36 Quality of Life Questionnaire.....	26

Table 18. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment CTM by Gender.....	27
Table 19. Analysis of the VAS, FIQ, McGill Pain and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment CTM by Gender.....	27
Table 20. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment Taping by Gender.....	28
Table 21. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of Participants Receiving Treatment Taping by Gender.....	29
Table 22. Analysis of the Scores of the Participants Receiving Treatment CTM from the SF-36 Quality of Life Scale by Educational Status.....	30
Table 23. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment CTM by Educational Status.....	31
Table 24. Analysis of the Scores from the SF-36 Quality of Life Scale of the Participants Receiving Treatment Taping by Educational Status.....	32
Table 25. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment Taping by Educational Status.....	33
Table 26. Analysis of the SF-36 Quality of Life Scale Scores of Participants Receiving Treatment CTM by Age.....	34
Table 27. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of Participants Receiving Treatment CTM by Age.....	35
Table 28. Analysis of the Scores from the SF-36 Quality of Life Scale of the Participants Receiving Treatment Taping by Age.....	36
Table 29. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of Participants Receiving Treatment Taping by Age.....	37
Table 30. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment CTM by Smoking Status.....	38

Table 31. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment CTM by Smoking Status.....	38
Table 32. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment Taping by Smoking Status.....	39
Table 33. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment Taping by Smoking Status.....	40
Table 34. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment CTM by Alcohol Use Status.....	40
Table 35. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment CTM by Alcohol Use Status.....	41
Table 36. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment Taping by Alcohol Use Status.....	42
Table 37. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment Taping by Alcohol Use Status.....	42
Table 38. Analysis of the Scores from the SF-36 Quality of Life Scale of the Participants Receiving Treatment CTM, by Presence of FMS in the Family.....	43
Table 39. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment CTM by FMS in the Family.....	44
Table 40. Analysis of the Scores from the SF-36 Quality of Life Scale of the Participants Receiving Treatment Taping, by Presence of FMS in the Family.....	45
Table 41. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment Taping by FMS in the Family.....	46
Table 42. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment CTM by Disease Duration.....	47

Table 43. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment CTM by Disease Duration.....	48
Table 44. Analysis of the Scores from the SF-36 Quality of Life Scale of the Participants Receiving Treatment Taping by Disease Duration.....	49
Table 45. Analysis of the VAS, FES, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment Taping by Disease Duration.....	50



LIST OF FIGURES

Figure 3.3.2.1.	14
Figure 3.3.2.2.	14
Figure 3.3.3.1.	14
Figure 3.3.3.2.	14
Figure 3.3.3.3.	14
Figure 3.3.3.4.	15
Figure 3.3.3.5.	15



LIST OF SYMBOLS AND ABBREVIATIONS

CTM	Connective Tissue Massage
FIQ	Fibromyalgia Impact Questionnaire
FM	Fibromyalgia
FMS	Fibromyalgia Syndrome
KT	Kinesiotaping
Quest	Questionnaire
VAS	Visual Analog Scale



ABSTRACT

Turksen, G. (2022). Comparison of the Effects of Connective Tissue Massage and Taping on Pain, Depression and Quality of Life in Patients with Fibromyalgia. Yeditepe University Institute of Health Sciences, Physiotherapy and Rehabilitation Program Master's Thesis. Istanbul.

This study was conducted with 34 fibromyalgia patients (mean age: 34.41 ± 7.74 years, M/F=10/24 years) to evaluate the effects of connective tissue massage and taping on pain, depression and quality of life. In our study, VAS and McGill Pain Scale were used to determine the severity of pain before and after the treatment, Beck's Depression Scale was used to evaluate the depression status, Fibromyalgia Impact Questionnaire and SF-36 Quality of Life Scale were used to determine the disability and quality of life of fibromyalgia patients. Statistical analysis was performed with SPSS version 21.0. As a result of our study, significant results were found on pain, depression and quality of life of both treatment methods in patients ($p < 0.05$). According to the VAS evaluation of the patients who were treated with connective tissue massage in the correlation analysis; Patients aged 25-35 showed statistically significantly higher improvement than patients aged 36 and over ($p < 0.05$). In terms of patients who received taping treatment, the scores obtained from only the Energy/Vivacity/Vitality sub-dimensions of the SF-36 quality of life scale differed according to age before and after the treatment ($p < 0.05$). Accordingly, the improvement of the patients in the 25-35 age group in terms of energy /vitality is statistically significantly higher than the older age group. In terms of patients who received taping treatment, the scores obtained from only the mental health sub-dimension of the SF-36 quality of life scale before and after the treatment differed according to the variable of smoking status, the improvement in mental health of the patients who declared that they did not smoke was higher than the patients who smoked. it was concluded that this difference was statistically significant ($p < 0.05$). As a result, both applications have been successful in the treatment of fibromyalgia patients.

Key words: Fibromyalgia, connective tissue massage, taping, pain

ÖZET

Türkşen, G. (2022). Fibromiyalji Hastalarda Konnektif Doku Masajı ve Bantlama Uygulamasının Ağrı, Depresyon ve Yaşam Kalitesi Üzerine Olan Etkilerinin Karşılaştırılması. Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü, Fizyoterapi ve Rehabilitasyon Programı Yüksek Lisans Tezi. İstanbul.

Bu çalışma fibromiyalji hastalarında, konnektif doku masajı ve bantlamanın ağrı, depresyon ve yaşam kaliteleri üzerindeki etkilerini değerlendirmek amacıyla 34 fibromiyalji teşhisi almış hasta (yaş ort: 34.41 ± 7.74 yıl, E/K=10/24) ile yapılmıştır. Çalışmamızda tedavi öncesi ve sonrası ağrı şiddetini belirlemek için VAS ve McGill Ağrı Ölçeği, Depresyon durumunu değerlendirmek için Beck'in Depresyon Ölçeği, fibromiyalji hastalarının disabilite ve yaşam kalitelerini tespit etmek için Fibromiyalji Etki Anketi ve SF-36 Yaşam Kalitesi Ölçeği kullanılmıştır. İstatistiksel analiz SPSS 21.0 versiyonu ile yapılmıştır. Her iki tedavi yönteminin ağrı, depresyon ve yaşam kalitesi üzerinde anlamlı sonuç bulunmuştur ($p < 0.05$). Yapılan analizlerde, konnektif doku masajı tedavisi uygulanan hastaların Fibromiyalji Etki Anketi sonucu istatistiksel açıdan anlamlı bulunmuştur. ($p < 0.05$). Bantlama tedavisi alan hastalar açısından, tedavi öncesinde ve tedavi sonrasında SF-36 yaşam kalitesi ölçeğinin yalnızca Enerji/Canlılık/Vitalite alt boyutlarından alınan puanların yaşa göre farklılaştığı saptanmıştır ($p < 0,05$). Buna göre 25-35 yaş grubundaki hastaların enerji/canlılık/vitalite açısından göstermiş oldukları iyileşme kendilerinden daha büyük yaş grubuna göre istatistiksel açıdan anlamlı seviyede yüksektir. Bantlama tedavisi alan hastalar açısından, tedavi öncesinde ve tedavi sonrasında SF-36 yaşam kalitesi ölçeğinin yalnızca ruhsal sağlık alt boyutundan alınan puanların sigara kullanma durumu değişkenine göre farklılaştığı, sigara kullanmadığını beyan eden hastaların ruhsal sağlık açısından göstermiş oldukları gelişmenin sigara kullanan hastalara göre daha yüksek olduğu ve bu farklılığın istatistiksel açıdan anlamlı olduğu sonucuna ulaşılmıştır ($p < 0,05$). Sonuç olarak fibromiyalji hastalarının tedavisinde her iki uygulama da başarıya ulaşmıştır.

Anahtar kelimeler: Fibromiyalji, konnektif doku masajı, bantlama, ağrı

1. INTRODUCTION

Fibromyalgia (FM) is a rheumatic disease that will be consumed worldwide (1). Despite years of research in FM, no definitive cause or pathophysiology has yet been discovered. From the point of view of symptomatology, it is known that it is a syndrome characterized by widespread chronic musculoskeletal pain (lasting longer than 3 months) with hyperalgesia at specific points called "tender points" (2). In addition, patients with FM have psychosomatic symptoms such as fatigue, sleep disturbances (waking up without renewal), anxiety, depression, cognitive dysfunction, headache, and gastrointestinal disturbances (3). Therefore, the clinical presentation of FM usually occurs with a decrease in functional capacity and consequently a decrease in the quality of life of patients (2,4). FM has no definitive cure, and treatment primarily focuses on managing symptoms and improving quality of life. This treatment strategy requires a comprehensive multidisciplinary approach consisting of pharmacological measures, lifestyle changes and other complementary approaches. Pharmacological therapy is one of the most cited, but it produces some side effects as well as having a low level of recommendation. Studies with non-pharmacological treatments focusing on physical therapy have become alternative treatments with fewer or no side effects to patients in recent years (5).

The incidence of fibromyalgia syndrome, which is more common in women, is increasing. Its prevalence in the world is 1-4%. It is one of the most common diseases in our country (6-7). In Turkey, approximately 100,000 people are diagnosed each year, and this number is increasing day by day with the increasing recognition of the disease by doctors (8).

In the researches, there are many autonomic, peripheral, neurohormonal, environmental, psychological and genetic factors in fibromyalgia. Recent studies have shown that fibromyalgia syndrome is a multifaceted syndrome in which problems in central pain functioning occur (9). One of the most important symptoms in fibromyalgia syndrome is pain; pain threshold and resistance to pain decreased in patients (10). All these signs and symptoms can affect the patient's psychological, physical and social performance, reduce the patient's participation in activities, cause difficulties in doing daily life activities and adopt a sedentary lifestyle. However, if the fear of movement and injury develops due to pain, this may cause the patient to be more inactive (11). It was determined that the scores of depression and anxiety increased in the questionnaires made to FM patients. The presence of depression and anxiety in individuals with FM can affect pain intensity and health status (12). A bidirectional relationship was found between FM

and depression (13). In the light of all these findings; fibromyalgia can negatively affect the quality of life of patients.

Developed 25 years ago by Dr Kenzo in Japan, Kinesio Taping (KT) is a therapeutic taping technique (14). This elastic, therapeutic tape is used to treat a variety of injuries (15). It is hypothesized that KT has effects such as pain control, reducing edema by increasing local circulation, and correcting joint alignment (16). In the study of Ergün et al. in 2016, laser and taping applications were compared. At the end of the study, it was seen that the taping application was as effective as the laser application (17). In the research conducted by Celenay et al. in 2020, taping was applied to one group along with the exercise, while the other group was only taped. As a result, it was more clearly seen that the pain decreased in the group that was taped together with the exercise (18).

Connective tissue massage (CTM), which is a manipulative technique, facilitates the treatment of some pathologies (19). CTM differs from traditional massage in terms of both its technical and physiological effects (20). It is thought to be a treatment that reduces the tension of the connective tissue and increases the plasma b endorphins. Manipulation of the skin and subcutaneous tissues can also have a beneficial effect on other tissues. The increase in blood flow in the affected area via neural reflexes may explain this effect (21). In the study conducted by Akbayrak et al. in 2006, connective tissue massage combined with ultrasound therapy was applied and both short and long-term effects were examined. As a result, it was observed that the pain decreased in fibromyalgia patients (22). In the research of Celenay et al. published in 2017, one group was given connective tissue massage combined with exercise, while the other group was given only exercise. As a result, exercises with CTM may be superior to exercise alone in improving pain, fatigue, sleep disturbance, and role limitations related to physical health (23).

The aim of our study, in the light of all this information, is to find out how connective tissue massage and taping applications affect the pain and depression complaints of fibromyalgia patients and to compare their effects on their quality of life.

H₀: taping has a more positive effect on pain than connective tissue massage.

H₁: taping has a more positive effect on depression than connective tissue massage.

H₂: taping has a more positive effect on quality of life than connective tissue massage.

H₃: Connective tissue massage has a more positive effect on pain than taping.

H₄: Connective tissue massage has a more positive effect on depression than taping.

H₅: Connective tissue massage has a more positive effect on quality of life than taping.



2. LITERATURE REVIEW

2.1. History

Fibromyalgia is now a disease causing chronic and disabling pain. Since the 1800s, muscle pains have been known as rheumatism and then as muscular rheumatism. In 1904, Gowers coined the term fibrositis. Smythe laid the foundation of modern FMS in 1972 by describing widespread pain and tender points. In 1981, the first controlled study of symptoms and tender points was published. This same study also proposed the first data-based criteria. In 1990, the first American rheumatology criteria were published and centrally sensitive neurohormonal mechanisms were developed (24).

2.2. Definition

Fibromyalgia is a disease known as soft tissue rheumatism, which negatively affects the quality of life of the person (1). Fibromyalgia patients commonly experience chronic pain, sleep disturbance, sensitivity to touch, morning stiffness, headache, and these complaints have been present for more than three months (2,3). The reason why fibromyalgia syndrome is not called fibrositis is that there is no inflammation in the studies (25).

2.3. Epidemiology

The prevalence of fibromyalgia relative to the general population in the United States is 2% and affects men less than women (women (3.4%), men (0.5%)) (26). According to the research published in 2005, the prevalence of Fibromyalgia in women in Turkey was calculated as 3.6%. In addition, a higher prevalence rate was found in the elderly population than in the younger population: 10.1% (27).

2.4. Etiopathogenesis

Various mechanisms are thought to be effective in the formation of FMS. However, although various studies have been carried out for many years, the cause of the disease is not yet known (28).

2.4.1. Genetic Factors

Studies suggest that there is a sensitivity to pain perception in the genetics of fibromyalgia patients (29). According to many published studies, it has been found that the incidence of FMS is increased in other family members of individuals with FMS (30). Pellioglu et al. examined 50 individuals from 17 families consisting of families of fibromyalgia patients, found the incidence of FMS to be 52% and argued that it is an autosomal dominant inheritance (31). Offenbecher et al., who analyzed the genotypes of the promoter region of the serotonin transporter gene in 62 patients with FMS and 110

healthy individuals, found that FMS patients had a higher genotype of the serotonin transporter promoter region (32).

2.4.2. Environmental Factors

Especially the troublesome childhood period and the violence experienced as a child may increase the incidence of FMS in adulthood (33). The patient's sensitivity to chemicals (mercury, nickel, silicon) that are frequently used in some surgical operations may trigger FMS (34).

2.4.3. Central Sensitization

"If the individual is given a painful stimulus continuously, cut it for a while and then given it again, this time he will feel the pain more intensely and in a wider area." With this theory, it is thought that there is a relationship between FMS and central sensitization (35). Comparing 17 individuals with FMS and 17 healthy individuals using mu-opioid receptor positron emission tomography, Harris et al. found that individuals with FMS exhibit reduced mu-opioid receptors in several regions that are important in pain regulation (36).

2.4.4. Autonomic Dysfunction

The autonomic nervous system manages basic involuntary functions in the body. It is activated by the spinal cord, brain stem, thalamus, and hypothalamus (29). It is important for us that the autonomic nervous system is in balance, but many studies have shown that the sympathetic system activity is more active than the parasympathetic system activity in individuals with FMS (37).

2.4.5. Psychological Disorders

It is known that individuals with FMS suffer from psychological disorders such as anxiety and depression. It has been suggested that FMS may cause psychological disorders related to chronic pain, as well as psychological disorders may cause FMS (38). According to the study by Waylonis and Perkins, individuals with FMS reported that they had been exposed to traumatic events such as accidents and injuries before (39). According to a study conducted in 2008, the depression levels of individuals with FMS were found to be higher than those of healthy individuals, and it was stated that the severity of pain and the level of depression were directly related (40).

2.5. Clinical Presentations

Many different clinical symptoms such as migraine, tremor, temporomandibular joint pain, and excessive sweating are seen in FMS. The most common are:

musculoskeletal pain, fatigue, depression, sleep disturbance, trigger points, irritable bowel syndrome (41).

2.5.1. Pain

One of the most important symptoms of FMS, which increases in individuals with FM especially in cold weather, in cases of intense stress, excessive movement or inactivity, is pain (42). The intensity of the pain felt by the patient is moderate or very severe. The form of the pain can be burning, stinging, sharp, throbbing, or it can be felt at the same time (43). Symmetrical pain usually starts in the neck - back region and spreads to both sides of the body in individuals with FM. The intensity of pain felt by the patients is 2 times higher than that of rheumatoid arthritis (44).

2.5.2. Depression

According to studies, the rate of FM patients affected by major depressive disorder varies between 62% and 86%. The processes that cause depression and FMS are personal. The individual may develop depression as a result of triggering events. Depression can develop in response to many of the symptoms of FMS, especially pain. Or, FMS may develop in response to the sedentary life of the depressed individual (45).

2.5.3. Fatigue

Fatigue in individuals with FM usually starts with waking up in the morning without rest and is combined with weakness that lasts all day. As the person feels tired, they may limit their daily living activities and lead a sedentary life (46).

2.5.4. Sleep Disorders

When describing sleep problems, individuals with FM usually state that they cannot get out of bed or that they wake up as if they have been beaten. Patients suffer from difficulties in falling asleep, waking up frequently at night, and waking up weakness in the morning. Poor quality of sleep; It can negatively affect the physical and psychological state of the person and reduce the quality of life (47).

2.5.5. Trigger Points

There are 18 tender points identified in individuals with FM. These points are;

- Occipital Region
- Lower Cervical Region
- Trapeze
- Supraspinatus
- Second Costa

- Lateral Epicondyle
- Gluteal Region
- Thoracantary Major
- Patella Medial Zone

and the pain is bilateral. When these mentioned points are palpated, pain occurs (48).

2.5.6. Irritable Bowel Syndrome

Irritable bowel syndrome (IBS) is a condition characterized by chronic abdominal pain. Just like FMS, IBS is more common in younger women. The symptoms of IBS and FMS are commonly seen in each other. Although the studies are insufficient, some publications suggest a common pathophysiological mechanism for FMS and IBS (49,50,51).

2.6. Diagnosis

- Fibromyalgia diagnostic criteria were established in 1990 by the American Rheumatology Association. These criteria are stated below:
- There must be widespread pain complaint lasting at least 3 months. In order for the pain to be considered widespread, it must be on the right or left side of the body, on the lower or upper side of the trunk. In addition, axial skeletal pain (neck, anterior chest wall, thoracic spine, lower back) is required.
- There should be pain in 11 of the 18 points identified by palpation. A pressure of approximately 4 kg should be applied on palpation with the thumb. In order for the applied point to be considered painful, the individual must describe palpation as "painful". Expressing the point as "tender" is not considered "painful".

The presence of a second clinical disorder invalidates the diagnosis of fibromyalgia syndrome.

However, pain is not the only symptom of fibromyalgia syndrome. Many symptoms such as sleep disturbance, psychological disturbances, fatigue, and cognitive problems can also be seen in fbrimyalgia syndrome (52).

For this reason, new criteria were published by ACR in 2010. The tender point examination did not exist within these new criteria, thus making it workable in FMS

surveys and clinical studies. Accordingly, the diagnosis of FM can be made as a result of the fulfillment of the following 3 conditions

- the Widespread Pain Index (WPI) ≥ 7 and the Symptom Severity Score (SS) ≥ 5 , or the WPI is 3–6 and the SS ≥ 9
- symptoms have been present at a similar level for at least 3 months
- the patient does not have a disorder that would otherwise explain the pain (53).

2.7. Treatment

Fibromyalgia is a difficult disease to treat as its pathophysiology is still not fully resolved. As a result of the studies, it is known that fibromyalgia syndrome should not be seen as a regional muscle disorder, but as a systemic syndrome. Good analysis of the patient brings maximum success in treatment. With the evaluations made, treatment should include pharmacological and non-pharmacological approaches (54,55).

2.7.1. Pharmacological Treatment

In fibromyalgia syndrome, drug therapy is generally used to reduce the symptoms of the disease and increase the patient's well-being. Tricyclic antidepressants, cyclobenzaprine, tramadol, serotonin norepinephrine reuptake inhibitors (SNRI), selective serotonin reuptake inhibitors (SSRI) and $\alpha 2\delta$ -ligand anticonvulsants have been proven to be effective in the treatment of fibromyalgia (56).

2.7.2. Exercises

There are studies that show that exercise improves autonomic modulation in healthy individuals, patients with diabetes and heart disease (57). In small-sample studies on FM patients, exercise has been shown to improve cardiac parasympathetic modulation (58). Valkeinen et al. A 26-year-old woman with fibromyalgia syndrome conducted a study on the effects of strengthening exercise. They found an increase of 33-36% in muscle strength, 5% in quadriceps muscle diameter, and 47-57% in voluntary muscle activation in individuals participating in the strengthening exercise program compared to the control group (59). Curtis et al. In his research on 22 women with fibromyalgia syndrome, individuals who took a group yoga session twice a week for 8 weeks showed that yoga could be used in fibromyalgia syndrome by changing the cortisol level (60). Wang et al. In a study conducted by 226 individuals with FMS, which lasted 52 weeks and compared Thai Chi and aerobic exercises, more improvement was seen in the symptoms of the group who performed Thai Chi (61).

2.7.3. Physical Therapy Modalities

Among the symptoms of Physical Therapy Modalities, FMS; It has positive effects on pain, sleep problems, depression and low quality of life (62,63).

2.7.3.1. Infrared

In the study of Salm and in 2019, FM patients were divided into two groups, aquatic exercises were given to one group, and infrared was applied to the other group together with aquatic exercises. A decrease in serum IL-6 levels, improvement in pain and quality of life were observed in both groups. However, this improvement was observed more prominently in the group in which infrared was applied together with aquatic exercise (64).

2.7.3.2. Transcutaneous Electrical Stimulation

Transcutaneous Electrical Stimulation (TENS) is used to reduce pain by stimulating peripheral nerves. According to Johnson et al., there is no high-level research that supports or rejects the use of TENS in fibromyalgia patients (65).

2.7.3.3 Laser

Laser therapy, used to reduce musculoskeletal or neuropathic pain, is a low-level, non-pharmacological treatment. Kuan et al. according to the results of his study, there was a significant improvement in the pain of fibromyalgia patients who received laser treatment. In addition, when the group that received only exercise therapy was compared with the group that received both exercise and laser therapy, it was observed that the severity of pain, the number of tender points and fatigue were additionally reduced in the group that received combined therapy (66).

2.7.3.4. Ultrasound

In many studies, ultrasound therapy has not been examined alone, but has been evaluated with combined treatments. These combined treatments applied on fibromyalgia patients have been shown to be effective in reducing pain and fatigue levels (22,67).

2.7.3.5. Acupuncture

Scott et al. In the study, published in 2018, involving 30 women with FM, acupuncture was applied to one group, and group training was given to the group who had a disability. As a result, significant improvement was observed in the acupuncture group, but no improvement was observed in the group training group (68).

2.7.3.6. Kinesiotaping

The thickness of kinesio tape, which is as flexible as the human body, is as much as the epidermis layer. However, the band only stretches longitudinally, and with this stretch, it can extend up to 55-60% of its length. The tape was adhered to a thin paper with 10% tension. The tape does not prevent the skin from breathing and sweating because it has air channels on its surface (69).

Kinesio tape application adheres to the upper layer of the skin and ensures the recovery of the elastic fibers in that area. With the application, the skin is lifted, the skin and the interstitial area under the skin are increased. Thus, by increasing circulation and movement, pain decreases, performance increases, neuromuscular system re-education is provided, circulation and tissue healing are expected to accelerate (70).

2.7.3.7. Massage Therapy

Connective Tissue Massage, an alternative treatment, aims to restore the balance between sympathetic and parasympathetic components by stimulating autonomic nerve endings (71).

Many publications published between 1990 and 2013 examining the effectiveness of massage in fibromyalgia have been reviewed and compiled. As a result of the review, it was seen that myofascial release had positive effects on pain and moderate effects on depression.

Also, fatigue decreased and quality of life improved. It was found that connective tissue massage improved depression and quality of life, but manual lymphatic drainage was superior in this regard. It has been observed that Shiatsu improves sleep quality, but Swedish Massage has no effect (72).

3. MATERIALS AND METHODS

3.1. Individuals

In this study, which was conducted to compare the effects of connective tissue massage and kinesiotape on pain, depression and quality of life in patients suffering from fibromyalgia syndrome, 34 patients diagnosed with Fibromyalgia Syndrome were included (male:4, female:30).

3.1.1. Inclusion Criteria

- Being diagnosed with fibromyalgia.
- Be in the age range of 20 - 55 years.
- To be a volunteer participant in the research.
- Being able to communicate comfortably.
- To be able to act independently.

3.1.2.Exclusion Criteria

- Having had a surgical operation within the last year.
- Presence of significant infection.
- Being diagnosed with cancer.
- Being pregnant or breastfeeding.
- Being addicted to drugs or alcohol.
- Having a cognitive problem.

3.2. Identifying Individuals and Forming Groups

Thirty-four individuals diagnosed with Fibromyalgia syndrome by a specialist physician were included in the study. The group of the individual was determined by selecting a paper for each patient from the randomization boxes containing 24 papers numbered from 1 to 24 to determine the groups of female individuals and 10 papers numbered from 1 to 10 to determine the groups of male individuals. Numbers 1 to 12 formed the 1st group (for women), the numbers 13 to 24 formed the 2nd group (for women), the numbers 1 to 5 for men formed the 1st group, and the numbers 6 to 10 formed the 2nd group.

3.3. Method

3.3.1. Evaluations

The following evaluations were applied to all individuals participating in the study by the physiotherapist. The questionnaires were interviewed face to face by the physiotherapist and filled by the physiotherapist.

Surveys:

- Sociodemographic Evaluation Form
- Fibromyalgia Impact Questionnaire
- McGill - Melzack Pain Questionnaire
- Beck's Depression Scale
- Visual Analogue Scale
- SF-36 Quality of Life Scale

3.3.1.1. Sociodemographic Evaluation Form

With the individual evaluation form, the individual's name, surname, age, occupation, educational status, marital status, dominant hand, employment status, smoking and alcohol use, presence of another family member diagnosed with fibromyalgia, presence of a chronic disease, dizziness that can be seen in fibromyalgia syndrome, Headache, depression, chest pain, palpitation, shortness of breath, sleep disturbance, morning stiffness, instability, irritable bladder syndrome symptoms, duration of the disease, and number of children were recorded. The individual evaluation form is presented in (Appendix 1).

3.3.1.2. Fibromyalgia Impact Questionnaire

“Fibromyalgia Impact Questionnaire (FIQ)” Burchardt et al. It was developed by Fibromyalgia to measure the functional status of individuals (73). Reliability and validity adaptation in Turkey Sarmer et al. (8). The scale consists of 20 questions that measure physical function, well-being, difficulty in doing work, not being able to go to work, fatigue, stiffness, morning fatigue, pain, anxiety and depression separately. Except for feeling well, low scores indicate improvement or less affect. While an average fibromyalgia patient scores 50 points, 70 points or more are considered severely affected fibromyalgia. The Fibromyalgia Impact Questionnaire is presented in (Appendix 2).

3.3.1.3. McGill - Melzack Pain Questionnaire

The quality of the pain felt by the patients was evaluated with the Short Form McGill Pain Questionnaire (SF-MPQ), the Turkish validity and reliability of which was performed by Yakut et al. (77). This form provides information about the perceptual,

sensory and severity components of pain perception. The main component of the SF-MPQ includes 15 descriptive adjectives (11 perceptual and 4 sensory) for pain perception. The level of severity felt by the patient is evaluated with a number scale (0=no, 1=mild, 2=moderate, 3=severe) (Appendix 3).

3.3.1.4. Beck's Depression Scale

The Beck's Depression Inventory (BDI) is a 21-item self-assessment scale that evaluates the patients' perceived depressive symptoms quantitatively, and measures the symptoms that occur in the vegetative, emotional, cognitive, and motivational areas of depression. The severity of the patient's depression is indicated by how high the total score is. It has been suggested that those who score 17 and above on the BDI may constitute an at-risk group. The Cronbach's alpha value for the BDI-Turkish version was 80 (78) (Appendix 4).

3.3.1.5. Visual Analogue Scale

Visual Analogue Scale (VAS) was used to assess pain severity. The individual was told that no pain on a 10 cm line was 0, the most severe pain situation was 10, and he was asked to mark the pain intensity on the chart. The place marked by the individual was measured in cm with a ruler and the value found was recorded as pain intensity. VAS values were recorded at rest before and after the application (74). The Visual Analogue Scale is presented in (Appendix 5).

3.3.1.6. SF-36 Quality of Life Scale

To assess quality of life, Ware et al. A Turkish validity and reliability study developed by Koçyiğit et al. "Short Form 36 (SF-36)" made by Dr. was used (75,76). The SF-36 Quality of Life Scale consists of 36 items evaluated in 8 separate subscales. Physical function, social function, general health, fitness, mental health, pain, physical and emotional role limitation are the subscales of SF-36. The score from each subscale is between 0-100, and a higher score means better health. SF-36 Quality of Life Scale presented in (Appendix 6).

3.3.2. Applications for First Group

The study was initiated by obtaining the socio-demographic information of all participants. SF-36 Quality of Life Scale, Fibromyalgia Impact Questionnaire, Beck's Depression Scale, VAS, McGill Pain Questionnaire were filled in both groups before and after treatment.

3.3.2.1. Kinesio Tape Application

Before the kinesio tape application, the individual was informed about the kinesio tape. Allergy test was performed by sticking a 3 cm long piece to the arm of the individual to detect allergic condition as a precautionary measure, although the tape was not allergic. Kinesio tape application was applied 2 days a week (3 or 4 days apart) for 4 weeks. Taping was done 2 days a week after TENS and Infrared treatments. The participants were asked to remove the tapes the day before the next taping application. Taping was applied to the levator scapula and upper trapezius muscles in a "Y" shape (Figure 1), with 25% tension and while the participants were in an upright position. Again in the same position, this time the "C" shaped taping technique was adhered with 50% tension from the middle fibers of the trapezium to the last rib (Figure 2).



Figure 1. Y Shape



Figure 2. C Shape

3.3.3. Applications for Second Group

3.3.3.1. Connective Tissue Massage

Participants received TENS and infrared treatment for 25 minutes, 5 days a week. Then Connective Tissue Massage was applied. CTM was started from the lumbosacral region (Figure 3), continued from the lower thoracic region (Figure 4), and finished by applying it to the scapular region (Figure 5), intrascapular region (Figure 6) and cervicooccipital region (Figure 7).



Figure 3. lumbosacral region

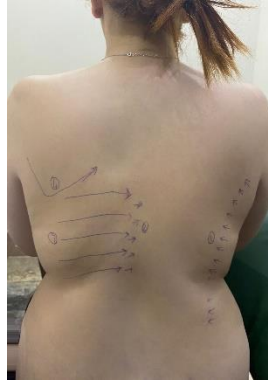


Figure 4. lower thoracic region



Figure 5. scapular region



Figure 6. intrascapular region



Figure 7. cervicooccipital region

3.3.4. Statistical Analysis

As a result of the power analysis, when 34 participants, 17 people in each group, were included, it was calculated that 80% power could be obtained with 95% confidence.

Data analysis was done with 'Statistical Packages for the Social Sciences' version 21.0. Continuous variables were given as mean, standard deviation, median number and percentage. The normality test was performed in order to make a decision to be used in the pre-analysis analyses. According to the Kolmogorov Smirnov Test results given in the Table, the scores obtained from FES, McGill and usage areas are based on normal weights, and the usages used will fulfill the normal usage conditions. The skewness and kurtosis scores are ± 3 for all of the generally used ones, and it was decided to use the more powerful parametric analysis. In the analysis of the difference between these two groups, the t-test was used, and in case of too many groups, ANOVA was used. The level was accepted as 95% in the analyzes.

Table1. Distortion Kurtosis Analysis

	Statistics	df	p-value	Distortion	Kurtosis
Physical Function	.22	34	.00	-2,18	1,27
Physical Role Difficulty	.15	34	.05	0.40	-1,17
ache	.24	34	.00	-0.65	-0.73
general health	.19	34	.00	-0.50	0.01
Energy / Vitality / Vitality	.17	34	.01	-0.14	-0.55
Social Functioning	.17	34	.01	0.32	0.27
Emotional Role Difficulty	.16	34	.02	-0.53	0.15
Mental Health	.18	34	.00	-0.20	-0.83
VAS at rest	.23	34	.00	-0.32	0.39
VAS in Motion	.22	34	.00	-0.28	-0.34
Fibromyalgia Impact Ques.	.08	34	.20 *	-0.05	-0.25
McGill Pain Ques.	.09	34	.20 *	-0.14	-0.86
Becks' Depression Inventory	.12	34	.20 *	-1,13	-0.24

Kolmogorov Smirnov Normality Test Results

4. RESULTS

A total of 34 individuals diagnosed with fibromyalgia syndrome were included in the study. 50% of the patients were treated with CTM and 50% with Taping treatment. Individuals were divided into two groups. Group 1 (n=17); connective tissue massage to Group 2 (n=17); taping therapy was used.

The physical and sociodemographic information of the individuals are given in Table 2. There was no difference between the groups in terms of age, body mass index (BMI), educational status, occupation, smoking and alcohol use, and duration of illness ($p>0.05$, Table 2).

Table 2. Distribution by Socio-demographic Data

		Group 1 (CTM) n = 17	Group2 (Taping) n = 17	P
Age		38,93 ± 12,12	36,27 ± 10,83	0,58
BMI		25,43 ± 4,05	23,72 ± 4,41	0,28
Education	primary school	5 (29,41%)	4 (23,52%)	-
	middle School	1 (5,88%)	2 (11,76%)	
	high school	4 (23,52%)	6 (35,29%)	
	licence	6 (35,29%)	5 (29,41)	
	degree	1 (5,88%)	0	
Profession	housewife	8 (47,05%)	7 (41,17%)	-
	worker/officer	4 (23,52%)	4 (23,52%)	
	private sector	3 (17,64%)	4 (23,52%)	
	other	2 (11,76%)	2 (11,76 %)	
Smoking	Yes	11 (64,70%)	12 (70,58%)	0,685
	No	6 (35,29%)	5 (29,41%)	
Alcohol	Yes	0	0	-
	No	17 (100%)	17 (100%)	
FMS in Family	Yes	5 (29,41%)	7 (41,17%)	0,516
	no	12 (70,58%)	10 (58,82%)	

An independent two-sample t-test was used to determine whether there was a statistically significant difference between the pre-treatment McGill Pain Scale scores of patients who received CTM and Taping treatment. As a result of the analysis, it was concluded that

there was no significant difference between the scores obtained before the treatment in terms of patients who received CTM and Taping treatment ($p>0.05$).

Table 3. Analysis of Pre-Treatment McGill Pain Questionnaire Scores of Patients Receiving CTM and Taping Therapy

McGill Pain Questionnaire	1.Group (CTM) (n=17)	2.Group (Taping) (n=17)	P Value
	Mean $\pm$ S.D.	Mean $\pm$ S.D.	
	90,17 $\pm$ 7,69	90,05 $\pm$ 4,33	0,95

Independent Two-Sample T Test

An independent two-sample t-test was used to determine whether there was a statistically significant difference between the pre-treatment VAS scores of patients who received CTM and Taping treatment. As a result of the analysis, it was concluded that there was no significant difference between the scores obtained before the treatment in terms of patients who received CTM and Taping treatment ($p>0.05$).

Table 4. Analysis of Pre-Treatment VAS Scores of Patients Receiving CTM and Taping Therapy

VAS		1.Group (CTM) (n=17)	2.Group (Taping) (n=17)	P Value
		Mean $\pm$ S.D.	Mean $\pm$ S.D.	
	Rest	7,23 $\pm$ 0,75	6,94 $\pm$ 0,82	0,28
	Motion	8,29 $\pm$ 0,68	8,17 $\pm$ 0,72	0,63

Independent Two-Sample T Test

An independent two-sample t-test was used to determine whether there was a statistically significant difference between the pre-treatment Beck's Depression Scale scores of patients who received CTM and Taping treatment. As a result of the analysis, it was concluded that there was no significant difference between the scores obtained before the treatment in terms of patients who received CTM and Taping treatment ($p>0.05$).

Table 5. Analysis of Pre-Treatment Beck's Depression Inventory Scores of Patients Receiving CTM and Taping Therapy

Beck's Depression Inventory	1.Group (CTM) (n=17)	2.Group (Taping) (n=17)	P Value
	Mean $\pm$ S.D.	Mean $\pm$ S.D.	
	24,94 $\pm$ 4,40	23,88 $\pm$ 3,90	0,46

Independent Two-Sample T Test

An independent two-sample t-test was used to determine whether there was a statistically significant difference between the pre-treatment Fibromyalgia Impact Questionnaire scores of patients who received CTM and Taping treatment. As a result of the analysis, it was concluded that there was no significant difference between the scores obtained before the treatment in terms of patients who received CTM and Taping treatment ($p>0.05$).

Table 6. Analysis of Pre-Treatment Fibromyalgia Impact Questionnaire Scores of Patients Receiving CTM and Taping Therapy

Fibromyalgia Impact Questionnaire	1.Group (CTM) (n=17)	2.Group (Taping) (n=17)	P Value
	Mean $\pm$ S.D.	Mean $\pm$ S.D.	
	71,42 $\pm$ 3,97	69,86 $\pm$ 4,67	0,30

Independent Two-Sample T Test

An independent two-sample t-test was used to analyze whether there was a significant correlation between the scores of patients receiving A and B treatment from the SF-36 Quality of Life scale before treatment. As a result of the analysis, it was concluded that there was no statistically significant difference between the scores of the patients receiving the A treatment from the sub-dimensions of the SF-36 quality of life scale before the treatment and the scores of the patients receiving the B treatment from the sub-dimensions of the SF-36 quality of life scale before the treatment ($p>0.05$).

Table 7. Analysis of Pre-Treatment sf-36 Quality of Life Questionnaire Scores of Patients Receiving CTM and Taping Therapy

SF-36 Quality of Life Questionnaire		1.Group (CTM) (n=17) Mean $\pm$ S.D.	2.Group (Taping) (n=17) Mean $\pm$ S.D.	P Value
	Physical Function	48.23 $\pm$ 7.89	51.17 $\pm$ 17.98	0.54
	Physical Role Difficulty	26.47 $\pm$ 24.15	25.00 $\pm$ 19.76	0.84
	Pain	17.64 $\pm$ 26.66	25.49 $\pm$ 27.71	0.40
	General Health	31.76 $\pm$ 5.28	31.47 $\pm$ 7.23	0.89
	Energy/Vitality/Vitality	49.64 $\pm$ 5.48	49.64 $\pm$ 5.66	1.00
	Social Functioning	32.35 $\pm$ 12.54	33.08 $\pm$ 15.27	0.87
	Emotional Role Difficulty	23.08 $\pm$ 11.67	28.08 $\pm$ 11.67	0.17
	Mental Health	30.29 $\pm$ 5.14	32.64 $\pm$ 6.15	0.23

Independent Two-Sample T Test

The analysis of the scores obtained by the participants from the McGill Pain Questionnaire before and after the treatment is presented in Table 8.

The dependent two-sample t-test was used to analyze whether there was a statistically significant difference between the McGill Pain Scale scores before and after the treatment. The analysis results are given in Table 8, and it was concluded that the scores obtained from all the relevant scales decreased statistically significantly after the treatment ($p < 0.05$).

Table 8. Analysis of the Difference Between Pre-Post Treatment Scores of Participants on McGill Pain Questionnaire

McGill Pain Questionnaire			1.Group (CTM) (n=17)	P Value	2.Group (Taping) (n=17)	P Value
			Mean $\pm$ S.D.		Mean $\pm$ S.D.	
	Before		90.17 $\pm$ 7.69	0.00	90.05 $\pm$ 14.33	0.00
	After		41.52 $\pm$ 6.49		35.82 $\pm$ 6.15	

Dependent Two-Sample T Test

The analysis of the scores obtained by the participants from the VAS before and after the treatment is presented in Table 9.

The dependent two-sample t-test was used to analyze whether there was a statistically significant difference between the VAS scores before and after the treatment. The analysis results are given in Table 3, and it was concluded that the scores obtained from all the relevant scales decreased statistically significantly after the treatment ($p < 0.05$).

Table 9. Analysis of the Difference Between Pre-Post Treatment Scores of Participants on VAS

VAS			1.Group (CTM) (n=17)	P Value	2.Group (Taping) (n=17)	P Value
			Mean $\pm$ S.D.		Mean $\pm$ S.D.	
	Rest	Before	7.23 $\pm$ 0.75	0.00	6.94 $\pm$ 0.82	0.00
		After	2.23 $\pm$ 1.03		2.29 $\pm$ 0.84	
	Motion	Before	8.29 $\pm$ 0.68	0.01	8.17 $\pm$ 0.72	0.00
		After	3.64 $\pm$ 1.32		3.11 $\pm$ 0.85	

Dependent Two-Sample T Test

The analysis of the scores obtained by the participants from the Beck's Depression Inventory before and after the treatment is presented in Table 10.

The dependent two-sample t-test was used to analyze whether there was a statistically significant difference between the Beck's Depression Inventory scores before and after the treatment. The analysis results are given in Table 10, and it was concluded that the scores obtained from all the relevant scales decreased statistically significantly after the treatment ($p < 0.05$).

Table 10. Analysis of the Difference Between Pre-Post Treatment Scores of Participants on Beck's Depression Inventory

Beck's Depression Inventory		1.Group (CTM) (n=17)	P Value	2.Group (Taping) (n=17)	P Value
		Mean $\pm$ S.D.		Mean $\pm$ S.D.	
	Before	24.94 $\pm$ 4.40	0.02	23.88 $\pm$ 3.9	0.04
	After	12.17 $\pm$ 2.40		12.23 $\pm$ 1.75	

Dependent Two-Sample T Test

The analysis of the scores obtained by the participants from the Fibromyalgia Impact Questionnaire before and after the treatment is presented in Table 11.

The dependent two-sample t-test was used to analyze whether there was a statistically significant difference between the Fibromyalgia Impact Questionnaire scores before and after the treatment. The analysis results are given in Table 11, and it was concluded that the scores obtained from all the relevant scales decreased statistically significantly after the treatment ($p < 0.05$).

Table 11. Analysis of the Difference Between Pre-Post Treatment Scores of Participants on Fibromyalgia Impact Questionnaire

Fibromyalgia Impact Questionnaire		1.Group (CTM) (n=17)	P Value	2.Group (Taping) (n=17)	P Value
		Mean $\pm$ S.D.		Mean $\pm$ S.D.	
	Before	71.42 $\pm$ 3.97	0.00	69.86 $\pm$ 4.67	0.00
	After	25.09 $\pm$ 3.87		27.17 $\pm$ 3.08	

Dependent Two-Sample T Test

The analysis of the scores obtained by the participants from the SF-36 Quality of Life Questionnaire before and after the treatment is presented in Table 12.

The dependent two-sample t-test was used to analyze whether there was a statistically significant difference between the SF-36 Quality of Life Questionnaire scores before and after the treatment. The analysis results are given in Table 12, and it was concluded that the scores obtained from all the relevant scales decreased statistically significantly after the treatment ($p < 0.05$).

Table 12. Analysis of the Difference Between Pre-Post Treatment Scores of Participants on SF-36 Quality of Life Questionnaire

			1.Group (CTM) (n=17) Mean $\pm$ S.D.	P Value	2.Group (Taping) (n=17) Mean $\pm$ S.D.	P Value
SF-36 Quality of Life Questionnaire	Physical Function	Before	48.23 $\pm$ 7.89	0.00	51.17 $\pm$ 17.98	0.01
		After	85.29 $\pm$ 5.98		87.35 $\pm$ 6.87	
	Physical Role Difficulty	Before	26.4 $\pm$ 24.15	0.01	25.0 $\pm$ 19.76	0.01
		After	79.41 $\pm$ 22.07		72.05 $\pm$ 21.43	
	Pain	Before	17.64 $\pm$ 26.6	0.01	25.49 $\pm$ 27.71	0.00
		After	74.26 $\pm$ 5.21		73.23 $\pm$ 7.94	
	General Health	Before	31.76 $\pm$ 5.28	0.02	31.47 $\pm$ 7.23	0.00
		After	55.29 $\pm$ 5.98		53.52 $\pm$ 6.55	
	Energy/Vitality/Vitality	Before	49.64 $\pm$ 5.48	0.01	49.64 $\pm$ 5.66	0.002
		After	61.76 $\pm$ 4.98		60.88 $\pm$ 2.64	
	Social Functioning	Before	32.35 $\pm$ 12.54	0.00	33.08 $\pm$ 15.27	0.00
		After	77.94 $\pm$ 12.12		75.73 $\pm$ 11.24	
	Emotional Role Difficulty	Before	23.08 $\pm$ 9.29	0.00	28.08 $\pm$ 11.67	0.00
		After	82.35 $\pm$ 20.8		72.54 $\pm$ 35.81	
	Mental Health	Before	30.29 $\pm$ 5.14	0.02	32.64 $\pm$ 6.15	0.01
		After	73.17 $\pm$ 5.79		69.17 $\pm$ 3.08	

Dependent Two-Sample T Test

An independent two-sample t-test was used to analyze whether there was a significant relationship between the differences between the scores of the participants on the McGill Pain Scale before and after the treatment (table 13), according to the type of treatment. No statistically significant difference was observed as a result of the analysis ($p>0.05$).

Table 13. Compare of the Rate of Change in Score from McGill Pain Questionnaire

McGill Pain Questionnaire	1.Group (CTM) (n=17)	2.Group (Taping) (n=17)	P Value
	Mean $\pm$ S.D.	Mean $\pm$ S.D.	
	48.64 $\pm$ 9.06	54.23 $\pm$ 8.04	0.06

Independent Two-Sample T Test

An independent two-sample t-test was used to analyze whether there was a significant relationship between the differences between the scores of the participants on the VAS before and after the treatment, according to the type of treatment (table 14). No statistically significant difference was observed as a result of the analysis ($p>0.05$).

Table 14. Compare of the Rate of Change in Score from VAS

VAS		1.Group (CTM) (n=17)	2.Group (Taping) (n=17)	P Value
		Mean $\pm$ S.D.	Mean $\pm$ S.D.	
	Rest	5.00 $\pm$ 1.22	4.64 $\pm$ 0.99	0.36
	Motion	4.64 $\pm$ 1.41	5.05 $\pm$ 1.08	0.34

Independent Two-Sample T Test

An independent two-sample t-test was used to analyze whether there was a significant relationship between the differences between the scores of the participants on the Beck's Depression Inventory before and after the treatment, according to the type of treatment (table 15). No statistically significant difference was observed as a result of the analysis ($p>0.05$).

Table 15. Compare of the Rate of Change in Score from Beck's Depression Inventory

Beck's Depression Inventory	1.Group (CTM) (n=17)	2.Group (Taping) (n=17)	P Value
	Mean $\pm$ S.D.	Mean $\pm$ S.D.	
	12.76 $\pm$ 4.00	11.64 $\pm$ 3.14	0.37

Independent Two-Sample T Test

An independent two-sample t-test was used to analyze whether there was a significant relationship between the differences in the scores of the participants from the Fibromyalgia Impact Questionnaire before and after treatment, according to the type of treatment. As a result of the analysis, a statistically significant difference was found ($p>0.05$). The difference in scores of the participants who received Connective Tissue Massage treatment was statistically significantly higher.

Table 16. Compare of the Rate of Change in Score from Fibromyalgia Impact Questionnaire

Fibromyalgia Impact Questionnaire	1.Group (CTM) (n=17)	2.Group (Taping) (n=17)	P Value
	Mean $\pm$ S.D.	Mean $\pm$ S.D.	
	46.33 $\pm$ 4.19	42.69 $\pm$ 5.11	0.03*

Independent Two-Sample T Test

An independent two-sample t-test was used to analyze whether there was a significant relationship between the differences between the scores of the participants on the SF-36 Quality of Life Questionnaire before and after the treatment, according to the type of treatment (table 17). No statistically significant difference was observed as a result of the analysis ($p>0.05$).

Table 17. Compare of the Rate of Change in Score from SF-36 Quality of Life Questionnaire

SF-36 Quality of Life Questionnaire		1.Group (CTM) (n=17) Mean $\pm$ S.D.	2.Group (Taping) (n=17) Mean $\pm$ S.D.	P Value
	Physical Function	37.05 $\pm$ 9.36	36.17 $\pm$ 20.57	0.87
	Physical Role Difficulty	52.94 $\pm$ 38.4	47.05 $\pm$ 30.46	0.62
	Pain	64.70 $\pm$ 38.13	47.05 $\pm$ 45.73	0.23
	General Health	30.00 $\pm$ 7.28	29.41 $\pm$ 8.07	0.82
	Energy/Vitality/Vitality	23.52 $\pm$ 7.19	19.52 $\pm$ 6.76	0.10
	Social Functioning	45.58 $\pm$ 19.73	42.64 $\pm$ 18.78	0.65
	Emotional Role Difficulty	51.17 $\pm$ 8.24	45.14 $\pm$ 17.33	0.20
	Mental Health	25.00 $\pm$ 6.12	20.88 $\pm$ 6.43	0.06

Independent Two-Sample T Test

In order to examine whether the treatment results differ according to demographic variables, analyzes were made using the score difference data before and after the treatment in terms of the scores obtained from the scales. The results of the analysis according to the gender variable are given in Table 18. In terms of patients who received treatment CTM, the difference between the scores obtained from the SF-36 quality of life scale before and after treatment did not differ according to gender, in other words, there was no significant difference between male and female patients in terms of improvement in quality of life ($p>0.05$).).

Table 18. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment CTM by Gender

	Gender	N	Mean $\pm$ SD		t	p-value
Physical Function	Boy	5	31,0	$\pm$ 11,40	-1,847	0.08
	Woman	12	39,5	$\pm$ 7,52		
Physical Role Difficulty	Boy	5	55,00	$\pm$ 51,23	0.138	0.89
	Woman	12	52,08	$\pm$ 34,47		
ache	Boy	5	53,33	$\pm$ 55,77	-0.784	0.44
	Woman	12	69.44	$\pm$ 30,01		
general health	Boy	5	30,00	$\pm$ 6.12	0,000	1,00
	Woman	12	30,00	$\pm$ 7,97		
Energy / Vitality / Vitality	Boy	5	21,60	$\pm$ 5,36	-0.702	0.49
	Woman	12	24.33	$\pm$ 7,90		
Social Functioning	Boy	5	55,00	$\pm$ 20,91	1,296	0.21
	Woman	12	41.66	$\pm$ 18,71		
Emotional Role Difficulty	Boy	5	52,50	$\pm$ 12,11	0.416	0.68
	Woman	12	50,6	$\pm$ 6.66		
Mental Health	Boy	5	28,00	$\pm$ 5,70	1,33	0.20
	Woman	12	23,75	$\pm$ 6,07		

Independent two-sample t-test

The results of the analysis using the score data obtained from the VAS, FES, McGill Pain and Depression scales according to the gender variable are given in Table 19. In terms of patients who received treatment CTM, it was concluded that the difference between the scores obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not differ according to gender, in other words, there was no significant difference between male and female patients ($p>0.05$).

Table 19. Analysis of the VAS, FIQ, McGill Pain and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment CTM by Gender

	Gender	N	Mean $\pm$ SD		t	p-value
VAS at rest	Boy	5	5,20	$\pm$ 1,09	0.42	0.67
	Woman	12	4.91	$\pm$ 1.31		
VAS in Motion	Boy	5	4,40	$\pm$ 0,54	-0.45	0.65
	Woman	12	4,75	$\pm$ 1,65		
FIQ	Boy	5	46,02	$\pm$ 2.78	-0.19	0.85
	Woman	12	46.45	$\pm$ 4,76		
McGill	Boy	5	41,60	$\pm$ 5,59	-2,33	0.03
	Woman	12	51,58	$\pm$ 8,73		
Beck' Depression Quest.	Boy	5	10,40	$\pm$ 3,50	-1,65	0.19
	Woman	12	13,75	$\pm$ 3,91		

Independent two-sample t-test

The results of the analysis according to the gender variable for the patients who received Taping treatment are given in Table 20. In terms of patients who received Taping treatment, it was concluded that the difference between the scores obtained from the SF-36 quality of life scale before and after the treatment did not differ according to gender, in other words, there was no significant difference between male and female patients in terms of improvement in quality of life ($p>0.05$).).

Table 20. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment Taping by Gender

	Gender	N	Mean $\pm$ SD		p-value
Physical Function	Boy	5	36,00 $\pm$	11,93	0.98
	Woman	12	36,25 $\pm$	23,75	
Physical Role Difficulty	Boy	5	65,00 $\pm$	28,50	0.12
	Woman	12	39,58 $\pm$	29,11	
Pain	Boy	5	40,00 $\pm$	54,77	0.69
	Woman	12	50,00 $\pm$	43,80	
General health	Boy	5	27,00 $\pm$	11,51	0.44
	Woman	12	30,41 $\pm$	6,55	
Energy / Vitality / Vitality	Boy	5	18,40 $\pm$	10,03	0.67
	Woman	12	20,00 $\pm$	5,39	
Social Functioning	Boy	5	55,00 $\pm$	20,91	0.07
	Woman	12	37,50 $\pm$	15,99	
Emotional Role Difficulty	Boy	5	38,50 $\pm$	14,85	0.32
	Woman	12	47,91 $\pm$	18,11	
Mental Health	Boy	5	21,00 $\pm$	5,47	0.96
	Woman	12	20,83 $\pm$	7,01	

The results of the analysis using the score data obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the gender variable are given in Table 21. In terms of patients who received Taping treatment, it was concluded that the difference between the scores obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not differ according to gender, in other words, there was no significant difference between male and female patients ($p>0.05$). .

Table 21. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of Participants Receiving Treatment Taping by Gender

	Gender	N	Mean	±SD	t	p-value
VAS at rest	Boy	5	5,00	±0.70	0.93	0.36
	Woman	12	4,50	±1,08		
VAS in Motion	Boy	5	4,60	±1.14	-1,13	0.27
	Woman	12	5,25	±1,05		
FIQ	Boy	5	42.60	±7,34	-0.04	0.96
	Woman	12	42.73	±4,29		
McGill	Boy	5	56,80	±6,68	0.84	0.41
	Woman	12	53,16	±8,57		
Beck' Depression Quest.	Boy	5	12,40	±1.14	0.62	0.54
	Woman	12	11.33	±3,67		

The results of the analysis according to the variable of educational status for patients receiving treatment CTM are given in Table 22. In terms of patients who received treatment CTM, the difference between the scores obtained from the SF-36 quality of life scale before and after treatment was significant only in terms of the improvement in the social functionality sub-dimension of the scale ($p < 0.05$). On the other hand, it was concluded that the difference between the scores obtained from the other sub-dimensions of the scale did not change according to the educational status, in other words, there was no significant difference between the high school graduate and undergraduate graduate patients in terms of improvement in the related sub-dimension of quality of life ($p > 0.05$).

Table 22. Analysis of the Scores of the Participants Receiving Treatment CTM from the SF-36 Quality of Life Scale by Educational Status

	education	N	Mean	±SD	t	p-value
Physical Function	High school	10	37,00	±10,05	-0,03	0,97
	Licence	7	37,14	±9,06		
Physical Role Difficulty	High school	10	42,50	±37,36	-1,37	0,18
	Licence	7	67,85	±37,40		
Pain	High school	10	56,66	±44,58	-1,04	0,31
	Licence	7	76,19	±25,19		
General health	High school	10	32,00	±7,14	1,39	0,18
	Licence	7	27,14	±6,98		
Energy / Vitality / Vitality	High school	10	23,60	±5,79	0,04	0,96
	Licence	7	23,42	±9,36		
Social Functioning	High school	10	53,75	±16,71	2,29	0,03
	Licence	7	33,92	±18,70		
Emotional Role Difficulty	High school	10	49,25	±9,13	-1,16	0,26
	Licence	7	53,92	±6,43		
Mental Health	High school	10	23,50	±6,25	-1,22	0,23
	Licence	7	27,14	±5,66		

Independent two-sample t-test

The results of the analysis using the score data obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the educational status variable are given in Table 23. In terms of patients who received treatment CTM, the difference between the scores obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not change according to the education level, in other words, there was no statistically significant difference between the high school graduate or undergraduate graduate patients ($p. >0.05$).

Table 23. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment CTM by Educational Status

	Education	N	Mean ±SD	t	p-value
VAS at rest	High school	10	5,00 ±1,15	0,00	1,00
	Licence	7	5,00 ±1,41		
VAS in Motion	High school	10	4,20 ±1,22	-1,64	0.12
	Licence	7	5.28 ±1.49		
FIQ	High school	10	46,39 ±4.49	0.07	0.94
	Licence	7	46.23 ±4,06		
McGill	High school	10	47,30 ±9.32	-0.72	0.48
	Licence	7	50,57 ±9,03		
Beck' Depression Quest.	High school	10	12,40 ±4,22	-0.43	0.66
	Licence	7	13.28 ±3,94		

Independent two-sample t-test

The results of the analysis according to the variable of educational status for patients receiving Taping treatment are given in Table 24. In terms of patients who received B treatment, it was concluded that the difference between the scores obtained from the SF-36 quality of life scale before and after the treatment did not change according to educational status, in other words, there was no significant difference in the improvement in quality of life between high school graduates and undergraduate patients ($p > 0.05$).

Table 24. Analysis of the Scores from the SF-36 Quality of Life Scale of the Participants Receiving Treatment Taping by Educational Status

	Education	N	Mean $\pm$ SD		t	p-value
Physical Function	High school	9	42,22	$\pm$ 15,83	1,31	0.20
	Licence	8	29,37	$\pm$ 24,11		
Physical Role Difficulty	High school	9	50,00	$\pm$ 30,61	0.41	0.68
	Licence	8	43,75	$\pm$ 32,04		
Pain	High school	9	40.74	$\pm$ 43,39	-0.59	0.56
	Licence	8	54,16	$\pm$ 50,19		
general health	High school	9	29.44	$\pm$ 9.50	0.01	0.98
	Licence	8	29,37	$\pm$ 6.78		
Energy / Vitality / Vitality	High school	9	18,22	$\pm$ 8,74	-0.83	0.41
	Licence	8	21,00	$\pm$ 3,54		
Social Functioning	High school	9	38.88	$\pm$ 9,77	-0.86	0.39
	Licence	8	46,87	$\pm$ 25,66		
Emotional Role Difficulty	High school	9	51,94	$\pm$ 15,29	1,83	0.08
	Licence	8	37,50	$\pm$ 17,11		
Mental Health	High school	9	22,22	$\pm$ 6.66	0.90	0.37
	Licence	8	19.37	$\pm$ 6,23		

Independent two-sample t-test

The results of the analysis using the score data obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the educational status variable are given in Table 25. In terms of patients who received Taping treatment, it was concluded that the difference between the scores obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not change according to the education level, in other words, there was no statistically significant difference between the high school graduate or undergraduate graduate patients ($p. >0.05$).

Table 25. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment Taping by Educational Status

	Education	N	Mean $\pm$ SD	t	p-value
VAS at rest	High school	9	4.55 $\pm$ 1.13	-0.39	0.70
	Licence	8	4,75 $\pm$ 0,88		
VAS in Motion	High school	9	5.44 $\pm$ 0,88	1,62	0.12
	Licence	8	4,62 $\pm$ 1,18		
FIQ	High school	9	42,17 $\pm$ 6,03	-0.42	0.67
	Licence	8	43.27 $\pm$ 4,18		
McGill	High school	9	55,66 $\pm$ 5,78	0.76	0.45
	Licence	8	52,62 $\pm$ 10,19		
Beck' Depression Quest.	High school	9	12,22 $\pm$ 2,63	0.79	0.44
	Licence	8	11.00 $\pm$ 3,70		

Independent two-sample t-test

The results of the analysis according to the age variable for the patients who received treatment CTM are given in Table 26. In terms of patients who received treatment CTM, the difference between the scores obtained from the SF-36 quality of life scale before and after treatment did not change according to age, in other words, there was no significant difference in improvement in quality of life among patients with different age groups ($p>0, 05$).

Table 26. Analysis of the SF-36 Quality of Life Scale Scores of Participants Receiving Treatment CTM by Age

	Age	N	Mean	±SD	t	p-value
Physical Function	25-35	10	38,50	±9,73	0.74	0.46
	36 and above	7	35,00	±9,12		
Physical Role Difficulty	25-35	10	60,00	±39,44	0.90	0.38
	36 and above	7	42,85	±37,40		
ache	25-35	10	60,00	±40,97	-0.59	0.56
	36 and above	7	71.42	±35,63		
general health	25-35	10	30,50	±6,43	0.32	0.74
	36 and above	7	29.28	±8,86		
Energy / Vitality / Vitality	25-35	10	24,00	±8,00	0.31	0.75
	36 and above	7	22,85	±6,41		
Social Functioning	25-35	10	41,25	±22,08	-1,09	0.29
	36 and above	7	51,78	±15,18		
Emotional Role Difficulty	25-35	10	50,75	±8,82	-0.24	0.80
	36 and above	7	51,78	±7,99		
Mental Health	25-35	10	25,00	±6.66	0,00	1,0
	36 and above	7	25,00	±5,77		

Independent two-sample t-test

The results of the analysis using the score data from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the age variable are given in Table 27. In terms of patients who received treatment CTM, the difference between the scores obtained from the VAS movement, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not change according to age ($p>0.05$), but in terms of the scores obtained from the VAS at rest scale, it was observed that in patients aged 25-35 years. It was concluded that there was a higher rate of improvement than the patients aged 36 and over and this difference was statistically significant ($p<0.05$).

Table 27. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of Participants Receiving Treatment CTM by Age

	Age	N	Mean $\pm$ SD		t	p-value
VAS at rest	25-35	10	5,50	$\pm$ 1,17	2,25	0.04
	36 and above	7	4,28	$\pm$ 0,95		
VAS in Motion	25-35	10	5,10	$\pm$ 1,28	1,66	0.11
	36 and above	7	4,00	$\pm$ 1,41		
FIQ	25-35	10	45,03	$\pm$ 3,30	-1,59	0.13
	36 and above	7	48,18	$\pm$ 4,86		
McGill	25-35	10	49,80	$\pm$ 8,92	0.61	0.54
	36 and above	7	47,00	$\pm$ 9,71		
Beck' Depression Quest.	25-35	10	11,90	$\pm$ 4,20	-1,06	0.30
	36 and above	7	14,00	$\pm$ 3,65		

Independent two-sample t-test

The results of the analysis according to the age variable for the patients who received Taping treatment are given in Table 28. In terms of patients who received B treatment, it was determined that the scores obtained from only the Energy/Vivacity/Vitality sub-dimensions of the SF-36 quality of life scale differed according to age before and after treatment ($p < 0.05$). Accordingly, the improvement of the patients in the 25-35 age group in terms of energy / vitality / vitality is statistically significantly higher than the older age group.

On the other hand, it was concluded that the difference between the scores obtained from the other sub-dimensions of the SF-36 quality of life scale did not change according to age, in other words, there was no significant difference in terms of improvement in quality of life among patients with different age groups ($p > 0.05$).

Table 28. Analysis of the Scores from the SF-36 Quality of Life Scale of the Participants Receiving Treatment Taping by Age

	Age	N	Mean $\pm$ SD		t	p-value
Physical Function	25-35	9	31,66	$\pm$ 24,62	-0.956	0.354
	36 and above	8	41,25	$\pm$ 14,82		
Physical Role Difficulty	25-35	9	41,66	$\pm$ 27,95	-0.764	0.457
	36 and above	8	53,12	$\pm$ 33,90		
Pain	25-35	9	44,44	$\pm$ 47,14	-0.243	0.812
	36 and above	8	50,00	$\pm$ 47,14		
general health	25-35	9	30,00	$\pm$ 6,61	0.309	0.761
	36 and above	8	28,75	$\pm$ 9,91		
Energy / Vitality / Vitality	25-35	9	22,66	$\pm$ 4,47	2,278	0.038
	36 and above	8	16,00	$\pm$ 7,40		
Social Functioning	25-35	9	38,88	$\pm$ 19,20	-0.868	0.399
	36 and above	8	46,87	$\pm$ 18,60		
Emotional Role Difficulty	25-35	9	39,72	$\pm$ 16,93	-1,411	0.179
	36 and above	8	51,25	$\pm$ 16,69		
Mental Health	25-35	9	19,44	$\pm$ 5,83	-0.976	0.344
	36 and above	8	22,50	$\pm$ 7,07		

Independent two-sample t-test

The results of the analysis using the score data from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the age variable are given in Table 29. In terms of patients who received Taping treatment, it was concluded that the difference between the scores obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not change according to age ($p>0.05$).

Table 29. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of Participants Receiving Treatment Taping by Age

	Age	N	Mean $\pm$ SD	t	p-value
VAS at rest	25-35	9	4,33 $\pm$ 1,11	-1,42	0.17
	36 and above	8	5,00 $\pm$ 0,75		
VAS in Motion	25-35	9	4,88 $\pm$ 1,05	-0.67	0.51
	36 and above	8	5,25 $\pm$ 1,16		
FIQ	25-35	9	43,44 $\pm$ 3,36	0.63	0.53
	36 and above	8	41,84 $\pm$ 6,73		
McGill	25-35	9	53,66 $\pm$ 9,30	-0.30	0.76
	36 and above	8	54,87 $\pm$ 6,93		
Beck' Depression Quest.	25-35	9	11,55 $\pm$ 3,50	-0.12	0.90
	36 and above	8	11,75 $\pm$ 2,91		

Independent two-sample t-test

The results of the analysis according to the variable of smoking status for patients receiving treatment CTM are given in Table 30. In terms of patients receiving treatment CTM, the difference between the scores obtained from the SF-36 quality of life scale before and after treatment did not differ according to smoking status, in other words, there was no significant difference in improvement in quality of life between smoking and non-smoking patients ($p > 0.05$).

Table 30. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment CTM by Smoking Status

	Cigaret	N	Mean $\pm$ SD	t	p-value
Physical Function	Yes	9	34,44 $\pm$ 9,82	-1,24	0.23
	No	8	40,00 $\pm$ 8,45		
Physical Role Difficulty	Yes	9	44,44 $\pm$ 46,39	-0.96	0.35
	No	8	62,50 $\pm$ 26,72		
Pain	Yes	9	55,55 $\pm$ 40,82	-1,05	0.30
	No	8	75,00 $\pm$ 34,50		
general health	Yes	9	28.33 $\pm$ 6,61	-1,00	0.33
	No	8	31,87 $\pm$ 7,98		
Energy / Vitality / Vitality	Yes	9	22,22 $\pm$ 6,35	-0.78	0.44
	No	8	25,00 $\pm$ 8.21		
Social Functioning	Yes	9	43.05 $\pm$ 11,02	-0.54	0.59
	No	8	48.43 $\pm$ 27.08		
Emotional Role Difficulty	Yes	9	51,38 $\pm$ 8.67	0.10	0.91
	No	8	50.93 $\pm$ 8,33		
Mental Health	Yes	9	27,77 $\pm$ 3,63	2,21	0.04
	No	8	21,87 $\pm$ 7,03		

Independent two-sample t-test

The results of the analysis using the score data from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the smoking status variable are given in Table 31. In terms of patients who received treatment CTM, it was concluded that the difference between the scores obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not differ according to the smoking status ($p > 0.05$).

Table 31. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment CTM by Smoking Status

	Smoking	N	Mean $\pm$ SD	t	p-value
VAS at rest	Yes	9	4.66 $\pm$ 1.11	-1,20	0.24
	No	8	5,37 $\pm$ 1,30		
VAS in Motion	Yes	9	4.55 $\pm$ 1,33	-0.27	0.78
	No	8	4,75 $\pm$ 1,58		
FIQ	Yes	9	46.32 $\pm$ 4.13	-0.00	0.99
	No	8	46,33 $\pm$ 4,53		
McGill	Yes	9	47.22 $\pm$ 8,54	-0.67	0.51
	No	8	50,25 $\pm$ 9,95		
Beck' Depression Quest.	Yes	9	11.66 $\pm$ 3,80	-1,21	0.24
	No	8	14,00 $\pm$ 4.10		

Independent two-sample t-test

The results of the analysis according to the variable of smoking status for the patients who received treatment Taping are given in Table 32. In terms of patients receiving Taping treatment, the scores obtained from only the mental health sub-dimension of the SF-36 quality of life scale before and after the treatment differed according to the variable of smoking status, the improvement in mental health of the patients who declared that they did not smoke was higher than the patients who smoked. it was concluded that this difference was statistically significant ($p<0.05$). On the other hand, it was concluded that the difference between the scores obtained from the other sub-dimensions of the scale did not change according to the smoking status, in other words, there was no significant difference between the smoking and non-smoking patients in terms of the improvement in the quality of life related to the relevant sub-dimensions ($p>0.05$).

Table 32. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment Taping by Smoking Status

	Smoking	N	Mean $\pm$ SD		t	p-value
Physical Function	Yes	9	33,33	$\pm 27,61$	-0.59	0.56
	No	8	39,37	$\pm 8,63$		
Physical Role Difficulty	Yes	9	52,77	$\pm 19,54$	0.81	0.42
	No	8	40,62	$\pm 39,94$		
Pain	Yes	9	55,55	$\pm 40,82$	0.80	0.43
	No	8	37,50	$\pm 51,75$		
general health	Yes	9	30,00	$\pm 7,50$	0.30	0.76
	No	8	28,75	$\pm 9,16$		
Energy / Vitality / Vitality	Yes	9	16,88	$\pm 7,42$	-1,82	0.08
	No	8	22,50	$\pm 4,75$		
Social Functioning	Yes	9	41,66	$\pm 22,53$	-0.22	0.82
	No	8	43,75	$\pm 14,94$		
Emotional Role Difficulty	Yes	9	41,94	$\pm 14,01$	-0.79	0.43
	No	8	48,75	$\pm 20,83$		
Mental Health	Yes	9	23,88	$\pm 4,85$	2,30	0.03
	No	8	17,50	$\pm 6,54$		

Independent two-sample t-test

The results of the analysis using the score data from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the variable of smoking status are given in Table 33. In terms of patients receiving Taping treatment, it was concluded that the difference between the scores obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not differ according to the smoking status ($p>0.05$).

Table 33. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment Taping by Smoking Status

	Smoking	N	Mean $\pm$ SD	t	p-value
VAS at rest	Yes	9	4.88 $\pm$ 0,60	1,06	0.30
	No	8	4,37 $\pm$ 1,30		
VAS in Motion	Yes	9	5,55 $\pm$ 1.13	2,23	0.04
	No	8	4,50 $\pm$ 0,75		
FIQ	Yes	9	42,79 $\pm$ 4,90	0.08	0.93
	No	8	42,58 $\pm$ 5,68		
McGill	Yes	9	51,88 $\pm$ 7,63	-1,30	0.21
	No	8	56,87 $\pm$ 8.13		
Beck' Depression Quest.	Yes	9	12,22 $\pm$ 2,58	0.79	0.44
	No	8	11.00 $\pm$ 3,74		

Independent two-sample t-test

The analysis results according to the alcohol use status variable for patients receiving treatment A are given in Table 34. In terms of patients who received treatment CTM, it was concluded that the difference between the scores obtained from the SF-36 quality of life scale before and after the treatment did not differ according to alcohol use, in other words, there was no significant difference in the improvement in quality of life between patients who used alcohol and those who did not ($p > 0.05$).

Table 34. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment CTM by Alcohol Use Status

	Alcohol	N	Mean $\pm$ SD	t	p-value
Physical Function	Yes	6	40,00 $\pm$ 9,48	0.95	0.35
	No	11th	35.45 $\pm$ 9.34		
Physical Role Difficulty	Yes	6	37,50 $\pm$ 34,46	-1,24	0.23
	No	11th	61.36 $\pm$ 39,31		
Pain	Yes	6	61,11 $\pm$ 49,06	-0.27	0.78
	No	11th	66.66 $\pm$ 33,33		
general health	Yes	6	31.66 $\pm$ 6.83	0.68	0.50
	No	11th	29,09 $\pm$ 7,68		
Energy / Vitality / Vitality	Yes	6	20,00 $\pm$ 6,69	-1,55	0.14
	No	11th	25,45 $\pm$ 6,99		
Social Functioning	Yes	6	52,08 $\pm$ 18,39	1,00	0.33
	No	11th	42,04 $\pm$ 20,36		
Emotional Role Difficulty	Yes	6	53,75 $\pm$ 10.09	0.94	0.35
	No	11th	49.77 $\pm$ 7,19		
Mental Health	Yes	6	26.66 $\pm$ 6.83	0.82	0.42
	No	11th	24,09 $\pm$ 5,83		

Independent two-sample t-test

The results of the analysis using the score data from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the variable of alcohol use are given in Table 35. In terms of patients who received treatment CTM, it was concluded that the difference between the scores obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not differ according to the alcohol use status ($p>0.05$).

Table 35. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment CTM by Alcohol Use Status

	Alcohol	N	Mean $\pm$ SD		t	p-value
VAS at rest	Yes	6	5.16	$\pm 1,16$	0.40	0.69
	No	11th	4.90	$\pm 1,30$		
VAS in Motion	Yes	6	4.66	± 1.03	0.04	0.96
	No	11th	4.63	± 1.62		
FIQ	Yes	6	47,50	$\pm 5,23$	0.84	0.40
	No	11th	45,68	$\pm 3,61$		
McGill	Yes	6	53,00	± 9.75	1,52	0.14
	No	11th	46.27	± 8.14		
Beck' Depression Quest.	Yes	6	11.66	$\pm 2,94$	-0.82	0.42
	No	11th	13.36	$\pm 4,50$		

Independent two-sample t-test

The analysis results according to the variable of alcohol use status for patients receiving Taping treatment are given in Table 36. In terms of patients who received Taping treatment, it was concluded that the difference between the scores obtained from the General Health sub-dimension of the SF-36 quality of life scale before and after the treatment was statistically significant ($p<0.05$). In terms of the general health sub-dimension, the improvement of the participants who declared that they used alcohol was higher than those who did not use alcohol.

It was concluded that the difference between the scores obtained from the other sub-dimensions of the scale did not change according to the alcohol use status, in other words, there was no significant difference in the improvement in the quality of life between the patients who used alcohol and those who did not ($p>0.05$).

Table 36. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment Taping by Alcohol Use Status

	Alcohol	N	Mean $\pm$ SD	t	p-value
Physical Function	Yes	9	33,33 $\pm$ 27,61	2,22	0.04
	No	8	39,37 $\pm$ 8,63		
Physical Role Difficulty	Yes	9	52,77 $\pm$ 19,54	1,24	0.23
	No	8	40,62 $\pm$ 39,94		
Pain	Yes	9	55,55 $\pm$ 40,82	0.80	0.43
	No	8	37,50 $\pm$ 51,75		
general health	Yes	9	30,00 $\pm$ 7,50	2,95	0.01
	No	8	28,75 $\pm$ 9.16		
Energy / Vitality / Vitality	Yes	9	16.88 $\pm$ 7.42	-1,14	0.27
	No	8	22,50 $\pm$ 4,75		
Social Functioning	Yes	9	41.66 $\pm$ 22,53	1,07	0.30
	No	8	43,75 $\pm$ 14,94		
Emotional Role Difficulty	Yes	9	41,94 $\pm$ 14,01	0.79	0.43
	No	8	48,75 $\pm$ 20,83		
Mental Health	Yes	9	23.88 $\pm$ 4,85	1,31	0.20
	No	8	17,50 $\pm$ 6,54		

Independent two-sample t-test

The results of the analysis using the score data from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the variable of alcohol use are given in Table 37. In terms of patients who received Taping treatment, it was concluded that the difference between the scores obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not change according to the alcohol use status ($p>0.05$).

Table 37. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment Taping by Alcohol Use Status

	Alcohol	N	Mean $\pm$ SD	t	p-value
VAS at rest	Yes	9	4.88 $\pm$ 0,60	-1,42	0.17
	No	8	4,37 $\pm$ 1,30		
VAS in Motion	Yes	9	5,55 $\pm$ 1.13	-1,66	0.11
	No	8	4,50 $\pm$ 0,75		
FIQ	Yes	9	42,79 $\pm$ 4,90	1,01	0.32
	No	8	42,58 $\pm$ 5,68		
McGill	Yes	9	51,88 $\pm$ 7,63	0.89	0.38
	No	8	56,87 $\pm$ 8.13		
Beck' Depression Quest.	Yes	9	12,22 $\pm$ 2,58	0.02	0.97
	No	8	11.00 $\pm$ 3,74		

Independent two-sample t-test

The results of the analysis according to the variable of having FMS in the family for patients receiving treatment CTM are given in Table 38. In terms of patients who received treatment CTM, the difference between the scores obtained from the pain and emotional role difficulty sub-dimensions of the SF-36 quality of life scale before and after treatment was statistically significant ($p < 0.05$). For both sub-dimensions, the development of the participants who declared that they had FMS in their family was higher than those who did not have FMS in their family.

It was observed that the difference between the scores obtained from the other sub-dimensions of the scale did not change according to the presence of FMS in the family ($p > 0.05$).

Table 38. Analysis of the Scores from the SF-36 Quality of Life Scale of the Participants Receiving Treatment CTM, by Presence of FMS in the Family

	FMS in the family	N	Mean $\pm$SD		t	p-value
Physical Function	Yes	6	35.83	$\pm 9,70$	-0.38	0.70
	No	11	37,72	$\pm 9,58$		
Physical Role Difficulty	Yes	6	62,50	$\pm 37,91$	0.74	0.46
	No	11	47.72	$\pm 39,45$		
Pain	Yes	6	88,88	$\pm 17,21$	2,13	0.05
	No	11	51,51	$\pm 40,45$		
general health	Yes	6	28.33	$\pm 5,16$	-0.68	0.50
	No	11	30,90	± 8.31		
Energy / Vitality / Vitality	Yes	6	22,66	$\pm 8,26$	-0.35	0.72
	No	11	24,00	$\pm 6,92$		
Social Functioning	Yes	6	45,83	$\pm 25,81$	0.03	0.97
	No	11	45,45	$\pm 17,02$		
Emotional Role Difficulty	Yes	6	59,16	$\pm 5,62$	4,22	0.00
	No	11	46,81	$\pm 5,81$		
Mental Health	Yes	6	25,00	$\pm 7,74$	0,00	1,00
	No	11	25,00	$\pm 5,47$		

Independent two-sample t-test

The results of the analysis using the score data obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the variable of presence of FMS in the family are given in Table 39. In terms of patients who received treatment CTM, it was concluded that the difference between the scores obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not differ according to the presence of FMS in the family ($p > 0.05$).

Table 39. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment CTM by FMS in the Family

	FMS in the family	N	Mean ±SD	t	p-value
VAS at rest	Yes	6	5,00 ±1,41	0,00	1,00
	No	11	5,00 ±1,18		
VAS in Motion	Yes	6	4,50 ±1,37	-0.30	0.76
	No	11	4.72 ±1,48		
FIQ	Yes	6	48.47 ±3.28	1,63	0.12
	No	11	45,16 ±4,29		
McGill	Yes	6	50,33 ±9.28	0.55	0.58
	No	11	47.72 ±9,26		
Beck' Depression Quest.	Yes	6	14,00 ±4.47	0.93	0.36
	No	11	12,09 ±3,78		

Independent two-sample t-test

The results of the analysis according to the variable of having FMS in the family for patients receiving Taping treatment are given in Table 40. In terms of patients who received Taping treatment, it was observed that the difference between the scores obtained from the sub-dimensions of the SF-36 quality of life scale before and after treatment did not differ according to the presence of FMS in the family ($p>0.05$).

Table 40. Analysis of the Scores from the SF-36 Quality of Life Scale of the Participants Receiving Treatment Taping, by Presence of FMS in the Family

	FMS in the family	N	Mean $\pm$ SD		t	p-value
Physical Function	Yes	6	42,50	12,14	0.93	0.36
	No	11	32,72	23,80		
Physical Role Difficulty	Yes	6	54,16	29,22	0.69	0.49
	No	11	43,18	31,80		
ache	Yes	6	44,44	40,36	-0.16	0.86
	No	11	48,48	50,25		
general health	Yes	6	34,16	4,91	1,94	0.07
	No	11	26,81	8,44		
Energy / Vitality / Vitality	Yes	6	20,66	3,93	0.50	0.62
	No	11	18,90	8,01		
Social Functioning	Yes	6	39,58	12,28	-0.48	0.63
	No	11	44,31	21,91		
Emotional Role Difficulty	Yes	6	47,08	14,78	0.33	0.74
	No	11	44,09	19,17		
Mental Health	Yes	6	23,33	5,16	1,17	0.25
	No	11	19,54	6,87		

Independent two-sample t-test

The results of the analysis using the score data from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the variable of FMS in the family are given in Table 41. In terms of patients who received Taping treatment, it was determined that there was a difference in the scores they got from the VAS Resting scale before and after the treatment, according to the presence of FMS in the family ($p < 0.05$). Specifically, for the resting sub-dimension of the VAS scale, the recovery rate of patients who declared that they did not have FMS in their family was higher than those who declared that they had FMS in their family.

On the other hand, it was concluded that the difference between the scores obtained from the FIQ, McGill Pain and Beck' Depression Quest. scales for treatment Taping did not differ according to the presence of FMS in the family ($p > 0.05$).

Table 41. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment Taping by FMS in the Family

	FMS in the family	N	Mean ±SD		t	p-value
VAS at rest	Yes	6	3.83	±1,16	-3,07	0.00
	No	11	5,09	±0.53		
VAS in Motion	Yes	6	4.83	±1,16	-0.61	0.54
	No	11	5.18	±1.07		
FIQ	Yes	6	44,57	±4.44	1,12	0.27
	No	11	41.66	±5,36		
McGill	Yes	6	54,33	±7.14	0.03	0.97
	No	11	54,18	±8,82		
Beck' Depression Quest.	Yes	6	11.66	±2,94	0.01	0.98
	No	11	11.63	±3,38		

Independent two-sample t-test

The analysis results using the score data from the SF-36 Quality of Life Scale according to the disease duration variable are given in Table 42. In terms of patients who received treatment CTM, it was concluded that the difference between the scores obtained from the sub-dimensions of the SF-36 Quality of Life Scale before and after the treatment did not change according to the duration of the disease ($p>0.05$).

Table 42. Analysis of the SF-36 Quality of Life Scale Scores of the Participants Receiving Treatment CTM by Disease Duration

	Disease Duration	N	Mean	±SD	t-value	p-value
Physical Function	1 year	9	33,88	±9,61	1,30	0.30
	2 years	4	42,50	±10,40		
	over 3 years	4	38,75	±6,29		
Physical Role Difficulty	1 year	9	61,11	±39,74	0.50	0.61
	2 years	4	50,00	±45,64		
	over 3 years	4	37,50	±32,27		
Pain	1 year	9	62,96	±45,47	0.19	0.82
	2 years	4	58,33	±41,94		
	over 3 years	4	75,00	±16,66		
general health	1 year	9	27,77	±6,66	1,00	0.39
	2 years	4	31,25	±10,30		
	over 3 years	4	33,75	±4,78		
Energy / Vitality / Vitality	1 year	9	24,44	±7,33	1,91	0.18
	2 years	4	27,00	±5,03		
	over 3 years	4	18,00	±6,92		
Social Functioning	1 year	9	43,05	±25,08	0.76	0.48
	2 years	4	56,25	±12,50		
	over 3 years	4	40,62	±6,25		
Emotional Role Difficulty	1 year	9	51,66	±9,18	0.21	0.80
	2 years	4	48,75	±5,95		
	over 3 years	4	52,50	±9,57		
Mental Health	1 year	9	25,55	±6,34	0.10	0.89
	2 years	4	23,75	±6,29		
	over 3 years	4	25,00	±7,07		

ANOVA Analysis

The results of the analysis using the score data from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the disease duration are given in Table 43. In terms of patients who received treatment CTM, it was concluded that the difference between the scores obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not change according to the duration of the disease ($p>0.05$).

Table 43. Analysis of the VAS, FIQ, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment CTM by Disease Duration

	Disease Duration	N	Mean $\pm$SD		t-value	p-value
VAS at rest	1 year	9	5.33	$\pm 1,32$	0.72	0.50
	2 years	4	4,50	$\pm 1,29$		
	over 3 years	4	4,75	$\pm 0,95$		
VAS in Motion	1 year	9	4.77	$\pm 1,56$	0.18	0.83
	2 years	4	4,25	$\pm 1,50$		
	over 3 years	4	4,75	$\pm 1,25$		
FIQ	1 year	9	45,89	$\pm 3,12$	0.53	0.59
	2 years	4	45,39	$\pm 5,42$		
	over 3 years	4	48,25	$\pm 5,60$		
McGill	1 year	9	46,22	$\pm 6,99$	0.71	0.50
	2 years	4	50,25	$\pm 12,01$		
	over 3 years	4	52,50	$\pm 11,09$		
Beck' Depression Quest.	1 year	9	12,22	$\pm 4,26$	0.81	0.46
	2 years	4	15,00	$\pm 4,24$		
	over 3 years	4	11,75	$\pm 3,20$		

ANOVA Analysis

The results of the analysis using the score data from the SF-36 Quality of Life Scale according to the disease duration variable are given in Table 44. In terms of patients who received Taping treatment, it was observed that the scores they got from only the physical role difficulty sub-dimension of the SF-36 Quality of Life Scale before and after the treatment differed according to the duration of the disease ($p < 0.05$). As a result of the post-hoc test performed to determine which group caused the difference, it was determined that the improvement of patients with a disease duration of 1 year was statistically significantly higher than the other two groups.

On the other hand, it was concluded that the difference between the scores obtained from the other sub-dimensions of the SF-36 Quality of Life Scale did not change according to the duration of the disease ($p > 0.05$).

Table 44. Analysis of the Scores from the SF-36 Quality of Life Scale of the Participants Receiving Treatment Taping by Disease Duration

	Disease Duration	N	Mean	±SD	t-value	p-value
Physical Function	1 year	5	29,00	±34,35	0.64	0.53
	2 years	6	35,00	±10,48		
	over 3 years	6	43,33	±13,66		
Physical Role Difficulty	1 year	5	75,00	±25,00	4,21	0.03
	2 years	6	37,50	±26,22		
	over 3 years	6	33,33	±25,81		
ache	1 year	5	66.66	±47,14	0.62	0.55
	2 years	6	38.88	±44,30		
	over 3 years	6	38.88	±49,06		
general health	1 year	5	32,00	±6,70	0.58	0.56
	2 years	6	30,00	±6,32		
	over 3 years	6	26.66	±10,80		
Energy / Vitality / Vitality	1 year	5	20,00	±4,89	0.22	0.80
	2 years	6	18,00	±8.29		
	over 3 years	6	20,66	±7,33		
Social Functioning	1 year	5	42,50	±31,37	0.42	0.66
	2 years	6	37,50	±13,69		
	over 3 years	6	47,91	±9,40		
Emotional Role Difficulty	1 year	5	42,50	±12,62	0.39	0.68
	2 years	6	42,08	±15,44		
	over 3 years	6	50.41	±23.31		
Mental Health	1 year	5	23,00	±6,70	0.45	0.64
	2 years	6	19.16	±4,91		
	over 3 years	6	20.83	±8,01		

ANOVA Analysis

The results of the analysis using the score data from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales according to the disease duration are given in Table 45. In terms of patients receiving Taping treatment, it was concluded that the difference between the scores obtained from the VAS, FIQ, McGill Pain and Beck' Depression Quest. scales before and after the treatment did not change according to the duration of the disease ($p>0.05$).

Table 45. Analysis of the VAS, FES, McGill and Beck' Depression Quest. Scale Scores of the Participants Receiving Treatment Taping by Disease Duration

	Disease Duration	N	Mean $\pm$ SD		t-value	p-value
VAS at rest	1 year	5	4.00	$\pm 1,22$	1,66	0.22
	2 years	6	4.83	± 0.98		
	over 3 years	6	5,00	± 0.63		
VAS in Motion	1 year	5	4,40	± 1.14	2,12	0.15
	2 years	6	5,00	$\pm 1,09$		
	over 3 years	6	5.66	± 0.81		
FIQ	1 year	5	45,75	$\pm 5,05$	2,27	0.13
	2 years	6	43,16	$\pm 3,90$		
	over 3 years	6	39.67	$\pm 5,24$		
McGill	1 year	5	51,20	$\pm 11,81$	0.68	0.52
	2 years	6	54,00	± 7.21		
	over 3 years	6	57,00	$\pm 4,97$		
Beck' Depression Quest.	1 year	5	13,60	$\pm 2,07$	1,53	0.25
	2 years	6	10,50	$\pm 3,50$		
	over 3 years	6	11.16	± 3.18		

ANOVA Analysis

5. DISCUSSION and CONCLUSIONS

No significant difference was found when the questionnaire results of the participants were compared before the treatment. This result is important for the homogeneity of the analyses. In the study in which we compared the effects of Connective Tissue Massage and Taping on fibromyalgia patients, it was determined that there was a positive change in the patients in both groups. In our study, patients with FM were followed up before and after treatment in terms of pain, depression and quality of life. Positive changes were observed in these values recorded before and after the treatment. Due to the positive effects of both treatment methods applied on FM patients, the literature showed that both connective tissue massage and taping could be preferred.

When the literature is reviewed, various methods are used for the treatment of fibromyalgia. These methods are; pharmacological treatment, aerobic exercises, exercises to increase flexibility, stretching exercises, strengthening exercises, electrotherapy, yoga, hydrotherapy, balneotherapy, biofeedback, acupuncture, tai chi, body awareness, pilates. Different combinations of these methods are used in the treatment of fibromyalgia syndrome (84,85).

Evaluation methods used in our study; socio-demographic information, SF-36 Quality of Life Scale, VAS, Fibromyalgia Impact Questionnaire, McGill Pain Scale, Beck's Depression Scale. The study will be discussed in line with these surveys.

70.6% of the patients participating in the study were women and 29.4% were men. While 44.1% of the participants are in the 36-50 age group, 55.9% are in the 25-35 age group. When the literature is examined, FMS frequently affects the age range of 30-50 years, and its prevalence varies between 4% in men and 2.5-10% in women (6-26).

FMS, which has symptoms such as widespread body aches, tender points in some body parts, constant fatigue, and sleep disturbance due to pain, causes both physical and mental disorders and can negatively affect the quality of life of the person (41).

One of the most important symptoms in individuals with FM is pain (42). When the studies in the literature are examined, it is known that CTM and Taping treatments reach statistically significant results in terms of reducing pain (71,79,80,81).

Bakar et al. found that there was a significant improvement in SCM muscle algometer values in the classical massage and connective tissue massage groups that they applied in a single session in 45 female individuals aged 25-45 with chronic neck pain (91).

Vayvay et al. investigated the effects of kinesio tape and laser application together with exercise applications on pain, flexibility, anxiety, depression, quality of life and functional status in fibromyalgia syndrome. In the study, 45 patients were divided into 3 groups. Laser was applied to the 1st group, placebo laser was applied to the 2nd group, and kinesio tape was applied to the 3rd group. Obtained results; There were significant differences in rest and night pain in groups 2 and 3, and a significant difference in group 1 in terms of activity. As a result, it was stated that kinesio tape application could be preferred to laser application method (86).

González-Iglesias et al. In a study conducted by 41 patients, the patients with acute neck and spine pain were compared with the control group who were treated with kinesio tape. In the follow-up after 24 hours, patients who applied kinesio tape for pain showed improvement in pain and normal range of motion compared to the control group (87).

Kavlak et al. Different physical therapy for neck pain done by Kinesio tape and classical treatment methods were compared in the study in which the effectiveness of the methods was investigated. Sixty patients with neck pain were included in the study, and classical treatment, classical treatment and mobilization, classical treatment and kinesio tape groups were formed, each consisting of 20 groups. The effects of pain on pain levels and daily life were evaluated by visual analog scale and neck adequacy index. At the end of the study, it was observed that all three groups gave significant results after the treatment, and no superiority was observed in the comparison between the groups (88).

According to the results of the Pain and Quality of Life Scale obtained in our study, the positive result of the taping application overlaps with the literature. When the connective tissue massage and taping treatments were compared, no superiority was found..

Due to the frequent occurrence of depression in patients suffering from fibromyalgia, FMS is also referred to as a psychological disease in the literature (82). In our study, Beck's Depression Scale was used to evaluate depression status. As a result of the questionnaires applied to the participants before and after both treatment methods, a

statistically significant decrease was found in the level of depression. However, when the two treatment methods were compared, no superiority was found over each other.

Limitation of movement and depression due to trigger points can negatively affect quality of life. Studies in the literature have found that patients with FM have pain, fear of movement, and low quality of life in their social lives (83). Lorente et al. In a study conducted on 65 individuals, 35 of whom were diagnosed with fibromyalgia and 30 of whom were control group patients, in 2014, it was found that patients with fibromyalgia syndrome had more severe pain in the physical and social areas, more fear of movement, and lower quality of life (89).

Soran et al. In the study conducted by fibromyalgia in which the relationship between depression symptom severity and clinical findings was investigated; Pain severity, physical disability, disease severity, and depression level were evaluated with 29 fibromyalgia and 38 healthy individuals. As a result of the study, it was observed that physical disability in individuals with fibromyalgia was not different from healthy individuals, depression symptoms were higher than healthy individuals, and the level of depression was associated with the severity of the disease (90).

Van Den Houte et al. In the study he conducted on 153 individuals, 135 of whom were women, with the diagnosis of fibromyalgia, physiotherapy, psychomotor and psychoeducation was applied to the individuals once a week for the first two weeks during the treatment applied for 12 weeks, and then the individuals were included in the treatment program 3 days a week for the following 10 weeks. Each week, individuals received 2 hours of occupational therapy, 3 hours of physiotherapy, 1 hour of psychomotor therapy, 2 hours of psycho-education and 1 hour of group psychotherapy. Questionnaires applied to individuals were administered before and after the treatment, and when the results were compared, they revealed that the applied treatment reduced basic anxiety, depression, and kinesiophobia (16). When the Fibromyalgia Impact Questionnaire, which is a questionnaire specific to fibromyalgia syndrome before and after the treatment, was examined, it was found that both treatment methods had significantly positive results, and that the Taping application was more effective than the CTM application. The SF-36 Questionnaire, which was used to measure quality of life, was administered to both groups before and after treatment. The scores they got in the subgroups of the SF-36 Questionnaire showed that both treatments were significant in a positive way, but there was no superiority between the treatment methods.

At the end of this study, it was found that CTM and Taping techniques were effective on patients with FM. In line with the statistical data, it has been determined that CTM and Taping applications reduce the severity of pain and depression level and increase the quality of life. However, with the exception of the results of the Fibromyalgia Impact Questionnaire, one treatment modality was not found to be superior to the other. At the end of the study, it was found that both treatment methods can be effective on patients with FM.

Although there are many studies on fibromyalgia syndrome in the literature, studies of CTM and Taping applications are limited. There is a need for more studies on the subject in a larger population and in which the long-term effects of treatment methods can be seen.

The problems caused by fibromyalgia, the burden it brings to health expenditures, affect the physical, mental and social status of the person, reducing the participation of individuals in activities, and decreasing their daily life activity independence and quality of life. A multidisciplinary approach is of great importance in the treatment of fibromyalgia. Physiotherapists, who are an important part of the multidisciplinary team, form integrated members of fibromyalgia treatment with their contributions to the determination of individual programs, preventive physiotherapy, physical activity and exercise programs. For this reason, it is important to increase awareness of individuals diagnosed with fibromyalgia in cooperation with rheumatology outpatient clinics by starting early period information and family education programs that will ensure posture, reduce pain, improve functional capacity and quality of life, by a physiotherapist in the early period.

Limitation of The Study

The shortcoming of the study is the absence of a third group in which connective tissue massage and taping were applied simultaneously. Although both treatments were successful as a result of our study, would both treatments be better at the same time? The answer to the question is missing.

At the same time, our study focused on short-term results. Long-term outcomes of both connective tissue massage and taping therapy have not been established.



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7. APPENDIXES

7.1. Appendix 1. Socio-Demographic Information

HASTA DEĞERLENDİRME FORMU

1. Adı soyadı: Yaş:
2. Cinsiyet: Erkek: Kadın:
3. Meslek: a. Ev hanımı b. Öğrenci c. Memur d. İşçi e. Özel şirket
f. Diğer
4. Eğitim durumu: a. Okuma yazma bilmiyor b. Okuma yazma biliyor c. İlkokul d. Ortaokul e. Lise f. Yüksekokul g. Lisans h. Lisansüstü
5. Adres: tlf:
6. Medeni durumu: Evli: Bekar: Boşanmış/eş vefatı:
7. Kilo: Boy: BMI:
8. Çalışma durumu: Çalışıyor: Çalışmıyor:
9. Hastalık süresi:ayyıl
10. Kullanılan ilaçlar:
11. Sigara Kullanımı: Evet: Hayır:
12. Alkol kullanımı: Evet: Hayır:
13. Ailede fms olan var mı? Evet: Hayır:

7.2. Appendix 2. McGill-Melzack Pain Questionnaire

McGill – Melzack Ağrı Anketi (The McGill Melzack Pain Questionnaire)

Hastanın Adı Soyadı: _____ Tarih: ____/____/____

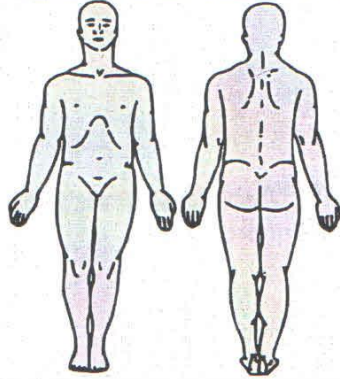
Klinik kategori (kardiyak, nörolojik gibi): _____ Tanısı: _____ Yaşı: _____
 Analjezik kullanıyorsa; Tipi: _____ Dozu: _____ Testten ne kadar önce aldı: _____
 Hastanın algı düzeyi (kognisyonu) ☐₁ (düşük) ☐₂ ☐₃ ☐₄ ☐₅ (yüksek)

Bu ölçek; ağrınıza ilişkin bize daha fazla bilgi vermek üzere hazırlanmış olup dört bölümden oluşmuştur; (1) Ağrınızın yeri (2) , Özelliği (3) Zamanla ilişkisi ve (4) şiddeti.

Şu anda ağrınızı nasıl hissettiğiniz önemlidir. Lütfen her bölümün başında bulunan açıklamaları izleyiniz.

I. Bölüm: Ağrınız Nerede?

Lütfen aşağıdaki şekil üzerinde ağrınızı nerede / nerelerde hissettiğinizi işaretleyiniz. Eğer ağrınız derinde ise D harfi, yüzeyde ise Y harfini işaretlediğiniz yerin yan tarafına yazınız. Şayet hem derinde hem de yüzeyde ise DY harflerini yazınız.



II. Bölüm: Ağrınızın Özelliği

Aşağıdaki kelimelerin bazıları şu andaki ağrınızı tanımlamaktadır. Sadece ağrınızı en iyi tanımlayan kelimeleri daire içine alınız. Uygun gelmeyenleri boş bırakınız. Her grupta uygun olan sadece bir kelime işaretleyiniz

- | | | | |
|--|---|--|---|
| ☐ ₁ Pır pır eden | ☐ ₁ Diken diken | ☐ ₁ Çimdik gibi | ☐ ₁ Künt, |
| ☐ ₂ Titreyen | ☐ ₂ Bayıcı, | ☐ ₂ Bastırıcı | ☐ ₂ Çıldıratan, |
| ☐ ₃ Çarpan | ☐ ₃ Delici, | ☐ ₃ Kemirici | ☐ ₃ Yaralayıcı, |
| ☐ ₄ Zonklayan | ☐ ₄ Şiş saplanır, | ☐ ₄ Kramp gibi | ☐ ₄ Sızlayan, |
| ☐ ₅ Vuran | ☐ ₅ Şimşek çakar gibi | ☐ ₅ Çarpar gibi | ☐ ₅ Ağır |
| ☐ ₆ Döven | | | |
| ☐ ₁ Yayılan, | ☐ ₁ Hassas, | ☐ ₁ Sıcak, | ☐ ₁ Karıncalı, |
| ☐ ₂ Dağılan, | ☐ ₂ Gergin, | ☐ ₂ Yakıcı | ☐ ₂ Kaşıntılı, |
| ☐ ₃ İçer işleyen, | ☐ ₃ Törpüleyen, | ☐ ₃ Haşlayıcı, | ☐ ₃ Acıtırıcı, |
| ☐ ₄ Delen | ☐ ₄ Keskin | ☐ ₄ Dağlayıcı | ☐ ₄ İğne batar |
| ☐ ₁ Çekiştirici, | ☐ ₁ Sefil eden, | ☐ ₁ Yorucu, | ☐ ₁ Tiksindirici, |
| ☐ ₂ Sürükleyici, | ☐ ₂ Kör eden | ☐ ₂ Tüketici | ☐ ₂ Boğucu |
| ☐ ₃ Burkutucu | | | |
| ☐ ₁ Sıkı | ☐ ₁ Cezalandırıcı, | ☐ ₁ Vırıltı, | ☐ ₁ Sinir eden, |
| ☐ ₂ Uyuşuk, | ☐ ₂ Bitap eden | ☐ ₂ Bulantı | ☐ ₂ Sıkıntılı, |
| ☐ ₃ Hissizleştirici, | ☐ ₃ Zalim, | ☐ ₃ İstiraplı, | ☐ ₃ Acınası, |
| ☐ ₄ Sıkıştırıcı, | ☐ ₄ Habis, | ☐ ₄ Berbat, | ☐ ₄ Yoğun, |
| ☐ ₅ Yırtıcı | ☐ ₅ Öldürücü | ☐ ₅ İşkence gibi | ☐ ₅ Dayanılmaz |
| ☐ ₁ Korku veren, | ☐ ₁ Çok keskin, | ☐ ₁ Ürperten, | ☐ ₁ Sıçrayan |
| ☐ ₂ Korkunç, | ☐ ₂ Kesiliyor, | ☐ ₂ Üşüten, | ☐ ₂ Şimşek gibi |
| ☐ ₃ Dehşetli | ☐ ₃ Yırtılır gibi | ☐ ₃ Donduran | ☐ ₃ Kurşun gibi |

4. Bölüm: Ağrınızın Şiddeti

İnsanlar artan yoğunluğa göre ağrılarını belirten beş kelimeye birleşirler. Bunlar;

- ☐₁ Haff ☐₂ Rahatsız edici ☐₃ Şiddetli ☐₄ Çok şiddetli ☐₅ Dayanılmaz

Aşağıdaki her soruyu yanıtlamak için sorunun yanındaki boşluğa, size en uygun rakamı yazınız.

1. Şu andaki ağrınızı hangi kelime tanımlar? ____
2. Ağrınızın en kötü halini hangi kelime tanımlar? ____
3. Ağrınızın en az olduğunda hangi kelime tanımlar? ____
4. Şu ana kadar geçirdiğiniz en kötü dış ağrısını hangi kelime tanımlar? ____
5. Şu ana kadar geçirdiğiniz en kötü baş ağrısını hangi kelime tanımlar? ____
6. Şu ana kadar geçirdiğiniz en kötü karın ağrısını hangi kelime tanımlar? ____

3. Bölüm: Zamanla Ağrınızın İlişkisi

Ağrınızı tanımlamak için hangi kelimeyi/kelimeleri kullanırsınız?

- 1 ☐₁ Devamlı, sürekli, sabit ☐₂ Ritmik, periyodik, aralıklı ☐₃ Kısa, Anlık, Geçici,
- 2 Neler ağrınızı rahatlatıyor?
- 3 Neler ağrınızı arttırıyor?

Toplam Puan (0-112): _____

7.3. Appendix 3. VAS

VİZÜEL ANALOG SKALASI

İstirahatte:

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

Harekette:

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

7.4. Appendix 4. Beck's Depression Inventory

BECK DEPRESYON ENVANTERİ

AÇIKLAMA:

Sayın cevaplayıcı aşağıda gruplar halinde cümleler verilmektedir. Öncelikle her gruptaki cümleleri dikkatle okuyarak, BUGÜN DÂHİL GEÇEN HAFTA içinde kendinizi nasıl hissettiğini en iyi anlatan cümleyi seçiniz. Eğer bir grupta durumunuzu, duygularınızı tarif eden birden fazla cümle varsa her birini daire içine alarak işaretleyiniz.

Soruları vereceğiniz samimi ve dürüst cevaplar araştırmanın bilimsel niteliği açısından son derece önemlidir. Bilimsel katkı ve yardımlarınız için sonsuz teşekkürler.

- 1- 0. Kendimi üzüntülü ve sıkıntılı hissetmiyorum.
 1. Kendimi üzüntülü ve sıkıntılı hissediyorum.
 2. Hep üzüntülü ve sıkıntılıyım. Bundan kurtulamıyorum.
 3. O kadar üzüntülü ve sıkıntılıyım ki artık dayanamıyorum.
- 2- 0. Gelecek hakkında mutsuz ve karamsar değilim.
 1. Gelecek hakkında karamsarım.
 2. Gelecekte beklediğim hiçbir şey yok.
 3. Geleceğim hakkında umutsuzum ve sanki hiçbir şey düzelmeyecekmiş gibi geliyor.
- 3- 0. Kendimi başarısız bir insan olarak görmüyorum.
 1. Çevremdeki birçok kişiden daha çok başarısızlığım olmuş gibi hissediyorum.
 2. Geçmişe baktığımda başarısızlıklarla dolu olduğunu görüyorum.
 3. Kendimi tümüyle başarısız biri olarak görüyorum.
- 4- 0. Birçok şeyden eskisi kadar zevk alıyorum.
 1. Eskiden olduğu gibi her şeyden hoşlanmıyorum.
 2. Artık hiçbir şey bana tam anlamıyla zevk vermiyor.
 3. Her şeyden sıkılıyorum.
- 5- 0. Kendimi herhangi bir şekilde suçlu hissetmiyorum.
 1. Kendimi zaman zaman suçlu hissediyorum.
 2. Çoğu zaman kendimi suçlu hissediyorum.
 3. Kendimi her zaman suçlu hissediyorum.
- 6- 0. Bana cezalandırılmışım gibi geliyor.
 1. Cezalandırılabilceğimi hissediyorum.
 2. Cezalandırılmayı bekliyorum.
 3. Cezalandırıldığımı hissediyorum.
- 7- 0. Kendimden memnunum.
 1. Kendi kendimden pek memnun değilim.
 2. Kendime çok kızıyorum.
 3. Kendimden nefret ediyorum.
- 8- 0. Başkalarından daha kötü olduğumu sanmıyorum.
 1. Zayıf yanların veya hatalarım için kendi kendimi eleştiririm.

2. Hatalarımdan dolayı ve her zaman kendimi kabahatli bulurum.
3. Her aksilik karşısında kendimi hatalı bulurum.
- 9- 0. Kendimi öldürmek gibi düşüncelerim yok.
 1. Zaman zaman kendimi öldürmeyi düşündüğüm olur. Fakat yapmıyorum.
 2. Kendimi öldürmek isterdim.
 3. Fırsatını bulsam kendimi öldürürdüm.
- 10- 0. Her zamankinden fazla içimden ağlamak gelmiyor.
 1. Zaman zaman içinden ağlamak geliyor.
 2. Çoğu zaman ağlıyorum.
 3. Eskiden ağlayabilirdim şimdi istesem de ağlayamıyorum.
- 11- 0. Şimdi her zaman olduğumdan daha sinirli değilim.
 1. Eskişine kıyasla daha kolay kızıyor ya da sinirleniyorum.
 2. Şimdi hep sinirliyim.
 3. Bir zamanlar beni sinirlendiren şeyler şimdi hiç sinirlendirmiyor.
- 12- 0. Başkaları ile görüşmek, konuşmak isteğimi kaybetmedim.
 1. Başkaları ile eskiden daha az konuşmak, görüşmek istiyorum.
 2. Başkaları ile konuşma ve görüşme isteğimi kaybetmedim.
 3. Hiç kimseyle konuşmak görüşmek istemiyorum.
- 13- 0. Eskiden olduğu gibi kolay karar verebiliyorum.
 1. Eskiden olduğu kadar kolay karar veremiyorum.
 2. Karar verirken eskişine kıyasla çok güçlük çekiyorum.
 3. Artık hiç karar veremiyorum.
- 14- 0. Aynada kendime baktığımda değişiklik görmüyorum.
 1. Daha yaşlanmış ve çirkinleşmiş gibi geliyor.
 2. Görünüşümün çok değiştiğini ve çirkinleştiğimi hissediyorum.
 3. Kendimi çok çirkin buluyorum.
- 15- 0. Eskişine kadar iyi çalışabiliyorum.
 1. Bir şeyler yapabilmek için gayret göstermem gerekiyor.
 2. Herhangi bir şeyi yapabilmek için kendimi çok zorlamam gerekiyor.
 3. Hiçbir şey yapamıyorum.
- 16- 0. Her zamanki gibi iyi uyuyabiliyorum.
 1. Eskiden olduğu gibi iyi uyuyamıyorum.
 2. Her zamankinden 1-2 saat daha erken uyanıyorum ve tekrar uyuyamıyorum.
 3. Her zamankinden çok daha erken uyanıyor ve tekrar uyuyamıyorum.
- 17- 0. Her zamankinden daha çabuk yorulmuyorum.
 1. Her zamankinden daha çabuk yoruluyorum.
 2. Yaptığım her şey beni yoruyor.
 3. Kendimi hemen hiçbir şey yapamayacak kadar yorgun hissediyorum.
- 18- 0. İştahım her zamanki gibi.
 1. İştahım her zamanki kadar iyi değil.

2. İştahım çok azaldı.
3. Artık hiç iştahım yok.
- 19-0. Son zamanlarda kilo vermedim.
 1. İki kilodan fazla kilo verdim.
 2. Dört kilodan fazla kilo verdim.
 3. Altı kilodan fazla kilo vermeye çalışıyorum.
- 20-0. Sağlığım beni fazla endişelendirmiyor.
 1. Ağrı, sancı, mide bozukluğu veya kabızlık gibi rahatsızlıklar beni endişelendirmiyor.
 2. Sağlığım beni endişelendirdiği için başka şeyleri düşünmek zorlaşıyor.
 3. Sağlığım hakkında o kadar endişeliyim ki başka hiçbir şey düşünmüyorum.
- 21-0. Son zamanlarda cinsel konulara olan ilgimde bir değişme fark etmedim.
 1. Cinsel konularla eskisinden daha az ilgiliyim.
 2. Cinsel konularla şimdi çok daha az ilgiliyim.
 3. Cinsel konular olan ilgimi tamamen kaybettim.

Depresyon derecesi	Toplam
• Minimal depresyon	0-9
• Hafif depresyon	10-16
• Orta depresyon	17-29
• Şiddetli depresyon	30-63

7.5. Appendix 5. Fibromyalgia Impact Questionnaire

FİBROMİYALJİ ETKİ SORGULAMASI

Soru 1. Geçtiğimiz hafta içinde aşağıdaki aktiviteleri ne sıklıkta gerçekleştirebildiğinizi belirtin. Bu aktivitelerden normal zamanlarda da yapmadıklarınız için yapmam sıklığını işaretleyin.

	Her Zaman 0	Sık Sık 1	Nadiren 2	Hiç 3	Yapmam
Alışveriş yapmak					
Yemek yapmak					
Elde bulaşık yıkamak					
Makineyle halı süpürmek					
Yatak toplamak					
Orta mesafe yürümek					
Misafirliğe gitmek					
Bahçe işi yapmak					
Araba sürmek					
Merdiven çıkmak					
Çamaşır makinesinde çamaşır yıkamak					

Soru 2. Geçtiğimiz haftanın kaç günü kendinizi iyi hissettiniz? (0-7 gün arası işaretleyin)

0 1 2 3 4 5 6 7

Soru 3. Fibromiyalji rahatsızlığı yüzünden geçtiğimiz hafta kaç gün işlerinizden uzak kaldınız(ev işleri dahil)?

0 1 2 3 4 5 6 7

Soru 4. Aşağıdaki her soruyu geçtiğimiz hafta yaşadıklarınıza ve hissettiklerinize göre cevaplayın.

A. Çalışmalarınızı (ağır işler dahil) ağır ve diğer Fibromiyalji şikayetleriniz ne ölçüde etkiledi?

0 1 2 3 4 5 6 7 8 9 10

Hiç etkilemedi

Çok etkiledi

B. Ağrınız ne derecede şiddetliydi?

0 1 2 3 4 5 6 7 8 9 10

Ağrı olmadı

Çok şiddetliydi

C. Ne kadar yorgundunuz?

0 1 2 3 4 5 6 7 8 9 10

Yorgun değildim

Çok yorgunum

D. Sabah katlığınızda kendinizi nasıl hissettiniz?

0 1 2 3 4 5 6 7 8 9 10

İyi dinlenmiş uyandım

Çok yorgun uyandım

E. Sabah sertliğiniz ne kadar şiddetliydi?

0 1 2 3 4 5 6 7 8 9 10

Hiç olmadı

Çok şiddetliydi

F. Sinirliliğiniz ya da anksiyeteniz ne düzeydeydi?

0 1 2 3 4 5 6 7 8 9 10

Hiç olmadı

Çok gergindim

G. Depresyonunuz veya moral bozukluğunuz ne düzeydeydi?

0 1 2 3 4 5 6 7 8 9 10

Hiç olmadı

Çok fazlaydı

7.6. Appendix 6. SF-36 Quality of Life Questionnaire

SF-36 YAŞAM KALİTESİ ÖLÇEĞİ (FORMU)

YÖNERGE: Bu tarama formu size sağlığınıza ilgili görüşlerinizi sormaktadır. Bu bilgiler sizin nasıl hissettiğinizi ve her zamanki faaliyetlerinizi ne rahatlıkla yapabildiğinizi izlemekte yardımcı olacaktır.

Bütün soruları belirtildiği şekilde cevaplayın. Eğer bir soruyu ne şekilde cevaplayacağınızdan emin olmazsanız, lütfen en yakın cevabı işaretleyin.

1. Genel sağlığınıza nasıl değerlendirirsiniz? Bir tanesini yuvarlak içine alınız

a)Mükemmel 1 b)Çok iyi 2 c)İyi 3 d)Orta 4 e)Kötü 5

2. Geçen yıl öncesi ile karşılaştırdığınızda, şimdi sağlığınıza nasıl değerlendirirsiniz?
Bir tanesini yuvarlak içine alınız

a. Geçen seneden çok daha iyi 1
b. Geçen seneden biraz daha iyi 2
c. Geçen sene ile aynı 3
d. Geçen seneden biraz daha kötü 4
e. Geçen seneden çok daha kötü 5

3. Aşağıdaki tipik bir günümüzde yapmış olabileceğiniz bazı aktiviteler yazılmıştır. Sağlığınıza bunları yaparken sizi sınırlandırmakta mıdır? Öyleyse ne kadar?
Her satırda bir sayıyı yuvarlak içine alınız

AKTİVİTELER	Evet, çok kısıtlıyor	Evet, çok az kısıtlıyor	Hayır, hiç kısıtlamıyor
a. Kuvvet gerektiren aktiviteler, koşma, ağır eşyaları kaldırmak, zor sporlar	1	2	3
b. Orta aktiviteler, bir masayı oynatmak, elektrik süpürgesi ile süpürmek, bowling, golf	1	2	3
c. Sebze-meyveleri kaldırmak, taşımak	1	2	3
d. Pek çok katı çıkmak	1	2	3
e. Tek katı çıkmak	1	2	3
f. Çömelme, diz çökmek, eğilmek	1	2	3
g. 1 kilometreden fazla yürüyebilmek	1	2	3
h. Pek çok mahalle arası yürüyebilmek	1	2	3
i. Bir mahalleden (sokak) diğerine yürümek	1	2	3
j. Kendi kendine yıkanmak, giyinmek	1	2	3

4. Son 4 hafta içerisinde, fiziksel sağlığınız yüzünden günlük iş veya aktivitelerinizde aşağıdaki problemlerle karşılaştınız mı?

Bir tanesini yuvarlak içine alınız

	EVET	HAYIR
a. İş yada diğer aktiviteler için harcadığınız zamanda kesinti	1	2
b. İstedığınızden daha az miktar işin tamamlanması	1	2
c. İşin veya diğer aktivitelerin çeşidinde kısıtlama	1	2
d. İş veya diğer aktiviteleri yaparken zorluk olması	1	2

5. Son 4 hafta içerisinde, duygusal problemler (örnek-üzüntü ya da sinirli hissetmek) yüzünden günlük iş veya aktivitelerinizde aşağıdaki problemlerle karşılaştınız mı?

Bir tanesini yuvarlak içine alınız

	EVET	HAYIR
İş yada diğer aktiviteler ayırdığınız süreden kesilme oldu mu?	1	2
İsteddiğinizden daha az kısım tamamlanması	1	2
İşin veya diğer aktiviteleri eskisi gibi dikkatli yapmama	1	2

6. Geçen 4 hafta içinde, fiziksel sağlık veya duygusal problemler, aileniz, arkadaşınız, komşularınız veya gruplar ile olan normal sosyal aktivitelerinize ne kadar engel oldu?

Bir tanesini yuvarlak içine alınız

a) Hiç	1
b) Çok az	2
c) Orta derecede	3
d) Biraz	4
e) Oldukça	5

7. Son 4 hafta içerisinde, ne kadar fiziksel acı (ağrı) hissettiniz?

Bir tanesini yuvarlak içine alınız

a) Hiç	1
b) Çok az	2
c) Orta	3
d) Çok	4
e) İleri derecede	5
f) Çok şiddetli	6

8. Son 4 hafta içerisinde, ağrı normal işinize ne kadar engel oldu?

Bir tanesini yuvarlak içine alınız

a) Hiç	1
b) Çok az	2
c) Orta	3
d) Çok	4
e) İleri derecede	5

9. Aşağıdaki sorular sizin son 4 hafta içerisinde kendinizi nasıl hissettiğiniz ve işlerin nasıl gittiği ile ilgilidir. Lütfen her soru için hissettiğinize en yakın olan sadece 1 cevap verin.

Bir tanesini yuvarlak içine alınız

	Her Zaman	Çoğu Zaman	Bir Kısım	Bazen	Çok Nadir	Hiçbir Zaman
a. Kendinizi capcanlı hissediyor musunuz?	1	2	3	4	5	6
b. Çok sinirli bir kişi misiniz?	1	2	3	4	5	6
c. Kendinizi hiçbir şey güldürmeyecek kadar batmış hissediyor musunuz?	1	2	3	4	5	6
d. Kendinizi sakin ve huzurlu hissettiniz mi?	1	2	3	4	5	6
e. Çok enerjiniz var mı?	1	2	3	4	5	6
f. kendinizi çökmüş ve karamsar hissettiniz mi?	1	2	3	4	5	6
g. Yıpranmış hissettiniz mi?	1	2	3	4	5	6
h. Mutlu bir insan mıydınız?	1	2	3	4	5	6
i. Yorulmuş hissettiniz mi?	1	2	3	4	5	6

10. Geçen 4 hafta içinde, fiziksel sağlık veya duygusal problemler, sosyal aktivitelerinize (arkadaşları, akrabaları ziyaret etmek gibi) ne kadar engel oldu?

Bir tanesini yuvarlak içine alınız

- | | |
|--------------------|---|
| a. Her zaman | 1 |
| b. Çoğu zaman | 2 |
| c. Bazı zamanlarda | 3 |
| d. Çok az zaman | 4 |
| e. Hiçbir zaman | 5 |

11. Aşağıdaki cümleler sizin için ne kadar doğru ya da yanlış?

Bir tanesini yuvarlak içine alınız

	Tamamen Doğru	Çoğunlukla Doğru	Bilmiyorum	Çoğunlukla Yanlış	Tamamen Yanlış
a. Diğer insanlardan biraz daha kolay hasta oluyorum	1	2	3	4	5
b. Tanıdığım herkes kadar sağlıklıyım	1	2	3	4	5
c. Sağlığımın kötüleşmesini bekliyorum	1	2	3	4	5
d. Sağlığım mükemmel	1	2	3	4	5

7.7. Appendix 7. Informed Written Consent

ONAY FORMU

Çalışmaya Katılım Onayı:

Yukarıda yer alan ve araştırmadan önce katılımcıya/gönüllüye verilmesi gereken bilgileri okudum ve katılmam istenen çalışmanın kapsamını ve amacını, gönüllü olarak üzerime düşen sorumlulukları tamamen anladım. Çalışma hakkında yazılı ve sözlü açıklama aşağıda adı belirtilen araştırmacı tarafından yapıldı, soru sorma ve tartışma imkanı buldum ve tatmin edici yanıtlar aldım. Bana, çalışmanın muhtemel riskleri ve faydaları sözlü olarak da anlatıldı. Bu çalışmayı istediğim zaman ve herhangi bir neden belirtmek zorunda kalmadan bırakabileceğimi ve bıraktığım takdirde herhangi bir olumsuzluk ile karşılaşmayacağımı anladım.

Bu koşullarda söz konusu araştırmaya kendi isteğimle, hiçbir baskı ve zorlama olmaksızın katılmayı ve yapılacak olan değerlendirme uygulamalarını kabul ediyorum.

Katılımcının (kendi el yazısı ile)

Adı-Soyadı:

İmzası:

Araştırmacının

Adı-Soyadı: Fzt.Gizem TÜRKŞEN

Telefon numarası:

Mail:

Danışmanın

Adı-Soyadı: Prof. Dr. Rasmi MUAMMER

Telefon numarası:

Mail:

7.8. Appendix 8. Ethical Approval



T.C.
MARMARA ÜNİVERSİTESİ
Sağlık Bilimleri Fakültesi
Girişimsel Olmayan Klinik Çalışmalar Etik Kurulu

PROJENİN ADI : "Fibromiyaljili Hastalarda Konnektif Doku Masajı ve Bantlamanın Ağrı, Depresyon ve Yaşam Kalitesi Üzerine Etkilerinin Karşılaştırılması"
PROJENİN YÜRÜTÜCÜSÜ : Prof. Dr. Rasmi MUAMMER
PROJEDEKİ ARAŞTIRICILAR : Gizem TÜRKŞEN
ONAY TARİHİ VE SAYISI : 30.12.2021/123

Sayın: Prof. Dr. Rasmi MUAMMER

"123" protokol numaralı "Fibromiyaljili Hastalarda Konnektif Doku Masajı ve Bantlamanın Ağrı, Depresyon ve Yaşam Kalitesi Üzerine Etkilerinin Karşılaştırılması" isimli projeniz Fakültemiz Etik Kurulu tarafından incelenmiş oy birliği ile etik yönden uygun olduğuna karar verilmiştir.



Marmara Üniversitesi Sağlık
Bilimleri Fakültesi 34854
Başıbüyük/Maltepe
İSTANBUL

0 (216) 399 62 42 (faks)
0 (216) 777 57 86
Ayrıntılı bilgi için
Melek KARADAĞ
AKYOL

sbfetikkurul@gmail.com
<http://sbf.marmara.edu.tr>