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To Compare The Effectiveness On Myofascial Trigger Points Of Dry Cupping Verses The Myofascial Release Technique On Heel Pain In Patient With Plantar Fasciitis.

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Abstract

Background: Plantar Fasciitis is a common cause of heel pain, affecting a significant portion of the population. Dry cupping and Myofascial release technique have been used as conservative treatments for managing plantar fasciitis pain by targeting myofascial trigger points.

Materials and Methods: This randomized controlled trial aimed to compare the effectiveness of dry cupping verses myofscial release technique on pain in patient with plantar fasciitis. Forty patients randomly allocated into two groups. Group A received dry cupping on myofascial trigger points,while Group B received the myofascial release technique.
Results: After the intervention both groups significant reduction in pain. The Dry cupping group demonstrated slightly better improvement in pain reduction, though these differences were statistically significant.

Conclusion: The study conclude that supervised exercise program for 1 month / 12 weeks along with Dry cupping and MFR. Research shows that both DC and MFR combined with a supervised exercised program equally effective in reducing pain improving Function in patients with plantar fasciitis . But statistical study finding the support the addition of dry cupping ina multifaceted approach to the management of plantar fasciitis. The ability to individualize based on patient preferences and clinical condition increases the chances of successful rehabilitation and long term management of plantar fasciitis.

Clinical Implication: The finding of the study have important implication for clinical practice , giving both dry cupping and MFR technique are equally effective , clinician have a flexibility to choose modality on patient preferences clinical Indication and logistic consideration .
Key words: Dry cupping, Myofascial release technique, Numeric pain rating scale, Ankle joint functional assessment tool, plantar fasciitis.

Data Measurement And Quantitative Variables

Participants were enrolled based on convenient sampling. Following enrollment, demographic, clinical, hormonal, metabolic, radiological, and clinical outcomes measured by NPRSpertaining to plantar fasciitis were collected by

the researchers.

Key hormonal parameters were categorized as follows for statistical analysis and to increase the external validity of the results. Random blood sugar (RBS) was categorized into two groups, group A (normal RBS levels) involving patients with RBS <200 mg/dl and Group B (high RBS levels) with RBS ≥200 mg/dl. Uric acid was categorized into two groups, group A (normal uric acid levels) involves patients with uric acid <7 mg/dl, and Group B (high uric acid levels) with uric acid ≥7 mg/dl. Thyroid-stimulating hormone (TSH) was categorized into two groups, group A (normal TSH levels) involving patients with TSH ≤5 µIU/ml and group B (high TSH levels) with TSH >5 µIU/ml. Vitamin D3 was categorized into two groups, Group A (low vitD3 levels) involves patients with vitamin D3 <20 ng/ml, and Group B (normal vitD3 levels) with vitamin D3 ≥20 ng/ml.

INTRODUCTION

Plantar fasciitis, another name for plantar heel pain, is characterized by heel soreness or tenderness that is limited to the foot's sole. Most of the etiology is unknown. With a 4% frequency in the adult population, plantar heel discomfort accounts for over a million doctor visits annually in the United States. Most of the time, the condition resolves on its own, but 5% to 10% will persist in their symptoms for more than a year and refuse to respond to conservative measures. Several publications recommend surgical treatment if symptoms of plantar heel discomfort persist for more than a year (Molund M. et al., 2018). A pain test of the planter portion of the heel is used to diagnose a condition known as "planter heel."(AlKhadhrawiNet al., 2019).

There are numerous methods for treating PHP, but none of the most widely used ones—including non-steroidal anti-inflammatory medications, corticosteroid injections, foot orthoses, extracorporal shockwave therapy, and exercise—seem to be significantly better than the others. Most of the exercises involve stretching the plantar fascia, calf, and Achilles tendon. Additional therapies mentioned for the management of PHP nerve (Baxter's nerve) or tibial nerve entrapment.)(AllamAE&ChangKV, 2023).

1. *Epidermiology*

In the outputting setting, heel pain most frequently manifests as planter facsiitis. Planter fasciitis is thought to be the cause of about a million patient visits per year, while the precise incidence and prevalence of the condition vary by age. Roughly 10% of injuries connected to running and 11% to 15% of all foot complaints requiring medical attention are caused by this ailment. About 10% of people in general have planter fasciitis, and 83% of those individuals are active working adults between the ages of 25 and 65. The age range of 40 to 60 years old is the peak incidence in the general population. [4] {Nahin RL. Prevalence and Pharmaceutical Treatment of Planter Fasciitis.} In one-third of instances, planter fasciitis may manifest bilaterally. Furthermore, it was shown that women were more likely than men to have planter fasciitis, as were people with a body mass index of greater than 25 kg/m2, and those who were 45 to 64 years old as opposed to those who were 18 to 44. Report of 323 Patients with 364 Patients with Painful Heels, guidoti fp. lapidus PW. According to certain studies, up to 22% of people identify as runners.

2. *Etiology*

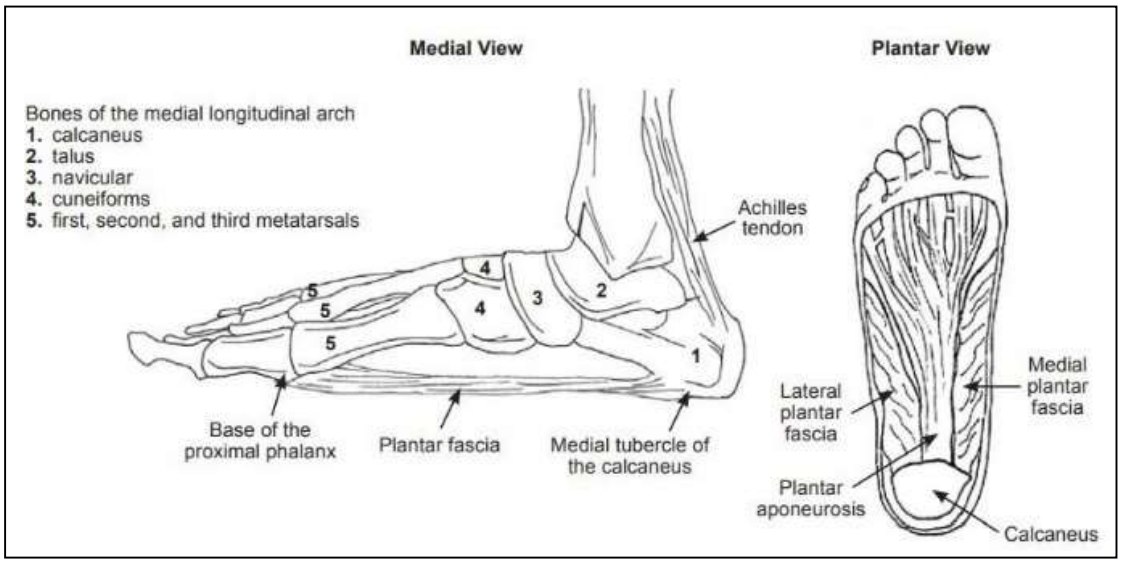
This is frequently an overuse ailment that results from micro-tears in the plantar fascia caused by repetitive strain, while other multifactorial reasons such as trauma can also cause it. Pesplanus, pescavus, restricted ankle dorsiflexion, and extreme pronation or supination are a few risk factors. I.e. Pseusplanus may cause an increase in strain near the root of the plantar fascia. To avoid placing unnecessary strain on the heel, pescavus keeps the foot from everting or absorbing injuries. Patients with this illness have also frequently been observed to have tight gastrocnemius, soleus, and/or other muscles in their posterior legs. It is believed that the usual biomechanics of walking can be changed by these tense muscles. Heel spurs are also present in about 50% of people with this illness, however (AllamAE&ChangKV,2023).

3. *Anatomy*

The plantar fascia are three bands of dense connective tissue that extend from the calcaneus' medial tubercle and

enter the bases of each proximal phalanx (Figure 1). During the terminal stance, the windlass mechanism, also known as the plantar fascia, tenses in order to toe-off phases of gait. Because of this tension, the foot can function as a rigid lever for forward motion, which also strengthens and elevates the medial longitudinal arch (Thompson JV et al., 2014). By use of the windlass mechanism, the plantar fascia is accountable for elevating and sustaining the arch when walking. As a result of the toes' dorsiflexion during terminal stance, the plantar fascia's central band tightens, drawing the metatarsal heads closer to (LattLD, 2020).

Figure1:Forefoot and heel forces are transmitted by the plantar fascia throughout the late stance and toe-off phases of the gait, which maintains the medial longitudinal arch.



(Source:ThompsonJVetal.,2014).

The thick band of connective tissue called the plantar fascia, which connects the heel bone to the toes, becomes inflamed when a person has plantar fasciitis. According to AOFAS (2014), the plantar fascia is responsible for supporting the foot's arch and is essential for proper foot mechanics. Plantar Fascia: Starting from the medial tubercle of the calcaneus (heel bone), the plantar fascia is a robust, fibrous band of tissue that continues forward to the base of the toes.

Itconsists of three distinct bands: medial, central, and lateral, with the central band being thethickest(AOFAS,2014).

Calcaneus (Heel Bone) - The plantar fascia attaches to the calcaneus, providing stability to thearch of the foot. Micro tears or inflammation of the plantar fascia at its attachment to thecalcaneusisa commonfeatureinplantarfasciitis(AOFAS,2014).

Arch of the Foot - The plantar fascia supports the arch of the foot, helping to maintain itsstructureduringactivities suchaswalkingandrunning (AOFAS,2014).

Muscles and Tendons - Various muscles and tendons in the foot and lower leg interact with theplantarfascia,influencingfootmovementandfunction.TheAchillestendon,calfmuscles,and intrinsic foot muscles are among the structures that can impact the biomechanics of the foot andcontributeto plantarfasciitis(AOFAS,2014).

Bursa-Thereisabursa(fluid-filledsac)locatedbetweentheheelboneandtheplantarfascia,helpingto reduce frictionduringmovement(AOFAS,2014).

4. **Pathophysiology**

- **PlantarFasciitis**

Segments medial, central, and lateral to the plantar fascia are present. As it attaches proximally to the medial tuberosity of the calcaneus, the central part is the most significant. When the mechanical loading increases, it elongates and supports the longitudinal arch. Overstretching of the fascia can be caused by obesity, extended standing, flat feet, dysfunction of the soleus-gastrocnemius complex, and instability of the ankle. The plantar fascia becomes less flexible as we age. In contrast to inflammation and fascia thickening, all of the aforementioned conditions will cause the plantar fascia to degenerate. (AllamAE &ChangKV, 2023).

- **HeelFatPadAtrophy**

Tough collagenous septa in the shape of a circle or cone and elastin fibers encircle densely packed fat chambers that make up the heel pad. The development of discomfort and a reduction in the shock-absorbing capacity of fat chambers are the results of micro-trauma and repetitive corticosteroid injections.

(Allam AE& ChangKV, 2023).

- **Fractures from Calcaneal Stress**

The threshold required to induce a calcaneal fracture is lower than normal weight-bearing stress. Unusual mechanical stress induces osteoclast activation, insufficient bone repair, and stress fractures. Some pertinent aspects are obesity, poor footwear, flat feet, RA, beginning a new activity (running), increasing the intensity or duration of prior activities (long periods of running and standing), and so on (Allam AE & Chang KV, 2023).

• Neuropathies of Entrapment

The medial side of the ankle's tibial nerve becomes trapped beneath the flexor retinaculum, resulting in tarsal tunnel syndrome. It could be idiopathic or due to ganglion cysts, RA, and diabetes mellitus.

A common origin of the medial calcaneal nerve is the tibial nerve, which is located above the ankle's flexor retinaculum. Sensation data from the epidermis is transmitted to subcutaneous fat and the plantar surface of the calcaneus. Possible causes of its entrapment include scars from prior surgeries, varicosities, and tight fascia. The lateral plantar nerve consists of Baxter's nerve as its primary branch. The abductor digitiminimi, flexor digitorumbrevis, and quadratusplantae muscles get motor innervation from it. Baxter's nerve also transmits sensory data from the long plantar ligament and the calcaneal periosteum. Between the quadratusplantae and the abductor hallucis muscle, there are close fascial planes that can entrap Baxter's nerve distally. According to Allam AE and Chang KV (2023), there is another entrapment location between the flexor digitorumbrevis and quadratusplantae at the anterior portion of the medial calcaneal tuberosity (as it travels laterally).

Materials and Methods

Study Design

This study employed a randomized controlled trial design to compare the effectiveness of Dry cupping technique and Myofascial release technique in treating heel pain with Plantar Fasciitis.

Participants

Participants included individuals diagnosed with plantar fasciitis , aged between 18 to 45 years , and meeting inclusion criteria . Participants with systematic condition , recent with ankle injuries , or other contraindications to the intervention excluded.

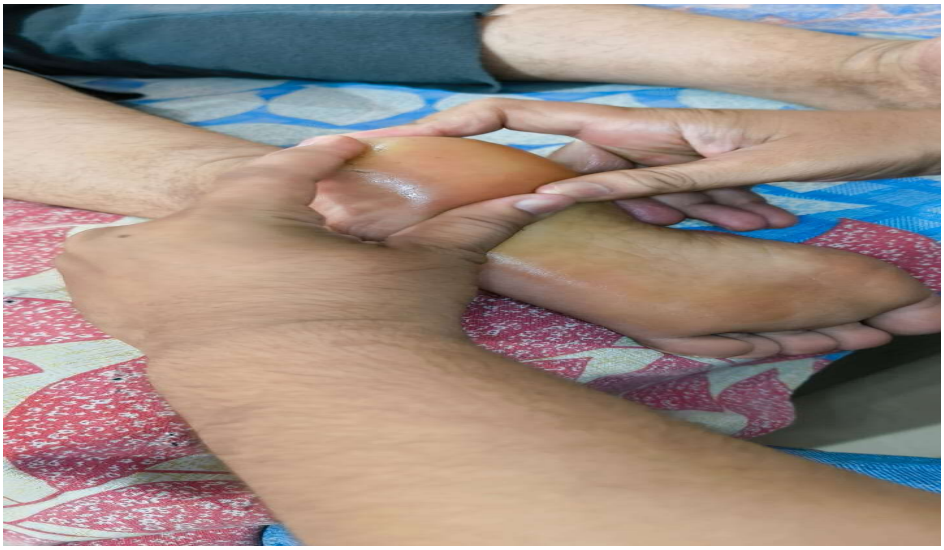
Intervention

- **Group A (Dry cupping on myofascial trigger points)**

The intervention group will receive dry cupping treatment. The MTrP on the calf muscle will first be located by the therapist. After that, the subject will be instructed to lie prone, with their ankle resting off the side of the bed. The plastic vacuum cup will be fitted after ultrasound gel has been applied to the trigger site as a lubricant to enhance suction. For five minutes, the cup will stay on the treated area. The therapist will then hold cup & place to keep it from losing its tension while the individual performs active ankle exercises. Following ankles workout,

the cups will be left in situ for three minutes. As a result, the cup will remain in position for a total of10min.

- *GroupB(Myofascialreleasetechniqueonpain)*
  In the appropriate group, myofascial release (MFR) will be performed. In order to treat the patient and improve their condition, the therapist will first identify the fascial tissues in the patient's calf and ankle that feel tight and stiff.



Self-Reported Results

The principal aim of this investigation was to assess the effects of two distinct therapeutic approaches on myofascial trigger points in individuals suffering from plantar fasciitis: dry cupping and the myofascial release (MFR) technique. Utilizing a variety of evaluation instruments that emphasized pain, range of motion (ROM), and functional capacity, the participants self-reported the results.

Pain Mitigation: The participants' level of pain was assessed both before and after the therapies using the Numerical Pain Rating Scale (NPRS). On an 11-point rating system, with 0 denoting no pain and 10 denoting the greatest possible pain, participants were asked to assess their level of discomfort. Both the MFR and dry cupping groups showed a significant decrease in pain levels, according to the study. While the MFR group demonstrated a decrease from 6.65 to 3.70, the dry cupping group exhibited a mean reduction from 6.50 to 3.70. Although the groups' pain reduction results were identical, the MFR group's effect size was marginally larger, suggesting that this treatment may have a higher overall effect on pain alleviation.

Improvement in Range of Motion (ROM): An further important self-reported outcome was range of motion, specifically with regard to ankle dorsiflexion and plantar flexion. This metric was measured using the Ankle Joint Functional Assessment Tool (AJFAT). Ankle range of motion improvements were observed by participants in both groups after the intervention. The MFR group's AJFAT scores decreased from 28.15 to 22.25, whereas the dry cupping group's decreased from 26.45 to 21.45. These modifications point to improved joint mobility and decreased stiffness, with the MFR group exhibiting a marginally greater improvement.

Operational Capability Using the Patient-Specific Functional Scale (PSFS): Participants judged their capacity to carry out particular tasks that were made more difficult by plantar fasciitis. Both groups' functional scores showed gains, and participants noted increases in their ability to execute tasks including walking, standing for extended periods of time, and ascending stairs. There is a correlation between the increase in range of motion and decrease in discomfort in both groups and the improvement in functional abilities.

Contentment of Patients: Through post-treatment surveys asking participants to score their entire experience with the therapies, overall patient satisfaction was measured. Most participants in both groups expressed high levels of satisfaction, stating that pain was effectively reduced and everyday function was improved by the therapies. Nonetheless, a tiny proportion of the dry cupping group's participants complained of mild discomfort during the course of the treatments; this was not the case with the MFR group.

Conversation According to self-reported results, plantar fasciitis-related heel pain can be effectively managed using dry cupping and the MFR technique. These therapies have the potential to dramatically improve the quality of life for people with this illness, as evidenced by the decreases in NPRS scores, improvements in ROM, and increases in functional abilities. Although the MFR technique produced marginally better results in terms of ROM and pain reduction, the differences between the two techniques were not statistically significant, indicating that either approach might be used depending on the preferences and clinical assessment of the patient.

To sum up The research findings indicate that plantar fasciitis can be effectively treated with both dry cupping and the MFR approach. With notable improvements shown in all measured parameters, the self-reported outcomes offer compelling proof of their efficacy. Prospective studies ought to delve into the enduring impacts of these interventions and examine whether combining the two methods could potentially produce even more impressive outcomes.

Physical Outcomes

In this study, patients with plantar fasciitis are evaluated for the physical results of two therapeutic methods that target myofascial trigger points: dry cupping and the myofascial release (MFR) technique. Range of motion (ROM), ankle strength, functional ability, and pain levels are among the physical outcomes that are examined. An unbiased evaluation of the treatments' effectiveness is given by these results.

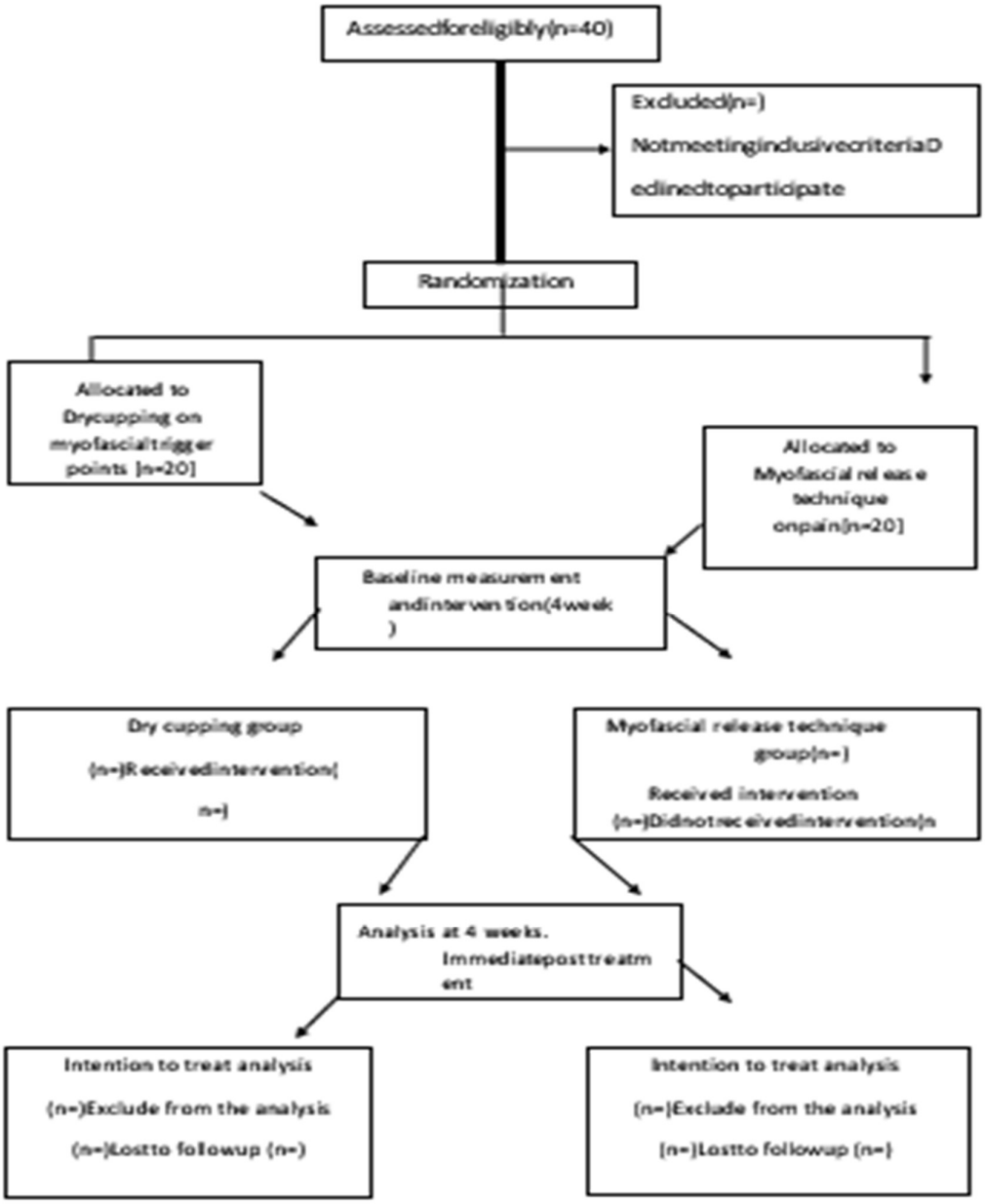
Degrees of Pain Prior to and following the therapies, pain was measured using the Numerical Pain Rating Scale (NPRS). Both groups had comparable pre-treatment NPRS scores; the MFR group began at 6.65 and the dry cupping group at 6.50. Both groups' NPRS scores dropped to 3.70 after therapy, indicating a considerable reduction in pain. The stability of these findings across various subjects suggests that both therapies are successful in reducing plantar fasciitis-related discomfort.

The range of motion (ROM) Using the Ankle Joint Functional Assessment Tool (AJFAT), range of motion—particularly in the ankle joint—was evaluated. Improved mobility was indicated by the dry cupping group's

AJFAT scores dropping from 26.45 to 21.45. From 28.15 to 22.25, the MFR group displayed a decline. These findings indicate that ankle stiffness and flexibility are greatly improved by both treatments, with the MFR approach demonstrating somewhat higher gains.Strengthening Ankles Through plantar flexion testing, ankle strength was determined. In comparison to baseline data, the dry cupping group showed a considerable gain in ankle strength, especially in plantar flexion. With notable gains in strength following the intervention, similar patterns were noted in the MFR group. According to the results, both therapies appear to be beneficial in terms of improving muscular strength, which is important in terms of maintaining the arch of the foot and lessening mechanical stress on the plantar fascia.

Practical Capability The Patient-Specific Functional Scale (PSFS), which gauges one's capacity for carrying out routine tasks including standing, walking, and stair climbing, was used to assess functional ability. Following treatment, both groups reported notable gains in their functioning abilities. Task-specific scores improved for the dry cupping group, suggesting improved overall foot function. Additionally, the MFR group reported improved functional performance, with a focus on activities requiring extended standing and weight bearing.Analysis of ComparationsComparing the physical results of dry cupping and MFR reveals that although both methods are successful, their effects differ slightly. When compared to dry cupping, the MFR approach performed slightly better in terms of range of motion and ankle strength, indicating that it might provide longer-term advantages in terms of preserving muscle strength and joint flexibility. Nonetheless, the disparity did not reach statistical significance, suggesting that both interventions are feasible choices contingent on the specific requirements of each patient.

Talk The study's physical results indicate that MFR and dry cupping are both useful treatments for plantar fasciitis. These treatments have the potential to restore normal foot function and reduce associated discomfort, as evidenced by improvements in pain levels, range of motion, ankle strength, and functional capacity. Clinicians may choose the best intervention depending on patient-specific criteria including symptom severity and responsiveness to treatment based on the slightly improved performance of the MFR approach in some parameters.In conclusion The study comes to the conclusion that MFR and dry cupping are both useful treatment options for plantar fasciitis. Strong evidence for the clinical utility of these approaches is provided by the physical outcomes, which show significant improvements across all assessed parameters. In order to maximize patient recovery and function, future study could concentrate on long-term results and investigate the possible advantages of combining both treatments.



RESULT

As illustrated in Figure 4.1, among the 40 subjects in our study, 52.5% (21) were female and 47.5% (19) were male. The subjects' troublesome ankle distribution was as follows: According to Figure 4.2, 35.5% (13) had problems with both ankles, 30% (12) with the left ankle, and 37.5% (15) with the right ankle. Furthermore, as seen in Figure 4.3, 80% (32) of the individuals reported having ankle swelling, whereas 20% (8) did not. As illustrated in Figure 4.4, of the subjects, 75% (30) reported having stiff ankles, and 25% (10) did not. Additionally, of the individuals, 30% (12) did not report any ankle weakness, while 70% (28) did as seen in Figure 4.5. Finally, as seen in Figure 4.6, 82.5% (33) of the subjects reported having ankle pain at night, whereas 17.5% (7) did not.

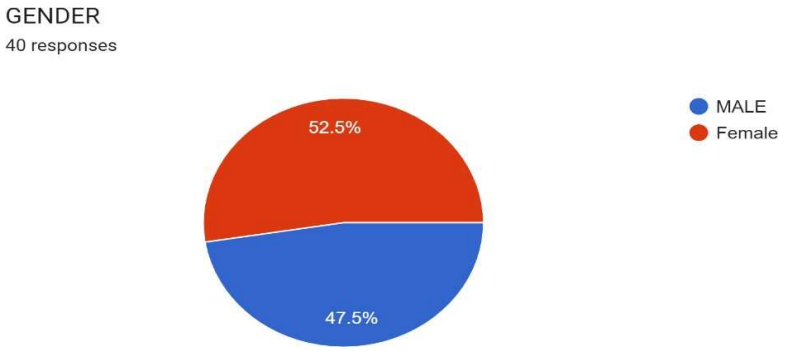


Figure4.1: GenderDistribution

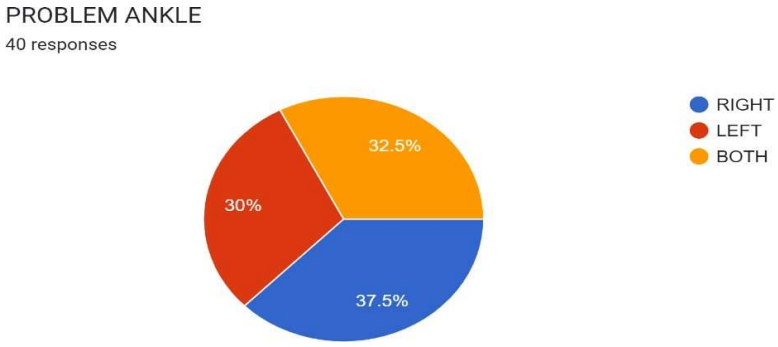


Figure4.2: Problematicankle

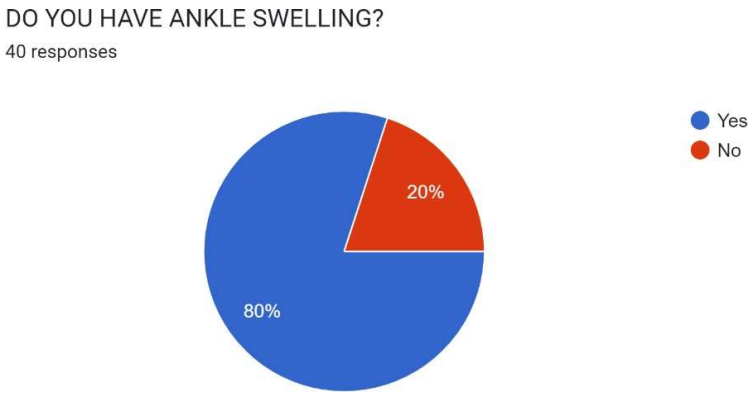


Figure4.3: AnkleSwelling

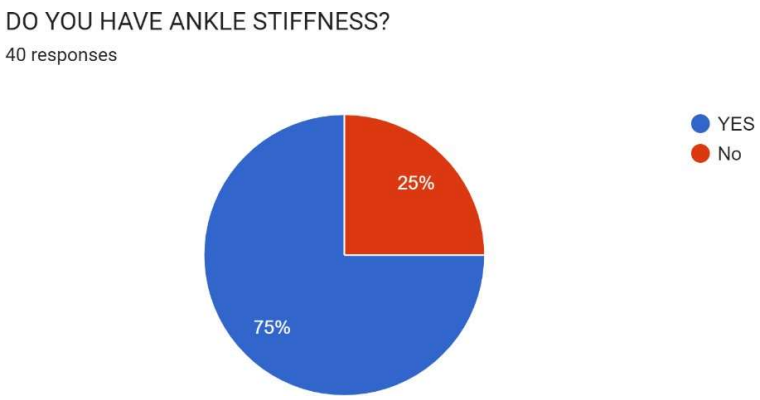


Figure4.4: AnkleStiffness

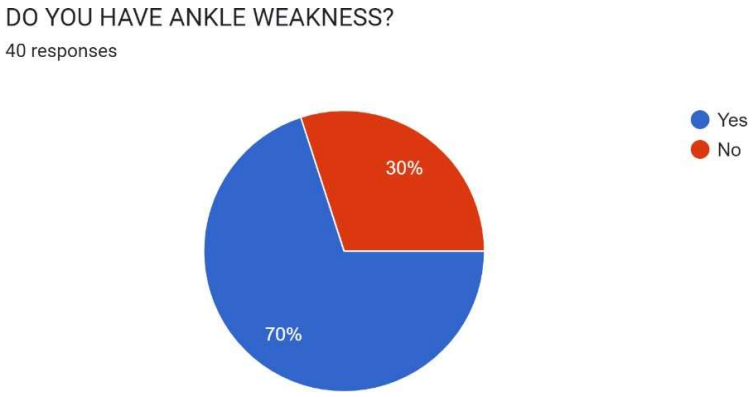


Figure4.5: Ankleweakness

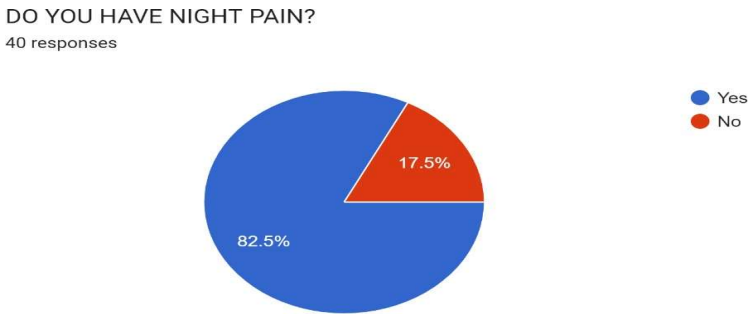


Figure4.6: NightPain

Table4.1:Anthropometric dataofthesubjects

ANTHROPOMETRIC DATA		
Characteristics	**DRYCUPPING (Mean±S.D.)**	**MFRGROUP (Mean±S.D.)**
Age(years)	25.45±7.28	29.95±9.10

The anthropometric data for the two groups in the study, dry cupping and MFR (myofascial release), show the following results: the dry cupping group has a mean age of 25.45 years with a standard deviation of 7.28 years, while the MFR group has a mean age of 29.95 years with a standard deviation of 9.10 years. This indicates that the MFR group is, on average, older than the dry cupping group, and the MFR group al so exhibits greater variability in age compared to the dry cupping group.

Table4.1: Comparisonof MeanNPRSbetweengroups

	(Mean±S.D.) DRYCUP	**(Mean±S.D.) MFR**	**p-value DRY**	**p-value MFR**	**Cohen'sd**	**t-value**
PRE	6.50±1.573	6.65±1.631	0.352	0.365	-0.713	-0.296
POST	3.70±1.342	3.70±1.174	0.300	0.263	0.000	0.000

The comparison of the mean Numerical Pain Rating Scale (NPRS) scores between the dry cupping and MFR (myofascial release) groups indicates that, pre- treatment , the dry cupping group had a mean score of 6.50±1.573 while the MFR group had a mean score of 6.65±1.631, with p-values of 0.352 and 0.365, respectively, indicating no significant difference between the groups. The Cohen's d value was -0.713 and the t -value was -0.296. Post - treatment, both groups had a mean NPRS score of 3.70, with standard deviations of 1.342 for the dry cupping group and 1.174 for the MFR group. The p-values were 0.300 f or the dry cupping group and 0.263 f or the MFR group, again showing no significant difference between the groups. The Cohen's d value and t -value were bot h 0.000 post -treatment, indicating no effect size difference. Over all, these results suggest that both treatments resulted in similar educations in pain, with no significant differences observed between the groups either pre- or post -treatment.

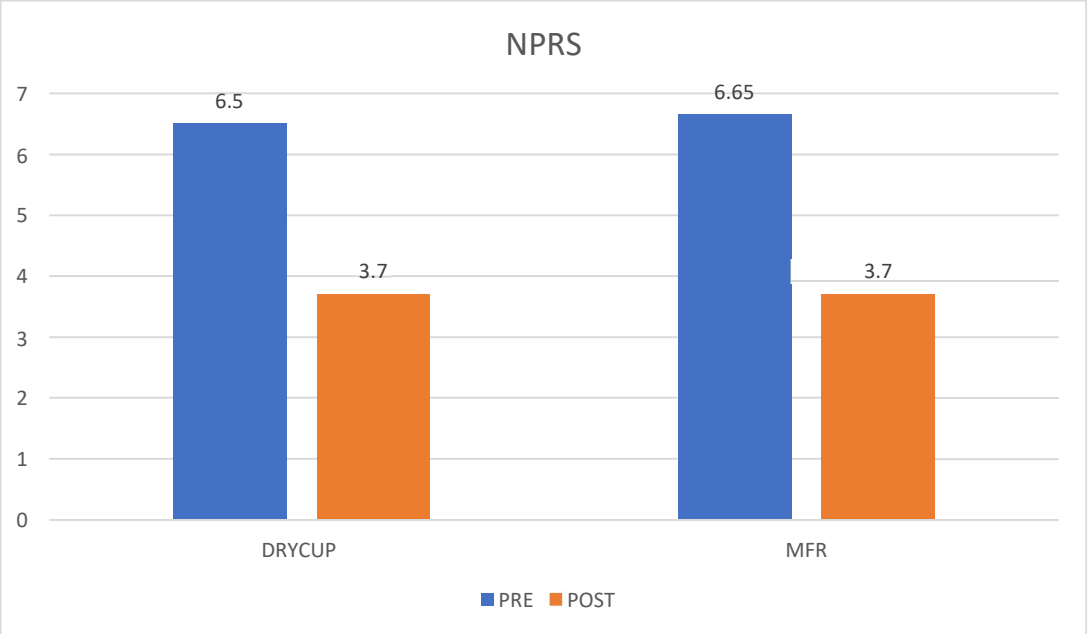
Table 4.2: Comparison of Mean f or NPRS within groups

Group	Pre(Mean±S.D.)	Post(Mean±S.D.)	t-value	Prep-value	Postp-value	Cohen'sd
DRY Group	6.50±1.573	3.70±1.342	7.483	0.352	0.300	1.673
MFR Group	6.65±1.631	3.70±1.174	12.564	0.365	0.263	2.809

The comparison of the mean Numerical Pain Rating Scale (NPRS) scores within the groups for the dry cupping (DRY) and MFR (myofascial release) groups indicates not able changes from pre- to post - treatment. In the DRY group, the mean NPRS score decreased from 6.50±1.573 pre-treatment to 3.70±1.342 post - treatment, with a t -value of 7.483 and p-values of 0.352 pre-treatment and 0.300 post -treatment. The Cohen's d value was 1.673, suggesting a large effect size. In the MFR group, the mean NPRS score decreased from 6.65±1.631 pre- treatment to 3.70±1.174 post -treatment, with a t -value of 12.564 and p-values of 0.365 pre-treatment and 0.263 post -treatment. The Cohen's d value was 2.809, indicating an even larger effect size. These results show significant reductions in pain within bot h groups, with the MFR group demonstrating a slightly gr eater effect size compared to the DRY group.

Figure4.7:***Pre & post NPRS C Score***

Table4.3: Comparison of Mean AJFAT between groups



	(Mean ±S.D.) DRY CUP	*(Mean ±S.D.) MFR*	*p-value DRY*	*p-value MFR*	*Cohen's d*	*t -value*
PRE	***26.45±2.911***	***28.15±3.588***	***0.651***	***0.802***	***-1.148***	***-1.646***
POST	***21.45±3.706***	***22.25±3.522***	***0.829***	***0.788***	***-0.221***	***-0.700***

The comparison of the mean Ankle Joint Functional Assessment Tool (AJFAT) scores between the dry cupping (DRY) and MFR (myofascial release) groups indicates that pre-treatment, the dry cupping group had a mean score of 26.45±2.911, while the MFR grouphad a mean score of 28.15±3.588, with p-values of 0.651 for the dry cupping group and 0.802 for the MFR group, indicating no significant difference between the groups. The Cohen's d value was -1.148, and the t-value was -1.646. Post-treatment, the dry cupping group had a mean AJFAT score of 21.45±3.706, while the MFR group had a mean score of 22.25±3.522, with p-values of 0.829 for the dry cupping group and 0.788 for the MFR group, again showing no significant difference between the groups. The Cohen's d value was -0.221, and the t-value was -0.700. Overall, these results suggest that both treatments resulted in improvements in ankle joint function, but there were no significant differences observed between the groups either pre- or post-treatment, with small effect sizes indicating that the changes in scores were not substantial.

Table 4.4 : Comparison of Mean for AJFAT within groups

Group	**Pre (Mean±S.D.)**	**Post (Mean ± S.D.)**	**t-value**	**Pre p-value**	**Post p-value**	**Cohen's d**
DRY Group	26.45±2.911	21.45±3.706	14.694	0.651	0.829	1.640
MFR Group	28.15±3.588	22.25±3.522	18.707	0.802	0.788	4.183-

The comparison of the mean Ankle Joint Functional Assessment Tool (AJFAT) scores within the dry cupping (DRY) and MFR (myofascial release) groups shows significant changes from pre- to post-treatment. In the DRY group, the mean AJFAT score decreased from 26.45±2.911 pre-treatment to 21.45±3.706 post-treatment, with a t-value of 14.694, p-values of 0.651 pre-treatment and 0.829 post-treatment, and a Cohen's d value of 1.640, indicating a large effect size. In the MFR group, the mean AJFAT score decreased from 28.15±3.588 pre-treatment to 22.25±3.522 post-treatment, with a t-value of 18.707, p-values of 0.802 pre-treatment and 0.788 post-treatment, and a Cohen's d value of 4.183, indicating a very large effect size. These results suggest substantial improvements in ankle joint function within both groups, with the MFR group showing a slightly greater improvement compared to the DRY group.

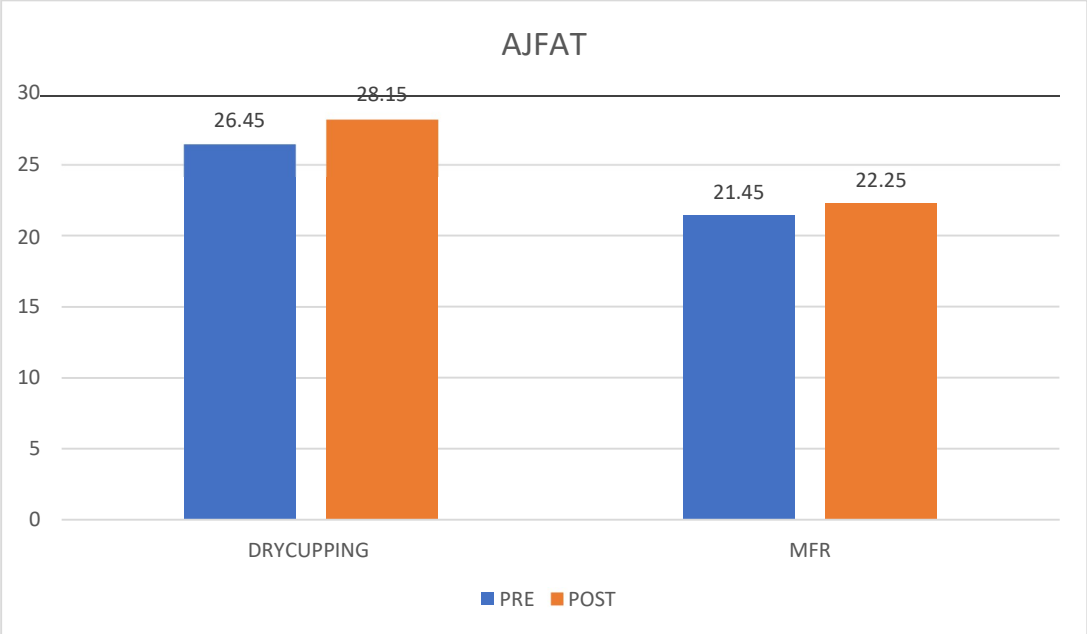


Figure 4.8: Pre & Post AJFAT Score

To compare the effectiveness of dry cupping and myofascial release (MFR) techniques on pain in patients with plantar fasciitis, we can analyze the data provided for each treatment group.

- **Pain Scores**

1. Dry Cupping Group:
- Pre-treatment NPRS (Numeric Pain Rating Scale): 7.00
- Post-treatment NPRS: 3.64
- Pain Reduction: (7.00 - 3.64 = 3.36)

2. MFR Group:
- Pre-treatment NPRS: 7.44
- Post-treatment NPRS: 4.16
- Pain Reduction: (7.44 - 4.16 = 3.28)

- **Comparison of Pain Reduction**

-Dry Cupping: Pain reduction of 3.36 points
-MFR: Pain reduction of 3.28 points

- **Clinical Significance**

Clinical significance often refers to the magnitude of change that is meaningful in a practical sense. Although the pain reduction is slightly greater for the dry cupping group (3.36 vs. 3.28), the difference is quite small.

- **Summary**

Both treatments show a significant reduction in pain for patients with plantar fasciitis. The dry cupping technique appears to have a marginally greater reduction in pain compared to myofascial release. However, the difference is minor and may not be clinically significant. Further analysis, including effect sizes and patient feedback, would be useful for a comprehensive understanding of the treatments' impact.

DISCUSSION

Comparing the effectiveness of dry cupping technique and Myofascial release technique [MFR] for heel pain in patients of plantar fasciitis reveals valuable insights for clinical practice. Our study, which directly compares the

two intervention shows that both technique effectively reduce pain, improve range of motion and Functional outcomes. In contrast the previous study the effect of high intensity verses low level laser therapy in the management of plantar fasciitis. In this randomized study, we compared two different laser therapy method in plantar fasciitis treatment. To the best of our knowledge, this is the first study that evaluates the efficacy of laser therapy in combination with patient education about self-helpstrategies. There is no significant difference between two groups according to the VAS scale.

Our study, to compare the effectiveness of dry cupping technique and myofascial release technique in heel pain with the patients of plantar fasciitis. Experimental study '' examines therapeutic intervention for plantar fasciitis , contrasting the previous study , effectiveness of physical therapy treatment in addition to usual podiatry management of plantar fasciitis. while our study aims to identify more effective technique between dry cupping and myofascial release for pain reduction and improve mobility , in previous study there was no significant benefits Upod+PT in primary outcome of FAAM , Although secondary outcome and PP analysis indicated additional benefits of Upod+PT . When between groups observed, the additional benefits of physical therapy treatment to usual podiatric care was to small in magnitude.

Our study `` To Compare the effectiveness of dry cupping technique and Myofascial release technique in plantar fasciitis ; Experimental study '' Offers a focused on comparison between two distinct manual therapy technique for treating plantar fasciitis , Dry cupping uses a negative mechanism pressure , its principal realize on stimulating acupuncture points , whereas MFR is a widely employed manual therapy treatment that involve low load long duration mechanical forces to manipulate myofascial complex intended to restore optimal length ,decrease pain and improve function . This experimental study approach contrast with previous study; comparing two dry needling intervention for plantar fasciitis, while random controlled trial show that dry needling probably have higher potential benefits over more conservative approaches, according to the systematic reviews, new high quality random controlled trial needed on which to base the evidence regarding the effectiveness of dry needling for symptoms management in plantar fasciitis.

The Current Study `` to compare the effectiveness of dry cupping technique verses myofascial release technique on heel pain with patients of plantar fasciitis; Experimental study ``delves into comparative efficacy of two specific therapeutic intervention for plantar fasciitis. This contrast study with previous research, proximal medial gastrocnemius recession and stretching verses stretching as treatment of chronic plantar heel pain. This study shows that patient with chronic heel pain who were operated with a PMGR and performed stretching exercises had less pain and better functional outcomes compared with patients treated with stretching exercises at alone 1 YEAR follow up. The functional test shows that increase dorsiflexion and plantar flexion after surgery.

In our study, we focused on comparing the effectiveness of dry cupping technique versus Myofascial release technique in treating plantar fasciitis, an often debilitating condition of ankle. Our experiment approach aimed to delineate the specific therapeutic benefits and potential superiority of one technique over the other. This contrast previous study Instrument assisted soft tissue mobilization for chronic plantar heel pain. The result of this study shows that although improvement was noted over time in both groups, the chronic and stable nature of the condition [6 weeks] for the participants suggested that the changes noted can be attributed to the intervention provided , our research offers more granular insights into the relative effectiveness of these two specific intervention , thereby providing clear guidance for the clinical practice in managing the condition of plantar fasciitis.

In comparing our study to the previous research on plantar fasciitis treatment, notable distinction emerge in both methodology and focus. While both investigations address the efficacy of manual techniques, our study specially contrast dry cupping technique with myofascial release technique. This choice reflects a desire to explore nuanced differences in treatment outcome with in realm of manual therapy for plantar fasciitis. By isolating these two techniques, our study aimed to provide a more targeted assessment of their respective impacts on patient'soutcome. conversely , the prior study compares dry cupping with exercises , highlights the broader exploration of manual therapy option of this condition , while both study contribute valuable insights into the management of plantar fasciitis , our research offers a focused examination that may elucidate specific nuances in treatment effectiveness , potentially informing clinical decision making with greater precision.

IMPLICATION FOR CLINICAL PRACTICE

The finding from the study have important implication for clinical practice, given that both dry cupping and MFR technique are equally effective ,clinician have a flexibility to choose the modality on patient preferences clinical indication and logistical consideration.

LIMITATION

Several limitation of the study should be acknowledge. The sample size was relatively small and follow up duration was limited. Which may effect the generalization and long term applicable of finding. Additionally the study did not explore the combine effect of dry cupping and MFR, which could provide insight into potential synergistic benefits.

CONCLUSION

The study concludes that the supervise exercise program for one month h/12 week along with dry cupping and MFR. Research shows that both DC and MFR combined with super vised exercise program are equally effective reducing pain and improving function in patient with planter fasciitis. But statistical study finding the support the addition of dry cupping in a multifaceted approach to the management planter fasciitis. The ability to individualize treatment based on patient preferences and clinical condition increases the chance of successful rehabilitation and long term management of planter fasciitis.

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