

Examination concerning the impact of Cupping Therapy as a treatment for Anterior Knee Pain and its possible job in Health Promotion

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Abstract

Objective: To research the impact of Cupping Therapy at a patho-physiological level for foremost knee agony and its effect on Quality of life and prosperity. **Method:** Trial overview using clinical preliminary and a survey. A multi week follow-up was led to decide longer term remainder of treatment impacts using both target and emotional appraisal. This strategy empowers the analyst to inspect how much the autonomous variable makes members change (Dane, 1990). **Result:** There was measurably importance contrast between the degree of agony, prosperity and Range of Motion for patients with front knee torment pre and post Cupping ($P < 0.05$). **Conclusions:** The viability of the treatment of Cupping Therapy for Anterior Knee Pain, prosperity and scope of movement has been investigated and results uncover enhancements in members because of Cupping Therapy. It is suggested that further investigations are led with bigger examination tests and of longer span.

Introduction:

Measuring is an antiquated strategy for treatment that has been utilized in the treatment and fix of a wide scope of conditions; blood maladies, for example, haemophilia and hypertension, rheumatic conditions running from joint pain, sciatica, back torment, headache, tension and general physical and mental prosperity. The point of Cupping is to separate blood that is accepted to be hurtful from the body which thusly frees the assemblage of likely damage from side effects prompting a decrease in prosperity.

History and Origin of Cupping Therapy:

Generally, Cupping Therapy has been rehearsed in many societies in some structure. In the UK the act of Cupping Therapy likewise goes back far with one of the main clinical diaries 'The Lancet' being named after this training. A lancet is a bit of careful hardware that was customarily used to deliver abundance blood for example phlebotomy and to prick bubbles. The Arabic name for Cupping Therapy is Al-Hejamah which intends to decrease in size for example to restore the body back to its characteristic state. The act of Al-Hejamah has been a piece of Middle-Eastern social practice for a large number of years with references going back to the hour of Hippocrates (400 BC). Of the western world, the first to grasp Cupping Therapy were the antiquated Egyptians, and the most seasoned recorded clinical reading material, Ebers Papyrus, written in around 1550 BC in Egypt makes reference to measuring (Curtis, 2005). Measuring Therapy can be separated into two general classes: Dry Cupping and Wet Cupping. Dry Cupping Therapy will in general be polished all the more usually in the Far-East though Wet Cupping is supported in the Middle East and Eastern Europe. With the end goal of this exploration Wet Cupping Therapy will be researched and the alluded to as Cupping Therapy.

Current use of Cupping Therapy:

Correlative and Alternative Medicine (CAM) is getting more well-known with the general population and picking up believability inside biomedical human services (Hill, 2003). Overviews show that roughly 33% of the UK's populace (Ernst, 1996) and marginally higher in the USA (Wootton and Sparber, 2001) have utilized CAM. Moreover, standard human services, while mentioning additional proof for CAM, are progressively keen on certain types of CAM (Hoffman, 2001).

Medical effects of Cupping Therapy:

As indicated by Hennawy (2004), Cupping Therapy is demonstrated for blood issues, help with discomfort, provocative conditions, mental and physical unwinding, varicose veins and profound tissue back rub and statements up to half improvement in fruitfulness levels.

The standards of Acupuncture and Acupressure are fundamentally the same as that of Wet Cupping Therapy, aside from the way that Wet Cupping includes the letting of blood though Acupuncture and Acupressure use pull and incitement of focuses to accomplish the ideal outcomes. Letting out blood is in truth among the most established of needle therapy methods (Dharmananda, 2004). It is conjectured that needle therapy began as a strategy for pricking bubbles of the skin, at that point extended to letting out "animosity" that was created by wounds or fevers lastly permitting imperceptible insidious spirits and unreasonable barometrical qi (most strikingly "wind") escape from the body (Unschuld, 1985). Focussing consideration back to the examination into Chinese recuperating customs, the revelation of Acupressure and Acupuncture absence of pain has demonstrated that they can inspire the arrival of morphine like substances (Endorphins), Serotonin or Cortisol which can eventually prompt relief from discomfort and change the physiological status of the individual (Schulte, 1996). Pressure point massage and Acupuncture in certainty are being used and demonstrated helpful in torment and addictive administration (Schulte, 1996; Hinze, 1988; Cadwell, 1998). At a natural level; Acupressure and Acupuncture work by invigorating or enacting (1) the insusceptible framework; (2) Enkephalin discharge; (3) synapse discharge (4) vasoconstriction and dilatation and (5) the entryways for torment in the CNS which decipher torment sensation (NIH Consensus Development Panel, 1998; Schulte, 1996). At long last, it is accepted that incitement of Acupoints can prompt the agony entryways to be overpowered by expanding recurrence of driving forces, in this way eventually prompting conclusion of the doors and thus torment decrease (Oumeish, 1998; Cadwell, 1998). As per the National Institute of Health (NIH) Consensus Development Panel (1997), needle therapy is likewise successful against chemotherapy queasiness and regurgitating, sickness in pregnancy, dental agony, aide treatment, enslavement, stroke restoration, cerebral pain, menstrual spasms, tennis elbow, fibromyalgia, low back torment, carpal passage disorder, asthma, etc (Lee, 2001). Given the relative minimal effort of CAM by and large, joining of treatments into standard social insurance conveyance will no uncertainty help the monetary and time trouble on our human services framework.

As Cupping Therapy has been proposed as a powerful treatment for torment and given the similitudes with Acupuncture and Acupressure hypothesis, it is conceivable to along these lines acknowledge the above instrument of organic activity for Cupping Therapy for torment decrease too.

Anterior Knee pain and cupping Therapy:

It is settled that knee wounds are the most well-known genuine injury during brandishing exercises (Johnson, 2005). The potential for Cupping Therapy to treat front knee torment and its related dismalness ought to be investigated as referenced before as the wellbeing and cost suggestions are without a doubt promising. It is suggested that Cupping Therapy nearby stable clinical and physiotherapy guidance for conditions, for example, Anterior Knee Pain will function admirably as examination has demonstrated that customary treatment of Anterior Knee Pain (AKP) with sound physiotherapy exhortation are powerful devices in decreasing degrees of AKP just as having benefits on singular prosperity (Clark et al., 2000).

Contraindication and precaution of treatment:

Measuring Therapy has no significant symptoms beside negligible distress because of the strategy for utilization of skin slices to the patient. In situations where the patient's agony limit is low, a neighborhood sedative can be regulated. Likewise other conceivable minor reactions that may happen is the inclination of slight tipsiness post Cupping Therapy, this again is like the sensation one feels in the wake of having had blood taken from the specialist, as Cupping Therapy urges blood stream to the measured district (hyperaemia), one may along these lines feel hotter and more sultry because of vasodilation occurring and slight perspiring may happen. Again this can be credited to sound logical method of reasoning and there is no reason for concern. Pregnant ladies or discharging ladies, malignant growth (metastatic) patients and patients with bone breaks or muscle fits are likewise accepted to be contra-shown. Likewise, Cupping Therapy can't be applied to a site of DVT, where there are ulcers, supply routes or places where a heartbeat can be felt (Chirali, 1999.).

Aim of the research:

- Assess the impact of Cupping Therapy on Anterior Knee Pain (AKP), Range of development and its effect on personal satisfaction and prosperity.

- Therapy has no impact on the view of knee torment, Range of development and prosperity.

Methodology and research Design:

The technique for this investigation was an exploratory overview using clinical preliminary and a poll philosophy. A multi week follow-up was led to decide longer term remainder of treatment impacts using both target and emotional evaluation. Estimations of subjects were taken pre-and post-test. The examination was planned after broad writing survey, conversation with measuring specialists, perception of the application methods, and conversation and correspondence with professionals and focuses associated with performing measuring (chiefly in the Middle East). From that point forward, the methodology for the utilization of measuring for this examination was established (see measuring application technique). An evaluation sheet (see reference section 1) was intended to incorporate patient data, at various times clinical history, imperative signs estimations (beat rate, circulatory strain and O₂ immersion rate for observing purposes as it were). All estimations and questions were performed by a similar scientist when measuring to improve legitimacy and unwavering quality. Outcome measures that were used were the Pain Visual Analogue Scale (Pain VAS), Well Being Visual Analogue Scale (Well Being VAS) and joint range of motion, both Active Range of Motion (AROM) and Passive Range of Motion (PROM). The independent variable in this study was the treatment of Cupping Therapy, which all participants received. The independent variables measured were Pain and Well-being VAS scales and Active and Passive Knee Ranges of Movement. The participants were also asked about their perception of cupping and general health and quality of life through a questionnaire. The questionnaire was designed carefully through integrating an array of generic qualitative approaches such as the World Health Organisation Quality of Life questionnaire (WHOQOL-100), EuroQol-5D (EQ-5D) and the 15D Health Related Quality of Life (15D); with the aim to develop a questionnaire specific to Cupping Therapy. Prior to the main study, the questionnaire was tested successfully in two pilot studies.

Population and sampling:

The objective populace for this examination was the overall population dominantly in the samastipur, Bihar local and as of now unaffiliated with any wellbeing trust utilizing comfort inspecting strategy. Subjects were selected using a scope of promoting procedures remembering publicizing for; nearby Media, Schools and universities.

Inclusion Criteria:

- Subjects with knee issues age between 20-80 years of age.
- Subjects who didn't get measuring to the knee district previously or to some other area of the body a half year before the investigation.

Excluding Criteria:

- Infants
- Subjects suffering from serious heart troubles or diseases that render the individual prone to bleeding.
- Pregnant women
- Cancer patients
- Subjects with bone fractures or muscle spasms at the knee region.

Instrumentation:

Basic Cupping therapy equipment was utilised including a hand suction pump, plastic cups of the same size and anti-septic tools.

Procedure:

Before beginning use of treatment, we guaranteed that:

- The subjects had agreed to the pre-measuring necessities (consideration models).
- Contra-signs were wiped out
- Equipment was cleaned

- Subjects were console/helped to remember minor symptoms
- Subjects' circulatory strain, beat rate and O₂ immersion rate were estimated in a sitting position, and afterward subjects were solicited to recognize the level from their torment utilizing visual simple scale in English (and furthermore an Arabic interpretation was accessible, see supplement 1). Essential signs were taken uniquely to screen subject general condition.
- Knee perceptions were directed for any variations from the norm and afterward the knee scope of movement was estimated from a prostrate lying position by a similar analyst.
- Subjects were met by a similar specialist.
- The measuring application was performed at the knee (horizontal to the quadriceps ligament) using a razor for sterility purposes and control of profundity and expansiveness of cuts. Cups were applied to the treatment area and the blood was painstakingly depleted multiple times. The measured district was overseen as indicated by fundamental injury the executives techniques (for example sterilizers and dressing application)
- All estimations (circulatory strain, beat rate and O₂ immersion rate, knee scope of movement just as the torment and prosperity scales) were rehashed by a similar analyst following measuring and afterward one, two and three weeks in the wake of measuring.

Data Analysis:

The information was investigated utilizing distinct examination as least, most extreme, mean, and Standard Deviation (SD). The matched example t-test was utilized to decide the contrast between subjects when measuring. The degree of centrality of this investigation was set at 5%. All information examination was performed utilizing Statistical Package for Social Sciences (SPSS) v.12 for Windows.

Result:

Reaction Rate

A sum of 26 volunteers agreed to participate in the examination. Four volunteers dropped out preceding the investigation initiating. Twenty two volunteers started the investigation; five volunteers didn't go to any subsequent arrangements consequently they were avoided from the examination and two volunteers couldn't go to the last two arrangements and the staying 15volunteers finished the examination giving an interest pace of 57.69% (n=15). The constitution of the twenty two volunteers that started the investigation was as per the following: male (n=20, 90.90%), female (n=2, 9.10%). All volunteers were over 18 years old.

The difference between Passive and Active Ranges of Movement, Pain and Well Being scores before and after Cupping Therapy

The table beneath shows there was an expansion in the mean both Active and Passive scopes of development, as a decrease in torment scores and an increment in prosperity. The Std. Deviation pre-Cupping for PROM was (M±SD) (142.64 ± 11.168), and three weeks post-measuring the Std. Deviation was (151.67 ± 5.96). Similarly for AROM the Std. Deviation pre-Cupping for AROM was (134.14 ± 16.53) and three weeks post-measuring the Std. Deviation was (147.24 ± 7.04). A comparative pattern can be seen for the torment and prosperity scores. The Std. Deviation pre-Cupping for Pain was (5.38 ± 2.8), and three weeks post-measuring the Std. Deviation was (1.29 ± 2.02). The Std. Deviation pre-Cupping for prosperity was (7.21 ± 1.65), and three weeks post-measuring the Std. Deviation was (8.29 ± 1.20).

| Measure | Mean | SD | Minimum | Maximum | N |
|---------------------------------------|--------|--------|---------|---------|----|
| Passive ROM before Cupping | 142.64 | 11.168 | 115.00 | 155.00 | 22 |
| Passive ROM immediately after Cupping | 148.45 | 7.60 | 130.00 | 155.00 | 22 |
| Passive ROM 1week after Cupping | 150.67 | 7.18 | 131.00 | 155.00 | 15 |
| Passive ROM 2weeks after Cupping | 150.58 | 6.56 | 135.00 | 155.00 | 12 |
| Passive ROM 3weeks after Cupping | 151.31 | 5.96 | 133.00 | 155.00 | 13 |
| Active ROM before Cupping | 134.14 | 16.53 | 95.00 | 155.00 | 22 |
| Active ROM immediately after Cupping | 140.00 | 7.26 | 128.00 | 150.00 | 22 |
| Active ROM 1week after Cupping | 143.33 | 7.50 | 124.00 | 151.00 | 15 |
| Active ROM 2weeks after Cupping | 145.67 | 8.50 | 127.00 | 154.00 | 12 |
| Active ROM 3weeks after Cupping | 147.24 | 7.04 | 128.00 | 155.00 | 13 |
| Pain (VAS) before Cupping | 5.38 | 2.80 | 0.01 | 10.00 | 21 |
| Pain (VAS) immediately after Cupping | 0.73 | 1.52 | 0.01 | 6.00 | 22 |
| Pain (VAS) 1week after Cupping | 1.60 | 2.85 | 0.01 | 10.00 | 15 |
| Pain (VAS) 2weeks after Cupping | 1.77 | 2.22 | 0.01 | 5.00 | 13 |
| Pain (VAS) 3weeks after Cupping | 1.29 | 2.02 | 0.01 | 5.00 | 14 |
| Well-being (VAS) before Cupping | 7.21 | 1.65 | 2.00 | 9.00 | 15 |
| Well-being (VAS) 1week after Cupping | 8.13 | 1.13 | 5.00 | 10.00 | 13 |
| Well-being (VAS) 2weeks after Cupping | 8.00 | 1.29 | 5.00 | 9.00 | 11 |
| Well-being (VAS) 3weeks after Cupping | 8.29 | 1.20 | 5.00 | 10.00 | 14 |

Table 1: Showing the difference between Passive and Active Ranges of Movement, Pain and Well Being scores before and after Cupping Therapy.

The significance of differences in subject scores before and after cupping

As we have seen from the above table there are observable contrasts in every result measure scores pre-Cupping and the subsequent meetings. The combined example t-test was performed to learn the factual importance contrast between the agony scores, scope of movement and prosperity: following Cupping, multi week in the wake of Cupping, fourteen days in the wake of measuring and 3 weeks in the wake of Cupping.

| Outcome measures tested | T | df | P value (2-tailed) |
|---|---------|----|--------------------|
| Passive ROM before Cupping - Passive ROM immediately after Cupping | -3.810 | 21 | .001 |
| Passive ROM before Cupping - Passive ROM 1week after Cupping | -3.651 | 14 | .003 |
| Passive ROM before Cupping - Passive ROM 2weeks after Cupping | -3.772 | 11 | .003 |
| Passive ROM before Cupping - Passive ROM 3weeks after Cupping | -4.064 | 12 | .002 |
| Active ROM before Cupping - Active ROM immediately after Cupping | -2.469 | 21 | .022 |
| Active ROM before Cupping - Active ROM 1week after Cupping | -2.199 | 14 | .045 |
| Active ROM before Cupping - Active ROM 2weeks after Cupping | -3.485 | 11 | .005 |
| Active ROM before Cupping - Active ROM 3weeks after Cupping | -3.457 | 12 | .005 |
| Pain (VAS) before Cupping - Pain (VAS) immediately after Cupping | 6.711 | 20 | .000 |
| Pain (VAS) before Cupping - Pain (VAS) 1week after Cupping | 5.241 | 13 | .000 |
| Pain (VAS) before Cupping - Pain (VAS) 2weeks after Cupping | 5.272 | 11 | .000 |
| Pain (VAS) before Cupping - Pain (VAS) 3weeks after Cupping | 6.222 | 12 | .000 |
| Well-being (VAS) before Cupping - Well-being (VAS) 1week after Cupping | -2.385 | 14 | .032 |
| Well-being (VAS) before Cupping - Well-being (VAS) 2weeks after Cupping | -2.309 | 12 | .040 |
| Well-being (VAS) before Cupping - Well-being (VAS) 3weeks after Cupping | -11.371 | 10 | .000 |

Table 2: showing the significance of differences in subject scores before and after cupping

The table above shows that there is a measurable importance contrast in Passive Ranger of Motion, Active Ranger of Motion, Pain Visual Analog Scale and Well Being Visual Analog Scale when Cupping Therapy; $p \leq 0.05$ in all result measures.

Discussion:

Impact of Cupping Therapy on Ranges of Motion and Pain level decrease (Tables 1 and 2)

The degree of agony saw by the subjects post mediation was altogether lower than contrasted with pre-intercession. This can be seen from table1 which shows distinction among Passive and Active Ranges of Movement (ROM), Pain and Well Being scores when Cupping Therapy. Taking a gander at the torment scores comparative changes can be viewed similarly as with the Ranges of Motion scores. The mean agony score had dropped from 5.14 to 1.26 after the third week. There was an impressive decrease in the degrees of torment apparent and after applying a combined example t-test it was discovered that the distinction in scores was measurably noteworthy following measuring, 1,2 and 3weeks post measuring additionally ($p < 0.05$). The outcomes affirm that intercession to foremost knee torment

Can prompt critical decreases in level of agony saw by people (Clark et al, 2000). Additionally it is evident that the greatest degree of agony saw by an individual diminished by half (from 10/10 to 5/10) toward the finish of the examination. This is especially significant as Cupping Therapy has for some time been upheld as a viable type of help with discomfort (Cassileth, 2004 and Hennawy 2004). The outcomes got from this examination supplement recommendations made by many measuring professionals around the world.

It tends to be seen that both dynamic and latent extents improved impressively post measuring. The mean AROM pre measuring was 134.14degrees with the base ROM being 95degrees. The mean scores had expanded to 143degrees 1week post measuring and the base score had expanded to 124degrees. By the third week, the mean score had expanded to 147.24degrees and the base score had expanded 128degrees. After applying a matched example t-test it was discovered that the distinction in scores was factually huge following measuring, 1,2 and 3weeks post measuring likewise ($p < 0.05$). Moreover, factually noteworthy contrasts are additionally seen with the PROM. Along these lines it tends to be said that measuring treatment essentially improves both dynamic and detached scopes of development. The decreases in torment scores can be ascribed to sound method of reasoning as measuring treatment can evoke the arrival of morphine like substances (Endorphins), Serotonin or Cortisol

which can at last lead to relief from discomfort and modify the physiological status of the individual (Schulte, 1996). Pressure point massage and Acupuncture in truth are being used and demonstrated helpful in torment and addictive administration (Schulte, 1996; Hinze, 1988; Cadwell, 1998). At an organic level like Acupressure and Acupuncture, Cupping Therapy works by invigorating or enacting (1) the safe framework;

(2) Enkephalin emission; (3) synapse discharge (4) vasoconstriction and dilatation and (5) the entryways for torment in the CNS which decipher torment sensation (NIH Consensus Development Panel, 1998; Schulte, 1996). At long last, it is accepted that incitement of Cupping focuses can prompt the agony doors to be overpowered by expanding recurrence of driving forces, subsequently eventually prompting conclusion of the entryways and henceforth torment decrease (Oumeish, 1998; Cadwell, 1998).

The effect of Cupping Therapy Well-Being (Tables 1 and 2)

It is unimaginable to really evaluate the genuine effect a mediation like Cupping Therapy has on the life of a person. A subjective methodology towards understanding the effect from a patient's viewpoint is maybe a more exact translation concerning the overall effect. Be that as it may, a simple scale like the Pain VAS was utilized to evaluate the apparent effect of measuring treatment on subject prosperity. The mean prosperity VAS scores had expanded from 7.21 to 8.23; a general increment of multiple. The expansion in prosperity scores was kept up all through the examination subsequently mirroring the possibility that Cupping Therapy positively affects prosperity. This finding is bolstered by the combined example t-test ($p \leq 0.05$). Hennawy (2004) underpins this finding too. It is along these lines sensible to specify that the organic advantages of measuring treatment related to the mental employments of measuring all in all prompt a sentiment of physical and mental prosperity.

Conclusion:

It isn't with the end goal of an exploratory bit of work like this to actualize changes in human services practice. Or maybe the point being to examine and bring issues to light of a strategy and to address issues of significance related with it. The adequacy of the treatment of Cupping for Anterior Knee Pain, Range of Movement and prosperity has been investigated and results uncover measurably noteworthy contrasts on the side of Cupping Therapy. It is additionally recommended that as a mediation, Cupping Therapy should be managed and a register of specialists created. Longer term contemplates identified with the impacts of Cupping Therapy should be led for other musculo-skeletal conditions

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