

Singing bowls Relaxation in fibromyalgia as part of a multimodal pain therapy: a quasi-randomized study

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Introduction:

Fibromyalgia syndrome (FMS) is a common disease and prevalence is estimated to be 3-4% (1). Most affected are women between the ages of 40 and 60 (2). It is a complex chronic pain disorder whose aetiology and pathogenesis are poorly understood (3). FMS involves a wide range of symptoms, with a focus on arthralgias with high levels of distress on the one hand and limited therapeutic approaches on the other hand (2). Increased muscle tone is a clinical finding that can be demonstrated in almost all FMS patients in addition to the typical tender tendon insertion points (4). Various analgesic and neuropathic drug therapies have proven to be only limited effective, especially the reduction of muscle tone is medically limited achievable (1). The S3 guideline on the treatment of FMS contains only few drug therapy recommendations (2), for many analgesics, non-steroidal anti-inflammatory drugs (NSAIDs) and myotonolytics there is no evidence-based evidence of efficacy. A therapeutic approach for FMS patients is in the form of inpatient multimodal pain therapy (MMST) (2, 3). This multidisciplinary form of therapy involves extensive balneo-physical and physiotherapeutic measures and is accompanied by a pain therapist and psychologist (5). The aim is to restore a physiological muscle tone by activating procedures, especially physiotherapy, and by muscle-relaxing measures. Relaxation process, e.g. Muscle relaxation procedures are an integral part of MMST, but to a lesser extent overall. MMST has been shown to be superior to conventional therapies in a meta-analysis of FMS patients (6), with a positive effect lasting up to 12 months (7).

With regard to complementary therapies, the S3 Guideline 2013 has withdrawn several recommendations made in the 2008 guideline (2). Ultimately, a recommendation was made only for acupuncture and meditative movement therapy. With regard to alternative forms of therapy, it was not possible to demonstrate any effectiveness for homeopathy in standardized examination procedures (8). For tai chi, yoga and acupuncture, there is only evidence that it is effective (9-11). A Cochrane meta-analysis from 2013 of 9 trials of acupuncture at FMS with a total of 395 patients demonstrated an improvement in pain and stiffness compared to standard or no therapy (12). Regarding muscle-relaxing measures, the S3 guideline recommends meditative exercise therapies such as tai chi, qigong, and yoga classes. Not recommended, however, is Reiki, Magnetic Field Therapy and Transcutaneous Electrical Nerve Stimulation (TENS) because there is not enough positive data for this (2).

The effect of behavioral interventions in a meta-analysis (13) of standardized and observational studies has been demonstrated. In addition, i.a. the benefits of relaxation techniques have been demonstrated (13). The studies studied had z.T. low number of participants and also the quality of the studies z.T. low. Personal experience exists for the singing bowls Relaxation relaxation (14), but so far there are no controlled data for this form of therapy in FMS patients. The aim of this study was to examine whether intensification of the relaxation procedure in the context of an MMST with singing bowls relaxation according to Peter Hess (14) can improve pain, sleep quality, mobility and relaxation.

Patients and methods:

100 patients with FMS who met the American College of Rheumatology (ACR) criteria (15) and who were admitted to the MMST were prospectively divided into 2 groups. A case number of 100 pat. Was deemed necessary to prove relaxation of the superiority of the MMST with singing bowls relaxation compared to a MMST without singing bowls. The MMST therapy took place in a rheumatologic hospital department. Patients were randomly assigned to the following 50 inpatient FMS patients at the beginning of the study group. Afterwards, the next 50 patients were recruited into the group without relaxation singing bowls. The identical therapy components for both groups are listed in Tab.1. The treatment density with regard to the individual treatments was at least 11.5 hours in all patients, on average 15.5 hours per week. The two groups did not differ in age and extent of complaint (fibromyalgia impact questionnaire (FIQ, 0-127 points) (16).) The study was conducted with FMS Pat., Who had a very high level of psychological distress FMS Pat. FIQ values by 50, values > 70 document a disproportionately high level of suffering through the FMS. In the first group (n = 50) an MMST was performed with singing bowls relaxation after Peter Hess, in the second group (n = 50) the identical MMST was performed without singing bowls relaxation. Daily, the extent of pain was recorded in the morning and in the evening using VAS and the change from the beginning to the end of the inpatient stay. The VAS (visual analogue scale, 0-10) in terms of global pain on admission was significantly different between the groups (Group 1: 7.3, Group 2: 6.3, $p = 0.005$).

At the end of inpatient therapy, questionnaires were used to improve global pain (0-100%), improve sleep and sleep (1-item variable 0-1), improve ability to relax (0-10), and recover of mobility (0-10). The patients were informed about participating in the study, but not for reasons of blinding, that the examination to verify the singing bowl relaxation was performed in the context of an MMST.

Singing bowls relaxation:

The singing bowls Relaxation after Peter Hess (14) was performed 2x 45 min. Per week in groups, the group size was between 1 - 7 patients. The Pat. Were on mats or couches in a comfortable position, storage materials were available. Different Peter Hess therapy singing bowls and sangha singing bowls were used (Tab. 2), they were struck in the context of a fantasy journey.

Statistics:

The Mann-Whitney U test was used to test the comparability of the two treatment groups in terms of age, length of stay, FIQ and VAS before therapy as well as relaxation and mobility. In each case, the null hypothesis that no group difference exists is tested. The exact Fisher test is used to test the null hypothesis that the changes in sleep quality and group affiliation are independent.

Whether the groups differ in terms of VAS alteration was additionally examined in a linear regression analysis in which the VAS baseline was controlled.

Results:

The two groups were comparable in terms of age (group 1 with singing bowls relaxation average age 55.4 years, group 2 without singing bowls relaxation 54.8, $p = 0.9$), the FIQ was comparably high in both groups (group 1: 89, 1, Group 2: 94.4, $p = 0.5$). The duration of inpatient treatment with MMST was not significantly different (group 1: 9.8 days, group 2: 9.4 days, $p = 0.6$).

The singing bowls relaxation was subjectively well accepted by the Pat. Of group 1, despite initial skepticism regarding this usually unknown form of therapy. No patient has stopped the therapy. On the whole, pain intensity using the VAS assessment improved relatively steadily during inpatient treatment in both groups. The pain improvement was significantly more pronounced (3.9 points) in group 1 with relaxation singing bowls ($p = 0.03$) than in group 2 with only 2.5 points (figure 1). In patients with relaxation singing bowls, the estimated decrease is 0.7 points greater than in patients without singing bowl relaxation (calculated using linear regression analysis, controlled for baseline).

28/50 group 1 patients reported improved sleep, 28/50 improved sleep, while in group 2 only 23/50 (falling asleep) or 25/50 (staying asleep) (falling asleep, falling asleep) $p = 0.8$). Group 1 rated the improvement in relaxation at 6.2 and group 2 at 5.8 ($p = 0.3$). There was no difference between the groups in terms of improving mobility (both groups 6.1).

Discussion:

Still, the treatment of FMS poses a major therapeutic challenge. There is no evidence-based therapy algorithm that provides a sustained amelioration of this chronic pain disorder. In this study, the question was examined as to whether a singing bowl relaxation in the context of a stationary MMST an improvement in pain, sleep impairment, ability to relax and mobility is achievable. The results show that a significant improvement in pain can be achieved through the additive relaxation of sound.

Regarding the effectiveness of a multidisciplinary treatment approach in FMS, an older Cochrane review did not show clear results (17). In the end, in 2000, only 3 studies met the criteria of a randomized, controlled study. While no clear effect could be demonstrated for a multidisciplinary rehabilitative therapy, individual therapy components were evaluated positively: Behavioral therapy, stress management and disease education and active training therapy also appear to bring long-term positive effects (16). A recent meta-analysis, however, concludes that a multimodal approach is superior to monomodal (6). The S3 guideline recommends an MMST for FMS patients in the event of imminent chronicity (2).

Various complementary therapies have been studied in FMS patients, but there are few systematically controlled trials, and there is no data available on FMS Pat for tonal relaxation. Taking into account the literature, the individual balance between active and passive treatment is important for the success of MMF in FMS patients. In particular, active and passive elements for muscle relaxation are pain-relieving. The study shows that in addition to conventional relaxation techniques (for example, Jacobsen muscle relaxation) an additional singing bowl relaxation can provide significant pain relief within the MMST. This therapy is easy to perform and can be continued on an outpatient basis.

Limitations of the study are the monocentric execution and the lack of randomization of the patient. Randomization was not possible due to the internal structure of the therapist, so that a quasi-randomization was performed. Another limitation of the study is that Group 1 had a significantly higher level of pain measured with the VAS at the beginning, and 1½ hours more therapy than the comparison group (17 versus 15.5 hrs / week) per week due to the singing bowls relaxation. It is unlikely that the difference in therapy hours at such high therapy density affected the outcome. Relaxing measures were performed in both groups in the form of progressive muscle relaxation according to Jacobsen. The singing bowls relaxation is very therapist-dependent and therefore not generally transferable. The duration of the effects of the singing bowls relaxation beyond the inpatient stay were not tested.

In summary, the singing bowls relaxation is a complementary therapy option for FMS Pat., Which can lead to a reduction of pain in the context of an MMST. Insignificant improvements

were additionally achieved with respect to sleep and sleep and the ability to relax. No improvement could be achieved with the singing bowls relaxation in terms of improving the mobility.

Conclusion:

The singing bowls Relaxation according to Peter Hess is a form of therapy that can lead to a reduction of pain in FMS patients in the context of an MMST.

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Summary

Background:

Fibromyalgia syndrome (FMS) is a chronic disease with limited treatment options. The

analgesic and neuropathic drug therapies have limited effectiveness. A therapeutic approach for FMS patients is in the form of inpatient multimodal pain therapy (MMST). In this quasi-randomized study with 100 FMS patients the effect of an additional singing bowl relaxation according to Peter Hess as part of a stationary multimodal pain therapy was examined.

Patients and methods:

100 patients with confirmed FMS who met the ACR criteria and were hospitalized for multimodal pain therapy were prospectively divided into 2 groups. In both groups an MMST was performed, in a group additionally a singing bowl relaxation. Every day, pain levels were recorded by visual analogue scale (VAS) and the change from the beginning to the end of hospitalization. At the end of the MMST, questionnaires were used to assess the improvement in global pain, improvement in sleep and sleep, improvement in the ability to relax, and improvement in mobility.

Result:

The two groups were comparable in terms of age and fibromyalgia impact questionnaire score (FIQ). The VAS at baseline was significantly higher in the group with tone relaxation. The length of stay of inpatient treatment did not differ. The pain intensity with the VAS assessment improved significantly by 3.9 points in group 1 with singing bowl relaxation ($p = 0.03$) and by 2.5 points in group 2. An insignificant trend towards recovery showed the group with relaxation singing bowls in terms of improved sleep and sleep and ability to relax. Concerning. The improvement in agility showed no difference between the groups with or without singing bowls relaxation.

Conclusions

Patients undergoing inpatient multimodal pain therapy may benefit from an additive singing bowl relaxation, especially in terms of pain reduction.

Sound massage therapy for fibromyalgia as part of multicomponent pain therapy: a randomized controlled trial

Summary

Background:

The fibromyalgia syndrome is a chronic disease with limited treatment options. Analgesics and neuropathic pain drugs offer only limited benefit. Alternatively, an in-patient multicomponent pain therapy offers a more beneficial approach. The effectiveness of an additional sound massage in a multicomponent pain therapy for fibromyalgia patients was evaluated in this prospective randomized study including 100 patients.

Patients and methods:

100 patients with fibromyalgia fulfilling the ACR criteria, who were admitted to an in-patient multicomponent pain therapy, were prospectively grouped into two groups. In both groups a multicomponent pain therapy was conducted; in one group additionally sound massage therapy. Global pain was measured daily by a visual analog scale (VAS) and changes were analyzed from the beginning to the end of the treatment. At the end of the multicomponent pain therapy, the improvement of global pain, the ability to sleep, the ability to relax and the improvement of mobility was assessed with questionnaires.

Results

The two groups were comparable regarding age and the fibromyalgia impact questionnaire (FIQ) score. The pain intensity by VAS was significantly higher in the group with sound massage therapy.

The duration of the in-patient treatment did not differ significantly between the two groups. The VAS improved in Group 1 with sound massage significantly ($p=0,03$) by 3.9 points, Group 2 improved by only 2.5 points. An insignificant improvement resulted concerning the ability to fall asleep, continued sleep and ability to relax in the sound massage group. Regarding mobility no difference was observed between the groups.

Conclusions

Fibromyalgia patients treated with a multicomponent pain therapy may benefit in respect to global pain from an additional sound massage therapy.

The authors do not indicate conflicts of interest.

Tab. 1 Therapy components of multimodal pain therapy

- physiotherapy
- occupational Therapy
- electrotherapy
- Stanger baths
- further bath therapies
- Muscle relaxation according to Jacobsen
- psychological one-to-one talks
- massages
- mud
- Team meeting with pain therapist

Tab. 2 Fig. 1 Peter Hess® singing bowls used

- small and big heart therapy singing bowl
- small pelvic therapy singing bowl
- Head singing bowl therapy
- Sangha Meditation Singing Bowls (5 sizes)
- Zen singing bowls (3 sizes)
- Fanello singing bowl

Fig. 1 Course of the VAS before and after the multimodal pain therapy

