A SYSTEMATIC REVIEW OF MANUAL THERAPY MODALITIES AND ANXIETY

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DISCLOSURES

- Presentors have no competing interests to declare and no sources of financial or non-financial support contributing to the conduct of this review
- Presentors have no ethical or legal declarations to declare

OBJECTIVES

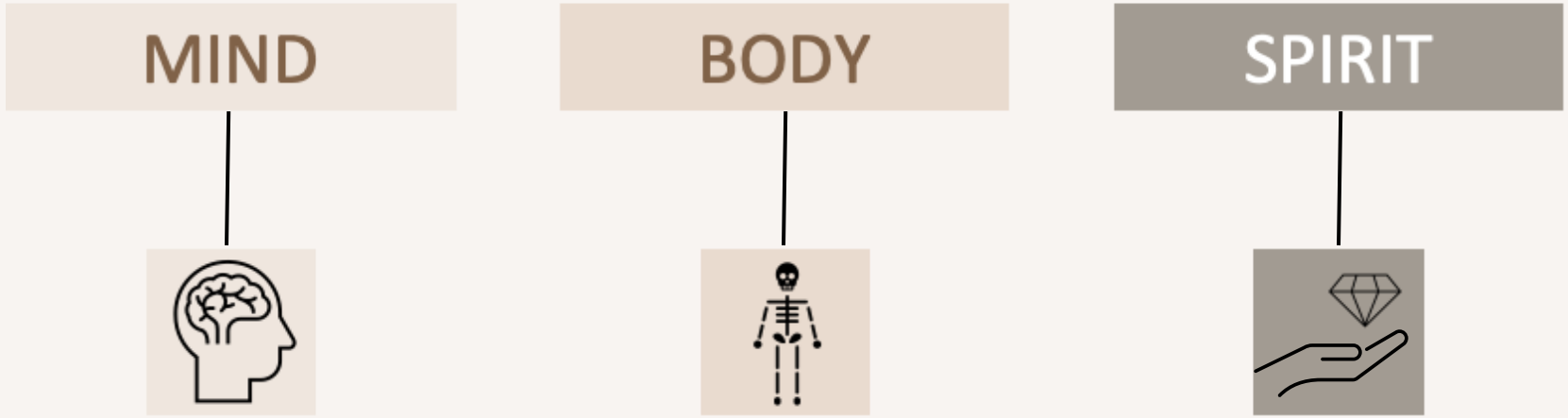
1. Discuss results found after a Systematic Review of Literature on Manual Therapy and Anxiety
2. Evaluate the Effectiveness of Various Manual Therapy Modalities for Anxiety Management
3. Establish Consensus Recommendations for the Use of Manual Therapy in Clinical Practice

OSTEOPATHY

OSTEOPATHIC MANIPULATIVE TREATMENT:

The therapeutic application of manually guided forces by an osteopathic physician (U.S. usage) to improve physiologic function and/or support homeostasis that has been altered by somatic dysfunction[44]

OSTEOPATHIC TENET:



Anxiety

Sleep Disturbance

Restless

WORRY

Irritable

53,728,523 people

Fatigue

Poor Concentration

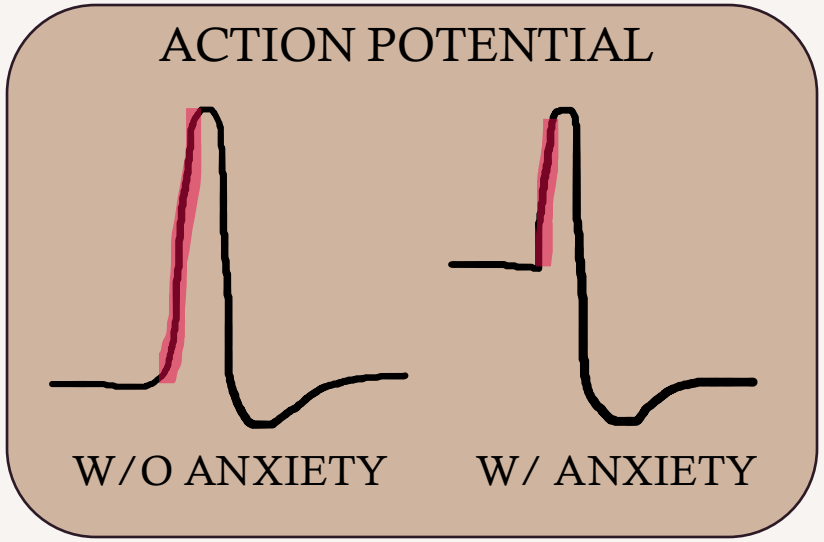
Muscle Tension

ANXIETY'S IMPACT ON THE BODY

1. LOW BACK PAIN
2. OSTEOARTHRITIS
3. LOWER PAIN THRESHOLD
4. ALTERNATIVE BRAINSTEM ACTIVITY

FACILITATION:

THE MAINTENANCE OF NEURONS IN A STATE OF PARTIAL EXCITATION SO THAT LESS STIMULATION IS NEEDED TO ACTIVATE THEM AND TRIGGER NERVE IMPULSES



TREATMENT FOR ANXIETY

LITERATURE REVIEW

DE GRUYTER J Osteopath Med 2024; aop

Neuromusculoskeletal Medicine (OMT) Review Article

Kayla L. West*, BS and Teodor Huzij, DO

A systematic review of manual therapy modalities and anxiety

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Abstract

Context: Anxiety disorders have a far-reaching impact on society, with profound implications on both mental and physical health. In response, there is growing interest in manual therapy modalities, with emerging research suggesting their potential to alleviate related symptoms.

Objectives: To establish a consensus regarding manual therapy modalities for addressing anxiety symptoms, a systematic review of current literature was conducted.

Methods: A literature search was conducted between May and August 2023, utilizing a systematic search on both PubMed and Google Scholar, adhering to the defined inclusion criteria. In addition, information was gathered utilizing the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Both authors (KLW and TH) conducted the literature review. The inclusion criteria include articles written in English, peer-reviewed, anxiety conditions documented, and manual therapy delivered by a respectfully qualified professional. Manual therapy modalities include massage therapy, osteopathic manipulative treatment (OMT), foot reflexology, acupressure, manual therapy, healing touch, therapeutic touch, and gentle touch. After initial data collection, both researchers independently screened articles utilizing two metrics: a level of evidence (LOE) table and a screening criterion incorporating unique elements from the search process. The quality of the included articles was assessed utilizing Strength of Recommendation Taxonomy (SORT). When reviewer discrepancies arose, authors reread full-text studies and discussed the inclusion and exclusion criteria to achieve consensus.

Results: The data searches identified 8,979 articles, with 239 articles remaining after duplicates and nonapplicable articles were removed. A total of 42 articles met the inclusion criteria, with only 40 articles able to be obtained for full-article review. After full review and the exclusion of articles with invalid author conclusions, meta-analysis, or systematic reviews, 34 articles were included in the review. All articles received an LOE rating of 2 or better and aligned with our specific screening criteria. Based on SORT, each modality was assigned a "B" rating. Among the included articles, n=27 demonstrated statistical significance in favor of manual therapy modalities as an anxiety treatment. The positive results for the aforementioned manual therapies on anxiety symptom improvement are shown: 15/18 (83 %) massage therapy, 2/6 (33 %) OMT, 5/5 (100 %) foot reflexology, 1/1 (100 %) acupressure, 1/1 (100 %) manual therapy, 0/2 (0 %) healing touch, 1/1 (100 %) therapeutic touch, and 1/1 (100 %) gentle touch.

Conclusions: A pattern emerged, wherein individuals receiving manual therapy interventions displayed a statistically significant reduction in anxiety intensity. Considering the positive results, manual therapy should be considered an effective strategy for anxiety management.

Keywords: anxiety; manual therapy; osteopathic manipulative treatment/technique; systematic review

Anxiety is often a natural part of the human experience, often serving as a protective mechanism in response to potential threats. However, when symptoms become chronic, disproportionate, or uncontrollable, anxiety can escalate into a clinical disorder. An estimated one in four adults in the United States have signs and symptoms that qualify as an anxiety disorder [1]. These estimates underscore the widespread nature of this mental health disorder. According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR), anxiety disorders vary in presenting symptoms and may include excessive worry, panic attacks, restlessness, fatigue, difficulty concentrating, irritability, muscle tension, and sleep disturbances [2].

Beyond these distressing psychological and emotional disturbances, the sequelae of anxiety extend into the realm of physical health. Research has pointed to a correlation

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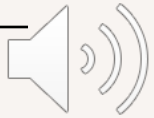
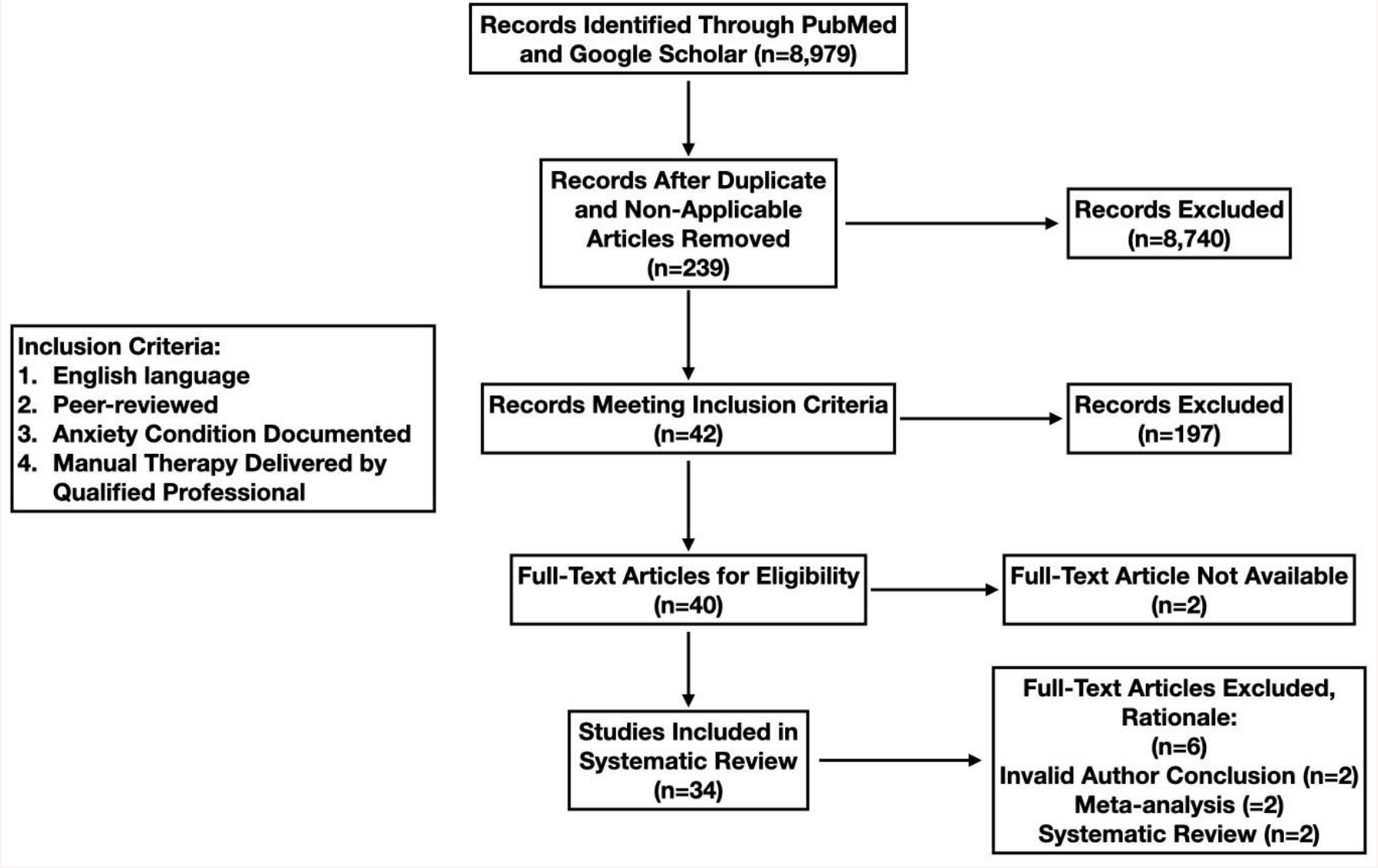
SEARCH STRATEGY

PubMed and Google Scholar for published reports/studies

“Manipulation OR musculoskeletal manipulations OR manual medicine OR chiropractic OR osteopathic OR osteopathy OR manipulative OR spinal manipulation OR cranial manipulation OR massage OR craniosacral OR therapeutic touch OR osteopathic manipulative medicine (OMM) OR osteopathic manipulative treatment (OMT) AND anxiety OR generalized anxiety disorder OR obsessive compulsive disorder OR panic disorder OR social anxiety disorder OR trait anxiety”

Included articles published between 1951 to June 2023

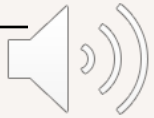



Records Identified Through PubMed and Google Scholar (n=8,979)
Records After Duplicate and Non-Applicable Articles Removed (n=239)
Records Excluded (n=8,740)
Inclusion Criteria:
1. English language
2. Peer-reviewed
3. Anxiety Condition Documented
4. Manual Therapy Delivered by Qualified Professional
Records Meeting Inclusion Criteria (n=42)
Records Excluded (n=197)
Full-Text Articles for Eligibility (n=40)
Full-Text Article Not Available (n=2)
Studies Included in Systematic Review (n=34)
Full-Text Articles Excluded, Rationale:
(n=6)
Invalid Author Conclusion (n=2)
Meta-analysis (=2)
Systematic Review (n=2)

QUALITY ASSESSMENT

Level of Evidence 1	High-quality randomized controlled trial • Concealed allocation • Blinding if possible • Intention-to-treat analysis • Adequate size • Adequate follow-up (>80%)
Level of Evidence 2	Low-quality randomized controlled trial • No concealed allocation • No blinding if possible • No intention-to-treat analysis • No adequate size • No adequate follow-up (>80%)
Level of Evidence 3	Study based on opinion, bench research, consensus guideline, usual practice, clinical experience, or a case series

Strength of Recommendation A	Based on Consistent findings from at least two high-quality randomized controlled trials
Strength of Recommendation B	Based on Inconsistent findings from high-quality or findings only from low-quality randomized controlled trials
Strength of Recommendation C	Based on Study based on opinion, bench research, consensus guideline, usual practice, clinical experience, or a case series



RESULTS

Table 3: Anxiety outcomes and LOE by modality.

Modality	Anxiety reduction	LOE 1	LOE 2	LOE 3
Massage therapy	15/18 (83 %)	2/18	16/18	
OMT	2/6 (33 %)		6/6	
Foot reflexology	5/5 (100 %)		5/5	
Acupressure	1/1 (100 %)	1/1		
Manual therapy	1/2 (50 %)		2/2	
Healing touch	0/2 (0 %)		2/2	
Therapeutic touch	1/1 (100 %)		1/1	
Gentle touch	1/1 (100 %)		1/1	

LOE, level of evidence; OMT, osteopathic manipulative treatment.

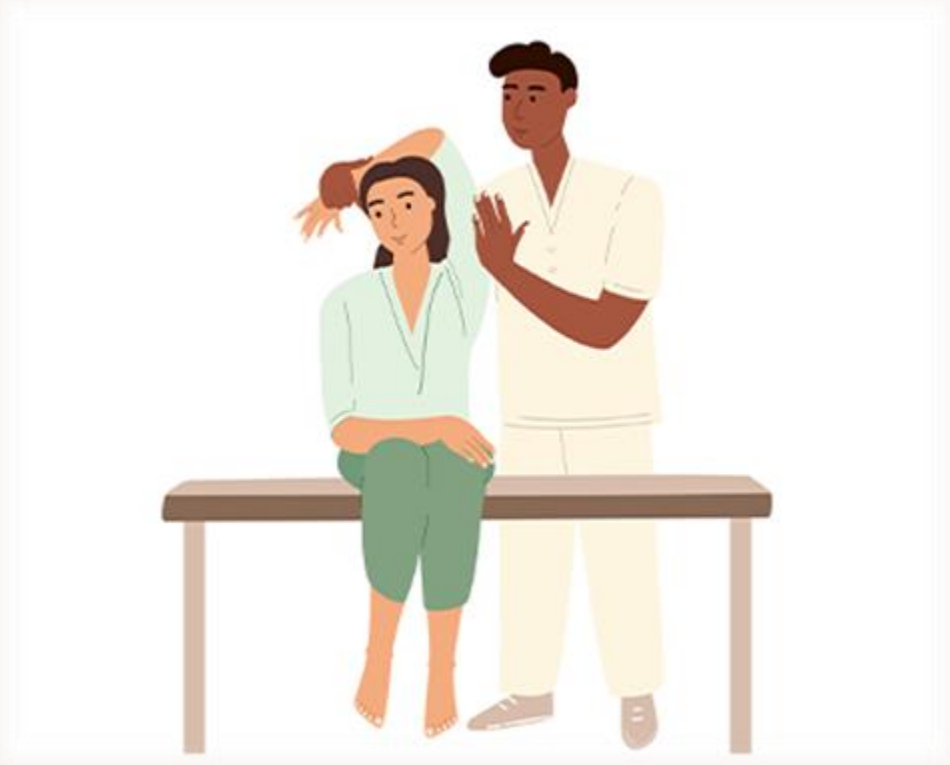
MASSAGE THERAPY

- Consistent reduction in anxiety levels (15/18 articles-->83%)
- Safe, Cost-effective, and Easily learned modality
- Generalized Anxiety Disorder (GAD) in 4/18 studies limits applicability to this population (2/4-->50%)
- LOE 1: 2/18, LOE 2: 16/18, **SOR: B**

- **Strength: Greatest number of studies**
- **Limitation: High degree of variable training**

OMT

- Short-term anxiety reduction after a single session (2/6 articles-->33%)
- GAD focus in 1/6 studies[30]
  - Study conducted at Clinic for Mood and Anxiety Disorders in Ontario
  - Significant reductions in total Hamilton Anxiety Rating Scale (HAM-A) scores after OMT ($p<0.001$)
  - Defined as a 50% or greater reduction of anxiety symptoms
- LOE 2: 6/6, **SOR: B**



- **Strength: Anxiety reduction after just one session**
- **Limitation: Lack of substantial research supporting use in GAD**

6, 7, 29-32, 47

FOOT REFLEXOLOGY

- Consistent reduction in anxiety levels (5/5 articles-->100%)
- 3/5 studies documented treatment on burn patients
  - Burn Study #1[33]:
    - 36 patients enrolled
    - Foot reflexology w/ and w/o music therapy, compared to control group w/o therapy
    - Day 1: no change
    - Day 3: $p<0.05$
    - Day 4: $p<0.001$
- LOE 2: 5/5, **SOR: B**

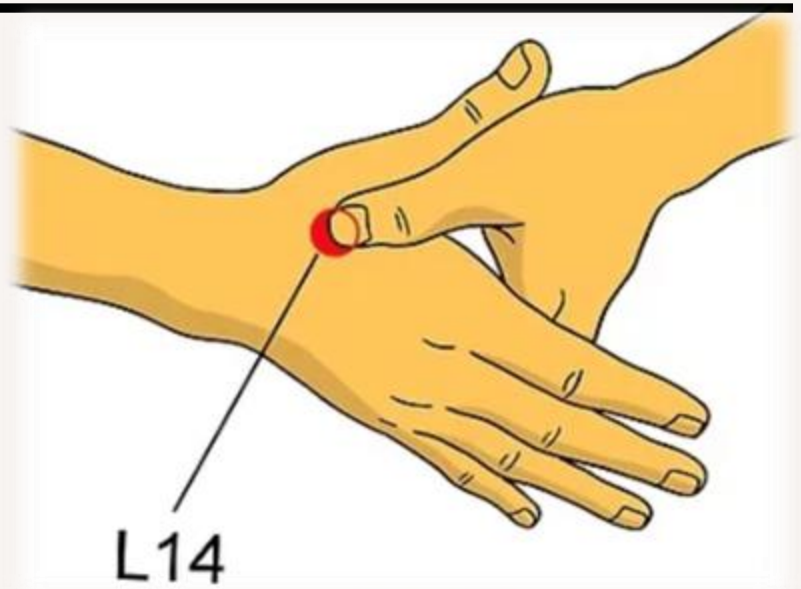
- **Strength: 100% efficacy**
- **Limitation: Primarily discussed in burn patients, limits applicability**

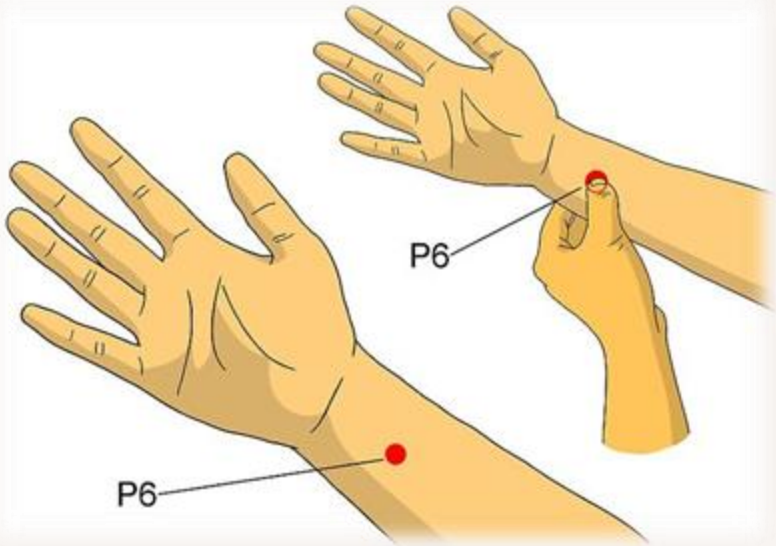
33-37, 48

ACUPRESSURE

- Reduction in anxiety symptoms (1/1 articles-->100%)
- Both P6 and LI4 acupressure points may effectively reduce may reduce anxiety[38]
- Results limited by statistical power
- LOE 1: 1/1, **SOR: B**

- **Strength: Accessible, patient education, LOE 1**
- **Limitation: n=1**

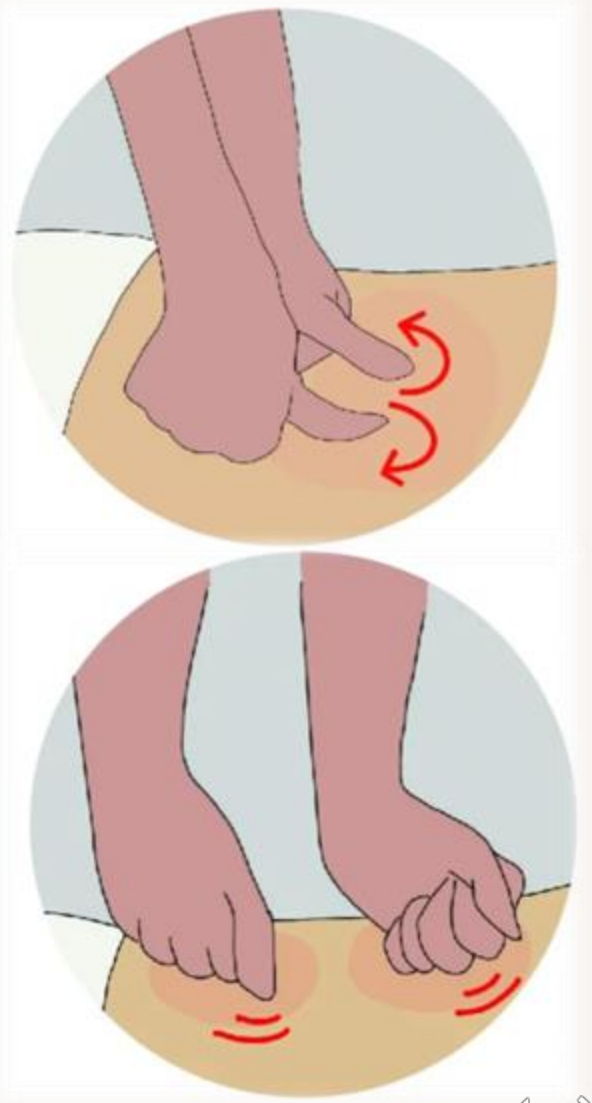




MANUAL THERAPY

- Reduction in anxiety symptoms (1/2 articles-->50%)
- Study #1[39]:
  - 44 patients with subacute and chronic neck pain
  - State-Trate Anxiety Inventory (STAI) scores significantly reduced in both groups
    - Maitland group STAI p=0.05
    - Mulligan group STAI p=0.05
  - Results limited by lack of control group
- Additional research required to determine efficacy
- LOE 2: 2/2, **SOR: B**

- **Strength: None**
- **Limitation: No control group, limits conclusion**



39, 40, 49

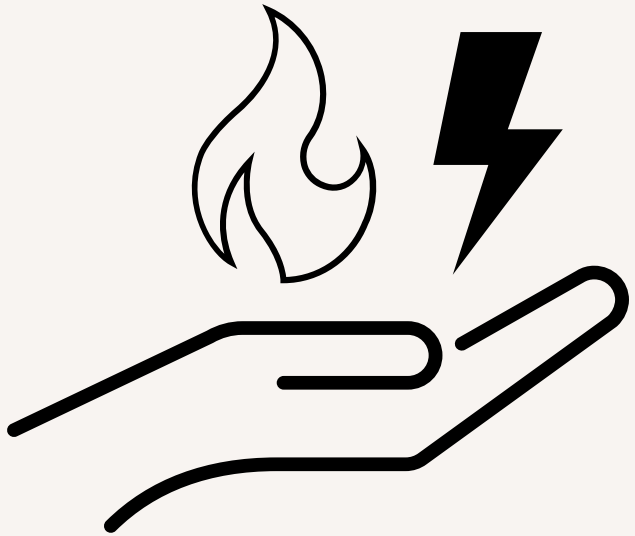
HEALING TOUCH

- No articles indicated reductions in anxiety (0/2-->0%)
- Not statistically significant reductions in anxiety
- Additional research required
- LOE 2: 2/2, **SOR: B**

- **Strength: None**
- **Limitation: No studies showing efficacy for anxiety**

THERAPEUTIC TOUCH

- Reduction in anxiety symptoms (1/1 articles-->100%)
- Article notes a potential to "enhance traditional anxiety treatments when utilized in a multimodal therapy"[41]
- LOE 2: 1/1: **SOR: B**



- **Strength: None**
- **Limitation: n=1**

GENTLE TOUCH

- Reduction in anxiety symptoms (1/1 articles-->100%)
- Study #1[42]:
  - Study conducted at The Center for Complementary Care in the United Kingdom
  - 147 participants
    - 32 presented to the trial with a diagnosis of "anxiety"
  - Anxiety reduction after treatment ($p<0.0004$)
- Even with significant results, more research needed to justify clinical application
- LOE 2: 1/1, **SOR: B**

- **Strength: Large sample size in included study**
- **Limitation: Patients without formal anxiety disorder**

ADDITIONAL OBSERVATIONS

- 6 studies on burns with majority improvement in anxiety symptoms (4/6-->67%)
- Reduction in anxiety symptoms in patients with anxiety diagnoses
  - Massage (at 2 wks but not 6 wks)
  - OMT (Non-physician group significant, Physician group not significant)

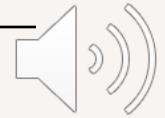
SUMMARY

- Significant evidence suggesting efficacy of massage therapy and foot reflexology in anxiety symptom reduction

- More robust research, particularly on OMT, therapeutic touch, manual therapy, and acupressure needed

- Clinical Significance: **Multimodal approach for anxiety should be considered, to include massage therapy and foot reflexology**.

QUESTIONS?



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