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## The physiological and psychological effects of slow-stroke back massage and hand massage on relaxation in older people

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Review published: 2010.

### CRD summary

The review concluded that physiological and psychological indicators suggested that slow-stroke back massage and hand massage were effective in promoting relaxation in older people across all settings. The methodological weaknesses within the review and the small sample sizes of the included studies, limit the reliability of the authors' conclusions.

### Authors' objectives

To examine the physiological and psychological effects of slow-stroke back massage and hand massage on relaxation in older people.

### Searching

PubMed, The Cochrane Library, EBSCO, CINAHL, Health Resource, PsycINFO and EMB Reviews were searched to June 2009 for articles in English. Search terms were reported. ProQuest, American Massage Therapy Foundation and Touch Massage Institute websites were searched.

### Study selection

Studies of participants with a mean age of at least 65 years who were treated with slow back massage or hand massage as the sole intervention were eligible for inclusion. Comparators could be single intervention or combined interventions as long as they were compared with massage as a single intervention. Studies that did not have well-defined criteria for rigorous research according to Duffy's Research Appraisal Criteria (RAC) criteria were excluded, as were studies that used acupuncture unless it was a combination intervention.

The included studies considered participants with a mean age of 76 years who were treated with slow-stroke back massage (protocols ranging from three to 10 minutes) or hand massage (protocols ranging from five to 16 minutes). The setting was predominantly nursing home; participants from the community, coronary care unit, hospices, and rehabilitation centres were also included. Most of the patients were white females. The reported outcomes included physiological and psychological outcomes.

The authors did not state how many reviewers were involved in the study selection.

### Assessment of study quality

Research Appraisal Checklist (RAC) was used to assess study quality.

The authors did not state how many reviewers performed the quality assessment.

### Data extraction

Data on physiological and psychological effects were extracted.

The authors did not state how many reviewers were involved in the data extraction.

### Methods of synthesis

A narrative synthesis was presented. Studies were grouped according to massage type (back or hand) and outcomes (physiological or psychological).

### Results of the review

Nineteen studies (n=672 participants) were included in the review: seven studies of hand massage (n=256) and 12 studies of back massage (n=416). Study sample size ranged from five to 102 participants.

Six studies that reported physiological outcomes and six studies that reported psychological outcomes showed a trend towards improvements in outcomes with slow-stroke back massage. Two studies indicated that back massage relieved pain and two further studies showed that it promoted sleep. Seven hand massage studies demonstrated a trend towards improvements in physiological or psychological outcomes.

### Authors' conclusions

Physiological and psychological indicators suggested the effectiveness of slow-stroke back massage and hand massage in promoting relaxation in older people across all settings.

### CRD commentary

Inclusion criteria for the review were clearly defined. Several relevant databases were searched. There was potential for language bias as only English-language articles were included. Publication bias was not considered and there was no search for unpublished studies, so there was potential for publication bias. The authors did not state how many reviewers undertook study selection, quality assessment and data extraction, which could have introduced error and bias into the review. The included studies had small sample sizes, which the authors acknowledged. Only studies that met RAC quality criteria were included in the analysis, but no details of this assessment were presented and so it was difficult to verify the quality of the included studies. A narrative synthesis was presented, which appeared appropriate, although the synthesis was limited.

Overall, the methodological weaknesses within the review combined with the small sample sizes of the included studies to limit the reliability of the authors' conclusions, but the authors' call for further research appeared warranted.

## Implications of the review for practice and research

**Practice:** The authors stated that nurses could be trained to administer and educate caregivers in the use of slow-stroke back massage and hand massage.

**Research:** The authors stated that further studies were needed to assess the feasibility or cost-effectiveness of massage and hand massage to develop best practices for massage interventions in older people. In particular, further research on the benefits of back and hand massage to promote sleep in older people using objective measures such as polysomnography or actigraphy were needed.

## Funding

John A. Hartford Foundation Building Academic Geriatric Nursing Excellence Capacity Predoctoral Scholarship Program; Sigma Theta Tau Gamma XI; National Gerontological Nurses Association Mary Wolanin Graduate Scholarship.

## Bibliographic details

Harris M, Richards KC. The physiological and psychological effects of slow-stroke back massage and hand massage on relaxation in older people. *Journal of Clinical Nursing* 2010; 19(7-8): 917-926. [PubMed: 20492036]

## Indexing Status

Subject indexing assigned by NLM

## MeSH

Aged; Alzheimer Disease /therapy; Back; Dementia /therapy; Female; Hand; Humans; Male; Massage /methods /psychology; Relaxation /physiology /psychology; Relaxation Therapy

## AccessionNumber

12010003704

## Database entry date

19/01/2011

## Record Status

This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.

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CRD has determined that this article meets the DARE scientific quality criteria for a systematic review.

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PMID: 20492036