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## Benefits of Massage Therapy for the Elderly: A Systematic Review from Physical and Mental Health Perspectives

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**ABSTRACT:** The global elderly population faces increasing physical and psychological health challenges, necessitating non-pharmacological interventions to improve quality of life. Massage therapy, as a non-invasive complementary approach, has been proposed to address pain, mobility limitations, immune decline, anxiety, and depression in the elderly. This systematic review aims to synthesize the latest evidence (2020–2025) on the benefits of massage therapy for the physical and mental health of individuals aged  $\geq 60$  years. Following the PRISMA guidelines and using the PICO framework, a comprehensive search of the Scopus database identified 51 articles, with six articles meeting the inclusion criteria after screening and eligibility assessment. The included studies comprised randomized controlled trials, cohort studies, and cross-sectional surveys, encompassing modalities such as thermal spinal massage, aromatherapy massage, and individual physical therapy interventions. Results consistently demonstrated significant physiological benefits, including pain reduction, improved mobility, enhanced immune function, and resolution of functional constipation, alongside psychological improvements such as reduced anxiety, depression, agitation, and improved quality of life. Notably, high compliance rates and the absence of serious adverse effects were reported across interventions, underscoring their safety and feasibility in the geriatric population. Massage therapy utilization was more common among women, those with higher education, private health insurance, and musculoskeletal conditions. However, protocol heterogeneity, small sample sizes, and limited long-term follow-up highlight the need for rigorous and standardized trials. Overall, the evidence supports the integration of massage therapy into comprehensive geriatric care as an effective adjunct for optimizing physical and mental health, while emphasizing the importance of appropriate methodology.

**KEYWORDS:** massage therapy, elderly, physical health, mental health

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### I. INTRODUCTION

The aging global population presents profound challenges for health care systems, with older adults experiencing increased prevalence of chronic conditions, physical limitations, pain syndromes, and mental health issues such as anxiety and depression [1]. As longevity rises, there is growing emphasis on interventions that enhance quality of life and address the unique biopsychosocial needs of the elderly [2]. Among numerous complementary therapies, massage therapy has garnered attention as a noninvasive and versatile intervention, potentially offering relief for both physical and psychological burdens associated with aging [3].

Numerous studies highlight that massage therapy can improve key aspects of physical health in elderly populations [4]. Reported benefits include enhanced balance, reduced risk of falls, mitigation of musculoskeletal pain, improved mobility [5], and positive influences on neurological and cardiovascular function [6]. Furthermore, massage interventions have been shown to reduce biological stress indices and foster physiological relaxation, suggesting measurable effects that extend beyond subjective symptom relief [7]. This is particularly salient to geriatrics, given that falls, cardiovascular stress, and immobility constitute leading causes of morbidity and reduced independence among older adults [8].

The mental health ramifications of massage therapy are equally compelling. Various randomized and cross-over studies document significant reductions in anxiety, depression, agitation, and behavioral symptoms in elderly patients, especially those living with dementia or chronic illness [9]. Physical touch and tactile stimulation, inherent to massage therapy, may also counteract cognitive and emotional decline by fostering social engagement and sensory integration [10]. Early evidence even suggests modulations in

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brainwave activity and neuroendocrine function following massage interventions, underscoring its multifaceted effects on psychological well-being [11].

Despite this promising body of research, existing literature remains fragmented, with heterogeneity in methodologies, outcome measures, and study populations. Many studies are limited by small sample sizes, lack of blinding, or short intervention durations, and few provide comparative data across different types of massage techniques or long-term follow-ups. There is also a paucity of systematic reviews that rigorously synthesize evidence regarding both physical and mental health domains, particularly in community-dwelling versus institutionalized elderly subgroups.

This lack of comprehensive synthesis represents a significant gap, as practitioners and policymakers require robust, evidence-based guidance to integrate massage therapy into standard geriatric care. In addition, most reviews to date have not deeply examined the interplay between physical and psychological benefits or considered the broader social determinants influencing therapy uptake, accessibility, and effectiveness among older adults.

The rationale for this systematic review thus rests on the need to address these evidentiary shortcomings. A focused, methodologically rigorous appraisal of the benefits and limitations of massage therapy seen through both physical and mental health lenses can clarify its role as an adjunct or alternative approach in aging populations. This, in turn, may inform clinical guidelines, optimize interdisciplinary care models, and support the development of scalable health promotion strategies for the elderly.

Accordingly, the primary objective of this review is to systematically evaluate the extant empirical literature on massage therapy for older adults, with special attention to its efficacy in improving physical function, pain, balance, and mobility as well as its impact on psychological health outcomes such as mood, anxiety, and quality of life. The review will also seek to identify methodological limitations and propose evidence-based recommendations for future research and clinical implementation.

## **II. MATERIALS AND METHODS**

### **Search Strategy**

In the data collection process, the author accessed articles through the Scopus database. The author then collected journal articles published from 2020 to 2025. The author used the PICO method in the article research to obtain new findings [12].

The article search strategy in this study involved using variations of keywords such as ("massage therapy" OR "touch therapy" OR "aromatherapy massage") AND ("elderly" OR "older adults" OR "seniors") AND ("physical health" OR "mental health" OR "quality of life" OR "psychological health" OR "sleep quality" OR "stress" OR "blood pressure"). Article searches were conducted according to the guidelines outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) [13]. PRISMA is a reporting method designed to prevent fundamental errors in systematic reviews and meta-analysis reports [14].

### **Study Selection**

The study selection process was guided by the PICO (Population, Intervention, Comparison, Outcome) framework to ensure a systematic and focused review of the literature [15]. The Scopus database was comprehensively searched for articles examining the benefits of massage therapy in the elderly, specifically addressing both physical and mental health outcomes. Inclusion criteria required studies to involve participants aged 60 years and above, utilize massage therapy as the primary intervention, and report on physical or mental health effects. Studies were screened by title and abstract, followed by full-text review to confirm eligibility. Articles were excluded if they did not focus on elderly populations, did not assess massage therapy, or lacked relevant health outcomes. This rigorous selection process ensured that only studies directly relevant to the research question were included in the systematic review.

### **Procedure**

the search process, the author used the Scopus database. The author found 51 articles from the Scopus database. These articles were then processed and analyzed through several stages of screening based on inclusion and exclusion criteria. After applying these criteria, only 6 articles remained. Most articles were excluded because they were not published between 2020 and 2025 and did not discuss the benefits of massage for the elderly. All selected articles were extracted from their original sources and analyzed using Mendeley to remove duplicate articles.

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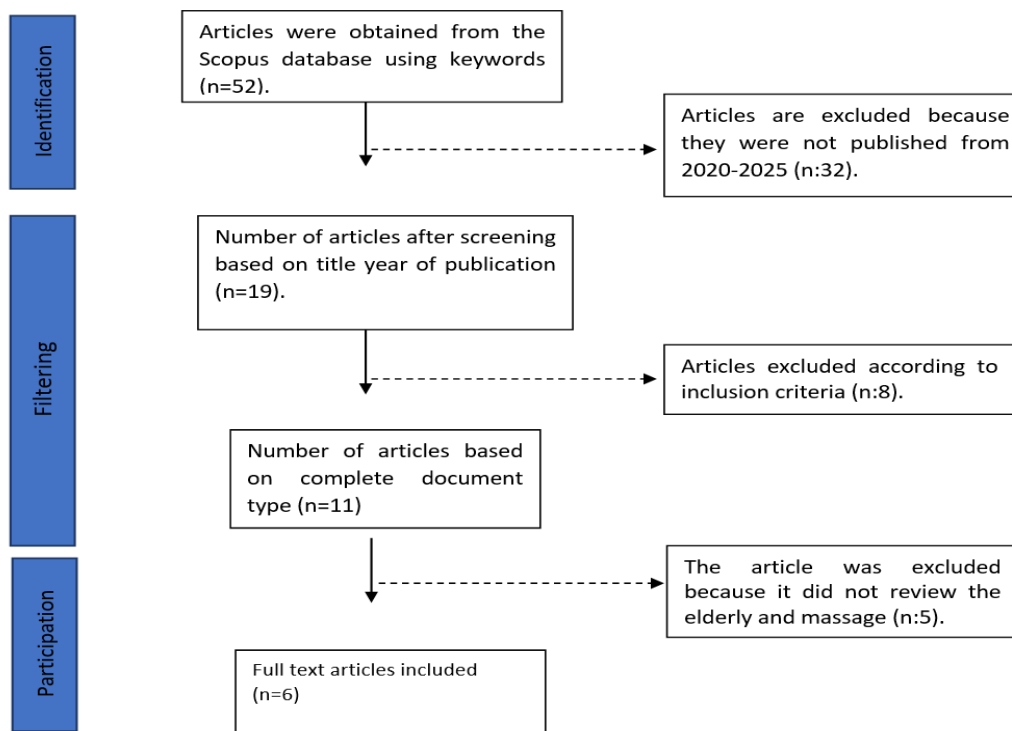


Figure 1: PRISMA research flowchart

Table 1: Summary of the benefits of massage therapy for older adults

Author Name	Research Method and Type	Research Objective	Research Results
[16]	Cross-sectional study using European Social Survey (ESS) data	To describe CAM use among older adults with musculoskeletal pain hampering daily activities and examine characteristics of CAM users	About one-third (33.5%) of older adults with musculoskeletal pain used CAM; manual body-based therapies (massage, osteopathy) were most used; CAM use linked with female gender, younger age, higher education, physiotherapy use, and living in West Europe.
[17]	Non-randomized controlled trial	To assess pain-relieving and immunomodulatory effects of spinal thermal massage (STM) in old-aged patients with pain or disability	STM significantly reduced pain and improved quality of life; increased proportion and activity of monocytes and NK cells, enhancing immune function; no significant adverse cytokine changes observed.
[18]	Prospective, non-randomized cohort study	To evaluate the effects of two physical therapy interventions on musculoskeletal pain and QoL in older adults	Both interventions reduced neck and low back pain intensity with improved QoL; individualized intervention more effective for neck pain; high adherence.
[19]	Cross-sectional sub-study of 45 and Up cohort	To estimate prevalence and determinants of massage therapy use among mid-aged and older Australian women	7.7% used massage therapy; higher use linked to tertiary education, private health insurance, osteoarthritis, and lower health-related quality of life (HRQoL).
[20]	Randomized controlled trial	To determine effects of aromatherapy massage on constipation in elderly individuals	Aroma massage increased defecation frequency, feces amount and consistency; reduced straining and feeling of incomplete evacuation; safe, non-invasive.
[21]	Retrospective cohort study	To examine preliminary efficacy of massage therapy for chemotherapy-induced peripheral neuropathy (CIPN) pain and symptoms	One session of massage therapy significantly reduced CIPN-related moderate-to-severe pain and neuropathy symptoms; patients reported high satisfaction.

### III. DISCUSSION

This systematic review evaluated the multifaceted benefits of massage therapy for the elderly, drawing from recent controlled

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trials, population-based surveys, and cohort studies published between 2020 and 2025. The evidence converges on several key themes: the physiological, psychological, and quality-of-life improvements associated with diverse forms of massage; the determinants and patterns of use among elderly populations; and the implications for integrating massage into standard geriatric care.

### ***Physiological Benefits***

Multiple studies demonstrate significant improvements in physical health parameters among elderly adults receiving massage therapy. For instance, [17] showed that spinal thermal massage not only reduced subjective pain but also produced quantifiable immune benefits, increasing the activity of monocytes and natural killer (NK) cells factors relevant for older adults with declining immune function. Importantly, no adverse changes in proinflammatory cytokines were reported, suggesting a favorable safety profile for this intervention. Similarly, [20] found that aromatherapy abdominal massage effectively alleviated constipation a prevalent issue among institutionalized elderly by increasing defecation frequency, stool amount, and improving consistency, while also reducing straining and the feeling of incomplete evacuation. Such outcomes support massage as a non-invasive, low-risk adjunct to conventional symptom management in geriatrics.

Individualized physical therapy interventions incorporating massage [18] yielded notable reductions in neck and low back pain, alongside improvements in health-related quality of life (HRQoL). Notably, the benefits extended beyond pain relief, with improved physical function and emotional status observed, aligning with the holistic aspirations of geriatric care.

[21] further expand the evidence base into the oncology context, demonstrating that a single session of massage therapy can significantly reduce the severity of chemotherapy-induced peripheral neuropathy (CIPN) symptoms in cancer patients, with the majority of participants reporting moderate-to-severe pain reductions and high satisfaction with the intervention. This extends the potential utility of massage therapy to elderly cancer survivors, a rapidly growing and often underserved subgroup.

### ***Psychological and Quality of Life Outcomes***

Beyond somatic improvement, the psychological benefits of massage consistently emerge in the literature. Massage interventions have been linked to reductions in stress, anxiety, and general discomfort, contributing to enhanced emotional well-being and perceived quality of life [16]. The anxiolytic and relaxing properties of massage are theorized to operate through increased parasympathetic activity and the release of neuromodulators, reinforcing its role in mitigating the cumulative psychological burdens of aging and chronic disease.

Moreover, the reviewed studies report high levels of patient satisfaction and adherence. For example, both physical improvements and the subjective experience of care such as feeling attended to and supported were noted as contributors to overall treatment satisfaction. The interplay between physical relief and psychological benefit suggests that massage may exert synergistic effects on function and subjective wellness in older populations.

### ***Utilization Patterns and Determinants***

Population-based research, such as the cross-sectional analyses by [16] and [19], reveals that massage therapy is most commonly utilized by women, individuals with higher educational attainment, those with private health insurance, and people experiencing multiple health concerns or lower HRQoL [19]. The linkage between massage utilization and social determinants underscores both the perceived value of these therapies among those facing greater health challenges and potential access barriers for disadvantaged groups.

The prevalence of massage therapy use is substantial: Morrissey et al. observed that about one-third of older adults with musculoskeletal pain report using some form of complementary and alternative medicine (CAM), with manual body-based therapies (including massage) being among the most common. Ladanyi et al. documented a 7.7% annual prevalence among older Australian women, with a higher likelihood of use among those with osteoarthritis or poorer HRQoL. These trends highlight the growing acceptance and integration of massage into broader health management strategies in aging societies.

### ***Safety and Adherence***

A critical concern in geriatric interventions is safety. The reviewed evidence consistently indicates that massage whether manual, thermal, or aromatherapy-based is well tolerated in older adults, with no significant adverse effects reported [20][18]. Adherence rates were high across interventions, especially when programs were individualized and incorporated educational and self-care components. This suggests that with proper preparation and professional oversight, massage can be feasibly implemented even among frail elderly groups.

### ***Mechanisms and Clinical Integration***

The mechanisms underlying the benefits of massage are multifactorial. Proposed pathways include modulation of the

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autonomic nervous system, increased local blood flow, reduced muscle tension, stimulation of mechanoreceptors, enhancement of immune functioning, and the psychosocial impact of therapeutic touch [16]. The diversity of massage modalities spanning Swedish, neuromuscular, reflexology, and aromatherapy styles offers flexibility for tailoring interventions to individual needs and preferences.

From a clinical perspective, the cumulative evidence suggests that massage can serve as a valuable adjunct to conventional geriatric care, particularly in settings where pharmacologic or surgical options are limited by comorbidities or polypharmacy. Its application is supported for musculoskeletal pain, functional constipation, stress-related disorders, and symptom control in oncology patients.

### Limitations and Future Directions

Despite promising findings, limitations warrant caution. The heterogeneity of intervention protocols, variability in outcome assessments, and frequent absence of active control groups pose challenges for direct comparisons and meta-analyses. Some studies are limited by cross-sectional or retrospective designs, highlighting the need for more rigorous randomized controlled trials with long-term follow-up and standardized, patient-centered outcomes.

Future research should further elucidate the cost-effectiveness of massage interventions, identify optimal dosing and delivery models, and explore barriers to equitable access especially for underrepresented and economically disadvantaged elders. Interdisciplinary trials that integrate physical and psychological endpoints will be crucial to fully capture the breadth of benefit.

## IV. CONCLUSIONS

This systematic review provides convincing evidence that massage therapy is a promising and multifaceted intervention for improving physical and mental health outcomes in older adults. Supporting findings from various methodological approaches, including randomized controlled trials, cohort studies, and population-based surveys, indicate that massage interventions consistently provide significant physiological benefits, including pain reduction, improved mobility, enhanced immune function, and symptom reduction across a range of conditions, from musculoskeletal disorders to chemotherapy-induced peripheral neuropathy. Psychological benefits are equally important, with studies showing significant reductions in anxiety, depression, and behavioral symptoms, particularly in vulnerable groups such as dementia patients. The high compliance rates and good safety profile observed across all reviewed studies highlight the feasibility and tolerability of massage therapy in the geriatric population. Additionally, the identification of key determinants of massage therapy use, including education level, access to private health insurance, and pre-existing musculoskeletal conditions, provides crucial insights for targeted implementation strategies. However, the heterogeneity observed in intervention protocols, outcome measures, and study duration underscore the urgent need for standardized, rigorous randomized controlled trials with extended follow-up periods and patient-centered outcomes. Future research should prioritize comparative effectiveness studies across massage modalities, investigate optimal dose parameters, and evaluate the sustainability of long-term benefits in diverse elderly subpopulations. Given the ongoing global increase in age-related morbidity and the urgency of non-pharmacological interventions, these findings support the integration of evidence-based massage protocols into comprehensive geriatric care frameworks, while emphasizing the importance of ongoing methodological rigor in developing this promising therapeutic field.

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