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Review Article

Therapeutic Massage Outcomes and Patient Experiences After Stroke: An Integrative Literature Review

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Abstract

Background: Post-stroke rehabilitation often requires long-term management of persistent physical and psychosocial consequences. Therapeutic massage has been studied as a complementary intervention, but evidence on patients' lived experiences remains limited.

Objective: To synthesize clinical, psychological, and experiential evidence on therapeutic massage among post-stroke patients.

Methods: An integrative literature review was conducted using PubMed, PubMed Central, ScienceDirect, and supplementary Google Scholar searching for literature published from 2020 to 2025. Primary quantitative and qualitative studies formed the direct evidence base, while systematic reviews were used for contextual synthesis and protocols were classified as ongoing research rather than outcome evidence. Seven sources were retained overall.

Results: Completed primary studies examined Tuina or massage combined with rehabilitation, tactile massage, and abdominal 'I LOV U' massage. Quantitative evidence suggested possible improvements in selected functional and gastrointestinal outcomes, while one small massage-specific qualitative study described comfort, relaxation, calmness, and temporary relief from worry. Review-level evidence was interpreted separately, and protocol publications were not treated as efficacy evidence.

Conclusion: Therapeutic massage may have a complementary role in post-stroke rehabilitation, but the evidence base is heterogeneous and direct qualitative evidence on patient experience is sparse. Findings from reviews and protocols should not be treated as equivalent to completed primary research. More rigorous primary qualitative, mixed-methods, and controlled studies are needed.

Keywords: Balloon blowing exercise; bronchopneumonia; child; ineffective breathing pattern; nursing care.

INTRODUCTION

Stroke is a major cause of death and disability worldwide. In 2021, an estimated 11.9 million new stroke cases occurred globally, with 93.8 million people living with stroke. Compared with 1990, the global burden increased by 70% for incident stroke, 86% for prevalent stroke, 44% for stroke-related deaths, and 32% for disability-adjusted life years (DALYs). Low- and middle-income countries accounted for 87% of stroke-related deaths and 89% of stroke-related DALYs. Stroke survivors may experience persistent weakness, spasticity, pain, impaired mobility, limitations in activities of daily living, anxiety, sleep disturbance, and reduced quality of life, often requiring prolonged rehabilitation and supportive care (1).

Rehabilitation addresses persistent impairments and limitations in physical functioning, independence, and daily participation after stroke (2). Physiotherapy, occupational therapy, speech therapy, psychological support, and pharmacological management are commonly incorporated into stroke rehabilitation. The World Health Organization estimated in 2025 that 2.6 billion people worldwide live with health conditions that could benefit from rehabilitation. Rehabilitation needs are particularly challenging in low- and middle-income settings because of limited services, workforce shortages, geographic barriers, and financial constraints (3). These conditions support the exploration of complementary interventions that can be integrated into post-stroke care.

Therapeutic massage is one such complementary intervention. It involves manual manipulation of soft tissues using techniques such as stroking, kneading, and pressure. In post-stroke care, massage has been studied as an adjunct to rehabilitation for muscle tension, spasticity, pain, mobility, and motor function. Other applications have focused on relaxation, comfort, sleep, and emotional well-being. These distinct purposes require clinical outcomes and patient experiences to be considered separately when interpreting the available evidence.

Clinical evidence has reported potential effects of therapeutic massage on post-stroke outcomes. (4) synthesized 18 randomized controlled trials involving 1,989 participants and found that Tuina combined with conventional physiotherapy was associated with improvements in upper-limb motor function and reductions in upper- and lower-limb spasticity compared with conventional physiotherapy alone. The evidence was concentrated on specific massage techniques and rehabilitation-related outcomes, limiting its applicability to other massage approaches and outcome domains.

Evidence on patients' experiences of therapeutic massage after stroke remains limited. Seiger Cronfalk (5) reported that eight patients with first-time stroke who received 20-minute tactile massage sessions three times weekly for up to nine sessions described the intervention as relaxing, associated with temporary relief from worry and anxiety, and conducive to feelings of closeness through physical touch. However, the small qualitative sample limits the transferability of these findings. Findings from broader rehabilitation research, including emotional support, therapeutic communication, motivation, and patient-centered care reported by Sun (6) provide relevant contextual evidence but do not directly represent experiences of therapeutic massage. The available literature therefore contains predominantly quantitative evidence on clinical and psychological outcomes, with comparatively limited massage-specific qualitative evidence. An integrative literature review is appropriate because it enables the synthesis of quantitative and qualitative evidence while maintaining distinctions in study design, outcome measurement, and evidentiary strength. This approach provides a structured basis for examining clinical and psychological outcomes alongside patients' lived experiences of therapeutic massage after stroke (7).

The review was guided by the following research question, which examined the clinical, psychological, and lived-experience outcomes reported among post-stroke patients receiving therapeutic massage, as well as the ways in which patients described their experiences during post-stroke care or rehabilitation (8,9). The review synthesized evidence on clinical and psychological outcomes and patient experiences associated with therapeutic massage after stroke, with particular attention to the limited evidence addressing patients' lived experiences. The findings may inform patient-centered nursing care and contribute to the development of future qualitative research examining the experiences of post-stroke patients receiving therapeutic massage (10).

METHODS

Study design

This study used an integrative literature review design to synthesize quantitative, qualitative, and review-based evidence on therapeutic massage in post-stroke rehabilitation. Primary studies provided the main clinical and experiential evidence, while systematic reviews and meta-analyses were used for contextual support and protocols were not considered outcome evidence. Overlapping studies were identified to minimize double-counting, and findings were stratified by evidence type and study design.

Search strategy

Literature searches were conducted in PubMed, PubMed Central, ScienceDirect, and supplementary Google Scholar searching for publications from 2020 to 2025. The search combined terms related to stroke, therapeutic massage, patient experience, rehabilitation, and quality of life. The exact search date and database-specific strings must be reported in the final manuscript to ensure reproducibility.

Eligibility criteria

English-language publications were eligible for inclusion. Indonesian-language search terms could be used to broaden discovery, but sources without an eligible full-text language were excluded. Primary quantitative and qualitative studies were considered direct evidence. Systematic reviews and meta-analyses were used for contextual synthesis, while protocols were retained only to describe ongoing research and were not counted as evidence of treatment efficacy.

Study selection and appraisal

Retrieved records were screened by title and abstract, followed by full-text assessment of potentially eligible sources. The manuscript reports 50 identified records and seven retained sources. Before submission, the PRISMA counts, duplicate-removal process, database-specific yields, reasons for full-text exclusion, and reviewer process should be checked against the actual search records. Study quality should be reported using design-appropriate appraisal tools with transparent study-level judgments.

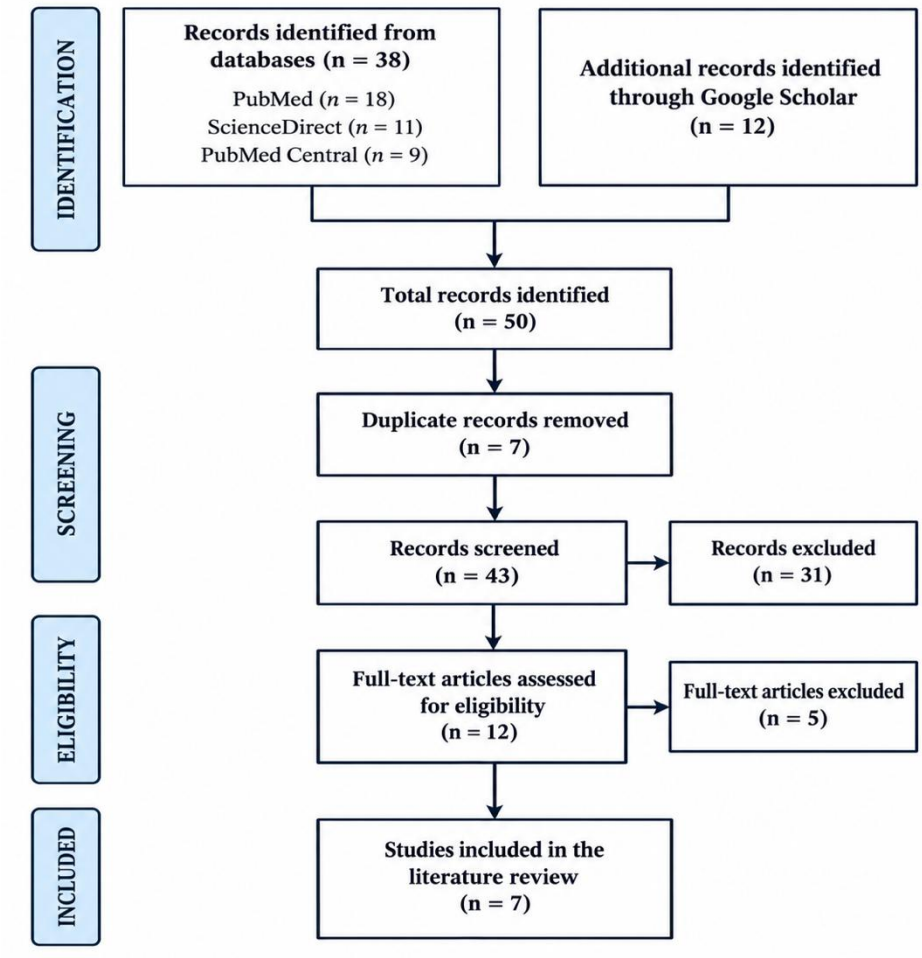


Figure 1. PRISMA flow diagram of the literature selection process.

Data synthesis

Findings were synthesized narratively across the included studies. Evidence was organized according to characteristics of the massage interventions, physiological benefits, psychological benefits, and social and emotional experiences. Because the included studies differed in design, intervention type, frequency, duration, and outcomes, statistical pooling was not undertaken in this integrative review.

RESULTS

The review reports 50 records identified across PubMed, PubMed Central, ScienceDirect, and supplementary Google Scholar searching, with seven sources retained after screening. These sources included completed primary studies, review-level evidence, and protocol publications. For interpretation, completed primary studies were treated as direct evidence, systematic reviews as contextual synthesis, and protocols as ongoing research without outcome data.

Across the seven retained sources, evidentiary weight varied substantially. Completed primary studies supplied direct clinical or experiential findings. Systematic reviews and meta-analyses summarized prior studies and were interpreted separately to reduce double-counting. Protocol publications did not contribute efficacy findings. This hierarchy should be maintained throughout the Results and Discussion (11-13).

The characteristics and principal findings of the seven studies are presented in Table 1. The table is intended to provide an editable, concise synthesis of the evidence rather than introduce a new statistical analysis. Overall, the findings indicate that therapeutic massage may provide complementary benefits during post-stroke rehabilitation, while the limited number of qualitative studies demonstrates the need for further research specifically examining patients' lived experiences (14,15).

Table 1. Characteristics and Principal Findings of the Included Studies

No.	Study	Design / Sample	Massage approach	Principal findings
1	Cabanas-Valdés (4)	Systematic review and meta-analysis; 18 RCTs, 1,989 adults with stroke	Massage therapy, particularly Tuina, mainly combined with conventional physiotherapy	Improved upper- and lower-limb motor function, reduced spasticity, improved ADL, balance and quality of life, with relaxation effects.
2	Shen et al. (16)	Systematic review and meta-analysis protocol; RCTs and cohort studies	Massage therapy for post-stroke depression	The protocol indicated potential benefits for depression, anxiety, relaxation, sleep quality and quality of life; final meta-analysis results were not yet available.
3	Liu et al. (17)	Systematic review and meta-analysis protocol; RCTs in post-stroke hemiplegia	Acupuncture and massage combined with rehabilitation	The protocol suggested potential improvements in motor function and ADL and reductions in spasticity compared with conventional rehabilitation alone.
4	Fekri et al. (7)	Randomized clinical trial; 68 older adults with stroke	Abdominal "I LOV U" massage plus lifestyle training	Reduced constipation and abdominal distension, improved gastrointestinal function, comfort and food tolerance; reported as safe and feasible as an adjunct intervention.
5	Seiger Cronfalk et al. (5)	Qualitative study; 10 adults; purposive sampling; in-depth interviews	Tactile massage	Participants described comfort, relaxation, calmness and feeling cared for; some reported reduced stress and emotional tension, better sleep and a more positive emotional state.
6	Sun et al. (6)	Qualitative systematic review and meta-synthesis	Experiences and needs during physical rehabilitation	Stroke survivors reported physical, emotional, social and psychological needs. Therapeutic relationships, communication, motivation, support and patient-centered care were important during recovery.
7	Ji et al. (8)	Systematic review and meta-analysis protocol; RCTs involving post-stroke spasticity	Tuina combined with physical therapy	The protocol indicated potential reductions in spasticity and improvements in motor function and ADL, with combined therapy potentially supporting more comprehensive recovery.

Note. ADL = activities of daily living; RCT = randomized controlled trial. The synthesis reflects the evidence reported in the source manuscript; protocol studies are presented as protocols and therefore should not be interpreted as reporting completed meta-analysis results.

Overall synthesis of findings

Across the retained literature, completed studies suggested possible benefits in selected physical, gastrointestinal, and psychosocial outcomes. However, the intervention types, co-interventions, outcome measures, and study designs differed markedly. The evidence therefore supports cautious consideration of massage as an adjunct rather than a standardized or broadly effective post-stroke intervention.

DISCUSSION

Characteristics and delivery of therapeutic massage

The reviewed evidence showed variation in massage techniques, treatment schedules, and rehabilitation settings. Tuina was mainly examined for motor recovery and spasticity, whereas tactile massage focused on relaxation, comfort, and emotional support. Abdominal "I LOV U" massage addressed gastrointestinal symptoms. Massage was commonly provided alongside physiotherapy or other rehabilitation rather than as a stand-alone intervention. Differences in stroke stage, severity, massage duration, and frequency limit direct comparison and transferability across studies.

Physiological benefits

Completed studies reported potential improvements in motor function, spasticity, activities of daily living, and gastrointestinal symptoms. Cabanas-Valdés (4) reported improvements in motor function, spasticity, and activities of daily living when massage was combined with conventional physiotherapy, while Fekri (7) reported improvements in constipation, abdominal distension, and eating tolerance. These findings suggest potential complementary effects, but variation in techniques and co-interventions prevents conclusions about a standardized massage protocol. Findings from protocols were not considered evidence of treatment efficacy.

Psychological, social, and emotional experiences

Direct evidence on patient experience remains limited. Seiger Cronfalk (5) reported that participants described tactile massage as comfortable, calming, and relaxing, with temporary relief from worry and anxiety. However, this evidence came from a single massage-specific qualitative study involving only 10 participants, limiting transferability to the broader post-stroke population. Findings from broader rehabilitation research, such as emotional support, communication, motivation, and therapeutic relationships reported by Sun et al., provide contextual rather than massage-specific evidence. Claims about lived experience should therefore remain cautious (18-21).

Safety and feasibility

Safety evidence was limited and was not systematically reported across all included studies. Fekri et al. reported no serious complications during abdominal massage, while other sources provided limited adverse-event information. Therefore, the available evidence is insufficient to establish the relative safety of therapeutic massage after stroke. In practice, massage should be individualized according to clinical condition, tolerance, and rehabilitation goals and used as an adjunct to established rehabilitation rather than a replacement.

Implications for nursing practice and future research

Therapeutic massage may be considered as a complementary component of individualized, patient-centered rehabilitation. Nurses can assess comfort, tolerance, functional needs, emotional responses, and patient preferences and coordinate massage with conventional rehabilitation. Future studies should use standardized intervention protocols and report stroke severity, timing, frequency, duration, adverse events, and effect estimates. Qualitative research is also needed to examine patients' experiences of touch, comfort, therapeutic relationships, family involvement, and cultural acceptability.

Limitations

This review has several limitations. It combined primary studies, review-level evidence, and protocols, creating a risk of overlap and double-counting if evidence types are not kept separate. The database strategy and search date are not yet fully documented, and formal appraisal results are not presented consistently. Direct qualitative evidence on massage-specific patient experience is limited to one small study, while some experiential findings derive from broader rehabilitation literature. These limitations reduce certainty and transferability.

CONCLUSION

This integrative review found limited but potentially favorable evidence for therapeutic massage as an adjunct to post-stroke rehabilitation, particularly for selected functional, gastrointestinal, and comfort-related outcomes. Evidence on patients' lived experiences is much more limited and derives primarily from one small massage-specific qualitative study. Review-level sources provide context, while protocols do not provide treatment outcomes. More rigorous primary studies are needed before broad clinical recommendations can be made.

Evidence on patients' lived experiences is considerably more limited. One small massage-specific qualitative study described experiences of comfort, relaxation, calmness, and temporary relief from worry and anxiety. Broader experiential findings from non-massage rehabilitation research provide contextual support but cannot be considered direct evidence of massage experiences. The limited qualitative evidence therefore represents an important gap in current research. Future studies should examine patients' experiences of therapeutic touch, comfort, therapeutic relationships, family involvement, and cultural acceptability to strengthen patient-centered and culturally responsive nursing care.

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Conflict of Interest

The authors declare that they have no financial or non-financial competing interests that could have influenced the conduct, interpretation, or reporting of this study.

Data Availability Statement

All evidence synthesized in this integrative literature review was obtained from previously published studies cited in the reference list. The characteristics of the included publications and the principal findings are presented in the manuscript. No new individual participant-level data were collected or generated. Further information regarding the literature selection and evidence synthesis is available from the corresponding author upon reasonable request.

Author Contributions

AS: Conceptualization, methodology, literature searching, data collection, data extraction, formal analysis, evidence synthesis, and writing—original draft. YI: Conceptualization, methodology, supervision, validation, critical interpretation of findings, and writing—review and editing. WW: Methodology, supervision, validation, critical interpretation of findings, and writing—review.

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