

Trends in Korean intervention studies on complementary and alternative therapies in rehabilitation nursing

Da-Jung Kim*

Department of Nursing, Cheju Halla University, Jeju, Korea

In nursing, complementary and alternative therapies (CATs) can be provided alongside, or as alternatives, to conventional medical treatments to maximize therapeutic effects, accelerate rehabilitation, and enhance patient satisfaction. Fostering the correct knowledge and attitudes toward CATs is crucial not only for theoretical development but also for practical application. To gain a comprehensive understanding of recent domestic research trends, this study conducted an integrative review to analyze different types of CAT-related intervention studies in rehabilitation nursing in South Korea. A literature search of relevant databases suggested 14 papers. The review revealed that most studies focused on older adult patients, with manipulative and body-based therapies being the most common CAT interventions, followed by energy therapies,

mind-body therapies, and others. The efficacy analysis of the CATs used in the selected studies indicated that their effects varied depending on participant characteristics and outcome measures, even when the same CAT was employed. To advance the field of rehabilitation nursing, effective CATs that are proven to be safe for older adult patients need to be developed and actively utilized. Additionally, specialized nurse training programs and clinical and community-based applications for rehabilitation patients requiring interventions need to be developed.


Keywords: Complementary and alternative therapy, Rehabilitation nursing, Integrative review

INTRODUCTION

The U.S. National Center for Complementary and Alternative Medicine defines complementary and alternative medicine (CAM) as “diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine.” It classifies CAM practices into five groups: (1) Biologically based practices including herbs and vitamins; (2) Energy medicine involving practices, such as magnet therapy, meridian therapy, and acupuncture; (3) Manipulative and body-based practices, such as massage and aromatherapy; (4) Mind-body medicine including meditation and relaxation techniques; and (5) Whole medical system, such as Traditional Chinese Medicine and Ayurveda (Oh et al., 2006). Additionally, CAM aims to harmonize treatment by considering the holistic aspects of mental, social, and environmental components, not limited to only addressing the patient’s illness (Corbin Winslow and Shapiro, 2002). CAM practic-

es have the advantage of being offered either complementarily or independently of conventional medical treatment models to maximize therapeutic effects and enhance patient satisfaction (DeKeyser et al., 2001).

Patients undergoing rehabilitation therapies often face challenges owing to a decline in physical functionality and psychological difficulties secondary to disabilities. Over time, they experience various disabilities caused by illness, going through cycles of exacerbations and remissions, and they make efforts to cope with their conditions independently (Prvu Bettger et al., 2015). Therefore, for rehabilitation patients to receive assistance in overcoming disabilities, managing the worsening of their conditions, addressing risk factors in daily life, and recovering lost or weakened functions to the greatest extent possible to adapt to their environment is crucial. Providing nursing care that supports functional recovery and adaptation is also necessary to enable them to perform activities of daily living (ADLs) postdischarge and address major health

*Corresponding author: Da-Jung Kim  <https://orcid.org/0000-0002-2091-4825>
Department of Nursing, Cheju Halla University, 38 Halladaehak-ro, Jeju 63092, Korea
Email: jung-321@hanmail.net
Received: August 10, 2024 / Revised: September 9, 2024 / Accepted: September 12, 2024

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concerns (Duncan et al., 2002).

CATs in nursing can be provided in conjunction with or as alternatives to conventional medical treatments to enhance therapeutic outcomes for rehabilitation patients and improve their satisfaction. Therefore, establishing the correct knowledge and attitude toward CATs is crucial not only for the theoretical development of nursing but also for the expansion of CAM practices (DeKeyser et al., 2001). CATs can support rehabilitation patients in therapeutic, psychological, social, and environmental aspects.

However, a review of previous studies indicates that the research trends on CATs in rehabilitation nursing have primarily been explored through integrative reviews. These studies have limitations in understanding how CAT research has progressed and what knowledge has been accumulated (Oh et al., 2006). This makes it challenging to comprehensively understand recent domestic (South Korean) research trends. Additionally, little research is dedicated to analyzing how CATs are currently being integrated into rehabilitation nursing and how new roles are being adapted. To address this research gap, this study systematically analyzed the trends of different types of Korean CAT-related intervention studies in rehabilitation nursing through an integrative review, aiming to gain a comprehensive understanding of recent domestic research trends.

This study aims to understand research trends in CATs by conducting an integrative review of CAT-related intervention studies in the field of rehabilitation nursing published in South Korea over the past decade. By employing an integrative review methodology, which synthesizes findings from diverse study designs and methodologies, the goal is to provide a comprehensive overview that can inform the restructuring of CATs for rehabilitation patients. Additionally, this approach will help identify gaps in the existing literature and explore appropriate research directions for the future application of CATs in rehabilitation nursing.

MATERIALS AND METHODS

Study design

This study is an integrative review of CAT-related intervention studies in the field of rehabilitation nursing that have been published in South Korea over the past 10 years.

Target articles and literature search

The literature search focused on papers published in the field of rehabilitation nursing in Korean academic journals over the past 10 years (2014–2023). The search was conducted using databases such as the National Assembly Library, the Korean Studies Infor-

mation Service System, DBPIA, and RISS4U, with the search terms “complementary and alternative therapies,” “rehabilitation nursing,” and “intervention study.” Unpublished papers, conference proceedings, studies involving non-human subjects, review articles, and papers without accessible full texts were excluded. A total of 14 papers that met the eligibility criteria were selected for analysis (Fig. 1).

Data analysis

To ensure consistency in analyzing research trends, predetermined criteria were used to examine the general characteristics of the selected papers (e.g., distribution of papers by year, characteristics of participants, and total number of participants), intervention methods for CATs, and content analysis (outcome measures and efficacy analysis) based on previous studies. For quantitative analysis of the collected data, descriptive statistics, such as frequency and percentage, were calculated using IBM SPSS Statistics ver. 21.0 (IBM Co., Armonk, NY, USA).

Ethical considerations

This study was conducted after obtaining an exemption from review by the Institutional Review Board (IRB) of University C (IRB No. 1044348-20231121-HR-005-01).

RESULTS

General characteristics of the studies

The characteristics of the reviewed papers are as follows: examining the distribution of papers by publication period, eight (57.1%), two (14.3%), and four (28.6%) were published in 2014 and 2015, between 2016 and 2019, and between 2020 and 2023, respectively. Regarding participant groups, nine (64.3%) targeted older adults, while five (35.7%) targeted nonolder adults. The total sample sizes were categorized as follows: fewer than 30, 30–39, 40–49, and 50–59, and 60 or more participants in two (14.3%), five (35.7%), three (21.4%), and two papers (14.3%) each, respectively (Table 1).

CAT intervention methods

The CAT intervention methods used in the 14 papers reviewed are as follows: seven papers (50.0%) applied manipulative and body-based therapies (e.g., auricular acupressure, massage, and hand acupuncture), two (14.3%) applied mind-body therapies (e.g., Tai Chi exercise), four (28.6%) applied energy therapies (e.g., acupressure, moxibustion, finger pressure pellet therapy),

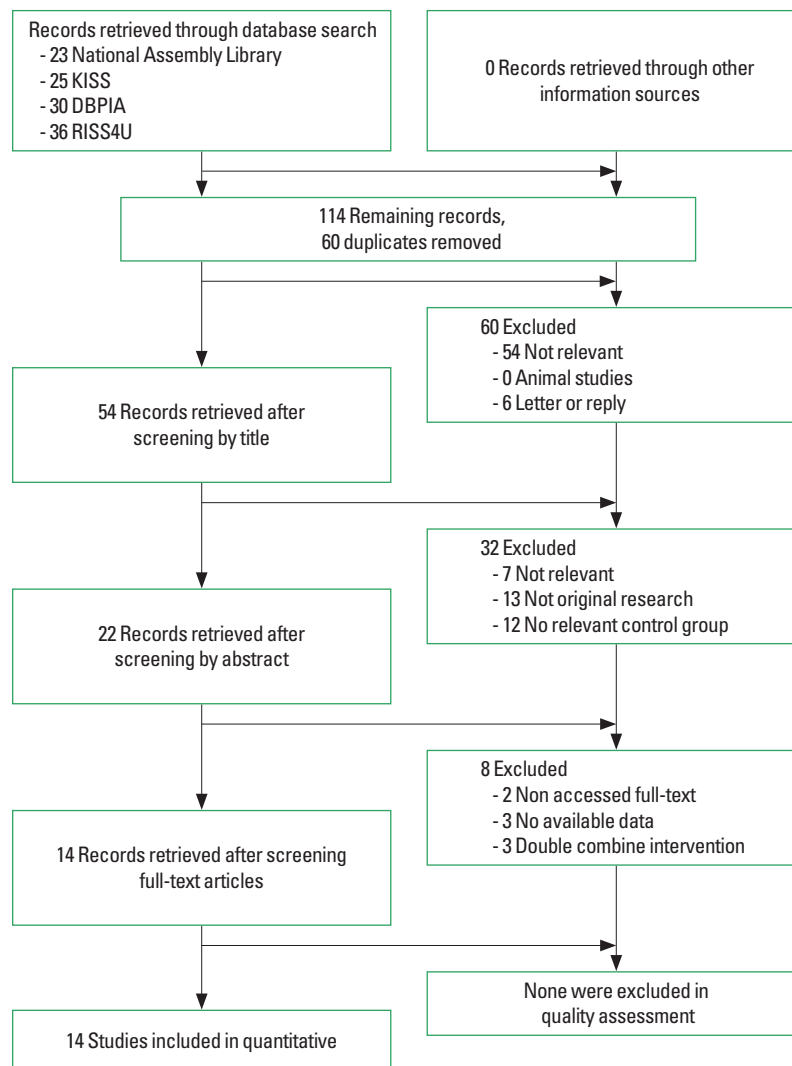


Fig. 1. Study flow diagram. KISS, Korean Studies Information Service System.

Table 1. General characteristics of the studies (n= 14)

Characteristic	No. (%)
Publication year	
2014–2015	8 (57.1)
2016–2019	2 (14.3)
2020–2023	4 (28.6)
Study populations	
Older adults	9 (64.3)
Nonolder adults	5 (35.7)
Total sample size (n)	
<30	2 (14.3)
30–39	5 (35.7)
40–49	3 (21.4)
50–59	2 (14.3)
≥60	2 (14.3)

and the remaining paper (7.1%) applied another, unspecified therapy (Fig. 2).

Content analysis (outcome measures and efficacy analysis)

Table 2 summarizes the content analysis of the 14 papers included in the review. The efficacy analysis revealed that CATs yielded different effects depending on participant characteristics and outcome measures.

The efficacy analysis of the studies on older adults (No. 1–9) can be summarized as follows: aromatherapy and foot reflexology massage reduced dementia-related sleep disorders and wandering behavior. Auricular acupressure improved sleep duration, sleep satisfaction, and nocturia. Moxibustion significantly reduced the severity of low back pain and disability in performing ADLs in

the experimental group compared to the control group. Tai Chi exercise administered to older adult women led to a statistically significant improvement in right upper limb and lower limb flexibility, but no significant difference in lower limb strength, left upper limb flexibility, bilateral static balance, agility, or dynamic balance. Tai Chi exercise administered to rural older adults at risk of dementia significantly improved their attention span compared

to the control group. Auricular acupressure applied to older adult workers exhibited a pain reduction effect but no difference in joint range of motion or sleep quality.

The efficacy analysis of the four studies on nonolder adults (No. 10–14) can be summarized as follows: auricular acupressure on home-based stroke patients displayed no significant difference in upper limb function or perceived health status. Aromatherapy hand massage applied to dialysis patients was more effective in reducing pulse rate than in reducing anxiety. Self-lymphatic drainage applied to breast cancer survivors exhibited only partial improvement in quality of life and no difference in subjective symptoms of edema.

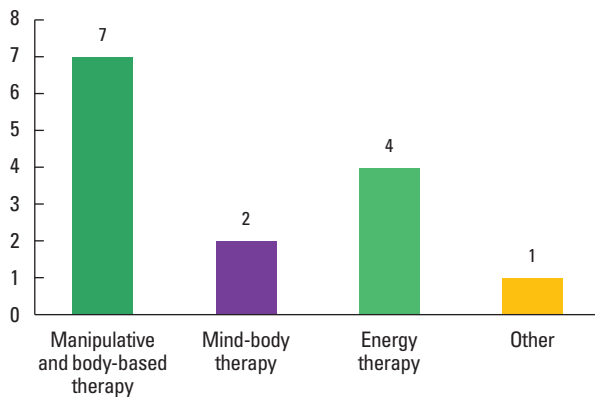


Fig. 2. Distribution of the 14 papers reviewed by intervention method.

DISCUSSION

This study examines trends in domestic intervention studies on CATs in rehabilitation nursing and aims to identify potential areas for restructuring CAT programs and explore future research directions. A total of 14 research papers were analyzed, with a focus on participant characteristics, CAT intervention methods, outcome

Table 2. General characteristics of the studies (n=14)

No.	Participants	CAT type	Outcome measures	Efficacy analysis
1	Older adults with dementia	Aromatherapy; foot reflexology massage	Sleep disorders; wandering behavior	Reduction in sleep disorders and wandering behavior
2	Older adults	Auricular acupressure	Nocturia; insomnia	Improved sleep duration and sleep satisfaction; decreased frequency of nocturia
3	Older adults	Moxibustion	Chronic low back pain; disability in performing ADLs	Significant reduction in the severity of low back pain and disability in performing ADLs
4	Older adult women	Tai Chi	Physical fitness; quality of life	Varying effects depending on body parts; improvement in physical and mental quality of life scores
5	Institutionalized older adults	Acupressure	Constipation relief	Significant increase in weekly bowel movements
6	Mild dementia older adults	Horticultural activities	Ability to perform ADLs	Improved ability to perform ADLs; reduced depression
7	Older adult women with knee osteoarthritis	Finger pressure pellet therapy	Joint pain; joint stiffness; depression	Significant reduction in joint pain, joint stiffness, physical difficulty in performing ADLs, and depression levels
8	Rural older adults at risk of dementia	Tai Chi	Cognitive function	Significant increase in attention span
9	Older adults' workers	Auricular acupressure	Knee joint pain; joint angle; sleep	Reduced pain; no differences in ROM and sleep
10	Laparoscopic hysterectomy patient	Hand acupuncture	Pain; abdominal bloating	Effective in pain relief; partially effective in alleviating abdominal bloating
11	Home-based stroke patients	Auricular acupressure	Upper limb function; perceived health status; ADLs	No significant difference in upper limb functionality and perceived health status; increase in ADL scores
12	Smokers	Auricular acupressure	Smoking amount; craving to smoke; exhaled carbon monoxide	No change in smoking amount and craving to smoke; partial reduction in exhaled carbon monoxide levels
13	Dialysis patients	Aromatherapy hand massage	Pain; anxiety; blood pressure; pulse	More effective in reducing pulse rate than anxiety
14	Breast cancer survivor	Self-lymphatic drainage	Quality of life; differences in subjective symptoms of edema and physical symptoms	Partially effective in enhancing quality of life; no difference in subjective symptoms of edema; increased shoulder joint ROM

ADL, activities of daily living; ROM, range of motion.

measures, and efficacy analysis. This study concludes with a presentation of trends and recommendations for domestic CAT intervention research in rehabilitation nursing.

First, among the 14 papers, nine (64.3%) focused on older adult patients, which is consistent with previous research suggesting increased use of CATs among older adults for disease management (Suen et al., 2016). Owing to physiological changes and potential interactions with underlying diseases and existing treatments, older patients require greater caution in medication and surgical considerations (Knopp-Sihota et al., 2022). Therefore, safe and effective nonpharmacological interventions are needed. In this context, CATs offer a relatively safe, noninvasive, and cost-effective alternative to treatments involving expensive medical equipment, thereby reducing healthcare costs. They are especially advantageous for home-bound older adult patients because of the availability of visiting care. Therefore, CATs may be preferred among older age groups. Their potential to improve pain management, physical functionality, psychological health, and quality of life in older adults (Nawai, 2019) warrants further development and active utilization.

Second, among the CAT intervention methods reviewed, auricular acupressure was the most used form of manipulative and body-based therapy in nursing care. Auricular acupressure involves placing small objects, such as seeds, magnets, or stones, on reflex points on the ear using tape and applying pressure with the fingers. Its low pain, minimal side effects, affordability, and ease of application make it a suitable CAT for many patients (Lee and Frazier, 2011; Kim and Park, 2023). Given that CATs have traditionally been employed for health maintenance rather than disease treatment (Kim et al., 2013), their application within the nursing care field needs to be broadened. This underscores the importance of nurse education and program development to integrate CATs into clinical practice and community settings for rehabilitation patients who require noninvasive and affordable interventions.

Third, the efficacy analysis revealed that the effects of CATs varied depending on participant characteristics and outcome measures. Previous research (Kılıç Akça and Taşçı, 2016; Lee and Hur, 2022) has confirmed differences in effect sizes based on intervention methods, timing of measurement, and participant characteristics, which limits the applicability and sustained efficacy of CATs in rehabilitation nursing. To enhance the generalizability of CATs, standardized methods need to be established, scientific knowledge accumulated, and repeated studies conducted. This is also essential for defining their academic identity and direction.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

ACKNOWLEDGMENTS

The author received no financial support for this article.

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