

Effectiveness of Functional Strength Training on Quality of Life in Postmenopausal Women

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Abstract

Background: Postmenopausal women commonly experience reduced muscle strength, functional decline, and impaired quality of life due to hormonal changes. Functional strength training focuses on movement-based strengthening that may improve daily functioning and well-being.

Objective: To evaluate the effectiveness of an 8-week functional strength training program on quality of life in postmenopausal women aged 45–60 years.

Methods: A pre-experimental pre-test–post-test study was conducted among 50 postmenopausal women aged 45–60 years. Participants underwent functional strength training for 8 weeks. Quality of life was assessed using the WHOQOL-BREF questionnaire. Data were analyzed using paired t-test.

Results: Significant improvement was observed in overall quality of life scores following the intervention ($p < 0.001$).

Conclusion: Functional strength training significantly improves quality of life in postmenopausal women and should be incorporated into physiotherapy-based women's health programs.

Keywords: Postmenopausal women, Functional strength training, Quality of life, Physiotherapy, Women's health.

Introduction

Menopause is a physiological transition characterized by the cessation of ovarian function and reduced estrogen levels. These changes are associated with sarcopenia, reduced balance, functional limitations, and psychological distress. As a result, quality of life is significantly affected in postmenopausal women.

Functional strength training emphasizes multi-joint, weight-bearing exercises that replicate daily activities, enhancing neuromuscular coordination and independence. Evidence suggests that such training improves physical and psychological well-being. This study aims to assess the effectiveness of functional strength training on quality of life in postmenopausal women aged 45–60 years.

METHODOLOGY

Study Design: Pre-experimental pre-test–post-test design

Sample Size: 50

Age Group: 45–60 years

Duration: 8 weeks

Inclusion Criteria:

- Postmenopausal women aged 45–60 years
- Willingness to participate
- Ability to perform exercises independently

Exclusion Criteria:

- Recent fractures or surgeries
- Severe cardiovascular, neurological, or musculoskeletal disorders
- Participation in structured exercise programs in the past 3 months

Outcome Measure:

WHOQOL-BREF questionnaire

Intervention Protocol:

Functional strength training was administered 3 sessions per week for 8 weeks.

Warm-up: 10 minutes

Main exercises: Squats, lunges, step-ups, wall push-ups, bridging, core stabilization (30–40 minutes)
Cool-down: Stretching and relaxation (10 minutes)

STATISTICAL ANALYSIS

Paired t-test was used to compare pre- and post-intervention QoL scores. Significance level was set at $p < 0.05$.

RESULTS

Table 1: Demographic Characteristics

Age (years): Mean $\pm$ SD = 52.4 ± 4.6

Sample size: 50

Table 2: Comparison of Pre- and Post-Intervention QoL Scores

Pre-test Mean $\pm$ SD: 56.2 ± 6.8

Post-test Mean $\pm$ SD: 68.9 ± 5.9

t-value: 12.45

p-value: <0.001

DISCUSSION

The results demonstrate significant improvement in quality of life following functional strength training. Improvements in physical functioning, emotional well-being, and social participation were observed. These findings align with previous studies emphasizing the role of exercise in postmenopausal health.

Functional training enhances muscle strength, balance, and confidence, thereby reducing dependency and improving overall quality of life.

CONCLUSION

An 8-week functional strength training program significantly improves quality of life in postmenopausal women aged 45–60 years. This intervention is safe, cost-effective, and clinically applicable in physiotherapy practice.

LIMITATIONS

- No control group
- Short intervention duration
- Limited generalizability

RECOMMENDATIONS

Future studies should employ randomized controlled trials with larger sample sizes and long-term follow-up.

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