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The Lifestyle-integrated Functional Exercise Program for Older Adults

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The Lifestyle-integrated Functional Exercise Program for Older Adults

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Introduction

According to the Centers for Disease Control and Prevention, falls are the most common cause of fatal and non-fatal injuries among older adults over the age of 65 (Centers for Disease Control and Prevention [CDC], 2009). Falls can lead to a myriad of traumatic physical and emotional consequences. Both older adults who have fallen and those who have not experienced a fall can develop a fear of falling. A fear of falling may discourage older adults from engaging in meaningful activities as they may now perceive certain activities as dangerous due to the risk of falling (Boyd & Stevens, 2009; Lach, 2005). Lifestyle integrated Functional Exercise (LiFE), an integrated exercise program has been proven to prevent falls and decreases the fear of falling in older adults (Clemson et al., 2012).

The Original LiFE Study

Clemson et al. (2012) developed the LiFE program integrating balance and strengthening activities into daily routines to reduce the rate of falls in older adults. Older adults, ages 70 or older, who had experienced two or more falls, or one injurious fall within the previous 12 months, participated in the study. Participants were assigned to either a structured exercise intervention group, the LiFE intervention group, or a control group consisting of 12 gentle flexibility exercises. The LiFE intervention group learned balance and strength principles that could be incorporated into their daily routines as often as possible, such as standing on one’s toes while brushing one’s teeth, or standing on one foot while watching television. The LiFE program was effective in preventing falls and increasing fall efficacy which is a persons confidence in not falling (Lord et al., 2005; Newson & Kemps, 2007).

Benefits of Integrated-exercise vs. Traditional Exercise

• Integrated exercise uses an occupation-based approach by incorporating balance and strengthening activities into everyday activities. Integrated exercise is tailored to each individual’s needs and lifestyles, and is motivating and accessible. Compliance is greater because the exercises become part of an overall lifestyle routine (Opdenacker, Boen, Coorevits, & Deleaseley, 2008).

Statement of Purpose

The purpose of this study was to examine if the LiFE program is as effective in reducing fall risk and increasing fall efficacy for non-fallers as it is for fallers.

Literature Review

Exercise for Fall prevention
• Exercise that promotes balance and strength can reduce fall risk, as well as increase fall self-efficacy (Hess & Woolacott, 2005).
• While traditional exercise programs may address the risk factors that lead to falls, they are time consuming and often lack motivation and compliance (Lord et al., 2005; Newson & Kemps, 2007).

Methodology

• One-group pre-test post-test experimental design.
• Residents living in an independent unit at a senior residential facility were recruited.
• The participants completed five weekly one-hour sessions to learn the balance and strength training principles.
• The participants practiced and integrated the balance and strength activities into their daily routines.
• Participants completed a booster session and received two follow up phone calls from the researchers to encourage habit formation.
• Participants filled out an Activity Planner and Activity Counter once a day throughout the program and for 16 weeks after completion of the program to monitor their implementation of the daily activities.

Data Collection

• Balance and strength assessments
  • Timed Up and Go test
  • Chair Stand Test
  • Functional Reach Test
  • One-leg Stand test

Fall efficacy assessments
• Activities-Specific Balance Confidence Scale
• Patient Reported Outcomes Measurement Information System (PROMIS®)

Additional information system (PROMIS®)
• Activity Counter once a day throughout the program
• Activity Planner and Activity Logs were collected.
• Testimonials were transcribed.

Program Effects and Testimonials

“I’ve been an exerciser for a long time. It was a worthwhile program.” – Participant A

“I enjoyed doing it better than other exercises. I’ve been an exerciser for a long time. It was a worthwhile program.” – Participant A

Discussion and Conclusion

In this study, the LiFE program included non-fallers to investigate whether the LiFE program was effective in reducing the risk of falls and increasing fall efficacy. The results were limited due to a small sample size and inconclusive as to whether this program was effective in reducing falls. Overall feedback from the participants was positive in promoting integrated exercise into daily routines. In addition, participants were able to maintain and or increase their physical fitness and fall efficacy abilities. Furthermore, the implementation of the modified LiFE program will encourage occupational therapists to place a greater emphasis on implementing fall prevention programs to fallers and non-fallers to facilitate successful aging in older adults.

References