

EFFECTS OF A COMMUNITY BASED STRENGTH TRAINING PROGRAM ON FUNCTIONAL STATUS AND QUALITY OF LIFE IN OLDER ADULTS

Conducted by The National Ageing Research Institute (NARI) in conjunction with Council on the Ageing

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EXECUTIVE SUMMARY

There are a number of health benefits associated with physical activity and strength training, however, most research involves the evaluation of programs in a strict “laboratory” setting. The Living Longer Living Stronger™ (LLLS™) program is a community based strength training program for people 50 years of age and over. Council on the Ageing Victoria (COTA) endorses facilities as LLLS™ partners and there are currently over 110 partner facilities across Victoria. The aim of the endorsement scheme is to ensure the provision of accessible cost effective, quality strength training programs.

Project Aims

The main aim of this project was to investigate, in a *real life context*, whether there is a significant improvement in self-rated health, cardiovascular fitness, muscle strength, balance, gait, activity level, mental health and quality of life in older adults participating in this community based program. The project also aimed to obtain information from focus groups about program effectiveness and ways to improve, modify and expand the existing program.

Methodology

Participants were recruited through selected LLLS™-endorsed fitness centres in metropolitan Victoria. Participants had to be aged 50 or over, representing both men and women, living in the community or retirement village, able to speak English, and able to provide informed consent. Participants had to be new clients to the LLLS™ program, that is, had not started or had completed no more than 5 weeks of the LLLS™ program.



Participants were assessed at baseline, 4 and 8 months on a range of physical measures and self reported health and well being questionnaires. Level of program adherence was also recorded on calendars. In addition, participants were invited to attend focus groups to discuss their perceptions of the LLLS™ program – the benefits from undertaking the program, any problems encountered and suggestions to improve the program. To capture the views of participants who withdrew from the LLLS™ program exit surveys were forwarded to them. The survey investigated reasons for ceasing the program and their perceptions of the program.

Results

Results from the assessments confirmed many of the positive findings reported in the focus groups and exit surveys.

Assessments:

Sixty six participants were recruited and assessed at baseline. Thirty five participants completed a 4 month assessment, and 24 remained to complete an 8 month assessment. Data was analysed for both sample groups - the 35 participants and the 24 participants.

A number of significant improvements were identified for participants overall (both the 35 and 24 sample), including the step test, stride length, distance covered in 6 minutes, sit to stand, and in the physical performance test (7 & 9 item) and reported health transition (SF-36).

Where no significant improvement or trends were evident, generally performance levels were maintained, very few measures reported a drop in performance.

The 35 participants who had completed a 4 month assessment also demonstrated significant improvement in self reported vitality (SF-36), quality of life (AQoL) and left shoulder abductor strength at 4 months.

The 24 participants who remained to complete an 8 month assessment also demonstrated significant improvement in role physical and mental health and gait velocity, although vitality, AQoL and left shoulder abductor strength were no longer significant.



In the 35 sample (all with a 4 month assessment) there were significant differences favouring high compliers in relation to vitality and social functioning, the step test, sit to stand and the right shoulder abductor and right elbow extensor strength.

In the 24 sample (all who completed an 8 month assessment) there were fewer significant differences over the time sequence (baseline, 4 & 8 months) between high and low compliers, they included the step test, the sit to stand and the right elbow extensor strength. In relation to the sit to stand and the step test, both high and low compliers showed significant change over time however high compliers significantly improved in the first 4 months compared to low compliers who significantly improved in the subsequent 4 months. In relation to the right elbow extensor strength, high compliers showed significant improvement in the first four months compared to low compliers but there was no significant difference in the subsequent 4 months. Therefore, over time, level of participation is less relevant to overall improvement.

Focus groups:

Nine participants still involved with the LLLS™ program attended a focus group. Participants' experiences of the LLLS™ program were positive and a range of benefits, both physical and psychosocial, were reported. On going, long term involvement with the program was associated with a number of factors. They included the health and well-being benefits that participants perceived in their own abilities and health and those of long term participants of LLLS™ program, the support and encouragement provided, the challenge and the social components of the program. However, participants reported that there was a clear need to promote the LLLS™ program as many older people were not aware of the program.



Exit surveys:

Fourteen participants who had withdrawn from the LLLS™ program completed an exit survey. Feedback confirmed the positive aspects of the program - including personal benefits and physical changes (improved strength, balance, stamina etc), and positive comments about the centres and staff. The majority of participants withdrew due to time, health or family commitments and not because they were dissatisfied with the LLLS™ program. Most intended to return to the program in the future. Some negative aspects were also reported in the survey and were associated with the level of support and attention provided by staff in some centres and the dissipation of the LLLS™ group.

Summary

Participation in the LLLS™ program demonstrated a number of significant improvements in quantitative measures of balance, gait, strength, function and self reported health and well-being measures for a group of older people. The assessment findings confirmed many of the benefits reported by participants still involved in the LLLS™ program (in focus groups) and participants who withdrew from the LLLS™ program (in exit surveys). The majority of the withdrawn participants indicated that they would like to return to the program at some time in the future. Therefore, facilities need to ensure that processes are in place to help participants keep in touch with the program (through newsletters or event invitations) and to assist them to more easily return to the program and exercise routine. Wider promotion of the program is also needed, but this may need additional subsidised funding to ensure that the program remains affordable to a range of older people. Further investigation of this highly regarded program is warranted to build on the current findings

