

'I was surprised that the machine could build muscles in your legs ... it looks like something out of Alien': Patient experiences of resistance exercise training in CKD

Dr Courtney J. Lightfoot^{1,2}, Miss Noemi Vadaszy^{1,2}, Dr Emma L. Watson^{1,3}, Professor Alice C. Smith^{1,2}

¹Leicester Kidney Lifestyle Team, Leicester General Hospital, Leicester, United Kingdom, ²Department of Health Sciences, University of Leicester, Leicester, United Kingdom, ³Department of Cardiovascular Sciences, University of Leicester, Leicester, United Kingdom

Purpose:

Muscle wasting is highly prevalent in chronic conditions and can result in decreased physical functioning, strength, and impaired ability to perform daily tasks, impacting upon quality of life. Exercise, particularly resistance training, promotes a multitude of benefits, including prevention and management of muscle wasting. Engagement in resistance training by older and chronically ill populations is recognised to be poor. However, the reasons underlying this are not well understood from the individuals' perspective. Exploring patient perceptions and experiences of a supervised progressive resistance exercise training program may help to identify factors that influence individual motivators and barriers to begin and continue with resistance training. Identification of these factors will inform the development and implementation of effective resistance exercise training programs and interventions for people with CKD.

Methodology:

This a sub-study of a parallel randomised controlled feasibility study, in which patients with CKD stages 3b and 4 were randomly assigned to an exercise or non-exercise control group. The exercise group undertook an eight-week progressive resistance exercise training program consisting of three sets of 10-12 leg extensions at 70% of estimated 1-repetition maximum thrice weekly.

Semi-structured interviews were conducted with a sample of individuals in the exercise group. Topics explored included perceptions and experiences of resistance training, the study resistance exercise program, and exercise habits following cessation of the study. Data were audio-recorded and transcribed verbatim. Thematic analysis was used to identify and report themes in the data.

Findings:

Nine participants (five females and four males) were interviewed between two and eleven months after their final exercise session. Interviews were conducted face-to-face and lasted approximately 40 minutes.

Five main themes were identified:

- Perceptions of resistance training

Participants had a lack of understanding of the importance of resistance training despite experiencing loss of muscle and declines in physical strength.

- Experiences of the resistance exercise program

The structured progressive exercise program provided routine, discipline, and a sense of achievement for participants.

- Challenges experienced

Gym environment and weight machines were considered to be quite intimidating and the intensity of the exercises appeared to be a shock to participants.

- Impact on daily activities and quality life

The benefits of resistance training such as improved physical function and ability to perform daily activities were experienced by all participants.

- Maintenance of resistance training

Only a small minority continued (modified) resistance training. After stopping the resistance exercise program, participants reported experiencing declines in physical function and difficulties with basic everyday tasks.

Both facilitators and barriers to begin or continue resistance training were identified by participants. Perceived barriers included lack of confidence, accessibility, and available resources such as time and money. Supervision, guidance, and structured programs were considered to be facilitators.

Conclusion:

The findings highlight the need for patient education and counselling about the importance and implementation of resistance training in their daily lives. The focus should be on increasing patients' knowledge and confidence to empower them to independently conduct and progress resistance training appropriately.