Web-based cognitive behavioral intervention for older adult with arthritis fatigue; A feasibility and acceptability study

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Aim/Purpose/Objective: Fatigue associated with arthritis significantly interferes with older adults' participation in usual daily routines. The purpose of this project was to (1) develop a web- based cognitive behavioral intervention, Web-CBI, and (2) test feasibility and acceptability of Web-CBI using an user-centered approach with 15 older adults with arthritis fatigue. Web-CBI was designed to alleviate arthritis fatigue symptoms by promoting a simple walking activity. Web-CBI consists of 4 weekly cognitive behavioral therapy (CBT)-based learning modules and peer-support videoconferencing sessions. Each weekly learning module consists of video recording, key points to remember, SMART goal, homework, and self-assessment quizzes.

The Web-CBI URL is: https://blogs.umass.edu/tabcbi2018/

Sample: The study sample consisted of fifteen older adults with a mean age of 67 years old (SD=8.9). The majority were female (n=10, 67%) identified as White (n=11, 74%), had a college graduate degree or higher (n=9, 64%), and had experience using a tablet, desktop, or smartphone (n = 13, 87%).

Setting: Older adults with arthritis fatigue were recruited from community senior centers, YMCAs in western Massachusetts or social media platforms. Participants used Web-CBI (https://blogs.umass.edu/tabcbi2018/) at home for 4 weeks and participated in 4 weekly meetings with the RA through Zoom to provide their experience with Web-CBI qualitatively and quantitatively.

Methodology: Mixed Methods, Interviews, Descriptive Research

Participants' feasibility and acceptability experience was examined using the user-centered evaluation approach. The data were measured using the User Experience Interview Guide and the System Usability Scale (SUS). Participants data were analyzed using a thematic analysis and a paired t-test to examine any improvement in perceived usability of Web-CBI.

Results: Participants perceived Web-CBI as easy and intuitive to use and helpful to improve their walking and manage fatigue. Positive feedback includes videoconferencing ability; SMART goals; and presentation continuity through modules and video-recordings. Suggestions for improvement include having group forums to share ideas and experience and journaling or personal diary tools.

Conclusions: Use of technology to promote health outcomes and quality of life continue to grow. Web-CBI is one such application designed specifically for older adults with arthritis fatigue. The feasibility results indicate Web-CBI holds promise for improving simple walking and reducing fatigue. Future research should include testing the effects of Web-CBI.

Implications: Our feasibility study demonstrated the user-centered process of obtaining older adults' feedback of Web-CBI and incorporating those comments when refining Web-CBI. In order for technology to be widely accepted and successfully used, nurse educators, clinicians, and researchers may adopt the user-centered approach in developing, refining, and evaluating technology in the future.

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