Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/programs/frontlines-copd/from-confidence-to-action-exercise-self-efficacy-and-improved-copd-outcomes/35537/

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From Confidence to Action: Exercise Self-Efficacy and Improved COPD Outcomes

Announcer:
You're listening to *On the Frontlines of COPD* on ReachMD. On this episode, we'll hear from Dr. Patricia Bamonti, who's a staff psychologist in the Geriatric Mental Health Outpatient Clinic and the track coordinator of the Geropsychology Training Program at VA Boston Healthcare System. She'll be discussing her recent study, which examined the link between improved exercise self-efficacy and increased physical activity among COPD patients. Here's Dr. Bamonti now.

Dr. Bamonti:
In terms of the concept of self-efficacy, it describes an individual's confidence to engage in a specific exercise or regular exercise. In the current study, we asked participants their confidence to engage in regular exercise despite common barriers, and barriers included COPD-related barriers, like shortness of breath and fatigue, and common barriers, such as scheduling logistics and just not feeling like it.

Self-efficacy—specifically exercise self-efficacy—is relevant to individuals with COPD because it's been found to be associated with important health outcomes. For instance, those with greater exercise self-efficacy attend more pulmonary rehabilitation sessions and have better functional outcomes after completing pulmonary rehabilitation. We also see that individuals with greater exercise self-efficacy engage in more physical activity and have better exercise capacity and health-related quality of life.

In terms of our study's hypothesis, we were interested in examining whether the effects of a technology-based physical activity intervention were mediated by changes in exercise self-efficacy. The primary outcome was clinically meaningful improvement in daily step count, which we defined as an improvement of 418 steps per day on average that we measured from baseline to three-month follow-up. We hypothesized that, in participants who received the physical activity intervention, an increase in exercise self-efficacy would mediate the likelihood of achieving that clinically meaningful improvement in step count.

In order to test this hypothesis, we conducted a secondary data analysis of two completed randomized controlled trials in US veterans. The veterans were randomized to either a three-month technology-based physical activity intervention or a control group. The intervention group received a pedometer that they wore for three months, and they accessed a website where they received feedback on their daily step count, tailored step count goals, educational and motivational messaging, and social support from an online community. Control participants in our sample one received only a pedometer and COPD self-management materials but had no access to the website, and control participants in the sample two received physical activity encouragement and self-management materials. They only received a pedometer for follow-up assessment and received no access to a website. In order to test our hypothesis, we constructed a mediation model to test the indirect effect of group assignment, control versus intervention, and the likelihood of achieving clinically meaningful improvement in daily step count through changes in an exercise self-efficacy.

We found that compared to our control group, exposure to the intervention was associated with significantly higher exercise self-efficacy at three months. Specifically, for every 10-point increase in exercise self-efficacy, the odds of achieving clinically meaningful improvement in daily step count increased by 26 percent. The indirect effect of the intervention on achieving clinically meaningful improvement in daily step count through change in exercise self-efficacy was significant, so it supported our hypothesis.

In terms of clinical practice, our findings suggest that providing patients with tools to track, monitor, and set goals and providing education and motivational messaging can promote exercise self-efficacy, which in turn can help promote physical activity. Providers may discuss exercise and physical activity in terms of the health benefits, but we may also recommend tools that patients can use to

promote confidence in their ability to engage in exercise and then be more likely to actually shift behavior.

Announcer:
That was Dr. Patricia Bamonti talking about how exercise self-efficacy can help improve physical activity among patients with COPD. To access this and other episodes in our series, visit *On the Frontlines of COPD* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!