

【Practice Article】

**Home-based Exercise Program by Mail for Alleviation of Knee Pain:
JAEE Research Project “Evidence from Intervention Studies”**

Tomoko Hatayama¹⁾, Yukio Oida²⁾

Abstract

We conducted a randomized controlled trial to demonstrate the effectiveness of a home-based exercise program, called the RAKUHIZA Taiso, which is sent by mail for the alleviation of knee pain. This article responds to a research project approved by the Japanese Association of Exercise Epidemiology to promote the creation, communication, and utilization of evidence from intervention studies in Japan. We aimed to provide evidence for the effectiveness of an exercise program, which is sent by mail, in alleviating knee pain, and to discuss its generalizability through the reach, effectiveness, adoption, implementation, and maintenance (RE-AIM) framework. Participants in this program were 0.1% of the elderly in the target area who were presumed to have knee pain; 4.0% received the information for this program (“reach”). Further work is needed to improve the dissemination of information and recruitment to take advantage of this program. On the other hand, the completion rate was 84.1%; the exercise implementation rate was as high as 84.5%; and the effect size of this program was equivalent to that of group exercise (“effectiveness”). In this program, the participants exercised by following a manual. In addition to the improvement of the exercise manual, “implementation” appears to require the development of an operating manual as well as the involvement of experts to provide participants with expert advice to promote this program safely. Future study is required to verify the “adoption” and “maintenance” of this program. Although generalization of the intervention remains an issue, this is a valid and practicable program for alleviation of knee pain, which is expected to be actively utilized as part of health promotion practice.

Key words: knee pain, elderly, home-based exercise program by mail

1) Faculty of Humanities, Nanzan University, Nagoya, Japan

2) School of Engineering, Chukyo University, Nagoya, Japan