

Effect of maintaining goal-oriented therapeutic exercise on low back pain from the hospital to the community

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Objective: To investigate the effect of maintaining goal-oriented therapeutic exercise in subjects with low back pain (LBP) from hospital to community

Methods: Eligible adult subjects who have symptoms of LBP without surgery and have been diagnosed with imaging studies were enrolled. They were assigned randomly to either intervention group A (n=15) or control group B (n=15). The group A underwent a goal-oriented exercise program at a hospital two times a week to reduce pain and improve daily activities. The exercise program consisted of warm-up for 5 minutes, a customized exercise for 30 minutes, and cooling down for 5 minutes. The group A underwent the exercise program for 2 weeks and then took a two-week break. Then, the previous intervention and the break were repeated. The community-based therapeutic exercise continued over the next 4 weeks. The control group B exercised at home for the same period as the group A. The evaluation items were a visual analog scale (VAS) to assess pain, an UCLA activity score to assess activities of daily living, a range of motions in trunk, a power of trunk flexion and extension, a gait and balance functions (timed up and go (TUG) test, modified functional ambulation category, Berg balance scale (BBS), and Romberg test), and an Oswestry disability index (ODI) over 3 times.

Keywords: Low back pain, Exercise, Activities of daily living, Function, Community Results :The VAS, ODI score, TUG, BBS and UCLA score before and after 12-week exercise showed

statistically significant differences in the group A ($p < 0.05$). Low back pain showed a tendency to improve not only when exercising at the hospital, but also after continuing exercise in the community. Especially there was a marked difference in the VAS and ODI score ($p < 0.001$). And the TUG and BBS showed also significant differences in the group B ($p < 0.05$). However, there was no statistically difference when comparing the two groups.

Conclusion The maintaining goal-oriented therapeutic exercise from the hospital to the community helped to improve low back pain and decrease ODI score. In addition, this study confirmed that maintaining therapeutic exercise affects balance, gait, and daily activities. However, no differences were identified between home training and one-on-one therapeutic exercise training. Further studies based on a larger number of subjects are needed. **Acknowledgement:** This work was supported by the National Research Foundation of Korea (NRF) grant funded by the Korea government (MSIT) (No. 2021M3I2A1077409)

Biography

Il-Young Jung is currently an assistant professor at the Chungnam National University Sejong Hospital in the department of Rehabilitation Medicine at Sejong Korea. His Research field includes: Musculoskeletal diseases and Pain management, Rehabilitation and physical medicine, Therapeutic exercise, Digital healthcare and artificial intelligence.

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