

Impact of lumbar stabilization exercises on pain and quality of life in physiotherapy students with lower back pain: A cross-sectional study

Nurul Najah Rosle, Mohd Murtadha Ramly, Santibuana Abd Rahman, Vijayamurugan Eswaramoorthi

Department of Physiotherapy, Faculty of Pharmacy and Health Sciences, Universiti Kuala Lumpur, Royal College of Medicine Perak, Ipoh, Malaysia

ABSTRACT

Introduction: Lower back pain is a common issue influenced by factors like age, physical activity, posture, and work conditions. Lumbar stabilization exercises have been shown to alleviate this pain by strengthening spinal support muscles, enhancing trunk stability, and improving overall quality of life. This study aimed to evaluate the impact of lumbar stabilization exercises on the severity of lower back pain and the overall quality of life in adults with this condition. **Materials and Method:** A cross-sectional design was employed, targeting physiotherapy students aged 18 to 30 at University Kuala Lumpur Royal College of Medicine Perak (RCMP). Convenience sampling was used to recruit participants, with a minimum sample size of 205 determined by the Krejcie and Morgan table. Data were collected through a Google Form questionnaire, which included sections from the Roland-Morris Low Back Pain and Disability Questionnaire, the International Physical Activity Questionnaire, and demographic questions. IBM SPSS Statistics Version 23 was used for data analysis, including descriptive statistics and chi-square tests. **Results:** Out of 123 participants, 75 (61.0%) reported experiencing lower back pain. Following lumbar stabilization exercises, 43.1% reported a significant reduction in pain, with 33.3% feeling neutral, and smaller percentages noting worsening pain (3.3% "worst" and 1.6% "very worst"). Statistical analysis showed a significant improvement in quality of life ($p = 0.026$). **Discussion:** Regarding exercise application, 80.5% of respondents used lumbar stabilization exercises to manage their pain, while 19.5% did not. The mean application value was 1.20 with a standard deviation of 0.398, indicating widespread use among those with lower back pain. These results suggest that lumbar stabilization exercises are effective in reducing lower back pain and improving overall quality of life.