
The Effect Of Static By Cycle Exercise On Genu Stiffness In Osteoarthritis At Pure Murni Teguh Hospital Medan

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Abstract

This community service will seek to establish the effectiveness of career preparation programs for students within the ranks of ABIM to better equip them for both higher education and the workforce. This research used a qualitative approach, incorporating workshops, interviews, and interactive sessions in the course of conducting an evaluation of the students' preparedness for careers. The findings indicated that structured career planning programs enhanced the students' confidence, knowledge about career opportunities, and preparedness to face academic and professional challenges. The study concludes that targeted interventions in career guidance are very necessary for empowering students with the necessary competencies for their future academic and career paths.

Keywords: *Students, Future Education, Career*

INTRODUCTION

Osteoarthritis (OA) is a degenerative joint disease that causes pain and decreased functional ability in the musculoskeletal, especially common in large joints such as: back, pelvis, knees, ankles and wrists. Osteoarthritis occurs due to unevenness of the joint cartilage followed by ulceration and loss of cartilage itself so that friction between bones occurs and is followed by the formation of subchondral cysts, osteophytes at the edge of the bone and inflammatory reactions in the synovial membrane. Swelling of the joint, thickening of the synovial membrane and deformity. so that the muscles around the joint become weak due to synovial effusion and disuse atrophy on one side and muscle spasm on the other.

Knee capacity and functional decline due to pain in knee OA, especially when the knee is moved. This joint pain in the knee can be minimised by manual therapy with techniques One form of exercise therapy is Open Kinetic Chain and Closed Kinetic Chain serve as an increase in functional activity. 1. Open Kinetic Chain is an active motion exercise that involves one muscle and joint only (single joint) and without movement in the proximal segment. Open Kinetic Chain training on the network is to change the local environment in irregular matrix fibres through slow motion between joints which will stimulate mechano growth factors due to increased lubrication as a condition for increasing the amount of platin substances, platin substances as precursors to stimulating Glucosaminoglycans (GAG's).

Closed Kinetic Chain is an active movement exercise that involves several muscle groups at once and several joints (multiple joints). Closed Kinetic Chain exercise is useful for training the muscles of the lower limbs, especially to improve functional ability in Knee osteoarthritis. Because in principle the Closed Kinetic Chain exercise is an exercise that strengthens agonist and antagonist muscles simultaneously and is a more physiological exercise for the lower limbs. The Closed Kinetic Chain motion technique is motion training in accordance with the anatomical plane of the knee joint, namely flexion-extension motion and motion aimed at daily activities (Activity Daily Living or ADL) such as squatting to standing

and toileting. With good flexibility and muscle strength, it will support the ability to move in carrying out daily activities. One of the forms of Knee Closec Kinetic exercise is Static by cycle exercise.

RESEARCH METHODS

Stretching exercise, strengthening exercise on the knee and both legs, isometric exercise on the bed or matras and the use of static by cycle exercise for about 10-15 minutes Data collection techniques in this study:

- Pre-test and post-test: Measurement instruments: mid line for measuring knee circumference, goniometer for knee joint ROM.
- Sampling: 10 subjects
- Duration of intervention: 4-8 weeks with 15 minutes of static use by cycle

RESULTS AND DISCUSSION

Data table Pre-test dan Post-test

Subjek	ccimferencePre (cm)	Cimference Post (cm)	ROM Pra (°)	Pos ROM (°)
1	42.5	40.8	90	112
2	43.0	41.2	88	110
3	41.8	40.1	91	114
4	42.2	40.4	89	113
5	43.3	41.3	87	111
6	42.7	41.0	90	115
7	42.9	41.1	89	112
8	43.1	41.5	92	116

Subjek	ccimferencePre (cm)	Cimference Post (cm)	ROM Pra (°)	Pos ROM (°)
9	42.4	40.7	90	113
10	42.6	40.9	88	110



Figure 1: OA patient using static by cycle



Figure 2: OA patient with obesity using static by cycle



Figure 3: OA patient with obesity using static by cycle



Picture 4: Photo with OA patient at Murni Teguh Hospital

CONCLUSION

Intensive static cycling training for 4-8 week: Decrease knee circumference (reduces swelling), improves (relieves) knee stiffness. Epl uses cookies, to personalize advertisements.

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