Kinesthetic Imagery and Pelvic Floor Muscle Contraction in Ultrasound Imaging, as well as Validation and Adaptation of the KMI-PFQ Questionnaire

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Objective

The aim of the project is to observe the relationship between kinesthetic imagery and the actual contraction of pelvic floor muscles, assessed using ultrasound imaging. Additionally, the project includes the validation and cultural adaptation of the KMI-PFQ questionnaire, which will enable the assessment of the ability to mentally activate pelvic floor muscles in both healthy individuals and those with dysfunctions.

Significance of the Study

Pelvic floor muscles play a crucial role in the function of the urogenital system, and their dysfunctions, such as urinary incontinence or pelvic organ prolapse, significantly affect quality of life. Understanding the mechanisms of kinesthetic imagery and its impact on muscle control may contribute to the development of more effective diagnostic and therapeutic methods.

Study Participants (Participant Groups)

Healthy individuals – women and men without reported pelvic floor muscle dysfunctions.

Individuals with pelvic floor dysfunctions – those reporting symptoms such as urinary incontinence, pelvic organ prolapse, or anorectal dysfunctions.

Research Methodology

The project has received a positive opinion from the University Research Ethics Committee (approval no. 1/2025) and is being conducted in multiple stages until December 2025:

It consists of three main phases:

Examining the relationship between kinesthetic imagery and pelvic floor muscle contraction in ultrasound imaging.

Validating and adapting the KMI-PFQ questionnaire through translation, expert assessment, pilot studies, and psychometric analysis.

Analyzing the influence of central sensitization and interoceptive awareness on the ability to control pelvic floor muscle function.

Participant Recruitment

Participants will be recruited through:

Announcements on social media and the Institute of Health Sciences website.

Collaboration with medical facilities, physiotherapy clinics, and health centers.

Benefits of the Study

Expanding knowledge on the mechanisms of pelvic floor muscle control.

Developing precise diagnostic tools for assessing pelvic floor muscle function.

Supporting physiotherapists and physicians in the treatment and rehabilitation of patients with dysfunctions.

Publication of Results

The research findings will be published in scientific journals, presented in two master's theses, and showcased at national and international conferences. Participants who wish to receive feedback on their individual results will be provided with a summary.

Why Is This Important?

This project will enhance the understanding of the role of kinesthetic imagery in pelvic floor muscle control and may contribute to the development of new therapeutic and diagnostic approaches. The validation of the KMI-PFQ tool will allow its use in research and clinical practice.

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