

## INTISARI

**Latar Belakang:** Latihan penguatan otot tubuh atau disebut juga latihan kekuatan, latihan beban, atau latihan resistensi memiliki berbagai manfaat kesehatan dan penurunan risiko penyakit bila dilakukan sesuai rekomendasi minimal 2 sesi dalam seminggu. Namun, latihan penguatan otot tubuh belum banyak menjadi perhatian dalam surveilans latihan fisik. Oleh karena itu, diperlukan instrumen penilaian yang bisa menilai frekuensi, intensitas, durasi, tipe latihan, dan kelompok otot yang dilatih. Penelitian ini akan mengadaptasi *Muscle Strengthening Exercise Questionnaire* (MSEQ) untuk menilai hal tersebut dengan melakukan proses translasi, uji validitas, dan uji reliabilitas

**Tujuan:** Penelitian ini mengkaji bagaimana validitas konten, validitas konkuren, korelasi hasil pengukuran dibandingkan alat ukur subjektif, korelasi hasil pengukuran dibandingkan alat ukur objektif, dan reliabilitas tes-tes ulang dari *Muscle Strengthening Exercise Questionnaire* (MSEQ) versi Bahasa Indonesia

**Metode:** Penelitian ini mencakup beberapa studi, yaitu studi translasi, studi validitas konten, studi validitas konkuren, dan studi reliabilitas. Studi translasi dilakukan berdasarkan panduan COSMIN. Studi validitas konten menggunakan gabungan metode kualitatif dan kuantitatif dengan menilai aspek relevansi, kelengkapan, dan pemahaman. Studi validitas konkuren membandingkan hasil pengukuran frekuensi dan volume latihan dengan *7-Days Diary* dan *relative handgrip strength*. Studi reliabilitas akan dilakukan dengan dua kali pengukuran dengan interval waktu 7 hari. Analisis data dilakukan dengan analisis tematik, uji spearman, dan uji *Intraclass Coefficient Correlation* (ICC)

**Hasil:** Pada studi validitas konten muncul 3 tema relevansi, 6 tema kelengkapan, dan 2 tema pemahaman yang kemudian diberikan tindak lanjut. Didapatkan peningkatan skor sebelum dan sesudah modifikasi kuesioner 368 menjadi 381. Terdapat korelasi kuat untuk frekuensi ( $r=0.815$ ,  $p=0.000$ ) dan volume ( $r=0.809$ ,  $p=0.000$ ) dibandingkan *7-Days Diary*. Terdapat korelasi sedang untuk frekuensi ( $r=0.346$ ,  $p=0.003$ ) dan volume ( $r=0.345$ ,  $p=0.003$ ) dibandingkan *relative handgrip strength*. Didapatkan reliabilitas sedang untuk frekuensi ( $ICC=0.705$ ) dan kuat untuk volume ( $ICC=0.978$ ).

**Kesimpulan:** Penelitian ini menunjukkan bahwa *Muscle Strengthening Exercise Questionnaire* (MSEQ) versi Bahasa Indonesia memiliki validitas dan reliabilitas yang baik sehingga kuesioner ini dapat digunakan untuk menilai latihan penguatan otot tubuh.

**Kata kunci:** latihan penguatan otot, *muscle strengthening exercise questionnaire*, translasi, validitas, reliabilitas, populasi mahasiswa perguruan tinggi.

## ABSTRACT

**Background:** Muscle strengthening exercises, also known as strength training, weight training or resistance training, have various health benefits and reduce the risk of disease if carried out according to the recommendations of at least 2 sessions a week. However, muscle strengthening exercises have not received much attention in physical exercise surveillance. Therefore, an assessment instrument is needed that can assess the frequency, intensity, duration, type of exercise and muscle groups trained. This research will adapt the Muscle Strengthening Exercise Questionnaire (MSEQ) to assess this by carrying out a translation process, validity test and reliability test.

**Objective:** This study examines content validity, concurrent validity, correlation of measurement results compared to subjective measuring instruments, correlation of measurement results compared to objective measuring instruments, and test-retest reliability of the Indonesian version of the MSEQ

**Methods:** This research includes several studies, including translational studies, content validity studies, concurrent validity studies, and reliability studies. The translational study was conducted according to COSMIN guidelines. Content validity studies use a combination of qualitative and quantitative methods by assessing aspects of relevance, comprehensiveness and comprehensibility. The concurrent validity study compared the results of measuring exercise frequency and volume with the 7-Days Diary and relative handgrip strength. The reliability study will be carried out with two measurements with a time interval of 7 days. Data analysis was carried out using thematic analysis, Spearman test, and Intraclass Coefficient Correlation (ICC) test.

**Results:** In the content validity study, 3 themes of relevance, 6 themes of comprehensiveness, and 2 themes of comprehensibility emerged which were then given follow-up. There was an increase in scores before and after modification of the questionnaire from 368 to 381. There was a strong correlation for frequency ( $r=0.815$ ,  $p=0.000$ ) and volume ( $r=0.809$ ,  $p=0.000$ ) compared to the 7-Days Diary. There was a moderate correlation for frequency ( $r=0.346$ ,  $p=0.003$ ) and volume ( $r=0.345$ ,  $p=0.003$ ) compared to relative handgrip strength. Moderate reliability was obtained for frequency ( $ICC=0.705$ ) and strong for volume ( $ICC=0.978$ )

**Conclusion:** This research shows that the Indonesian version of the Muscle Strengthening Exercise Questionnaire (MSEQ) has good validity and reliability so that this questionnaire can be used to assess muscle strengthening exercises.

**Keywords:** muscle strengthening exercise, muscle strengthening exercise questionnaire, translation, validity, reliability, university students population