

Letter to the Editor

Isokinetic strength training versus core stability training on the trunk muscle strength and quality of life after surgical repair of incisional hernia in adolescents

Özge İpek Dongaz[®], Asalet Aybüke Güp[®]

Department of Physiotherapy and Rehabilitation, Muğla Sıtkı Koçman University Faculty of Health Sciences, Muğla, Türkiye

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Incisional hernias are a substantial and widespread postoperative complication of abdominal surgery.^[1] The minor/major incisions or laparoscopic methods on the abdominal wall may negatively affect trunk function. Additionally, patients' health-related quality of life can be disturbed after surgery.

We read the article by Abdelhalim et al.^[2] with attention and would like to congratulate them for their valuable research, which includes two different exercise training methods after surgical repair of incisional hernia in adolescents. Although the study was well planned, there are some unclear points we would like to discuss. First, the authors have used the European Registry for Abdominal Wall Hernias Quality of Life questionnaire to evaluate patients' quality of life in the study. When the origin study of the questionnaire is investigated, it is seen within the inclusion criteria that participants must be over the age of 18.^[3] In this case, it is crucial for participants to be adults for the use of the questionnaire. In the study by Abdelhalim et al.,^[2] although it is accepted that the population is old enough to understand the questionnaire, the minimum age of the participants is 12. The range of age (12 to 18 years) reduces the probability of correctly answering the questionnaire. Readers may not make inferences or comments correctly as the

comprehensibility of the questionnaire is difficult for a 12 year old. Furthermore, bias could have been eliminated if this study had been conducted with a blind assessor and a progressive exercise program had been performed with the same supervisor. In addition, the reader cannot understand the details of the exercise program as the criteria it is based on are not indicated. The authors state that the strength of muscles can be increased after short periods of isokinetic resistance exercises and contribute some neural factors in the discussion section. This explanation has been supported by two studies.^[4,5] However, the diagnosis, characteristics, such as age, and the physical conditions of the patients in these studies are not similar. Hence, readers cannot be assured that the similarity between the results of these studies was due to the neural and hypertrophic factors.

Finally, we believe that the issues mentioned in our letter may be beneficial to comment on the results of the current study. We are aware of the challenges in performing experimental research studies and congratulate the authors for their valuable study.

Data Sharing Statement: The data that support the findings of this study are available from the corresponding author upon reasonable request.

Corresponding author: Özge İpek Dongaz, MD. Muğla Sıtkı Koçman Üniversitesi Sağlık Bilimleri Fakültesi, Fizyoterapi ve Rehabilitasyon Bölümü, 48000 Menteşe, Muğla, Türkiye.

E-mail: ozgeipek@mu.edu.tr

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REFERENCES

- Antic A, Kmezic S, Nikolic V, Radenkovic D, Markovic V, Pejovic I, et al. Quality of life following two different techniques of an open ventral hernia repair for large hernias: A prospective randomized study. BMC Surg 2022;22:99. doi: 10.1186/s12893-022-01551-w.
- 2. Abdelhalim NM, Radwan NL, Ibrahim MM, Fathy Samhan A. The efficacy of isokinetic strength training versus core stability training on the trunk muscle strength and

quality of life after surgical repair of incisional hernia in adolescents. Turk J Phys Med Rehabil 2022;68:501-8. doi: 10.5606/tftrd.2022.9899.

- 3. Muysoms FE, Vanlander A, Ceulemans R, Kyle-Leinhase I, Michiels M, Jacobs I, et al. A prospective, multicenter, observational study on quality of life after laparoscopic inguinal hernia repair with ProGrip laparoscopic, self-fixating mesh according to the European Registry for Abdominal Wall Hernias Quality of Life Instrument. Surgery 2016;160:1344-57. doi: 10.1016/j.surg.2016.04.026.
- Granacher U, Lacroix A, Muehlbauer T, Roettger K, Gollhofer A. Effects of core instability strength training on trunk muscle strength, spinal mobility, dynamic balance and functional mobility in older adults. Gerontology 2013;59:105-13. doi: 10.1159/000343152.
- 5. Yu SH, Park SD. The effects of core stability strength exercise on muscle activity and trunk impairment scale in stroke patients. J Exerc Rehabil 2013;9:362-7. doi: 10.12965/ jer.130042.

This letter was submitted to the authors of the manuscript; however, not responded.