Introduction Anterior cruciate ligament (ACL) injury is a serious knee injury that occurs in both children and adolescents and the incidence is increasing. The purpose of the study was to investigate children’s development of their physical function 1 year and 3 years after undergoing ACL-reconstruction.

Materials and Methods Data was collected from a cohort running as part of clinical practice at Bispebjerg and Frederiksberg Hospitaler. From 2011 to 2022, 148 children were at that time at least 3 years postoperative after ACL-reconstruction. The children’s physical function was assessed with 4 hop tests and in a power rig, where the strength ratio between the operated leg and the healthy leg was measured with the Limb Symmetry Index (LSI). The anterior knee stability was assessed with a rolometer and the children completed the Pedi-IKDC and KOOS-Child questionnaires to evaluate their own experience of knee function.

Results LSI was well over 90% on all 4 hop tests as well as in the power rig both at the 1-year and 3-year test. Anterior knee laxity was less than 2 mm at both 1-year and 3-year test. The self-reported questionnaire Pedi-IKDC showed significant improvement in the score from 1-year test to 3-year test and KOOS-Child showed significant improvement in 2 of the 5 domains.

Conclusion The included children had good physical function both 1 year and 3 years after ACL-reconstruction. The children did not feel that their sport specific function and quality of life were at the best possible level.

Functional Performance Tests, Clinical Measurements, and Patient Reported Outcome Measures Are Separate Outcomes After Primary Anterior Cruciate Ligament Reconstruction

1 Mustafa Hamid Hussein Al-Gburi*, 1 Jakob Bredahl Kristiansen, 1 Karl Bang Christensen, 1 Michael Krosggaard, 2 Copenhagen University Hospital Bispebjerg, Denmark; 3 Copenhagen University, Denmark

Introduction The technical results after anterior cruciate ligament reconstruction (ACL-R) are evaluated by laxity measures, the functional results by performance tests, and patients’ perception by patient-reported outcome measures (PROMs). It is unknown whether one of these can represent outcome, or if they should all be reported, and the aim was to analyze this in a cohort one year after primary ACL-R.

Method Consecutive adult patients who had an ACL-R between 1.1.2019 and 31.12.2021 were offered a one-year follow-up by an independent observer, who measured clinical and instrumented knee stability, range of motion, and results of four different hop tests. Patients completed 4 PROMs (IKDC, KOOS, Lysholm and KNEES-ACL) and Tegner activity scale, reported pain scores and answered anchor questions regarding satisfaction and willingness to repeat the operation. Spearman correlations were calculated between the Lysholm score, IKDC-score, each domain score in KNEES-ACL and KOOS and the other outcome modalities.

Results A total of 190 adults attended the one-year follow-up and 151 had all assessments. There were only few positive and weak correlations between performance tests and PROMs and between clinical measurements and PROMs (r = 0.00 – 0.38), and the majority were of negligible strength.

Conclusions There was no clinically important correlation between scores obtained by PROMs, functional performance tests and instrumented laxity of the knee at 1-year follow-up after ACLR, meaning that the various modalities represent different aspects of outcome, and that one type of outcome cannot represent all. Conclusions based on one type of outcome may not be sufficient.