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| **SUPPLEMENTARY MATERIAL B.**Specific study characteristics of included studies; study, subject, raters, methods/tests, assessment criteria and outcome/statistics |
| **Study** | **Subjects**  | **Raters** | **Methods/Tests** | **Assessment Criteria** | **Outcome/Statistics**  |
| Ageberg et al | N=25, ♀=17.Age 18-37 yr.Healthy active. | -2 PTs researchers. -No previous experience of the test. | **Single-limb mini squat:**-Stance leg; 50° knee flexion;-Non-stance leg; slight hip flexion and 80° knee flexion.-Arms; Fingertip support. | -Body segments; knee/foot-Rating scale; Medial or over/lateral to 2nd toe at $\geq $ 3 out of 5 squats. | -Nominal data. -Interrater reliability; Kappa and PA.  |
| Barker-Davis et al  | N=20 (♂)Age 34.3 ±6.7 yr.Healthy military volunteers | -5 PTs with minimum 9 yr. experience. | **Small knee bend:**-Stance leg; knee flexion until you can´t see your second toe.-Non-stance leg; knee flexion 90°-Arms; not specified.**Single Leg Squat:**-Stance leg; knee flexion 60°-Non-stance leg; knee flexion 90°.-Arms; not specified. | **Small knee bend/ Single Leg Squat:**-Body segments; trunk flexion, pelvic tilt and obliquity, hip adduction, knee,-Rating scale; dichotomous for each segment and given 0-1 points. This was summated to a 0-5 scale.-Five SLS is performed but only repetition 2,3, and 4 was analysed**.** | -Ordinal data.-Intra-and interrater reliability; Kappa for criteria scores and ICC for composite scores. |
| Chmielewski et al (Unilateral Squat)  | N=25, ♀=18.Age 18-37 yr.Healthy active. | -2 PTs and 1 AT.-Clinical experience 14$\pm $ 6 yr. | **Unilateral Squat:**-Stance leg; knee flexion 60$°$-Non-stance leg; hip neutral and knee flexion 90°.-Arms; not specified. | **Overall method scoring system:**-Body segments; trunk, hip and pelvis as one unit.-Rating scale; a three-point scale**Specific method scoring system:**-Body segments; scoring the segments trunk, hip and pelvis individually.-Rating scale; a four-point scale-Median score of 3 trials was used | -Ordinal data.-intra- and interrater reliability; weighted and generalized Kappa and PA |
| Chmielewski et al (Lateral Step Down) |  |  | **Lateral step-down:**-Stance leg; on a 15.24-25.4 cm height. -Non-stance leg; hip in slight flexion and the knee extended. Heel should touch the ground before returning to start position.-Arms; not specified.  | **Overall method scoring system:**-Body segments; trunk, hip and pelvis as one unit.-Rating scale; a three-point scale**Specific method scoring system:**-Body segments; scoring the segments trunk, hip and pelvis individually.-Rating scale; a four-point scale-Median score of 3 trials was used | -Ordinal data.-Intra- and interrater reliability; weighted and generalized Kappa and PA. |
| Cornell et al  | N=23, ♀=17Age 26 ±3 yr.Healthy students. | - 1 AT -Clinical experience 24 yr. | **1-Leg Squat Test:**-Stance leg; Perform 5 squats as if sitting into chair. Toes straight ahead-Non-stance leg; Non-involved foot and leg are neutral-Arms; hands on hips | -Body segments; foot, knee, lumbo-pelvic-hip complex and balance. -Rating scale; dichotomous (Yes/No)-The most proficient of five squats were chosen.  | -Nominal data.-Intrarater reliability; Prevalence-adjusted bias-adjusted kappa and PA. |
| Crossley et al  | N= 15Age 25 ±5 yr.Healthy active. | 3 PTs, 2 with 10 yr of clinical experience. | **Single-Leg Squat:****(N.B. this test is named as an SLS but executed as an FSD).**-Stance leg; on a 20-cm high box-Non-stance leg; pointing forward (as for step down). -Arms; folded across their chest | -Body segments; trunk, pelvis, hip joint and knee joint.-Rating scale; a three-point scale.-Overall impression across 5 trials. | -Ordinal data.-intra- and interrater reliability; Kappa and PA. |
| DiMattia et al  | N=50, ♀=24.Age 24.3 ±4.8 yr.Healthy active.  | 2 ATs | **Single-Leg Squat:**-Stance leg; knee flexion 60°.-Non-stance leg; 45° hip flexion, 90° knee flexion.-Arms; straight arms, 90° shoulder flexion. | -Body segments in degrees; hip adduction <10°and knee valgus <10°.-Rating scale; a four-point scale. -Three SLS is performed | -Ordinal data -Interrater reliability; non-parametric Kappa PA. |
| Edmondston et al  | N=31 (♀).Age=21.7 ± 3.1Healthy active.  | 2 PTs with 27 yr. and 15 yr. of clinical experience. | **Single-Leg Squat:**-Stance leg; knee flexion 30°.-Non-stance leg; knee flexion 30°-Arms; arms along the side. | -Body segments; trunk-Rating scale; dichotomous, direction of trunk against/from the non-stance leg.  | -Nominal data. -Interrater reliability:Kappa and PA. |
| Friedrich et al  | N=23, ♀=12Age=31.7 yr., range 23-55.Healthy active. | 4 physicians at a university outpatient spine centre. | **Single-Leg Squat:**-Stance leg; knee flexion 45°.-Non-stance leg; knee flexed.-Arms; Hands on hips. | -Body segments; balance, trunk, pelvis, knee flexion and femoral control.-Rating scale; a four-point scale.-One squat was executed. | -Ordinal data.-Interrater reliability;ICC (1,1) and 95% CI. |
| Frohm et al  | N=26 (♂)N=18 (Retest)Age=Med 18 yr.Elite soccer players. | 8 PTs with 4-12 yr. of clinical experience and 3-7 yr. of experience of screening tests. | **One-Legged Squat:**-Stance leg; squat is performed as deep as possible with the upper body vertically.-Non-stance leg; Hip neutral, knee flexion 90°-Arms; Hands on hip | -Body segments; foot, knee, hip, pelvis and trunk -Rating scale; a four-point scale-Three squats were assessed. | -Ordinal data.-Interrater reliability;ICC and ME. |
| Gianola et al  | N=70, ♀=28Age=25.85 yr.One physically active group and one non- physically active group. | 6 clinicians, specialized in musculoskeletalrehabilitation. | **Single-Leg Squat:**-Stance leg; Squat down as far as possible.-Non-stance leg; pointing forward (as for step down). -Arms; folded across their chest | -Body segments; trunk, pelvis, hip joint and knee joint.-Rating scale; a three-point scale.-Overall impression across 3 trials. | -Ordinal data.-intra- and interrater reliability; weighted and generalized weighted Kappa and CI. |
| Harris-Hayes et al  | N=30, ♂=18Age=19.3±4.5 yr.Healthy active. | 2 PTs with 13 and 24 yr. of clinical experience and 1 postdoctoral fellow (non-clinician) | **Single Legged Squat:**-Stance leg; knee flexion 60°-Non-stance leg; hip neutral hip, knee flexion-Arms; arms across the chest. | -Body segments; Knee/midline-Rating scale; a three-point scale-One squat was assessed | -Ordinal data.-Intra- and interrater reliability; weighted Kappa, 95% CI and PA.  |
| Herman et al  | N=6Age=27.9±2.2 yr. Healthy subjects. | 142 PTs divided into level of experience, familiarity with the test and training of the test. | **Forward-step-down test:**-Stance leg; on a 20 cm high box-Non-stance leg; pointing forward, as for step down. Heel should touch the ground before returning to start position.-Arms; folded across the chest. | -Body segments; trunk, pelvis, hip and knee-Rating scale; a three-point scoring scale. -Overall impression across 5 trials. | -Ordinal data.-Interrater reliability; ICC and PA.  |
| Junge et al  | N=74 Age=9–12 yr.♀=16, ♂=21Age=12–14 yr.♀=20, ♂=17 | 2 PTs students.  | **Single Leg mini Squat:**-Stance leg; knee flexion approx. 50°, no hip flexion.-Non-stance leg; not specified.-Arms; hand support | -Body segments; ankle, knee, hip and trunk-Rating scale; a four-point scale-General impression of the SLS performance during 30 sec.  | -Ordinal data -Interrater reliability: overall agreement, linear weighted Kappa, Kappa, prevalence adjusted bias-adjusted Kappa and Quadratic Weighted Kappa. |
| Kaukinen et al  | N=41, ♀=26KOA: N=29, 65±9 yr.Control: N=12, 37±16 yr. | 2 PT with 30 years of experience. | **Small Squat on One-Leg Stance:** -Stance leg; approx. 30° knee flexion.-Non-stance leg; not specified.-Arms; Hanging alongside the body, should not move | -Body segments; arms, balance, pelvis, hip, knee and foot.-Rating scale; a three-point scoring scale. -4 squats were executed. | -Ordinal data.-Intra- and interrater reliability; weighted Kappa, 95% CI and PA. |
| Kennedy et al  | N=42 (♀/♂)Athletes from different sports | 4 ATs | **Single-Leg Squat:**-Stance leg;90° knee flexion-Non-stance leg; not specified.-Arms; straight arms, 90° flexion. | **Most significant limiting factor:**-Body segments; trunk, hip, knee, lower leg, and other.-Rating scale; dichotomous-Most significant limiting factor assessed.**Regardless limiting factor:**Dichotomous classification regardless limiting factor. | -Nominal data.-Intra- and interrater reliability; Kappa  |
| Lenzlinger-Asprion et al  | N=30 (♀/♂)Age=55-75 yr.N=16 with hip problems. N=14 without hip joint impairment | 2 PTs with 20 yr. and 4 yr. of clinical experience.  | **Small Single Leg Squat:** -Stance leg; small knee bend, straight upper body, -Non-stance leg; vertically aligned legs.-Arms; support allowed if needed. | -Body segments; hip, pelvis, knee, foot and balance. -Rating scale; a three-point scoring scale. -Number of correct trials out of four squats was assessed.  | -Ordinal data.-Intra- and interrater reliability; Weighted Kappa, 95% CI and PA.  |
| McKeown et al  | N=17 (♀)Age=22 ± 4 yr. Football players  | 6 Strength and conditioning coaches with 2-5 yr. of experience of movement assessment.  | **Single Leg Squat of a box:**-Stance leg; Standing on a box, hip below knee.-Non-stance leg; straight and flexed in the hip-Arms; 90° flexion. | -Body segments; trunk, hip, knee, ankle and depth of squat. -Rating scale; a three-point scoring scale. -Number of correct trials out of three squats was assessed. | -Ordinal data -Intrarater reliability; ICC-Interrater reliability; Kappa |
| Nae et al  | N=51, ♀=23Age=24.5 ± 5.5 yr. ACL patients with injury or reconstruction.With/without other injuries to the knee. | 2 PTs | **Single-limb mini squat:**-Stance leg; 50° knee flexion;-Non-stance leg; knee flexion.-Arms; no fingertip support. | **Segment-specific scoring system:**Body segments; trunk, hip/pelvis, knee and foot. -Rating scale; a four-point scoring scale but the worst score (3=very poor) was removed as a missing value and not used in the calculation.-Number of correct trials out of five squats was assessed.**Within-task scoring system:**A total sum of each segment specific scores was calculated including the worst score 3=very poor.  | -Ordinal data. -Interrater reliability; Weighted Kappa and 95% CI.  |
| Park et al  | N=26 (♀)Age=22.7 ± 0.9 yr.Asymptomatic   | 2 PTs with 2-6 years of clinical experience. | **Forward Step-down test:**-Stance leg; on a 20 cm high box-Non-stance leg; pointing forward, as for step down. Heel should touch the ground before returning to start position.-Arms; hands on waist | -Body segments; arm strategy, trunk, pelvic, knee and stance. -Rating scale; dichotomous for each segment and given 0-1 points. Except for the knee were 0-2 points were given.-All five FSD was assessed to a composite score of 0 to ≥4 points. | -Ordinal data. -Interrater reliability; Kappa and PA |
| Piva et al  | N=30, ♀=17Age=29.1±8.4 yr. All with PFPS.  | 2 pairs of PTs with 3-5 yr. and 2-10 yr. of clinical experience.   | **Lateral Step-Down Test:**-Stance leg; Standing on a 20-cm high box. Bending until non-stance leg gently touches the floor.-Non-stance leg; positioned over the floor adjacent to the step, maintained with the knee in extension. -Arms; hands on waist. | -Body segments; arm strategy, trunk, pelvic, knee and stance. -Rating scale; dichotomous for each segment and given 0-1 points. Except for the knee were 0-2 points were given.-All five FSD was assessed to a composite score of 0 to ≥4 points. | -Ordinal data. -Interrater reliability; Kappa, 95% CI and PA. |
| Poulsen et al | N=12, Age=18–60 yr. No previous or current injury to lower extremity. | 6 PTs students. | **Single-Leg Squat:**-Stance leg; neutral hip, knee flexion 45°-Non-stance leg; not specified.-Arms; not specified. | -Body segments; trunk, pelvic and thigh. -Rating scale; a four-point scoring scale | -Ordinal data.-Intra- and interrater reliability; Quadratically weighted kappa with 95% CI.  |
| Rabin et al (2010) | N=29 ♀Age: 24.3±3.2Healthy students. | 2 PTs with 12 yr. and 25 yr. of clinical experience. | **Lateral Step-Down Test:**-Stance leg; Standing on a 20-cm high box. Bending until non-stance leg gently touches the floor.-Non-stance leg; positioned over the floor adjacent to the step, maintained with the knee in extension. -Arms; Both hands on the waist. | -Body segments; arm strategy, trunk, pelvic, knee and stance. -Rating scale; dichotomous for each segment and given 0-1 points. Except for the knee were 0-2 points were given.-All five FSD was assessed to a composite score of 0 to 6 points. | -Nominal data. -Interrater reliability; Kappa, 95% CI and PA. |
| Rabin et al (2014) | N=79, ♀=40Age:♀=19.9±1.5♂=20.8±1.8Healthy active soldiers diagnosed with PFPS. | 2 PTs with 15 yr. and 28 yr. of clinical experience.  | **Lateral Step-Down Test:**-Stance leg; Standing on a 15-cm high box. Bending until non-stance leg gently touches the floor.-Non-stance leg; positioned over the floor adjacent to the step, maintained with the knee in extension. -Arms; Both hands on the waist. | Body segments: arm strategy, trunk, pelvic, knee and stance. -Rating scale; dichotomous for each segment and given 0-1 points. Except for the knee were 0-2 points were given.-All five FSD was assessed to a composite score of 0 to 6 points. | -Nominal data. -Interrater reliability; Kappa, 95% CI and PA. |
| Räisänen et al  | N=60, intraraterN=18, interraterAge ♀=18±4 yr.Age ♂=17±2 yr.Athletes from different sports | 2 PTs, one with and one without clinical experience.  | **Single-Leg Squat:**-Stance leg; 90° knee flexion.-Non-stance leg; not allowed in front or at side.-Arms; hands on waist | -Body segments; pelvic, knee and medial/lateral side to side movement of the knee.-Rating scale; a three-point scoring scale-The subjects were scored by their poorest performance. | -Ordinal data-Intra- and interrater reliability; Kappa |
| Stensrud et al  | N= 18 (♀)Age= 22±4 yr.Handball players | A single observer. | **Single Leg Squat:**-Stance leg; 90° knee flexion.-Non-stance leg; not allowed in front or at side.-Arms; hands on waist | -Body segments; pelvic, knee and medial/lateral side to side movement of the knee.-Rating scale; a three-point scoring scale-The subjects were scored by their poorest performance. | -Ordinal data.-Intrarater reliability; Kappa  |
| Teyhen et al  | N=64, ♂=53Age=25.2±3.8 yr.Healthy service members. | 29 PTs students in a doctoral student program, novice raters. | **Lateral Step Down:**-Stance leg; Standing on a 20-cm high box. Bending until non-stance leg gently touches the floor.-Non-stance leg; positioned over the floor adjacent to the step, maintained with the knee in extension. | -Body segments; arm strategy, trunk, pelvic and knee. -Rating scale; dichotomous for each segment and given 0-1 points. Except for the knee were 0-2 points were given.-All five LSD was assessed to a composite score of 0 to 5 points. | -Ordinal data.-Interrater reliability; ICC 2,5, 95% CI |
| Van Mastrigt et al  | N=55 Age=40-89 yr.N=31 with KOAN=24 healthy controls | 11 PTs and 4 Orthopaedic surgeons, all experienced. | **Single-Limb Mini Squat:**-Stance leg; 50° knee flexion;-Non-stance leg; slight hip flexion and 80° knee flexion.-Arms; Fingertip support. | -Body segments; Raters were instructed to rate overall movement quality and provide a comment on which movement characteristics they based their rating.-Scoring scale; During 10 sec of squats, raters assessed participants movement quality based on a 4-point Likert scale from 1= poor to 4=good movement quality.  | -Ordinal data-Interrater reliability;Linearly weighted, quadratically weighted and generalized kappa values for each rater pair and averaged overall rater pairs. 95% CI. |
| Weeks et al (2012) | N=22, ♀=9Age=23.8 ±3.1 yr. Healthy  | 8 PTs with clinical experience and 8 PTs students. | **Single-Leg Squat:**-Stance leg; squatting as deep as possible without losing balance.-Non-stance leg; knee flexion 90°.-Arms; arms folded across the chest | -Body segments; the assessor was asked to grade the movement quality, no other instructions.-Scoring scale; a 10-point ordinal scale. -One squat was assessed | -Ordinal data.-Intra and interrater reliability; ICC and t-test. |
| Weir et al (Unilateral Squat) | N=40 (♂)Age=25.4 yr. Active athletes. | 4 sport physicians and 2 sport PTs  | **Unilateral Squat:**-Stance leg; moving into a squat position.-Non-stance leg; neutral hip and knee in 90° flexion.-Arms; hands on the hip.  | -Body segments; trunk, hip, pelvic and knee. -Scoring scale; a four-point scoring scale.  | -Ordinal data. Intra- and interrater reliability; ICC and 95% CI and PA. |
| Weir et al (Lateral Step Down) |  |  | **Lateral Step-Down:**-Stance leg; Standing on the edge of an adjustable step. Subjects lowered themselves until the non-weight bearing heel contacted the ground.-Non-stance leg; positioned over the floor adjacent to the step, maintained with the knee in extension and hip in slight flexion.-Arms; hands on the hip. | -Body segments; trunk, hip, pelvic and knee. -Scoring scale; a four-point scoring scale.  | -Ordinal data. Intra- and interrater reliability; ICC and 95% CI and PA. |
| Whatman et al  | N=23. Age=11 ±1 year. Healthy athletes. | 66 PTs with clinical experience <5 to >14 yr. For intrarater reliability 26 PTs  | **Single leg small knee bend:**-Stance leg; knee flexion as far as possible without lifting the heel.-Non-stance leg; neutral hip, knee flexion 80-Arms; not specified. | -Body segments; pelvic, patellae and second toe.-Scoring scale; Dichotomous, yes/no.  | -Nominal data.-Intra- and interrater reliability; AC1, 95% CI, PA. |
| Örtqvist et al  | N=33, intrarater reliability. N=28, interrater reliability.Age=9-16 yr (♀/♂) | 2 PTs. | **Single-Limb mini Squat:**-Stance leg; 50° of knee flexion.-Non-stance leg; not specified.-Arms; fingertip support.-As many squats as possible during 30 sec.  | Body segments; knee and foot.Scoring scale; dichotomous | -Nominal data.-Intra and interrater reliability; Kappa, 95% CI and PA. |
| Abbreviations: AT, Athletic Trainer; PT, Physiotherapist; PFPS, Patellofemoral Pain Syndrome; KOA, Knee Osteoarthritis; ACL, Anterior Cruciate Ligament; ICC, Intraclass correlation Coefficient; AC1, First order of agreement coefficient; PA, Percent Agreement; ME, Measurement Error; CI, Confidence Interval. |