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MEDLINE Search strategy

- 1) COSMIN psychometric properties term*
- 2) PASS [Title/Abstract] OR (patient acceptable symptom state) [Title/Abstract]
- 3) SCB [Title/Abstract] OR (substantial clinical benefit) [Title/Abstract]
- 4) 1 OR 2 OR 3
- 5) hip [Title/Abstract] AND (arthroscop*[Title/Abstract] OR preservation[Title/Abstract])
- 6) (femoroacetabul* impingement [Title/Abstract])
- 7) 5 OR 6
- 8) 4 AND 7

**COSMIN psychometric properties term, taken from www.cosmin.nl:*

(instrumentation[sh] OR methods[sh] OR "Validation Studies"[pt] OR "Comparative Study"[pt] OR "psychometrics"[MeSH] OR psychometr*[Title/Abstract] OR clinimetr*[tw] OR clinometr*[tw] OR "outcome assessment (health care)"[MeSH] OR "outcome assessment"[Title/Abstract] OR "outcome measure*" [tw] OR "observer variation"[MeSH] OR "observer variation"[Title/Abstract] OR "Health Status Indicators"[Mesh] OR "reproducibility of results"[MeSH] OR reproducib*[Title/Abstract] OR "discriminant analysis"[MeSH] OR reliab*[Title/Abstract] OR unreliab*[Title/Abstract] OR valid*[Title/Abstract] OR "coefficient of variation"[Title/Abstract] OR coefficient[Title/Abstract] OR homogeneity[Title/Abstract] OR homogeneous[Title/Abstract] OR "internal consistency"[Title/Abstract] OR (cronbach*[Title/Abstract] AND (alpha[Title/Abstract] OR alphas[Title/Abstract])) OR (item[Title/Abstract] AND (correlation*[Title/Abstract] OR selection*[Title/Abstract] OR reduction*[Title/Abstract])) OR agreement[tw] OR precision[tw] OR imprecision[tw] OR "precise values"[tw] OR test-retest[Title/Abstract] OR (test[Title/Abstract] AND retest[Title/Abstract]) OR (reliab*[Title/Abstract] AND (test[Title/Abstract] OR retest[Title/Abstract])) OR stability[Title/Abstract] OR interrater[Title/Abstract] OR inter-rater[Title/Abstract] OR intrarater[Title/Abstract] OR intra-rater[Title/Abstract] OR intertester[Title/Abstract] OR inter-tester[Title/Abstract] OR intratester[Title/Abstract] OR intra-tester[Title/Abstract] OR interobserver[Title/Abstract] OR inter-observer[Title/Abstract] OR intraobserver[Title/Abstract] OR intra-observer[Title/Abstract] OR intertechnician[Title/Abstract] OR inter-technician[Title/Abstract] OR

intratechnician[Title/Abstract] OR intra-technician[Title/Abstract] OR interexaminer[Title/Abstract] OR inter-examiner[Title/Abstract] OR intraexaminer[Title/Abstract] OR intra-examiner[Title/Abstract] OR interassay[Title/Abstract] OR inter-assay[Title/Abstract] OR intraassay[Title/Abstract] OR intra-assay[Title/Abstract] OR interindividual[Title/Abstract] OR inter-individual[Title/Abstract] OR intraindividual[Title/Abstract] OR intra-individual[Title/Abstract] OR interparticipant[Title/Abstract] OR inter-participant[Title/Abstract] OR intraparticipant[Title/Abstract] OR intra-participant[Title/Abstract] OR kappa[Title/Abstract] OR kappa's[Title/Abstract] OR kappas[Title/Abstract] OR repeatab*[tw] OR ((replicab*[tw] OR repeated[tw]) AND (measure[tw] OR measures[tw] OR findings[tw] OR result[tw] OR results[tw] OR test[tw] OR tests[tw])) OR generaliza*[Title/Abstract] OR generalisa*[Title/Abstract] OR concordance[Title/Abstract] OR (intraclass[Title/Abstract] AND correlation*[Title/Abstract]) OR discriminative[Title/Abstract] OR "known group"[Title/Abstract] OR "factor analysis"[Title/Abstract] OR "factor analyses"[Title/Abstract] OR "factor structure"[Title/Abstract] OR "factor structures"[Title/Abstract] OR dimension*[Title/Abstract] OR subscale*[Title/Abstract] OR (multitrait[Title/Abstract] AND scaling[Title/Abstract] AND (analysis[Title/Abstract] OR analyses[Title/Abstract])) OR "item discriminant"[Title/Abstract] OR "interscale correlation*" [Title/Abstract] OR error[Title/Abstract] OR errors[Title/Abstract] OR "individual variability"[Title/Abstract] OR "interval variability"[Title/Abstract] OR "rate variability"[Title/Abstract] OR (variability[Title/Abstract] AND (analysis[Title/Abstract] OR values[Title/Abstract])) OR (uncertainty[Title/Abstract] AND (measurement[Title/Abstract] OR measuring[Title/Abstract])) OR "standard error of measurement"[Title/Abstract] OR sensitiv*[Title/Abstract] OR responsive*[Title/Abstract] OR (limit[Title/Abstract] AND detection[Title/Abstract]) OR "minimal detectable concentration"[Title/Abstract] OR interpretab*[Title/Abstract] OR ((minimal[Title/Abstract] OR minimally[Title/Abstract] OR clinical[Title/Abstract] OR clinically[Title/Abstract]) AND (important[Title/Abstract] OR significant[Title/Abstract] OR detectable[Title/Abstract]) AND (change[Title/Abstract] OR difference[Title/Abstract])) OR (small*[Title/Abstract] AND (real[Title/Abstract] OR detectable[Title/Abstract]) AND (change[Title/Abstract] OR difference[Title/Abstract])) OR "meaningful change"[Title/Abstract] OR "ceiling effect"[Title/Abstract] OR "floor effect"[Title/Abstract] OR "Item response model"[Title/Abstract] OR IRT[Title/Abstract] OR Rasch[Title/Abstract] OR "Differential item functioning"[Title/Abstract] OR DIF[Title/Abstract] OR "computer adaptive testing"[Title/Abstract] OR "item bank"[Title/Abstract] OR "cross-cultural equivalence"[Title/Abstract])*

Additional Details

- **EMBASE search:** through EMBASE Elsevier interface
 - Filters applied: Sources = Embase. Languages = English.
- **MEDLINE search:** Through PubMed interface
 - Filters applied: Text availability = Full text, Species = Humans, Languages = English, Journal categories = MEDLINE

- **COSMIN database:**
 - Hip arthroscopy

Supplementary Table 1: Description of Included Studies

Source	LOE	Psychometric Property	Name of Questionnaire (s)	Study Population	Demographics	Follow-up time point, yrs	Mode of Administration
Carton and Filan (2020) ³²	II	CIOV	mHHS	Competitive athletes, primary hip arthroscopy	N=576 (23 F); Age: 25.9 ± 5.7	2	Self-administered
Cancienne et al (2020) ³³	III	CIOV	HOS-ADL, HOS-SS, mHHS	Revision hip arthroscopy due to capsular incompetency	N=49 (39 F); Age: 30.0 ± 10.5 N=384 (265 F); Age: 34.6 ± 11.8, 34.5 ± 11.9	2	Self-administered
Beck et al (2020) ^{‡37}	III	CIOV	HOS-ADL, HOS-SS, mHHS	Adults, primary hip arthroscopy	N=171 (101 F); Age: 29 (IQR 13)	2	Self-administered
Robinson et al (2020) ³⁶	III	CIOV	iHOT-12	Adults, primary hip arthroscopy	N=658 (462 F); Age: 35.3 ± 13	1.25	Self-administered
Martin et al (2020) ^{a35}	III	CIOV	iHOT-12	Adults, primary hip arthroscopy	N=733 (537 F); Age: 35.3 ± 13	2	Self-administered
Martin et al (2020) ^{b34}	III	CIOV	iHOT-12	Adults, primary hip arthroscopy	N=658 (462 F); Age: 35.3 ± 13	1	Self-administered
Martin et al (2020) ^{c49}	III	CIOV	HOS-ADL, HOS-SS, iHOT-12, HOS-ADL, HOS-SS, mHHS	Adults, primary hip arthroscopy	N=283 (179 F); Age: 34.2 ± 11.9	2	Self-administered
Nwachukwu et al (2020) ^{‡38}	IV	CIOV	HOS-SS	Adults, primary hip arthroscopy	N=626 (437 F); Age: 31.5 ± 11.9	1, 2, 5	Self-administered
Stone et al (2019) ^{‡39}	IV	CIOV Test-retest reliability, internal consistency, measurement error, construct validity, CIOV	HOS-SS	Athletes, hip arthroscopy	N=50 (31 F); Age: 44 (18-60)	Minimum 2	Self-administered
Watanabe et al (2019) ²⁹	II	CIOV	iHOT-12	Adults, labral tear diagnosis. Majority hip arthroscopy		0.5	Self-administered

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Martin et al (2019) ^{*40}	III	CIOV Test retest reliability,	iHOT-12	Adults, hip arthroscopy	N=733 (537 F); Age: 35.3 ± 13	1	Self-administered
Bramming et al (2019) ³⁰	II	responsiveness, measurement error	FJS-12	Adults, hip arthroscopy	N=50 (27 F); Age: 36 ± 19	NA	Self-administered
Kivlan et al (2019) ^{*41}	III	CIOV Test-retest reliability,	iHOT-12	Adults, hip arthroscopy	N=647 (427 F); Age: 25.9 ± 10.7	1	Self-administered
Ohlin et al (2019) ²⁸	II	responsiveness, construct validity	HSAS	Adults, hip arthroscopy	N=60 (19 F); Age: 30.6 ± 11.3, 36.2 ± 10.8	NA	Self-administered
Nwachukwu et al (2019) ⁴²	IV	CIOV	iHOT-12	Adults, hip arthroscopy	N=120 (81 F); Age: 38.7 ± 11.7	1	Self-administered
Maxwell et al (2018) ⁴³	II	CIOV	iHOT-33	Adults, hip arthroscopy	N=118 (72 F); Age: 36.8 (18-59)	2	Self-administered
Thorborg et al (2018) ⁴⁴	II	CIOV	HAGOS, mHHS	Adults with chondrolabral injury or FAI, hip arthroscopy	N=97 (56 F); Age: 38 (17-60), 37 (19-59)	NA	Self-administered
Nwachukwu et al (2018) ⁴⁵	IV	CIOV Content validity, Test-retest reliability,	mHHS, HOS-ADL, HOS-SS, iHOT-33	Revision hip arthroscopy	N=49 (27 F); Age: 29.7 ± 8.6	1	Self-administered
Papaliodis et al (2017) ³¹	III	responsiveness, construct validity	KJOC Athletic Hip Score	Athletes, hip injury	N=250 (121 F); Age: 21.3 (NR)	NA	Self-administered
Nwachukwu et al (2017) ^{a†47}	II	CIOV	mHHS, HOS-ADL, HOS-SS, iHOT-33	Adults, primary hip arthroscopy	N=364 (208 F); Age: 32.5 ± 10.3	1	Self-administered

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Source	LOE	Psychometric Property	Name of Questionnaire (s)	Study Population	Demographics	Follow-up time point, yrs	Mode of Administration
Nwachukwu et al (2017) ^{b†46}	II	CIOV	mHHS, HOS-ADL, HOS-SS, iHOT-33	Adults, primary hip arthroscopy	N=364 (208 F); Age: 32.5 ± 10.3	1	Self-administered
Chahal et al (2015) ^{‡48}	II	CIOV	mHHS, HOS-ADL, HOS-SS	>16 yrs old, hip arthroscopy	N=130 (75 F); Age: 35.6 ± 11.7	1	Self-administered
Jonasson et al (2014) ^{**51}	I	CIOV*	iHOT-12	Adults, hip arthroscopy	N=502 (165 F); Age: 37 ± 13.4	0.3	Self-administered
Thomee et al (2014) ^{**50}	I	CIOV*	HAGOS HAGOS, HOOS, HOS-ADL, HOS-SS, iHOT-33, mHHS	Adults, hip arthroscopy	N=502 (165 F); Age: 37.3 ± 13.4	0.3	Self-administered
Kemp et al (2013) ⁵³	II	CIOV*	HOS-SS, HOS-ADL	Adults, hip arthroscopy	N=50 (26 F); Age: 37.4 ± 11.3	1 to 2	Self-administered
Martin et al (2008) ⁵²	III	CIOV*	HOS-SS, HOS-ADL	Adults, hip arthroscopy	N=126 (67 F); Age: 41 ± 16	0.6	Self-administered

All values presented as mean ± SD or mean (range) unless otherwise specified. When ages were reported for multiple cohorts within a single study, the values for all cohorts are presented.

NA: not applicable

^{**,*}, [†], [‡], Likely overlapping cohorts

* Other psychometric properties reported in the study, but not included because they have been addressed in prior systematic reviews