# Clinimetric Data On Patient Reported Outcomes For Hip Preservation Surgery: Review Of The Literature

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# Disclosures

- American Hip Institute[a], AANA Learning Center Committee[a], Amplitude[c], Arthrex[b,c,d], ATI[b], Breg[b], DJO Global[d], Orthomerica[d], Pacira[b,c], Stryker[b,c]
- a – boardmember; b – research support; c – consulting; d – royalty; e - stockholder

# Background

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  - Studies in the past have individually validated multiple PRO scores for hip preservation surgery
  - Since the last review- iHOT-33 has been released and studied and further studies have been conducted on other PRO scores

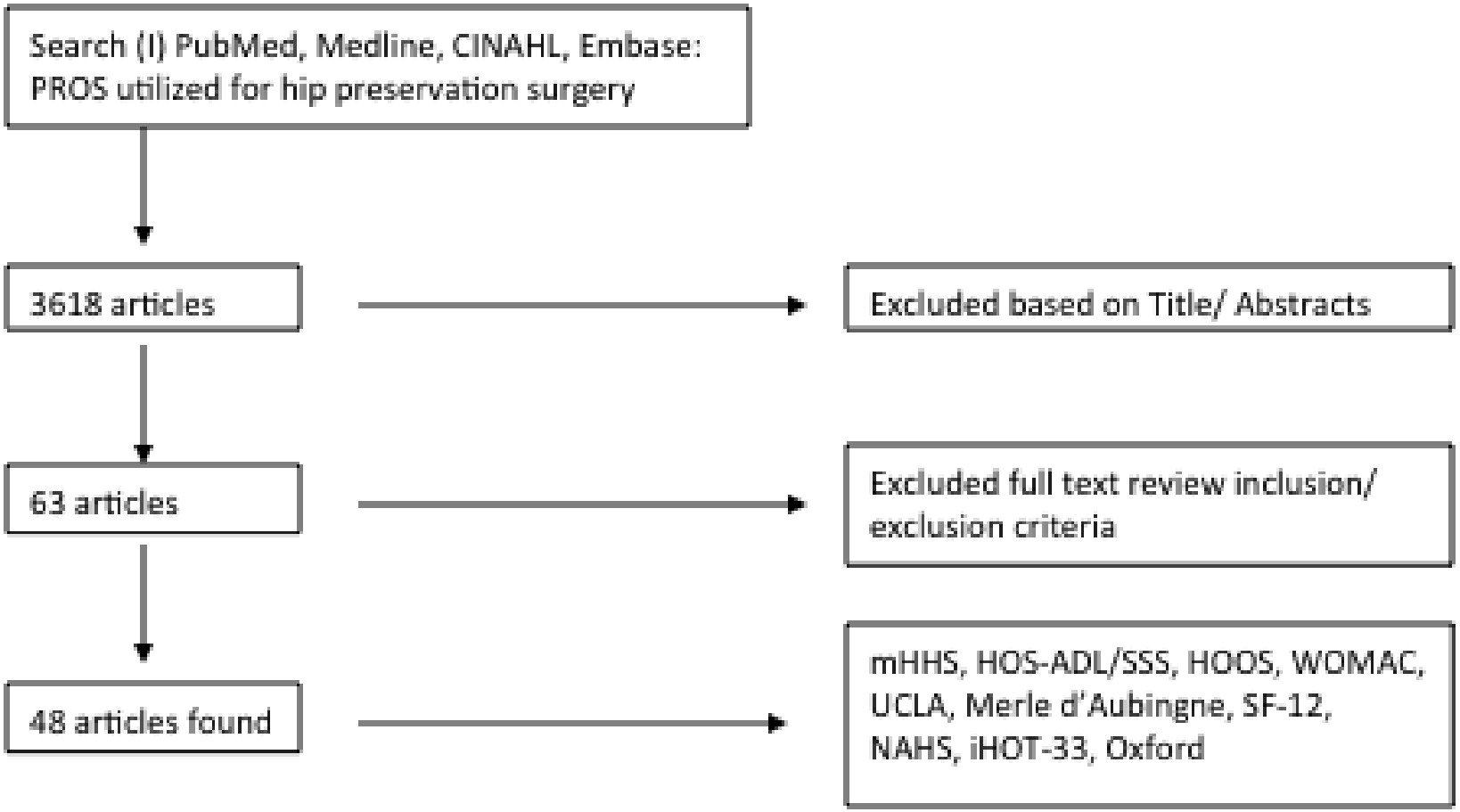
# Purpose

- To investigate the body of psychometric and clinimetric evidence for the most popular PROs when treating the young hip with hip preservation surgery and determine the most efficient and effective way to evaluate patient outcomes with the least administrative burden.

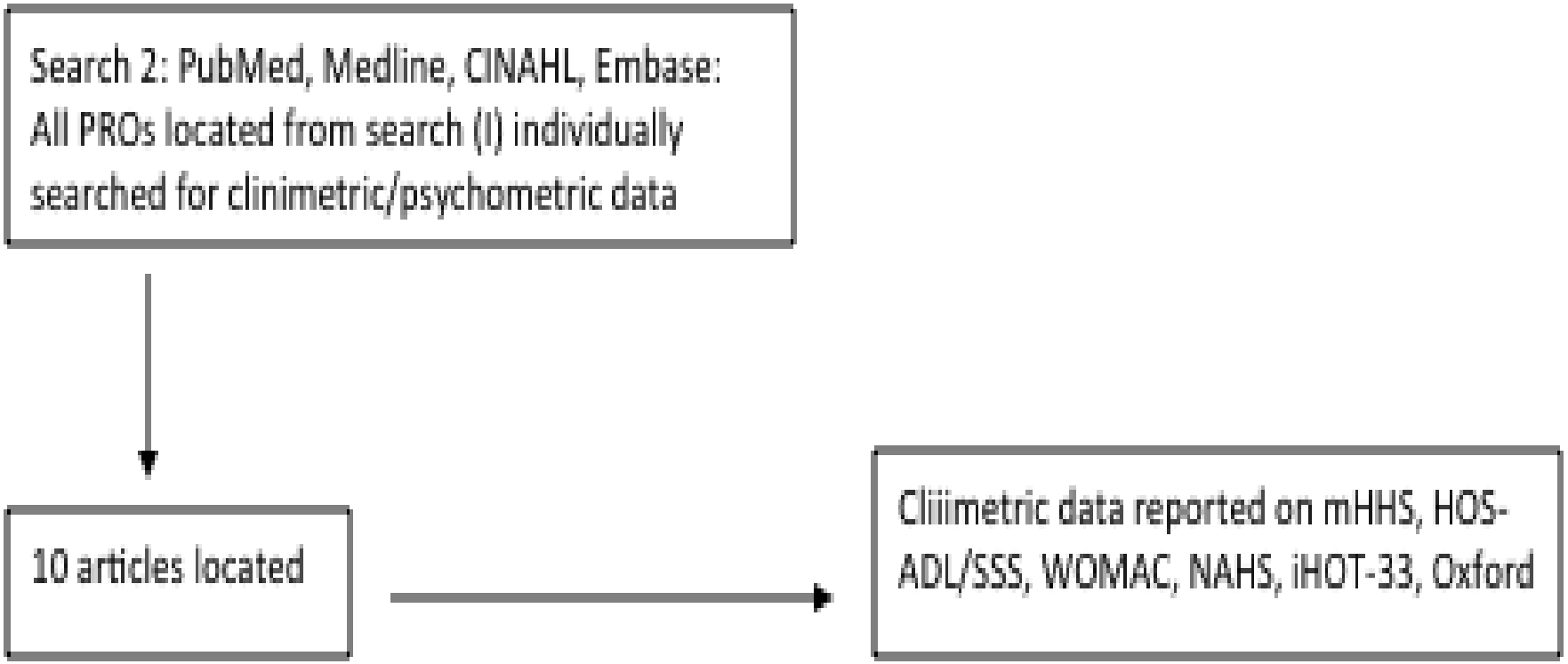
# Methods

- 2 literature searches conducted on the following databases: PubMed, Medline (via ovid), CINAHL, and Embase
  - i) to search for popular PROs utilized currently in the literature search one utilized search terms: FAI or labral tear or labrum tear or dysplasia and hip
  - ii) all clinimetric and psychometric data on PROs recorded from search (i) were searched in the same databases.

# Search 1


Search (I) PubMed, Medline, CINAHL, Embase:
PROS utilized for hip preservation surgery
3618 articles
Excluded based on Title/ Abstracts
63 articles
Excluded full text review inclusion/
exclusion criteria
48 articles found
mHHS, HOS-ADL/SSS, HOOS, WOMAC,
UCLA, Merle d'Aubingne, SF-12,
NAHS, iHOT-33, Oxford

# Search 2


Search 2: PubMed, Medline, CINAHL, Embase:
All PROs located from search (I) individually searched for clinimetric/psychometric data
10 articles located
Cliiimetric data reported on mHHS, HOS-ADL/SSS, WOMAC, NAHS, iHOT-33, Oxford

# PROs located by Search 1

| Test | Purpose | Maximum score |
|---|---|---|
| Non-arthritic hip score (NAHS) | Measure preoperative and postoperative hip pain and function in pts 20-40 with no x-ray diagnosis | 100 |
| mHHS (modified Harris hip score) | Measure preoperative and postoperative pain, function, and activities of daily living in hip arthroscopy population. | 100 |
| HOS (hip outcome score) ADL (activities of daily living) SSS (sports specific subscale | Measure functional activities and sporting activities with individuals with acetabular labral tears. | 100 |
| iHOT-33 (inthernational hip outcome tool) | Measures symptoms and functional limitations, sports and recreational activities, job related concerns, social/emotional/lifestyle concers. This is used in a variety of hip conditions, age 18-60, tegner > or equal to 4. | 100 |
| WOMAC (Western Ontario and McMaster Universities) Osteoarthritis index | The measures pain, stiffness, and physical function in a population with osteoarthritis. | 100 |
| Oxford | Measures pain, mobility, and function and was designed for use in total hip arthroplasty patients. | 48 |

# Clinimetric data on all PROs from Search 1

| | | construct validity | responsiveness | Reliability | Floor effect | Celining effect | interpretability | internal consistency | content validity |
|---|---|---|---|---|---|---|---|---|---|
| mHHS | Kemp | + | + | + | + | - | + | ? | - |
| | Hinman | ? | ? | - | ? | ? | ? | ? | ? |
| NAHS | Christensen | + | ? | ? | + | + | ? | ? | + |
| | Hinman | ? | ? | + | ? | ? | ? | ? | ? |
| iHOT-33 | Kemp | + | + | + | + | + | + | + | + |
| | Hinman | ? | ? | + | ? | ? | ? | ? | ? |
| | Mohtadi | + | + | + | + | + | ? | + | + |
| HOS | | | | | | | | | |
| ADL | Kemp | + | + | + | - | + | + | ? | - |
| | Martin-31 | + | + | ? | + | + | + | + | ? |
| | Hiinman | ? | ? | - | ? | ? | ? | ? | ? |
| | Siejas | ? | ? | + | + | + | ? | ? | ? |
| SSS | Kemp | + | - | + | - | - | + | ? | - |
| | Martin-31 | + | + | ? | + | + | + | + | ? |
| | Hinman | ? | ? | - | ? | ? | ? | ? | ? |
| | Siejas | ? | ? | + | + | + | ? | ? | ? |
| Oxford | Impellizzeri | + | ? | + | + | + | ? | + | ? |
| WOMAC-12 | Rothenfluh | ? | ? | ? | ? | ? | ? | + | ? |

# Conclusion

- The iHOT-33 demonstrated adequate clinimetric evidence for use in isolation. The WOMAC had insufficient clinimetric support for use in patients undergoing hip preservation surgery. The remaining PROs should be used in combination with one another in order to guard against any clinimetric shortcomings demonstrated in this review.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