

Table 1 Patient demographics

Number of participants	113
Female/Male, no. (%)	92 (81)/21 (19)
Age, mean \pm SD years	58.1 \pm 12.9
Disease: HOA/ONFH/Tu, no. (%)	89 (79)/21 (19)/3 (3)
KL grading of HOA: 0/1/2/3/4/THA, no. of hips. (%)	29 (16)/42 (23)/31 (17)/11 (6)/5 (3)/60 (34)
Treatment of the hip: Conservative/Osteotomy/THA, no. (%)	104 (46)/35 (15)/87 (38)

Abbreviations: SD, standard deviation; HOA, osteoarthritis of the hip; ONFH, osteonecrosis of femoral head; Tu, bone tumor on the hip; KL grading, Kellgren-Lawrence grading. (0: No OA, 1: Doubtful, 2: Mild, 3: Moderate, 4: Severe); Conservative, any conservative treatment; Osteotomy, any osteotomy including either pelvic or femur; THA, total hip arthroplasty.

Table 2 Mean scores of the wJHEQ and pJHEQ

JHEQ subscale	Mean score	SD	Mean score difference	SD of difference	Paired <i>t</i> -test p values	ICC [95% CI]
Pain						
wJHEQ	21.5	6.8	0.15	2.6	0.40	0.95
pJHEQ	21.6	6.8				[0.93-0.97]
Movement						
wJHEQ	13.8	7.7	0.26	2.0	0.15	0.97
pJHEQ	14.0	7.9				[0.96-0.98]
Mental						
wJHEQ	18.2	7.7	0.14	2.3	0.52	0.96
pJHEQ	18.3	7.6				[0.94-0.97]
Satisfaction VAS (mm)						
wJHEQ	33.9	29.8	2.0	5.3	0.62	0.96
pJHEQ	32.9	29.1				[0.94-0.97]
Right hip pain VAS (mm)						
wJHEQ	21.1	26.3	1.6	5.2	0.65	0.96
pJHEQ	20.5	26.0				[0.94-0.97]
Left hip pain VAS (mm)						
wJHEQ	21.7	24.6	1.8	5.6	0.61	0.97

pJHEQ

20.9 24.9

[0.94-0.98]

Abbreviations: wJHEQ, Japanese Orthopaedic Association Hip Disease Evaluation Questionnaire, web version; pJHEQ, Japanese Orthopaedic Association Hip Disease Evaluation Questionnaire, paper version; VAS, Visual Analogue Scale; SD, standard deviation; ICC, intraclass correlation coefficient; 95% CI, 95% confidence interval.

Table 3 Gender difference in the preference for wJHEQ or pJHEQ

	wJHEQ	pJHEQ	Both
Male	9	6	5
Female	48	27	9

Abbreviations: wJHEQ, Japanese Orthopaedic Association Hip Disease Evaluation Questionnaire, web version; pJHEQ, Japanese Orthopaedic Association Hip Disease Evaluation Questionnaire, paper version.

Table 4 Disease difference in the preference for wJHEQ or pJHEQ

	wJHEQ	pJHEQ	both
HOA	46	27	9
ONFH	11	6	3
Tu	0	0	2

Abbreviations: wJHEQ, Japanese Orthopaedic Association Hip Disease Evaluation Questionnaire, web version; pJHEQ, Japanese Orthopaedic Association Hip Disease Evaluation Questionnaire, paper version; HOA, osteoarthritis of the hip; ONFH, osteonecrosis of femoral head; Tu, bone tumor on the hip.

Supplemental Table 1 Demographics of the two groups according to the preference for wJHEQ or pJHEQ

	wJHEQ first	pJHEQ first	P value
Number of participants	57	56	0.9
Female/Male, no.	45/11	47/10	0.81
Age \pm SD years	57.8 \pm 13.2	58.3 \pm 13.0	0.86
Disease: HOA/ONFH/Tu, no.	46/10/1	43/11/2	0.9
Treatment of the hip: Conservative/Osteotomy/THA, no	59/18/37	52/24/36	0.52

Abbreviations: wJHEQ, Japanese Orthopaedic Association Hip Disease Evaluation Questionnaire, web version; pJHEQ, Japanese Orthopaedic Association Hip Disease Evaluation Questionnaire, paper version; SD, standard deviation; HOA, osteoarthritis of the hip; ONFH, osteonecrosis of femoral head; Tu, bone tumor on the hip; Conservative, any conservative treatment; Osteotomy, any osteotomy including either pelvic or femur; THA, total hip arthroplasty.

The Student *t*-test was used to compare mean patient age. Fisher's exact test was used to compare the number of disease, sex and treatment. $P < 0.05$ indicates significance.

Supplemental Table 2 Demographics of the participants who could not complete the pJHEQ

Participants	Number of missing items	Disease	Treatment	Unanswered questions
51, female	12	OA	Osteotomy for right hip in 2016	She did not answer any questions on the last page of her pJHEQ questionnaire.
79, female	8	OA	THA for right hip in 2003, conservative treatment for left hip	She did not answer the questions regarding her left hip.
76, female	6	OA	THA for right hip in 2017, conservative treatment for left hip	She did not answer the questions regarding her left hip on the first page.
65, female	5	OA	THA for right hip in 2013	She answered only one of the questions regarding her left hip on the first page.

85, female	2	OA	THA for right hip in 2011, THA for left hip in 2014	She did not answer question No. 3 for both the right and left hips.
85, female	1	OA	THA for right hip in 2000), THA for left hip in 2001	She did not answer the first question.
65, female	1	OA	THA for left hip in 2017, conservative treatment for right hip	She did not answer question No. 2.
77, female	1	OA	THA for left hip in 2010, THA for right hip in 2017	She did not answer the last question on the first page.
41, male	1	ONFH	Osteotomy for left hip in 2011, osteotomy for right hip in 2012	He did not answer question No. 2.

Abbreviations: pJHEQ, Japanese Orthopaedic Association Hip Disease Evaluation Questionnaire, paper version; OA, osteoarthritis of the hip; ONFH, osteonecrosis of femoral head; Osteotomy, any osteotomy including either pelvic or femur; THA, total hip arthroplasty.

Supplemental Table 3. Test results between the two groups

	Mean score (95% CI)		P value
	wJHEQ first	pJHEQ first	
Pain			
wJHEQ	21.1 (19.7-22.4)	22.1 (20.7-23.2)	0.40
pJHEQ	21.3 (19.9- 22.6)	22.1 (20.8-23.5)	0.31
Movement			
wJHEQ	13.2 (11.7-14.8)	14.3 (12.9-15.8)	0.30
pJHEQ	13.4 (11.9-14.9)	14.6 (13.1-16.1)	0.30
Mental			
wJHEQ	18.4 (16.3-20.5)	18.1 (15.9-20.2)	0.70
pJHEQ	18.6 (16.6-20.6)	18.1 (15.9-20.2)	0.83
Satisfaction VAS			
wJHEQ	34.0 (25.8-42.1)	33.9 (25.8-42.0)	0.88
pJHEQ	31.5 (24.0-39.0)	33.9 (24.0-40.7)	0.99
Right hip pain VAS			
wJHEQ	23.0 (17.0-32.8)	19.2 (12.7-25.7)	0.40
pJHEQ	22.7 (15.2-30.2)	18.3 (11.8-24.7)	0.50
Left hip pain VAS			
wJHEQ	21.4 (19.5-23.3)	21.8 (19.9-23.7)	0.73
pJHEQ	21.3 (19.2-23.2)	22.1 (20.2-23.9)	0.68

The Student *t*-test was used to compare means. $P < 0.05$ indicates significance.

Supplemental Table 4. Mean score differences between the two groups

	Mean score difference (95% CI)		P value
	wJHEQ first	pJHEQ first	
Pain	0.19 (-0.28-0.67)	0.11 (-0.41-0.62)	0.81
Movement	0.21 (-0.19-0.61)	0.30 (-0.03-0.65)	0.72
Mental	0.27 (-0.47-1.00)	0.02 (-0.45-0.49)	0.58
Satisfaction VAS	-1.96 (-4.53-0.62)	-1.58 (-3.88-0.75)	0.83
Right hip pain VAS	-2.34 (-5.14-0.49)	-0.93 (-2.35-0.50)	0.39
Left hip pain VAS	-1.21 (-2.85-0.42)	-2.34 (-3.78- -0.91)	0.31

Abbreviations: CI, confidence interval; wJHEQ, Japanese Orthopaedic Association Hip Disease Evaluation Questionnaire, web version; pJHEQ, Japanese Orthopaedic Association Hip Disease Evaluation Questionnaire, paper version; VAS, Visual Analogue Scale; The Student's t-test was used to compare mean. P < 0.05 were significant