

Supplementary article data

Eliciting health state utilities for Dupuytren's contracture using a discrete choice experiment

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Table 3. Sample characteristics

	Whole sample (n = 2,282)	Included sample (n = 1,745)	Excluded sample (n = 537)
Mean age (SD)	47.2 (17.1)	48.4 (16.9)	43.6 (17.1)
Gender, % female	51.9	53.4	46.9
Education, % with college education or higher degree	59.1	58.8	60.0
Employment/occupation			
% not working or unknown status	55.2	57.3	48.6
% non-manual labor/office based	27.8	27.4	29.2
% unskilled manual labor	7.0	6.8	7.5
% skilled manual labor	10.0	8.5	14.7
Know someone who has DC, % yes	6.1	6.5	4.7
Immediate family	21.0	23.9	8.0
Relative	18.8	17.7	24.0
Friend	46.4	44.3	56.0
Colleague	5.8	5.3	8.0
Other	8.0	8.9	4.0
General health status			
Excellent	10.3	9.3	13.2
Very good	36.3	36.2	36.5
Good	33.4	33.4	33.7
Fair	16.0	16.6	13.8
Poor	4.1	4.5	2.8
Hand use			
Right-handed	86.0	87.1	82.5
Left-handed	11.0	10.3	13.2
Ambidextrous	3.0	2.6	4.3
Inconsistent response, % yes	20.2	0.0	14.2
Average survey time, mean (SD) in min	2.9 (8.9)	2.6 (2.3)	3.9 (17.8)
Survey satisfaction, mean (SD)	76.1 (21.5)	76.4 (21.3)	75.1 (22.1)

Table 4. Conditional logistic model (CLM) estimates

Finger	Joint	Coeff.	SE	Joint model			95% CI	Finger	Coeff.	Tubiana stage model			95% CI	
				z	p > z					z	p > z			
Index	PIP	-0.013	0.001	-20.09	<0.001	-0.014	-0.011	Index	-0.513	0.023	-22.39	<0.001	-0.557	-0.468
	MCP	-0.015	0.001	-21.94	<0.001	-0.016	-0.013							
Middle	PIP	-0.009	0.001	-16.00	<0.001	-0.010	-0.008	Middle	-0.661	0.022	-30.13	<0.001	-0.704	-0.618
	MCP	-0.020	0.001	-34.63	<0.001	-0.021	-0.018							
Ring	PIP	-0.017	0.001	-29.20	<0.001	-0.018	-0.016	Ring	-0.692	0.020	-35.05	<0.001	-0.731	-0.654
	MCP	-0.013	0.001	-27.89	<0.001	-0.014	-0.012							
Little	PIP	-0.010	0.000	-21.53	<0.001	-0.011	-0.009	Little	-0.492	0.018	-27.73	<0.001	-0.527	-0.457
	MCP	-0.011	0.001	-22.13	<0.001	-0.012	-0.010							

N = 34,900; LL at convergence = -10,884; pseudo R2 = 0.1001 N = 34,900; LL at convergence = -11,266; pseudo R2 = 0.0685

Table 5. Rescaled EQ-5D-5L utilities for different hand uses

	Mean	SD	Minimum	Maximum
Right-handed respondent				
Right hand utility	0.508	0.273	-0.594	1.000
Left hand utility	0.579	0.232	-0.594	1.000
Left-handed respondent				
Right hand utility	0.559	0.253	-0.241	1.000
Left hand utility	0.474	0.273	-0.280	1.000
Ambidextrous respondent				
Right hand utility	0.632	0.232	0.073	1.000
Left hand utility	0.637	0.220	0.074	1.000
Dominant hand utility		0.491		
Non-dominant hand utility		0.569		
Ambidextrous hand utility		0.634		

Dominant hand utility = average of (right hand utility for right-handed respondents + left hand utility for left-handed respondents).
 Non-dominant hand utility = average of (left hand utility for right-handed respondents + right hand utility for left-handed respondents).
 Ambidextrous hand utility = average of (right hand utility for ambidextrous respondents + left hand utility for ambidextrous respondents).

Appendix A. Overview of 54 hand profiles

Pair_id	Profile	Joint #1	Joint #2	Joint #3	Joint #4	Joint #5	Joint #6	Joint #7	Joint #8	Profile	Joint #1	Joint #2	Joint #3	Joint #4	Joint #5	Joint #6	Joint #7	Joint #8
1	A	45	0	0	0	90	0	45	0	B	45	0	0	0	90	45	90	45
2	C	0	0	45	0	0	45	0	0	D	45	90	0	45	0	0	0	0
3	E	0	45	90	0	45	0	0	0	F	0	0	0	45	45	45	0	90
4	G	0	0	0	45	45	0	90	45	H	0	0	0	45	45	90	45	0
5	I	0	0	45	0	0	0	90	90	J	0	0	45	0	0	90	45	45
6	K	90	45	0	0	0	0	45	90	L	90	45	0	0	0	90	0	45
7	M	0	45	0	90	90	0	0	45	N	90	45	0	0	0	45	90	0
8	O	45	90	45	0	45	0	0	45	P	90	0	90	45	0	0	0	45
9	Q	0	45	90	0	45	45	45	45	R	45	0	0	0	90	90	0	90
10	S	90	0	45	90	90	0	0	0	T	45	90	0	45	0	45	45	45
11	U	0	90	90	90	0	0	45	0	V	90	45	45	45	45	0	45	0
12	W	45	45	90	45	90	45	0	0	X	45	45	45	90	0	90	45	0
13	Y	45	45	45	90	0	45	0	90	Z	45	45	45	90	0	0	90	45
14	AA	90	90	0	90	45	45	0	0	AB	0	90	45	45	90	45	90	0
15	AC	45	0	90	90	45	45	90	0	AD	45	0	90	90	45	0	45	90
16	AE	0	90	45	45	90	0	45	90	AF	45	90	45	0	45	45	45	90
17	AG	90	0	90	45	0	45	45	90	AH	0	45	0	90	90	90	90	0
18	AI	45	90	45	0	45	90	90	0	AJ	0	90	45	45	90	90	0	45
19	AK	90	0	90	45	0	90	90	0	AL	45	0	90	90	45	90	0	45
20	AM	0	45	0	90	90	45	45	90	AN	90	45	45	45	45	90	0	90
21	AO	0	90	90	90	0	45	90	45	AP	45	90	0	45	0	90	90	90
22	AQ	90	0	45	90	90	45	45	45	AR	90	45	45	45	45	45	90	45
23	AS	0	45	90	0	45	90	90	90	AT	0	90	90	90	0	90	0	90
24	AU	90	90	0	90	45	90	45	45	AV	90	90	90	0	90	90	45	0
25	AW	90	90	0	90	45	0	90	90	AX	90	90	90	0	90	0	90	45
26	AY	45	45	90	45	90	90	45	45	AZ	45	45	90	45	90	0	90	90
27	AAA	90	90	90	0	90	45	0	90	AAB	90	0	45	90	90	90	90	90

Note:

Joint #1: index finger, PIP joint
 Joint #2: index finger, MCP joint
 Joint #3: middle finger, PIP joint
 Joint #4: middle finger, MCP joint
 Joint #5: ring finger, PIP joint
 Joint #6: ring finger, MCP joint
 Joint #7: little finger, PIP joint
 Joint #8: little finger, MCP joint

Appendix B-1. Calculating EQ-5D-5L dominant hand utilities using sample hands

		β	"Best" hand	"Worst" hand	Hand #1	Hand #2
The Joint Model						
Index	PIP	-0.012550	0	90	90	0
	MCP	-0.014750	0	90	0	0
Middle	PIP	-0.008810	0	90	90	0
	MCP	-0.019487	0	90	45	0
Ring	PIP	-0.016765	0	90	0	0
	MCP	-0.013084	0	90	0	90
Little	PIP	-0.009609	0	90	0	0
	MCP	-0.010892	0	90	45	90
	V(hand)		0.0000	-9.5352	-3.2895	-2.1578
	U(hand)		1.0000	0.4909	0.8244	0.8848
The Tubiana Stage Model						
Index	0	0.000000	0	4	2	0
	1	-3.477461				
	2	-4.416257				
	3	-3.356156				
	4	-9.924247				
Middle	0	0.000000	0	4	3	0
	1	-1.569192				
	2	-0.534170				
	3	-1.947996				
	4	-3.378112				
Ring	0	0.000000	0	4	0	2
	1	-1.138544				
	2	-2.548062				
	3	-3.799231				
	4	-5.008510				
Little	0	0.000000	0	4	1	2
	1	-1.748863				
	2	-2.398389				
	3	-3.580404				
	4	-5.218915				
	V(hand)		0.0000	-23.5298	-8.1131	-4.9465
	U(hand)		1.0000	0.4909	0.8245	0.8930

Appendix B-2. Illustration of the numerical computations for Hand #1 in Appendix B-1

$V(\text{hand})$ for hand #1 = $(-0.012550 \cdot 90) + (-0.014750 \cdot 0) + (-0.008810 \cdot 90) + (-0.019487 \cdot 45) + (-0.016765 \cdot 0) + (-0.013084 \cdot 0) + (-0.009609 \cdot 0) + (-0.010892 \cdot 45) = -3.2895$

$V(\text{hand})$ for the "Best" hand = $(-0.012550 \cdot 0) + (-0.014750 \cdot 0) + (-0.008810 \cdot 0) + (-0.019487 \cdot 0) + (-0.016765 \cdot 0) + (-0.013084 \cdot 0) + (-0.009609 \cdot 0) + (-0.010892 \cdot 0) = 0$

$V(\text{hand})$ for the "Worst" hand = $(-0.012550 \cdot 90) + (-0.014750 \cdot 90) + (-0.008810 \cdot 90) + (-0.019487 \cdot 90) + (-0.016765 \cdot 90) + (-0.013084 \cdot 90) + (-0.009609 \cdot 90) + (-0.010892 \cdot 90) = -9.5352$.

Hence,

$$U(\text{hand}) \text{ for hand \#1} = (-3.2895 - (-9.5352)) / (0 - (-9.5352)) * (1 - 0.4909) + 0.4909 = 0.8244$$

Using the same approach, the estimated utility for hand #1 using the Tubiana stage model is 0.8245, as shown in Appendix B-1.

Appendix C. Profile frequencies

Choice set	Profile	Choice (n, %)		Total frequency (n, %)
		0	1	
1	A vs B	461 (20.20)	1,821 (79.80)	2,282 (0.10)
2	C vs D	217 (27.43)	574 (72.57)	791 (0.03)
3	E vs F	295 (37.39)	494 (62.61)	789 (0.03)
4	G vs H	176 (22.31)	613 (77.69)	789 (0.03)
5	I vs J	452 (57.29)	337 (42.71)	789 (0.03)
6	K vs L	242 (30.59)	549 (69.41)	791 (0.03)
7	M vs N	657 (83.16)	133 (16.84)	790 (0.03)
8	O vs P	400 (50.63)	390 (49.37)	790 (0.03)
9	Q vs R	94 (11.90)	696 (88.10)	790 (0.03)
10	S vs T	694 (87.85)	96 (12.15)	790 (0.03)
11	U vs V	716 (90.52)	75 (9.48)	791 (0.03)
12	W vs X	95 (12.04)	694 (87.96)	789 (0.03)
13	Y vs Z	194 (24.53)	597 (75.47)	791 (0.03)
14	AA vs AB	597 (75.57)	193 (24.43)	790 (0.03)
15	AC vs AD	185 (23.45)	604 (76.55)	789 (0.03)
16	AE vs AF	450 (57.03)	339 (42.97)	789 (0.03)
17	AG vs AH	154 (19.52)	635 (80.48)	789 (0.03)
18	AI vs AJ	515 (65.11)	276 (34.89)	791 (0.03)
19	AK vs AL	337 (42.66)	453 (57.34)	790 (0.03)
20	AM vs AN	578 (73.26)	211 (26.74)	789 (0.03)
21	AO vs AP	324 (41.06)	465 (58.94)	789 (0.03)
22	AQ vs AR	715 (90.39)	76 (9.61)	791 (0.03)
23	AS vs AT	315 (39.87)	475 (60.13)	790 (0.03)
24	AU vs AV	200 (25.32)	590 (74.68)	790 (0.03)
25	AW vs AX	634 (80.15)	157 (19.85)	791 (0.03)
26	AY vs AZ	311 (39.37)	479 (60.63)	790 (0.03)
27	AAA vs AAB	488 (61.77)	302 (38.23)	790 (0.03)
Total				22,820 (100)

