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Development of a clinical risk score for pain and function following total knee arthroplasty: results from the TRIO study. [Dataset]

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Table 1. Characteristics of the study population

Predictors			N respondents
Demographic and socioeconomic characteristics			
Age (median years, IQR)	69.0	63.3-74.6	721
No. female (n, %)	379	52.6%	721
Marital status (n, %)			719
<i>Single</i>	35	4.9%	
<i>Married</i>	485	67.5%	
<i>Widowed</i>	100	13.9%	
<i>Divorced</i>	67	9.3%	
<i>Separated</i>	8	1.1%	
<i>Co-habiting</i>	24	3.4%	
Education (n, %)			719
<i>Secondary school</i>	356	49.5%	
<i>Apprenticeship</i>	81	11.3%	
<i>Further education college</i>	188	26.2%	
<i>University degree</i>	69	9.6%	
<i>Further degree</i>	25	3.5%	
Centres			721
<i>Edinburgh</i>	242	33.6%	
<i>Aberdeen</i>	118	16.4%	
<i>Royal Orthopaedic Hospital</i>	146	20.3%	
<i>Weston General Hospital</i>	45	6.2%	
<i>Barts Health NHS Trust</i>	17	2.4%	
<i>Warrington</i>	20	2.8%	
<i>Fife</i>	67	9.3%	
<i>Dudley</i>	13	1.8%	
<i>Pennine Acute</i>	53	7.4%	
Work			
Current employment status (n, %)			703
<i>Working full time</i>	117	16.6%	
<i>Working part-time</i>	68	9.7%	
<i>Retired</i>	397	56.5%	
<i>Unable to work because of illness or disability</i>	41	5.8%	
<i>Student</i>	0	0	
<i>Unemployed and looking for work</i>	6	0.9%	
<i>Not looking for paid employment</i>	74	10.5%	
Clinical factors			
Duration of knee pain (median years, IQR)	5.0	2.0-10.0	699
Baseline Oxford Knee Score (median, IQR)	21.0	15.0-26.0	709
Chronic Pain Grade (n, %)			664

<i>No pain – Grade 0</i>	126	19.0%	
<i>Low disability and low intensity – Grade I</i>	55	8.3%	
<i>Low disability and high intensity – Grade II</i>	175	26.4%	
<i>High disability and moderate intensity – Grade III</i>	145	21.8%	
<i>High disability and high intensity – Grade IV</i>	163	24.6%	

Table 2. Univariable associations between individual preoperative variables and poor outcome

Predictors	Persons with poor outcome ¹	N total	Odds Ratio	95% Confidence Interval
Sociodemographic factors				
Age, years	67.8 (9.0)	704	0.99	0.96-1.01
Gender				
Female	55 (15.1)	704	reference category	
Male	44 (12.9)		0.84	0.54-1.28
Clinical factors				
Duration of knee pain, years	8.4 (7.6)	682	1.02	0.998-1.05*
Baseline Oxford Knee Score; per unit (0-48)	15.2 (6.8)	695	0.87	0.84-0.91*
Chronic Pain Grade				
No pain – Grade 0	4 (3.3)	651	reference category	
Low disability and low intensity – Grade I	2 (3.8)		1.16	0.21-6.53
Low disability and high intensity – Grade II	12 (7.1)		2.25	0.71-7.17
High disability and moderate intensity – Grade III	24 (16.7)		5.90	1.98-17.54*
High disability and high intensity – Grade IV	45(27.6)		11.25	3.92-32.30*
Chronic Widespread Pain				
No	78(12.5)	697	reference category	
Yes	18 (25.0)		2.34	1.30-4.19*
Sleep Problem Scale				
Mildly sleep disturbed (≤ 15 nights)	77 (13.0)	699	reference category	
Severely sleep disturbed (>15 nights)	21 (19.8)		1.66	0.97-2.83*
Co-morbidities				
≤ 1 comorbidities	14 (8.5)	704	reference category	
2-3 comorbidities	53 (12.8)		1.58	0.85-2.93
≥ 4 comorbidities	32 (25.8)		3.75	1.90-7.40*
Psychosocial factors				
Illness Attitude Score; per unit (0-108)	31.9 (13.4)	655	1.03	1.01-1.05*
Active coping; per unit (7-35)	21.1 (4.6)	562	0.87	0.83-0.92*
Passive coping; per unit (11-55)	33.6 (7.6)	547	1.08	1.05-1.12*
Expectations of pain after recovery; per unit (0-100)	51.4 (29.0)	685	1.01	1.01-1.02*
Expectations of limitations after recovery; per unit (0-100)	43.5 (25.4)	685	1.02	1.01-1.02*
Mental and Physical Health				
HADS ² anxiety				
Mild to moderate anxiety	84 (12.8)	702	reference category	

¹ For categorical variables, number and percentages of persons with poor outcome are reported. Means and standard deviations of persons with poor outcome are reported for continuous variables

² Hospital Anxiety and Depression Scale

<i>Severe anxiety</i>	15 (34.9)		2.58	1.48-4.49*
HADS depression				
<i>Mild to moderate depression</i>	78 (12.5)		reference category	
<i>Severe depression</i>	21 (26.9)	702	3.67	1.88-7.15*
PROMIS ³ mental health; per unit (4-20)	42.6 (5.6)	696	0.93	0.89-0.97*
PROMIS ⁴ physical health; per unit (4-20)	35.0 (3.6)	691	0.82	0.77-0.87*
Quality of life				
EQ5D; per tenth of a unit (-0.5-1.0)	2.6 (1.8)	685	0.74	0.65-0.83*

*p < 0.2

³ Patient Reported Outcome Measurement System

⁴ Patient Reported Outcome Measurement System

Table 3. Predictors of poor outcome in a multivariable stepwise regression model

Predictors	Adjusted Odds ratio	95% Confidence Interval
Oxford knee score (per unit increase in score)	0.89	0.86-0.93
Expectations of knee pain after recovery (per unit increase in score)	1.01	1.005-1.02
Active coping (per unit increase in score)	0.91	0.86-0.96
Chronic Widespread Pain	1.65	0.86-3.17