

SUPPLEMENTS

Supplement 1. Relationships between patient race by level of depression (PHQ-9) & willingness to undergo arthroplasty.

	Willing, n	Unwilling, n	OR (95% CI) ^a
Model 1 ^{b, f}			
White*Minimal-Mild Depression (Referent)	350	84	
White*Moderate-Severe Depression	59	18	0.79 (0.44, 1.40)
AA* Minimal-Mild Depression	125	76	0.39 (0.27, 0.57)
AA* Moderate-Severe Depression	51	30	0.41 (0.24, 0.68)
Model 2 ^{c, f}			
White*Minimal-Mild Depression (Referent)	316	68	
White*Moderate-Severe Depression	52	17	0.70 (0.36, 1.35)
AA* Minimal-Mild Depression	114	68	0.39 (0.24, 0.63)
AA* Moderate-Severe Depression	49	27	0.47 (0.24, 0.91)
Model 3 ^{d, f}			
White*Minimal-Mild Depression (Referent)	316	68	
White*Moderate-Severe Depression	52	17	0.71 (0.37, 1.38)
AA* Minimal-Mild Depression	114	68	0.42 (0.26, 0.68)
AA* Moderate-Severe Depression	49	27	0.47 (0.24, 0.90)
Model 4 ^{e, f}			
White*Minimal-Mild Depression (Referent)	316	68	
White*Moderate-Severe Depression	52	17	0.72 (0.37, 1.40)
AA* Minimal-Mild Depression	114	68	0.41 (0.25, 0.66)
AA* Moderate-Severe Depression	49	27	0.47 (0.25, 0.91)

^a Odds Ratio (95% Confidence Interval); 95% CIs are calculated using robust variance estimates

^b Model 1 = Race by PHQ-9 (Minimal-Mild [0-9] or Moderate-Severe [10-27] depression) only

^c Model 2 = Model 1 + site (VA or non-VA), age, income, and WOMAC total score

^d Model 3 = Model 2 + marital status + #close friends or family

^e Model 4 = Model 3 + MOS Social Support

^f Likelihood Ratio Test for Heterogeneity, $p \leq 0.001$

PHQ-9=Patient Health Questionnaire-9; AA=African-American; MOS=Medical Outcomes Study; WOMAC=Western Ontario McMaster Instrument

Supplement 2. Relationships between patient race by physical health (SF-12 Physical Health) & willingness to undergo arthroplasty.

	Willing, n	Unwilling, n	OR (95% CI) ^a
Model 1 ^{b, f}			
White*High Physical Health (Referent)	69	11	
White*Low Physical Health	332	89	0.59 (0.30, 1.17)
AA* High Physical Health	16	11	0.23 (0.09, 0.63)
AA* Low Physical Health	156	90	0.28 (0.14, 0.55)
Model 2 ^{c, f}			
White*High Physical Health (Referent)	59	8	
White*Low Physical Health	303	75	0.61 (0.27, 1.36)
AA* High Physical Health	15	10	0.21 (0.07, 0.66)
AA* Low Physical Health	145	80	0.30 (0.13, 0.74)
Model 3 ^{d, f}			
White*High Physical Health (Referent)	59	8	
White*Low Physical Health	303	75	0.62 (0.28, 1.37)
AA* High Physical Health	15	10	0.24 (0.07, 0.75)
AA* Low Physical Health	145	80	0.32 (0.13, 0.77)
Model 4 ^{e, f}			
White*High Physical Health (Referent)	59	8	
White*Low Physical Health	303	75	0.62 (0.28, 1.38)
AA* High Physical Health	15	10	0.23 (0.07, 0.73)
AA* Low Physical Health	145	80	0.31 (0.13, 0.75)

^a Odds Ratio (95% Confidence Interval); 95% CIs are calculated using robust variance estimates

^b Model 1 = Race by SF-12 Physical Health (Low [<50] or High [≥ 50])

^c Model 2 = Model 1 + site (VA or non-VA), age, income, and WOMAC total score

^d Model 3 = Model 2 + marital status + #close friends or family

^e Model 4 = Model 3 + MOS Social Support

^f Likelihood Ratio Test for Heterogeneity, $p \leq 0.001$

AA=African-American; MOS=Medical Outcomes Study; WOMAC=Western Ontario McMaster Instrument

Supplement 3. Comparable cohorts of patients recruited in other studies and their characteristics in comparison to our cohort

	Our sample			OAI ^a Study			US Census (Allegheny County) ^b		
		White	AA		White	AA		White	AA
Age	Mean (SD)			Mean (SD)			Median (SE)		
		64.54 (9.39)	58.68 (8.13)		62.27 (9.09)	58.30 (7.96)		43.6 (0.1)	32.7 (0.4)
% Married		53.5	22.8		73.32	39.13		52.2 (M) ^c 46.8 (F)	30.1 (M) ^c 20.1 (F)
Income, %	<\$10000	6.9	31.7	<\$10000	1.6	12.3	<\$10000	6.0	20.5
	\$10000-\$19999	15.6	31.3	\$10000-\$24999	9.7	12.9	\$10000-\$24999	17.1	28.5
	\$20000-\$29999	16.2	13.2	\$25000-\$49999	28.1	36.8	\$25000-\$49999	25.2	25.9
	\$30000-\$39999	10.8	6.4	\$50000-\$99999	41.1	25.2	\$50000-\$99999	31.3	19.2
	\$40000-\$49999	11.0	4.5	≥\$100000	19.5	12.9	\$100000-\$199999	15.9	5.1
	≥\$50000	39.5	12.8				≥\$200000	4.4	0.8

^a Osteoarthritis Initiative (OAI) Study (51). The OAI is a multicenter, longitudinal, prospective observational study of knee OA patients. We present the data only of patients recruited from the University of Pittsburgh.

^b US Census Bureau, 2006-2010 American Community Survey (52).

^c Marital status was presented among those ≥15 years of age, by sex (Male, Female)