

Productivity Benefits of Minimally Invasive Surgery in Patient with Chronic Sacroiliac Joint Dysfunction

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Supplemental Material

Descriptive statistics on outcome variables

Table A1 provides summary statistics for our key response variables. These statistics were calculated using the NHIS. Statistical significance testing for differences in means across groups was performed using ANOVA for earnings and Pearson Chi-Squared tests for employment and disability percentages.

Table A1. Mean Outcome Variables Across Various Categorical Variables			
	Percentage of Individuals Working	Personal Earnings of Workers	Percentage Receiving Disability Payments
Age	***	***	***
20-29 Years	81%	\$24,231	1%
30-39 Years	82%	\$40,105	2%
40-49 Years	81%	\$46,150	3%
50-59 Years	73%	\$46,297	8%
60-69 Years	47%	\$41,081	6%
70-79 Years	16%	\$29,404	0%
Gender	***	***	**
Female	63%	\$33,274	3%
Male	73%	\$45,185	4%
Health Status	***	***	***
Excellent	79%	\$44,016	0%
Very Good	76%	\$41,087	1%
Good	64%	\$33,830	3%
Fair	39%	\$26,708	13%
Poor	16%	\$23,826	25%
Work Limitation	***	***	***
Not Limited	75%	\$39,829	1%
Limited	24%	\$25,100	22%
Personal Care Limitation	***	***	***
Does Not Need Help	69%	\$39,161	3%

Table A1. Mean Outcome Variables Across Various Categorical Variables			
	Percentage of Individuals Working	Personal Earnings of Workers	Percentage Receiving Disability Payments
Needs Help	11%	\$22,864	24%
Usual Activity Limitation	***	***	***
Not Limited	74%	\$39,542	1%
Limited	15%	\$20,839	27%
Difficulty Carrying	***	***	***
No Difficulty	73%	\$39,639	2%
Minor Difficulty	33%	\$29,205	13%
Major Difficulty	15%	\$24,236	21%
Difficulty Kneeling	***	***	***
No Difficulty	76%	\$40,104	1%
Minor Difficulty	54%	\$35,649	6%
Major Difficulty	26%	\$29,123	16%
Difficulty Sitting	***	*	***
No Difficulty	72%	\$39,708	2%
Minor Difficulty	40%	\$31,569	13%
Major Difficulty	22%	\$26,970	22%
Difficulty Climbing Stairs	***	***	***
No Difficulty	74%	\$39,816	2%
Minor Difficulty	36%	\$28,969	12%
Major Difficulty	17%	\$24,003	19%
Difficulty Standing	***	***	***
No Difficulty	77%	\$39,799	1%
Minor Difficulty	43%	\$34,600	9%
Major Difficulty	16%	\$27,550	20%
Difficulty Walking	***	***	***
No Difficulty	76%	\$40,044	1%
Minor Difficulty	44%	\$31,050	9%
Major Difficulty	19%	\$26,721	18%

Source: Author analysis of data from the National Health Interview Survey (2013).

* P-Value < 0.10

** P-Value < 0.05

*** P-Value < 0.01

Regression Coefficients

Table A2. Employment Probit Regression Model			
Categories	Coefficient	95% Lower CI	95% Upper CI
Age (Ref: 20-29 Years)			
30-39 Years	0.1417***	0.0799	0.2035
40-49 Years	0.2232***	0.1590	0.2875
50-59 Years	0.0932***	0.0268	0.1596
60-69 Years	-0.7546***	-0.8221	-0.6870
70-79 Years	-1.7426***	-1.8246	-1.6605
Gender (Ref: Female)			
Male	0.2675***	0.2308	0.3041
Race (Ref: White)			
Hispanic	-0.1175***	-0.1672	-0.0677
Black	-0.1422***	-0.1923	-0.0920
Asian	-0.4272***	-0.4971	-0.3572
Non-White Other Race	-0.1051	-0.2377	0.0275
Education (Ref: No High School Degree)			
High School Degree	0.3887***	0.3389	0.4384
Associates Degree	0.2242***	0.1650	0.2833
Bachelor's Degree	0.1572***	0.0885	0.2258
Graduate Degree	0.1409***	0.0686	0.2132
Marital Status (Ref: Married)			
Divorced/Widowed	-0.1303***	-0.1782	-0.0823
Never Married	-0.2079***	-0.2597	-0.1562
Children (Ref: No Children)			
1 Child Family	0.0502*	-0.0079	0.1083
2+ Child Family	-0.1125***	-0.1752	-0.0498
3+ Child Family	-0.3196***	-0.3912	-0.2481
Health Status (Ref: Good)			
Excellent	0.1051***	0.0550	0.1552
Very Good	0.1148***	0.0684	0.1612
Fair	-0.1899***	-0.2539	-0.1260
Poor	-0.3167***	-0.4394	-0.1941
Activities of Daily Living			
Needs Help with Personal Care	-0.0051	-0.1747	0.1645
Limited in Usual Activities	-0.8736***	-0.9752	-0.7720
Limited in the Kind or Amount of Work	-0.3126***	-0.3987	-0.2266
Functional Status (Ref: No Difficulty)			
Carrying Objects: Major Difficulty	-0.1984***	-0.3103	-0.0865
Carrying Objects: Minor Difficulty	-0.1120***	-0.1925	-0.0314
Climbing Stairs: Major Difficulty	-0.0257	-0.1451	0.0936
Climbing Stairs: Minor Difficulty	-0.0457	-0.1279	0.0365
Sitting: Major Difficulty	-0.0592	-0.2043	0.0859
Sitting: Minor Difficulty	-0.0862**	-0.1548	-0.0177

Table A2. Employment Probit Regression Model			
Categories	Coefficient	95% Lower CI	95% Upper CI
Standing: Major Difficulty	-0.4539***	-0.5631	-0.3447
Standing: Minor Difficulty	-0.2501***	-0.3163	-0.1838
Kneeling: Major Difficulty	0.1510***	0.0630	0.2391
Kneeling: Minor Difficulty	0.0924***	0.0335	0.1513
Walking: Major Difficulty	-0.1698***	-0.2729	-0.0667
Walking: Minor Difficulty	-0.0179	-0.0924	0.0565
Other Health Indicators			
Heart Problem	-0.1251*	-0.2727	0.0225
Diabetes	-0.0599	-0.2058	0.0861
Breathing Problem	-0.1585**	-0.2840	-0.0330
Senility Problem	-0.1589	-0.9066	0.5888
Depression	-0.0641	-0.1792	0.0511
Memory Problem	-0.2292***	-0.3417	-0.1168
Instruments			
Other Sources of Family Income	-0.2642***	-0.3213	-0.2071
Amount of Other Family Income (\$1,000s)	-0.0095***	-0.0100	-0.0090
Intercept	0.9015***	0.8162	0.9868

Source: Author analysis of data from the National Health Interview Survey (2013).

* P-Value < 0.10

** P-Value < 0.05

*** P-Value < 0.01

Table A3. Earnings Conditional on Working Regression Ordinary Least Squares Model			
Categories	Coefficient	95% Lower CI	95% Upper CI
Age (Ref: 20-29 Years)			
30-39 Years	12,044***	10,932	13,157
40-49 Years	17,578***	16,407	18,748
50-59 Years	19,866***	18,623	21,109
60-69 Years	12,946***	11,138	14,754
70-79 Years	1,409	-2,514	5,333
Gender (Ref: Female)			
Male	12,307***	11,416	13,197
Race (Ref: White)			
Hispanic	-5,729***	-6,737	-4,721
Black	-4,451***	-5,480	-3,422
Asian	-2,299***	-3,822	-776
Non-White Other Race	-2,919**	-5,709	-128
Education (Ref: No High School Degree)			
High School Degree	8,330***	7,062	9,597
Associates Degree	5,184***	4,003	6,365
Bachelor's Degree	11,692***	10,366	13,019
Graduate Degree	13,779***	12,427	15,130
Marital Status (Ref: Married)			
Divorced/Widowed	-869*	-1,855	117
Never Married	-5,129***	-6,081	-4,176
Children (Ref: No Children)			
1 Child Family	972*	-103	2,046
2+ Child Family	3,240***	2,069	4,411
3+ Child Family	52	-1,487	1,591
Health Status (Ref: Good)			
Excellent	5,184***	4,220	6,148
Very Good	3,040***	2,090	3,989
Fair	-3,111***	-4,740	-1,483
Poor	-2,390	-6,610	1,830
Activities of Daily Living			
Needs Help with Personal Care	383	-6,356	7,121
Limited in Usual Activities	-3,123*	-6,773	526
Limited in the Kind or Amount of Work	-6,173***	-8,579	-3,767
Functional Status (Ref: No Difficulty)			
Carrying Objects: Major Difficulty	1,010	-2,728	4,748
Carrying Objects: Minor Difficulty	121	-2,189	2,431
Climbing Stairs: Major Difficulty	-585	-4,489	3,319
Climbing Stairs: Minor Difficulty	-546	-2,717	1,626
Sitting: Major Difficulty	-958	-5,452	3,537
Sitting: Minor Difficulty	-1,539*	-3,277	199
Standing: Major Difficulty	-717	-4,169	2,735
Standing: Minor Difficulty	339	-1,363	2,041

Table A3. Earnings Conditional on Working Regression Ordinary Least Squares Model			
Categories	Coefficient	95% Lower CI	95% Upper CI
Kneeling: Major Difficulty	-385	-2,720	1,951
Kneeling: Minor Difficulty	-1,424**	-2,708	-140
Walking: Major Difficulty	-693	-3,709	2,322
Walking: Minor Difficulty	-1,212	-3,035	612
Other Health Indicators			
Heart Problem	1,842	-3,214	6,899
Diabetes	-1,993	-7,070	3,085
Breathing Problem	1,270	-2,616	5,155
Senility Problem	-5,650	-35,076	23,775
Depression	-2,819*	-6,120	482
Memory Problem	-5,184***	-9,124	-1,244
Intercept	6,684***	4,485	8,882

Source: Author analysis of data from the National Health Interview Survey (2013).

* P-Value < 0.10

** P-Value < 0.05

*** P-Value < 0.01