

## Predicting Completion of Follow-up in Prospective Orthopaedic Trauma Research

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**Purpose:** Orthopaedic trauma studies that collect long-term outcomes are expensive and maintaining high rates of follow-up can be challenging. Knowing what factors influence completion of follow-up could allow interventions to improve this, but few studies have been published looking at this. We theorized that factors such as work status and social assistance would be potential predictors for completing follow-up to 12 months.

**Methods:** Patients who had previously been recruited to 4 studies into orthopaedic trauma inpatients at our Level I trauma center were included. Their orthopaedic injuries were all managed operatively and outcome questionnaires including Short Form-36 (SF-36) and Short Musculoskeletal Function Assessment (SMFA) were collected at baseline, 6 months, and 12 months. Complete follow-up was defined as completion of all outcome measures at all time points up to 12 months. Univariate analysis and subsequent analysis by building a reductive multivariate regression model allowed for estimation of the influence of factors in completion of follow-up.

**Results:** 870 patients with complete data had previously been recruited and were included in the analysis. 707 patients (81.2%) completed follow-up to 12 months. Factors associated with completion of follow-up included the physical component summary score of SF-36 at baseline, not being on social assistance at the time of injury, being married, and having a higher level of educational attainment (Table 1).

**Conclusion:** Although these factors are not modifiable themselves, we advocate that researchers planning longitudinal orthopaedic trauma studies should take these factors into account in their design.

	Odds Ratio	95% Confidence Intervals		p-value
		Lower	Upper	
<b>SF-36 PCS Score at baseline</b>	1.032	1.010	1.055	<b>0.004</b>
<b>Educational Attainment</b> (versus those who didn't graduate high school)				
Graduated High School	1.231	0.743	2.032	0.418
Some College Education	1.732	1.018	2.950	<b>0.043</b>
Graduated College	1.633	0.975	2.731	0.061
Postgraduate degree	2.112	1.207	3.722	<b>0.009</b>
<b>Marital Status</b> (versus married patients)				
Living with significant other	0.493	0.301	0.809	<b>0.005</b>
Divorced/separated	0.790	0.454	1.402	0.410
Widowed	0.693	0.287	1.804	0.428
Single	0.568	0.382	0.839	<b>0.005</b>
<b>Not currently working vs. working</b>	0.733	0.529	1.018	0.063
<b>No social assistance vs. social assistance</b>	2.227	1.348	3.671	<b>0.002</b>

**Table 1: Results of multivariate regression analysis**

See pages 401 - 442 for financial disclosure information.