Published in final edited form as:

J Oral Maxillofac Surg. 2007 December ; 65(12): 2430–2437. doi:10.1016/j.joms.2007.04.011.

Baseline Characteristics and Treatment Preferences of Oral Surgery Subjects

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Abstract

Background—Patient preferences for treatment choices may depend on subject characteristics.

Objective—Using Standard Gamble (SG) and Willingness to Pay (WTP), this study compares preferences for treatment of mandibular fracture among patients in a low-income urban area.

Patients and Methods—Surveys of African American and Hispanic adults receiving treatment at King/Drew Medical Center for either a mandibular fracture (n=98) or third-molar removal (n=105) are used to investigate differences in patient characteristics across treatment groups (third-molar vs. fracture) and treatment preference (wiring vs. surgery).

Results—Fracture patients were willing to pay more to restore function without scarring or nerve damage than third-molar patients. Subjects who chose surgery were willing to accept a greater risk of possible nerve damage or scarring than those who chose wiring. Among 15 potential predictors of SG and WTP studied in 4 subgroups defined by actual treatment and treatment preference, significant predictors varied with associations for education and clinical experience for SG, and income and psychosocial predictors for WTP.

Conclusions—SG and WTP capture different domains of health values among subjects. There is considerable heterogeneity in relationships between patient characteristics and patient preferences across subgroups defined by actual treatment and treatment preferences.

Introduction

A developing body of literature suggests that patient involvement in treatment decisions, specifically choosing from possible treatments, may increase satisfaction with outcomes and promote adherence to medical instruction. This has been especially important for treatments that may produce side effects that reduce subjects' quality of life for some subjects. A surgeon may determine the optimal treatment based upon clinical expertise and comfort, but a patient may select treatment based on other factors such as past experiences, or anticipated impact on appearance and quality of life. Patterns of choices may also depend on subject characteristics

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such as clinical, mental and social factors and could be related to the subject's distrust of diagnosis, belief in alternative cures, and diverging understanding of prognosis.^{1,2,3} Information on patient preferences is needed to inform health-care providers and health policy decision makers about the effects of improved outcomes, as well as other aspects of delivery of interventions on subject well-being. Determining the value that a patient places on different aspects of health is the first step in decoding subject preferences.

Treatment for facial fractures, often a result of traumatic injury, can produce both short-term and long-term physical and functional impairment with lasting effects on general health status, psychosocial well-being, and health-related quality of life.⁴ Management of some mandibular fractures where the injury severity can be treated either surgically (open reduction and rigid internal fixation) or non-surgically (maxillomandibular fixation) provides investigators with an opportunity to explore the influence of subject characteristics on preferences for treatment choices. In an earlier qualitative study based on focus groups with patients receiving care at an inner-city hospital for either a mandibular fracture or third molar extraction under general anesthesia, patients discussed the extent to which seven decision-making factors; perceived side effects, effectiveness, size of scar, trust of a doctor's recommendation, expectations of the alternative procedures, reactions to previous cases, and judgments about the location of a surgical incision/scar affect their preferences between surgical and non-surgical treatment.⁵ Recognizing that information about positive and negative outcomes was considered by patients in making treatment decisions, the focus of the present study is to use interviews with queries about decision-related outcomes to compare similarities and differences in preferences for treatment of mandibular fracture between patients coming for emergency treatment of a broken lower jaw and a comparison group of patients coming for elective third-molar removal.

Methods

This prospective cohort study reports on admission data from 203 subjects receiving treatment at King/Drew Medical Center (KDMC) for either a mandible fracture (n=98) or third-molar removal (n=105) and followed for 3 months to determine the stability of their treatment preferences and health utilities. KDMC is an inner-city public hospital in Los Angeles serving a predominantly disadvantaged, minority population.⁶

To be eligible for inclusion in the study, the patient had to be able to speak English or Spanish, have either a mandibular fracture or planning to undergo surgical removal of impacted third molar teeth under general anesthesia, and had to be capable of answering a medical history, not suffering from uncontrolled epilepsy or a severe psychiatric problem, and deemed capable of giving informed consent. A total of 315 patients met the first level of inclusion, of which 128 were mandibular fracture patients and 187 were third molar patients.

For mandibular fracture patients, the screening took place during admission by an oral and maxillofacial surgeon and prior to discussion of treatment options. Only a narrow range of clinical conditions was considered eligible, a bony displacement between 2mm and 4mm, no grossly shattered jaws, gunshot wounds, or anatomically unapproachable fractures. A total of 30 mandibular fracture patients screened were ruled out under the exclusion criteria, leaving a sample of 98 mandibular fracture subjects who were informed about the study and its purpose and were given a letter inviting them to participate in the study. After agreeing to participate they were consented by the surgeon.

Third molar patients undergo an initial assessment by an oral and maxillofacial surgeon prior to being scheduled for surgical extraction under general anesthesia. Third molar patients were given the invitation letter describing the study when they arrived at the clinic waiting area on the day of the assessment and the surgeon explained the study during the assessment screening.

Informed consent took place for those who agreed to participate. Of the 82 third-molar patients who did not participate in the study, 74 did not agree to participate and 8 were determined to be not eligible to participate.

Much attention had been paid to the actual presentation of the treatment scenarios. KDMC IRB reviews all language and requires that presenting information be made in language and a format that subject can understand. A combination of verbal, written, and graphic depiction was finally agreed upon by the IRB. Subjects were presented with two scenarios for treatment of a mandible fracture: non-surgical (closed reduction) and surgical (open reduction).

Measures of utility and psychosocial health

Patients were informed that the closed treatment choice requires wiring the jaws together for 4–6 weeks while the bones heal and a drawing of a patient with wired jaws was shown. With this treatment, subjects were told they would not be able to open their mouth but would be able to drink liquid food through a straw and talk out of the side of their mouth. The presentation listed problems associated with jaw wiring described by subjects in our focus groups, including pain lasting up to three months, potential sharp edges of the wires causing oral ulceration, eating problems, speaking problems, difficulty keeping the mouth clean, and prolonged problems of restrictions on opening the mouth for many weeks.

Subjects were then given information on a second treatment option, which was an operation to reduce the fracture through an incision in the neck under the mandible and fixation provided by metal plate to hold the fragments in position for healing and a graphic depiction of the incision was shown to interested subjects. They were informed that they would be able to open their mouth and eat a soft diet within a day or two after the operation. The scenario again listed problems reported by focus group subjects including with the open treatment, including pain, swelling, eating difficulties, and temporary nerve problems. Subjects were then asked which treatment they would prefer.

Following their selection of treatment, participants were informed of additional potential side effects related to surgery reported in the literature (permanent numbness or lack of facial mobility from nerve damage, and scarring). Figure 1 shows the form that was shown and read to the subjects for the two approaches employed to assess the value subjects place on health outcomes: *Standard Gamble* (SG) and *Willingness to Pay* (WTP).⁷ SG is designed to assess the trade-off between good outcomes, such as improved health function or appearance, and a serious complication associated with surgery. The strength of the preference for a specific treatment is expressed in terms of the amount of risk the individual would accept for obtaining improved health function.

A follow-up hypothetical scenario was designed to elicit *willingness to pay* (WTP) for a special treatment as a measure of the value placed on health outcomes. Due to concerns that subjects could conceivably worry that they might lose access to publicly funded health care benefits if their own income were to exceed a certain threshold, a standardized scenario of winning the lottery was used to avoid entangling patient preferences with other anticipated income-related concerns.

The aim of the study was to determine whether a variety of factors, including socio-demographic, clinical, and psychosocial health characteristics, were associated with the subject's preferences for treatment. Level of formal education completed was measured on an ordinal scale: 8th grade or less (0), some high school (1), completed high school (2), vocational/technical school (3) and college graduate (4). Four categories of monthly household income were measured, with (0) representing either receipt of public assistance or a monthly income of \$616 or less, and with (1) through (3) representing respectively \$617 to \$766, \$767 to \$999,

and \$1,000 or more, with cutoffs corresponding to natural break points in annual income. Gender, ethnicity (African American, Hispanic) and employment status (employed or not) were measured using dichotomous variables.

Several psychosocial characteristics were assessed using items from previously validated scales. Post-traumatic stress disorder (PTSD) symptoms were measured by four yes/no questions related to having nightmares, intrusive thoughts, anxiety, and feeling detached during the past two weeks and were scored by counting the number of such symptoms from 0 to 4.^{8A} modified CAGE measure using four yes/no responses was used to capture alcohol and drug use, yielding a summary score from 0 to 4.⁹ Depressive symptoms included five Likert-scaled CES-D items related to feeling down or lonely, having little interest or pleasure, and having difficulty concentrating and focusing. Responses on each item ranged from never (0) to always (4), yielding a summary score from 0 to 20.¹⁰ The number of close family members or friends available to the subject was assessed as a measure of one's social network. Social support was measured using four Likert-scaled items related to availability of someone to give advice, to confide in, to prepare meals, and to accompany the subject to the doctor if needed.¹¹ Similarly, a four-item measure of hardiness was used to capture sense of control, commitment and challenge regarding health.¹² The same four Likert response options were used and both summary scores ranged from 0 to 16.

Clinical characteristics of fracture and third molar treatment included pain (measured using a scale from 0, representing no pain, to 10, representing severe pain); the summed number of dental problems prior to coming for treatment (intermittent pain, swelling, bad breath, biting of gum tissue, pressure) reported; and a summary of the types of prior dental treatments within the past five years (fillings, gum surgery, tooth extractions, orthodontics, previous broken jaw, previous gun shot wound).

Analyses

Analyses focused on investigating differences in patient characteristics and study outcomes across subgroups defined by treatment groups, i.e. mandibular fracture (n=98) versus third molar (n=105), and treatment preference (wiring vs. surgery). ANOVA was used to investigate differences in continuously scaled variables, and chi-square tests were used to identify significant variation in proportions across subgroups.

To identify predictors of SG and WTP outcomes, we used linear regression analysis with indicators for subgroups defined by treatment received and treatment preference. Four subgroups, reflecting both treatment group and hypothetical treatment choice were analyzed: third-molar subjects who chose wiring as their treatment of choice (n=80); third-molar subjects who chose surgery as their treatment of choice (n=25); fracture subjects who chose wiring (n=65); and fracture subjects who chose surgery (n=33). To avoid including too many predictors in a single model, separate models for demographic predictors (age, education, income, gender, ethnicity, employment), psychosocial predictors (post-traumatic stress, depression, substance use, social support, and hardiness), and clinical predictors (pain, number of prior dental problems, and number of prior dental treatments) were used. Instead of a traditional main-effect/interaction parameterization, we explored interaction phenomena by analyzing separate regression models for subgroups defined by actual treatment and treatment-preference, reporting salient findings where predictors are significant in one subgroup but not another. An α of 0.05 was used to judge statistical significance, although borderline significant results where $0.05 < \alpha < 0.10$ are also noted.

Because it is natural to interpret WTP on its original scale (dollars), we present results for that outcome without imposing any transformation. But because the distribution of WTP is highly skewed and might call into question regression linearity assumptions, we also analyzed WTP

after a logarithmic transformation and report qualitative departures in the findings between the two models.

Results

Comparing baseline characteristics of subjects admitted to KDMC for repair of mandibular fracture or third-molar removal (see Table 1), fracture subjects were significantly older than third-molar subjects (mean: 35 vs. 28 years), and were significantly more likely to be male (88% vs. 50%), unemployed (57% vs. 34%), and African-American (66% vs. 50%). For psychosocial baseline characteristics, mandibular fracture subjects reported a higher mean score for PTSD symptoms (1.1 vs. 0.1); depressive symptoms (2.5 vs. 1.8); alcohol and drug abuse problems (0.7 vs. 0.2); and a lower mean score for social support (2.6 vs. 3.8) and size of social network (2.6 vs. 3.8). Regarding clinical health characteristics, significant differences between mandibular fracture and third-molar subjects were reported. A mean score on a 10 point pain scale of 6.9 was reported for mandibular fracture subjects compared to a mean score of 1.2 for third-molar subjects. Conversely, fracture subjects reported fewer prior dental problems (means: 0.3 vs. 2.3) and fewer prior dental treatments within the past five years (means: 0.4 vs. 0.6). Analysis of baseline utility measures demonstrated that fracture subjects were willing to pay more for a special treatment to restore function without scarring or nerve damage, with an average WTP dollar amount of \$37,400 versus \$30,600 for third-molar subjects. While the result reflected a significant difference, the standardized effect-size was estimated to be just 0.23 standard deviations. No significant difference between groups was found for the SG percentage.

When subjects were compared by treatment preference groups (see right side of Table 1), no significant differences were found on any of the clinical or psychosocial characteristics. Among the sociodemographic characteristics, the only significant difference was by age. The difference in average age across treatment preference groups was less pronounced than the difference in average age across actual treatment groups. Subjects who chose surgery had significantly higher SG scores (92 % risk) than those who chose wiring (6 % risk). No significant difference was found between treatment-preference groups on the WTP utility measure.

Comparing health value utilities among the four groups of subjects defined by current condition and treatment preference (third-molar/wire, third-molar/surgery, fracture/wire, fracture/surgery) using chi-square and ANOVA respectively, significant differences were found between groups on baseline SG outcomes but not on WTP outcomes (Table 2). Subjects who chose surgery rather than wiring were willing to accept a greater risk of possible nerve damage or scar formation than those who chose wiring (92% vs 8% or 4%). However, no significant differences between groups were found in the amount of money they would pay to have a fracture fixed with no long-term impairment.

Regression models were developed for each of the 4 subgroups using the SG and WTP utility measures as dependent variables in separate regression models for each domain of predictors (socio-demographic, psychosocial health, and clinical health). Among third-molar/wire-preference subjects (Table 3), a higher level of education is associated with higher SG scores ($r^2 = 0.106$), while higher income and more substance abuse are associated with higher WTP scores ($r^2 = 0.252$). Among third-molar/surgery-preference subjects (see right side of Table 3), prior dental problems and prior dental treatment are associated with higher SG scores ($r^2 = 0.544$), while more PTSD and depressive symptoms are associated with higher WTP scores ($r^2 = 0.661$).

Among fracture/wiring-preference subjects (Table 4), more prior dental treatment was associated with higher SG scores, while a larger social network was associated with higher WTP scores. Finally, among surgery-preference subjects (Table 4, right side), more current pain was associated with higher SG scores, but no patient or clinical characteristics were associated with WTP scores.

Discussion

In treatment scenarios where options exist, investigators study ways to incorporate subject preferences for various health states into the treatment choice decision.^{4,13,14,15} Several questions arise before stating that utility measures can appropriately be used in the case of acute oral conditions where a potential risk is related to quality of life and disfigurement rather than death. First, is the information about decision-making provided by individuals who come seeking treatment at a time when their physical and mental health is compromised by the acute condition, in this case a mandibular fracture, valid and generalizable? We selected a third molar sample as a comparison group similar to the diverse, disadvantaged south central Los Angeles community in order to help answer that question and to increase the generalizability of the study. The people seeking surgical removal of third molars reported a greater number of prior dental problems such as dental pain, swelling, bad breath and gum problems. They were somewhat younger, included more females, were somewhat better educated and included fewer unemployed people. All of these increased the generalizability of the sample, as fracture patients are predominantly male and unemployed. None of these sociodemographic differences were found when comparing subjects by treatment preference groups, except age, and that difference was approximately three years. Further, while significant differences between mandibular fracture and third-molar subjects were reported on many of the clinical and psychosocial health characteristics, with fracture subjects reporting higher pain scores at admission, and more post-traumatic stress symptoms, these differences also did not persist in the analysis of treatment preferences. Indeed, only age and SG were found to be significant comparing the subjects by treatment preference. Thus, we conclude patients seeking treatment can provide valuable information.

One next questions whether these two utility outcome measures, SG and WTP can appropriately be used in the case of acute oral health conditions among disadvantaged populations. Regarding the acute condition, with guidance from the IRBs at UCLA and KDMC, only mandibular fracture patients who were alert and capable of informed consent were allowed to be recruited. The investigators also spent many rounds of wordsmithing and guidance by the IRB to arrive at descriptions of the SG and WTO that were deemed understandable and consistent with the lower health literacy found within the patient population at KDMC. The IRB's review helped guide the final wording of the informed consent and the structured questionnaire to a level that was understood by the presenting patients, and the consistency of the responses across third molar and fracture and differences between SG and WTP confirm that people understood.

Finally, can SG and WTP be used in studies resulting in quality of life and disfigurement outcomes? Most earlier work developed on utility measures were used for chronic conditions where the potential risk was related to death. Consistent with the theory that health state values are proportional to the direct experience of the subject with the health state,¹⁴ mandibular fracture subjects faced with a hypothetical question similar to their actual experience were willing to pay more for a better health outcome as measured by WTP than their comparison-group counterparts, who were experiencing only removal of third molars. Of great interest, those subjects who chose surgery rather than wiring were willing to accept a much greater risk of possible nerve damage or scar formation than those who chose wiring as measured by the SG. The SG results exhibited a bimodal pattern with people's responses close to one anchor

or the other; in particular, the 6% of subjects preferring wiring appear risk averse, and the 92% choosing surgery are much more risk tolerant even at an almost certain risk of side effects. The question then becomes are there subject characteristics that divide people into those who prefer wiring to those who prefer surgery and are they related to risk tolerance or risk aversion?

While none of the psychosocial or clinical problem measures showed significant associations with baseline treatment preferences, they did show associations with baseline health value utilities. Consistent with the findings of Sherbourne, et al.,³ that different domains of health influence patient preferences, across each group of subjects in our study, the SG was more closely associated with clinical health characteristics while WTP was more closely associated with socio-demographic and psychosocial health characteristics. These findings suggest that SG and WTP capture different domains of health among both third-molar and mandible fracture subjects and that both should be used to fully explain the relationship between different dimensions of health and patient preferences.

Potential limitations of this study include that we had only a moderate sample size for each preference group, so that failure to detect associations between patient characteristics measures of patient utilities may have been due to limited statistical power. More generally, the clinical contexts from which we recruited participants in this research have features that make assessment of preferences challenging. One might question whether individuals seeking treatment for mandibular fracture would exhibit the same preferences while in great pain as they would from a perspective with some distance. An anonymous reviewer also raised questions about whether differences in results across actual treatment groups might be explained in part by subtle distinctions in recruitment and consent procedures which we would acknowledge is possible despite our efforts to standardize the study protocol.

This data provides a platform to move forward in the examination of the impact of subject characteristics on treatment choice and the stability of subject preference for treatment over time. Some studies have found that the value for a particular treatment elicited by means of a hypothetical scenario may remain stable within the same subject over time, but may differ between subject groups depending on whether they are or are not experiencing the particular health state.¹³ The lack of substantive differences between treatment preference groups at baseline limits the likelihood that group differences may confound the relationship between treatment preferences and utility scores. Further study of follow-up data will examine whether this pattern persists during the course of treatment and recovery.

Acknowledgments

The authors acknowledge Daniel Wong and Mirna Abrego for data collection and analyses. This study was supported by NIDR grant # RO1-DE-13839.

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These serious problems happen in a certain percentage of patients. For what percent chance of possible nerve damage or scar formation (between 0% and 100%) would you select Treatment 2 (surgery) instead of Treatment 1 (jaw wiring)?

Suppose

1. 0% means you would never select bone plate surgery instead of jaw wiring.
2. 100% means you would always select bone plate surgery even if you were sure to get scar or nerve damage.
3. A percentage between 0% and 100% means you would select surgery so long as the chance of getting nerve damage or scar formation is not more than that percentage.

For example, 20% means you will select the surgery if 1 out of 5 people will get permanent nerve damage or scar formation; and 80% means you will select the surgery even if 4 out of 5 people will get nerve damage or scar formation.

Now we have a “what if” question.....

Suppose on the day you got your jaw fracture, you also won \$100,000 at the lottery, how much would you be willing to pay to have your fracture fixed with instant return to normal function and with no chance of permanent numbness or a scar?

For example, perhaps having this type of miracle treatment would be very important to you and you would be willing to pay \$40,000 or it isn't that important to you and you would only be willing to pay \$3000.

Figure 1.

Description of Patient Preference Language used for disadvantaged patients.

Table 1
Comparison of baseline patient characteristics by treatment received and fracture treatment preference

	Treatment Received		Fracture Treatment Preference	
	Third Molar (n=105)	Fracture (n=98)	Wiring (n=145)	Surgery (n=58)
<i>Socio-demographic</i>				
	Mean (SD) or %	Mean (SD) or %	Mean (SD) or %	Mean (SD) or %
Age	28.0 (7) *	34.7 (11.5)	30.4 (9.6) *	33.5 (10.7)
Education (0–4)	1.7(0.8) *	1.4 (0.80)	1.6 (0.8)	1.6 (0.8)
Income (0–3)	0.8 (1.2)	0.8 (1.2)	0.8 (1.2)	0.9 (1.3)
Male	49.5% *	87.8%	66.9%	70.7%
African American	49.5% *	66.3%	57.2%	58.6%
Unemployed)	34.3% *	57.1%	46.2%	43.1%
<i>Psychosocial</i>				
PTSD (0–4)	0.1 (0.5) *	1.1 (1.2)	0.5 (1.0)	0.7 (1.3)
Depression (0–20)	1.8 (3.0) *	2.5 (3.8)	1.9 (3.2)	2.8 (3.9)
Substance use (0–4)	0.2 (0.7) *	0.7 (1.1)	0.5 (1.0)	0.5 (0.9)
Hardiness (0–16)	13.5 (2.6)	13.4 (2.9)	13.4 (2.9)	13.6 (2.3)
Social Support (0–16)	15.1 (2.2) *	12.6 (5.1)	13.9 (3.9)	13.9 (4.4)
Social Network	3.8 (3.3) *	2.6 (2.3)	3.3 (3.2)	3.0 (2.0)
<i>Clinical health</i>				
Pain (0–10)	1.2 (2.0) *	6.9 (3.3)	3.8 (3.9)	4.4 (4.0)
Prior dental problems (0–5)	2.3 (1.4) *	0.3 (0.9)	1.4 (1.5)	1.0 (1.5)
Prior dental treatment (0–6)	0.6 (0.7) *	0.4 (0.6)	0.5 (0.6)	0.5 (0.7)
<i>Health value utilities</i>				
Standard Gamble (% risk)	28% (43%)	34% (45%)	6% (20%) *	92% (21%)
Willingness to Pay (0–100K)	\$30.6K (\$28.7K) *	\$37.4K (\$31.2K)	\$31.7K (\$29.2k)	\$39.3K (\$31.7k)

* Significant at p < .05

Table 2
Baseline characteristic differences between four subgroups

	Third-molar/ Wire (n=80)	Third-molar/ Surgery (n=25)	Fracture/ Wire (n=65)	Fracture/ Surgery (n=33)
<i>Health value utilities</i>				
Standard Gamble*	8%	92%	4%	92%
Willingness to Pay	\$28,300	\$37,100	\$35,700	\$42,300

* Group differences based on ANOVA or chi-square significance at $p < .05$

Table 3
Third-molar group, predictors of utility scores

Wire Preference Group (n=80)		Surgery Preference Group (n=25)	
Standard Gamble Models	Willingness to Pay Models	Standard Gamble Models	Willingness to Pay Models
Model 1: Socio-demographic B (p-value)			
<i>Adjusted r²</i>	10.6%	8.40%	30.0%
Age	-0.21 (.597)	-553.47 (.253)	-0.10 (.878)
Education	8.73* (.016)	-259.05 (.951)	-5.28 (.324)
Income	1.45 (.523)	5720.45* (.036)	4.79 (.186)
Male	5.30 (.311)	-522.82 (.933)	-10.55 (.274)
African American	-8.53 (.117)	-413.55 (.949)	14.59 (.176)
Unemployed	3.17 (.605)	-729.20 (.920)	3.11 (.771)
Model 2: Psychosocial B (p-value)			
<i>Adjusted r²</i>	8.70%	25.2%	35.2%?
PTSD	-3.54 (.603)	-1351.02 (.872)	-9.42 (.222)
Depression	1.67 (.1501)	-73.31 (.959)	3.46 (.124)
Substance use	-3.91 (.441)	24824*** (.0002)	2.44 (.773)
Hardiness	0.05 (.959)	338.91 (.791)	1.02 (.711)
Social Support	-1.71 (.436)	-4188.72 (.126)	4.05 (.112)
Social Network	-0.25 (.767)	-617.03 (.553)	-0.09 (.969)
Model 3: Clinical B (p-value)			
<i>Adjusted r²</i>	3.61%	5.13%	54.4%?
Pain	0.61 (.655)	2023.74 (.280)	2.2 (.070)
Prior Problems	-0.19 (.922)	1765.90 (.506)	10.66** (.0036)
Prior Treatment	5.47 (.166)	-6241.53 (.242)	11.1* (.029)

Note: Parameter Estimate (B) is reported for each model

* significant at p < .05

** significant at p < .01

*** significant at p < .001

Table 4
Fracture group preference predictors of utility scores

Wire Preference Group (n=65)		Surgery Preference Group (n=33)	
Standard Gamble Models	Willingness to Pay Models	Standard Gamble Models	Willingness to Pay Models
Model 1: Socio-demographic B (p-value)			
Adjusted r^2	5.6%	7.9%	16.9%
Age	-0.06 (.730)	-102.13 (.784)	-0.13 (.758)
Education	2.73 (.326)	-2129.21 (.704)	6.29 (.333)
Income	-1.32 (.467)	6317.21 (.088)	2.82 (.566)
Male	3.38 (.586)	4887.44 (.697)	12.08 (.303)
African American	-6.06 (.203)	7549.23 (.431)	1.47 (.888)
Unemployed	2.57 (.573)	11717 (.207)	20.09 (.096)
Model 2: Psychosocial B (p-value)			
Adjusted r^2	7.4%	15.6%	29.0%
PTSD	1.44 (.254)	3342.36 (.410)	-3.48 (.437)
Depression	-0.46 (.219)	343.06 (.776)	2.89 (.067)
Substance use	-0.02 (.989)	-103.16 (.981)	3.96 (.269)
Hardiness	-0.42 (.371)	3.04 (.998)	-2.05 (.245)
Social Support	0.08 (.793)	-737 (.462)	0.11 (.914)
Social Network	1.00 (.159)	6209.85** (.008)	-2.78 (.373)
Model 3: Clinical B (p-value)			
Adjusted r^2	24.4%	3.0%	25.9%
Pain	0.43 (.230)	-610.14 (.658)	2.66* (.010)
Prior Problems	-1.74 (.211)	-6249.94 (.241)	0.65 (.849)
Prior Treatment	8.59*** (.0004)	3421.29 (.697)	5.45 (.288)

Note: Parameter Estimate (B) is reported for each model

* significant at $p < .05$

** significant at $p < .01$

*** significant at $p < .001$