Patient Preferences in Office-Based Orthopedic Care: A Prospective Evaluation

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Take-Home Points

- The vast majority of patients desire only 10 to 20 minutes with their doctor and are highly satisfied with the amount of time their surgeon spends with them.
- Patients reported no significant gender- or ethnicity-based preferences for their doctor.
- The majority of patients believe that a wait time exceeding 30 minutes is too long.
- Nearly 42% of respondents felt they would be receiving below average medical care if seen only by a nurse practitioner or physician’s assistant at a postoperative appointment.
- Recommendations from friends is the most common way patients find their physicians.

Patient satisfaction has become an important focus in the rapidly changing healthcare environment due to the significant impact it has on healthcare delivery, healthcare economics, assessment of the quality of care, development of patient-care models, and quality improvement initiatives. Historically, the quality of care was measured by objective metrics such as complication rates, range-of-motion, and the provider’s expert opinion on the outcome. While those metrics are still impactful variables when defining a successful outcome, the medical community is now increasingly recognizing the importance of patients’ perspectives when defining successful treatments. Patient satisfaction is now highly regarded by clinicians and the government when considering outcomes and is even being incorporated into determining the value of care. Under the Affordable Care Act,
patients assumed a more active role in clinical decision-making as well as in creating quality and efficiency initiatives. By 2017, 2% of the United States government’s Medicare payments will be redistributed among hospitals and physicians based on their quality and efficiency metrics, which are largely determined by patients’ evaluations of care. As a result, there has been significant interest in identifying variables influencing patient satisfaction and subjective outcomes.

Patient satisfaction is related to both the outcomes of care and the process of care. As first described by Donabedian, patients may be satisfied with the successful outcome of their care, but dissatisfied with how they received their care. The process of care is complex and considers many aspects of healthcare delivery, including time, cost, healthcare provider interactions, and burdens faced. While patient satisfaction with outcomes and process of care are heavily related, they should be regarded separately. It is essential that providers understand what variables are important to patients with regards to how they experience healthcare and choose their provider, especially surrounding elective procedures such as hip and knee arthroplasty.

Within orthopedic surgery, patient satisfaction scores are beginning to be incorporated as part of the standard-of-care quality metrics obtained along with patient-reported outcome measures (PROMs) at defined time points postoperatively. Furthermore, PROMs and patient satisfaction data are becoming an increasingly important component of medical decision-making. Several authors have reported that increased patient satisfaction is correlated with increased compliance, improved treatment outcomes across numerous medical settings, including orthopedics, decreased risk of litigation, and higher patient ratings of the quality of care. Various factors, including meeting of expectations, staff politeness, the communication skills of the surgeon, and waiting times, have been suggested to influence eventual patient satisfaction within the surgical literature. However, within orthopedic surgery there is a paucity of investigations evaluating how patients determine preferences and satisfaction with the process of care.

The purpose of this study is to determine what preferences, if any, patients have when selecting their physician and how they experience care in an outpatient orthopedic setting. The authors hypothesize that the majority of patients find their physicians through online rating sites or recommendations from family and friends. The authors believe that patients expect to be seen in <30 minutes and will be unsatisfied overall with the amount of time that they spend with their physician.

**Methods**

The senior author (BRL) and a research team created a 15-question survey to evaluate patient preferences regarding the demographic characteristics (eg, age, gender, ethnicity) of their physician, wait times in a waiting room, time spent with the physician, care received from physician extenders (eg, nurse practitioners, physician assistants), and how they learned of their physician. An a priori power analysis was conducted to determine that approximately 200 patients were needed for inclusion. Following Institutional Review Board approval (ORA 15051104), the survey was administered to 212 patients in a single-surgeon, adult reconstruction clinic. The survey was digitally administered on a touch-screen tablet using an electronic independent third party survey center (SurveyMonkey Inc) devoid of any identifying data. The survey was offered to all patients >21 years of age who were English-speaking and in the common area as patients waiting to be seen, from June 2015 to March 2016. A research assistant approached patients in the waiting room and asked if they would like to participate in a short survey regarding what factors influence the patient-physician relationship from the patient’s perspective.
Descriptive statistics were used to analyze subject demographics and survey responses. Chi-square analyses and multinomial logistic regressions were utilized to compare responses. All statistical analyses were conducted using SPSS version 24.0 software (SPSS Inc). Statistical significance was set at $P < 0.05$.

**Results**

Of the 212 patients who were invited to participate, 196 patients (92.4%) agreed and completed the survey. Demographic and surgical history information can be found in Table 1. The majority of patients were female (62%) and above the age of 50 years (92.4%). Almost half (48.5%) of patients had a prior hip or knee replacement.

When asked how long is too long to wait to see the doctor, 30 minutes (39.8%) was most commonly selected, followed by 40 minutes (24.5%) (Figure 1). When asked how much time patients would like the doctor to spend with them during an office visit, the majority (68.9%) selected either 10 to 15 minutes (41.3%) or 15 to 20 minutes (27.6%) (Figure 2). The majority of patients (92.3%) were satisfied with the amount of time the doctor spent with them. In addition, 94.9% of respondents would want their doctor to tell them what they would do if they were in the patient’s shoes when making decisions regarding their medical care (Table 2). Less than half of respondents (41.8%) believe that seeing a physician extender (eg, nurse practitioner or physician assistant) at a postoperative visit would result in a lower quality of care (Table 2).

When asked if patients preferred a doctor of the same race/ethnicity, the vast majority (83.7%) had no preference (Table 2). There was no significant difference found between male and female respondents when asked if they would feel more comfortable with a male as opposed to a female orthopedic surgeon ($P = .118$) and vice versa ($P = .604$) (Table 3). Most patients preferred a physician between the ages of 45 and 55 years (39.3%), followed by 35 and 45 years (23.0%); however, this preference was not statistically significant (Table 4). Older patients were more likely to prefer younger physicians (odds ratio, 4.612 for 25-35 years of age; odds ratio, 1.328 for 35-45 years of age). Only 12.2% of patients reported online research/rating sites as the main resource utilized when selecting their physician (Figure 3). The majority (68.4%) reported that recommendations from either friends (35.2%) or healthcare providers (33.2%) were the main avenues through which they found their physicians.

**Discussion**

The results of this study demonstrate that patients have several expectations and preferences with regards to the care they receive from physicians in the office. Patients prefer to wait <30 minutes before seeing their provider and desire only 10 to 20 minutes with their doctor. Patients do not have specific preferences with regards to the gender or ethnicity of their physician but would prefer a physician in the middle of their career, aged 45 to 55 years. Ultimately, patients do believe that seeing a physician at a postoperative visit is important, as just under half of patients thought that seeing a physician extender alone at a postoperative visit resulted in a lower quality of care.

While these results were obtained in a population specifically seeking the care of an orthopedic adult reconstruction surgeon, the results demonstrate that patients do not necessarily desire an unreasonable amount of time with their doctor. Patients simply want to be seen in a timely fashion and receive the full undivided attention of their doctor for approximately 20 minutes. Similarly, Patterson and colleagues found, in their series of 182 patients who presented to an orthopedic surgeon, that there was a significant correlation between time spent with the surgeon and overall patient satisfaction. Interestingly, the authors reported that patient satisfaction was not correlated with education level, sex, marital status, whether the patients were evaluated by a resident
physician before seeing the attending surgeon, self-reported mental status, tobacco usage, the type of clinic visit, or the waiting time to see the surgeon (average, about 40 minutes for this cohort). Similarly, Teunis and colleagues reported an average 32-minute wait time in 81 patients presenting for care at an orthopedic hand clinic and demonstrated that a longer wait time was associated with decreased patient satisfaction. These results corroborate the findings of this study that a short wait time is important to patients when evaluating the process of care. Additionally, patients do not have unreasonable expectations with regards to the amount of time they would like to spend with the physician. A physician who has a clinic for 9 hours a day would thus be able to see 54 patients and still spend at least 10 minutes with each patient. The quality of the physician-patient interaction is likely more important than the actual amount of time spent; however, based on this study, patients do have certain expectations about how much time physicians should spend with them.

There were no significant sex, age, or ethnicity preferences in our specific patient cohort. However, a sizable percentage of respondents, 41.8%, believed that they were receiving inferior care if they only saw a physician extender at a routine follow-up visit. Many orthopedic surgeons rely on the care provided by physician extenders to enable them to see additional patients. Physician extenders are well trained to provide high-quality care, including at routine postoperative visits. The results of this study, that many patients believe physician extenders provide lower-quality care, may be a result of inadequate patient education regarding the extensive training and education physician extenders undergo. Physician extenders are qualified, licensed healthcare professionals who are playing increasingly important roles within orthopedics and medicine as a whole. As the demand for orthopedic surgeons to see more patients increases, so does the role of physician extenders. Future research is warranted into educating the public regarding the importance of these healthcare providers and the adequacy of their training.

While many practices now routinely obtain patient satisfaction scores, another modality through which patients can express their satisfaction and experiences with healthcare providers is through online internet physician rating sites (IPRS). These sites have exploded in number and popularity in recent years and, according to some studies, have a very real effect on provider selection. Interestingly, a low percentage of patients in this study utilized IPRS reviews to find their doctors. In a recent prospective survey study of 1000 consecutive patients presenting for care at the Mayo Clinic, Burkle and Keegan reported that 27% of patients would choose not to see a physician based on a negative IPRS review. Interestingly, only 1.0% of patients reported finding their doctor through advertising. Numerous authors have recently addressed advertising in orthopedic surgery, specifically direct-to-consumer marking, including how the influence of physician self-promotion on patients. Specifically, Halawi and Barsoum discussed how direct-to-consumer marketing is commonly disseminated to the public through television and print advertisements, which are modalities more commonly utilized by older generations. However, many advertising agencies are moving toward internet-based advertising, especially through orthopedic group and individual surgeon websites for self-promoting advertisement, as approximately 75% of Americans use the internet for health-related information. The fact that many patients in this study did not utilize IPRS reviews or advertising (much of which is electronic) may be a result of the older, less internet-centric demographic that is often seen in an adult reconstruction clinic. Future research is warranted to determine what demographic of patients value IPRS reviews and how those reviews influence physician selection and the patient experience.

There are several limitations to this study. First, the majority of the surveyed population was Caucasian, and our results may not be equally reflective of diverse ethnic backgrounds. Second, the cohort size, while based on previous studies conducted in a similar fashion, may be underpowered to detect significant differences for 1 or more of these questions. In addition, having a question regarding the patient’s medical background or experiences may have provided further insight as to why patients selected the answers that they did. Furthermore, questions
regarding the patient’s education level, religious background, and income brackets may have provided further context in which to evaluate their responses. These questions were omitted in an effort to keep the questionnaire at a length that would maximize enrollment and prevent survey fatigue. Future research is warranted to determine what patient-specific, injury/symptom-specific, and treatment-specific variables influence the subjective patient experience.

**Conclusion**

The vast majority of patients desire only 10 to 20 minutes with their doctor and are highly satisfied with the amount of time their surgeon spends with them. Patients reported no significant gender- or ethnicity-based preferences for their doctor. The majority of patients believe that a wait time exceeding 30 minutes is too long. A greater effort needs to be made to educate patients and the public about the significant and effective roles nurse practitioners and physician assistants can play within the healthcare system. While this cohort did not report notable utilization of IPRS reviews, it remains essential to understand what factors influence patients’ subjective experiences with their providers to ensure that patients achieve their desired outcomes, and report as such on these websites as they continue to gain popularity. Diminishing clinic wait times and understanding patient preferences may lead to a greater percentage of “satisfied” patients. While the majority of focus has been and will likely continue to be on improving patients’ satisfaction with their outcomes, more work needs to be done focusing specifically on the process through which outcomes are achieved.

**Key Info**

**Figures/Tables**

Figures / Tables:

- edmiston1018_f1.jpg
Figure 1. Patient preferences for wait time.
Figure 2. Patient preferences for time spent with the physician.

edmiston1018_f3.jpg
Table 1. Survey Respondent Demographics

<table>
<thead>
<tr>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Range</strong></td>
<td></td>
</tr>
<tr>
<td>30-40 years</td>
<td>4</td>
</tr>
<tr>
<td>40-50 years</td>
<td>11</td>
</tr>
<tr>
<td>50-60 years</td>
<td>47</td>
</tr>
<tr>
<td>60-70 years</td>
<td>84</td>
</tr>
<tr>
<td>70-80 years</td>
<td>41</td>
</tr>
<tr>
<td>&gt;80 years</td>
<td>9</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>74</td>
</tr>
<tr>
<td>Female</td>
<td>122</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>39</td>
</tr>
<tr>
<td>Asian</td>
<td>3</td>
</tr>
<tr>
<td>Caucasian</td>
<td>140</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
<tr>
<td><strong>Prior knee or hip replacement</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>95</td>
</tr>
<tr>
<td>No</td>
<td>55</td>
</tr>
<tr>
<td>No Response</td>
<td>46</td>
</tr>
</tbody>
</table>

Figure 3. How patients find their physician.
Table 2. Responses to Survey Questions

If you were to only see a physician's assistant or nurse practitioner at your follow-up visit and not the doctor, would you feel like you were getting below average care?

<table>
<thead>
<tr>
<th>Answer choices</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>114</td>
<td>58.2%</td>
</tr>
<tr>
<td>Yes</td>
<td>82</td>
<td>41.8%</td>
</tr>
</tbody>
</table>

If you were to need a major surgery would you want the physician to tell you what he or she would do if they were in your shoes?

<table>
<thead>
<tr>
<th>Answer choices</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>10</td>
<td>5.1%</td>
</tr>
<tr>
<td>Yes</td>
<td>186</td>
<td>94.9%</td>
</tr>
</tbody>
</table>

Would you prefer your doctor to be the same race/ethnicity as you?

<table>
<thead>
<tr>
<th>Answer choices</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>29</td>
<td>14.8%</td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
<td>1.5%</td>
</tr>
<tr>
<td>No Preference</td>
<td>164</td>
<td>83.7%</td>
</tr>
</tbody>
</table>

Table 3. Overall Responses to Questions Regarding Male and Female Orthopedic Surgeons

<table>
<thead>
<tr>
<th>Would you feel more comfortable with a male as opposed to a female orthopedic surgeon?</th>
<th>Answer choices</th>
<th>Number</th>
<th>Percent</th>
<th>Female responses</th>
<th>Male responses</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>164</td>
<td>83.7%</td>
<td>106 (86.9%)</td>
<td>58 (78.4%)</td>
<td>0.118</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>32</td>
<td>16.3%</td>
<td>16 (13.1%)</td>
<td>16 (21.6%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Would you feel more comfortable with a female as opposed to a male orthopedic surgeon?</th>
<th>Answer choices</th>
<th>Number</th>
<th>Percent</th>
<th>Female responses</th>
<th>Male responses</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>186</td>
<td>94.9%</td>
<td>115 (94.3%)</td>
<td>71 (95.9%)</td>
<td>0.604</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>10</td>
<td>5.1%</td>
<td>7 (5.7%)</td>
<td>3 (4.1%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

aResponses were broken down by gender and compared utilizing a 2 x 2 chi-square analysis to test for significant differences in respondents’ gender preferences for their orthopedic surgeon.

Table 4. Patient Preferences Regarding Physician Age

<table>
<thead>
<tr>
<th>What age would you like your physician to be?</th>
<th>95% Confidence Interval</th>
<th>Answer Choices</th>
<th>Number or Responses</th>
<th>Percent</th>
<th>P value</th>
<th>Exp(β)</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-35 years</td>
<td></td>
<td>1</td>
<td>0.5%</td>
<td>0.217</td>
<td>0.407</td>
<td>52.283</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35-45 years</td>
<td></td>
<td>45</td>
<td>23.0%</td>
<td>0.161</td>
<td>0.893</td>
<td>1.975</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45-55 years</td>
<td></td>
<td>77</td>
<td>39.3%</td>
<td>0.159</td>
<td>0.909</td>
<td>1.791</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55-65 years</td>
<td></td>
<td>9</td>
<td>4.6%</td>
<td>0.483</td>
<td>0.624</td>
<td>2.717</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥65 years</td>
<td></td>
<td>2</td>
<td>1.0%</td>
<td>0.272</td>
<td>0.138</td>
<td>1.748</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No preference a</td>
<td></td>
<td>62</td>
<td>31.6%</td>
<td>Reference</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

aNo preference was used as the reference category for the answer choices, while the age bracket “>80 years” was used as the reference for the age of respondent variable.
Appendix 1

1. Do you wish to partake in this 3-minute survey?
   1. 
   2. 

1. Have you had a prior knee or hip replacement?
   1. 
   2. 

1. What is your age?
   1. 30-40 years
   2. 40-50 years
   3. 50-60 years
   4. 60-70 years
   5. 70-80 years
   6. 80+ years

1. What is your gender?
   1. 
   2. 

1. Which of the following best represents your racial or ethnic heritage?
   1. African American
   2. 
   3. 
   4. 
   5. 

1. How much time would you like the doctor to spend talking to you on a routine visit?
   1. 0-5 minutes
   2. 5-10 minutes
   3. 10-15 minutes
   4. 15-20 minutes
5. 20-30 minutes
6. >30 minutes

1. How long is too long to wait to see the doctor?
   1. 10 minutes
   2. 20 minutes
   3. 30 minutes
   4. 40 minutes
   5. 50 minutes
   6. An hour or more

1. If you were to only see a physician’s assistant or nurse practitioner at your follow-up visit and not the doctor, would you feel like you were getting below average care?
   1.
   2.

1. Overall I am satisfied with the time the doctor spends with me.
   1.
   2.

1. If you were to need a major surgery, would you want the physician to tell you what he or she would do if they were in your shoes?
   1.
   2.

1. Would you prefer your doctor to be the same race/ethnicity as you?
   1. No
   2.
   3. No Preference

1. Would you feel more comfortable with a male as opposed to a female orthopedic surgeon?
   1.
   2.

1. Would you feel more comfortable with a female as opposed to a male orthopedic surgeon?
   1.
2.

1. What age would you like your physician to be?
   1. 25-35 years old
   2. 35-45 years old
   3. 45-55 years old
   4. 55-65 years old
   5. 65 years and older
   6. No preference

1. How do you usually find your physician?
   1. Friends’ recommendations
   2. Healthcare provider’s recommendations
   3. Insurance plans
   4. Online research/ratings
   5. Other

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## Multimedia

### Product Guide

**Product Guide**

- STRATAFIX™ Symmetric PDS™ Plus Knotless Tissue Control Device
- STRATAFIX™ Spiral Knotless Tissue Control Device
- BioComposite SwiveLock Anchor
- BioComposite SwiveLock C, with White/Black TigerTape™ Loop

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