Quantifying the Importance of Orthopedic Surgeon Attributes by the Public

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INTRODUCTION: With an evolving patient population, new modalities and strategies for finding surgeons are available to our patient population. Few studies evaluate what attributes are currently important to our patients, and what modalities may be most effective.

METHODS:

An online survey was developed and distributed in January 2022 using an online platform. In total, 510 responses were collected. Participant responded to questions regarding their demographics and the relative importance physician characteristics. This included technical competency, prestige, experience, and non-modifiable attributes and were graded on a unipolar Likert scale. Descriptive statistics including mean, standard deviation and percentage were performed.

RESULTS:

Respondents on average were 40.4 years old, Caucasians (83.14%), and with a bachelor's degree (45.49%) or higher and earning between $25,000-74,000 USD (56.07%). Most applicants lived in a suburban location (47.05%) in the southern region of the US (40.78%). Medically, 60.59% of patients were privately insured and averaged 2.91±4.99 PCP visits annually. 32.55% had seen and orthopedist in the past.

When evaluating various surgeon attributes on a unipolar Likert scale (Table 2), surgical skill was quantifiably the most important with 81.96% ranking it as "most important." This was followed by years in practice (Most important: 50.39%), which was ideally reported to be 11.2±6.13 years (Table 3). Medical school was third (Most important: 35.69%), outranking qualities such as bedside manners (Most important: 29.80%), fellowship training location (Most important: 18.43%), and prestige factors such as academic affiliations (Most important: 15.69%). Conversely, the three least important factors were surgeon gender (Least important 60.2%), race (Least important: 65.1%), and religion (Least important: 68.63%).

Foreign medical graduates were generally seen as no different (53.92%) or positively (27.84%) from US trained surgeons (Table 3). While 62.55% respondents reported no preference for surgeon gender, male surgeons were actively preferred by 24.51% - double that of female respondents (12.75%) in the context 54.12% female respondents.

Lastly, respondents were asked regarding the most effective method of marketing. Referral from a physician or therapist was ranked #1 by 72.16%, while family and friend recommendations were #2 with 23.33%. Social media and traditional advertisement were #3 and #4 and collectively made up less than 5% of respondents. 78.63% still utilized the internet to research their surgeon. This survey did not specifically assess different social medial platforms nor prestige or number of followers concerning the surgeon.

DISCUSSION AND CONCLUSION: Skill and experience are the most important attributes in our cohort when choosing an orthopedic surgeon, above academic performance, race, gender or religion. Despite the rise of social media platforms, physician referrals and reputation remain the most important marketing tool to orthopaedic surgeons.

Table 1: Demographics

	Respondents n=510
Age	40.44±11.83
Gender	
Female	276 (54.12%)
Male	231 (45.29%)
Prefer not to say	3 (0.59%)
Race	
American Indian or Alaskan Native	2 (0.39%)
Asian	36 (7.06%)
Black or African American	40 (7.84%)
Native Hawaiian or Pacific Islander	1 (0.20%)
White or Caucasian	424 (83.14%)
Other	7 (1.37%)
Ethnicity	
Hispanic or Latino	38 (92.55%)
Not Hispanic or Latino	472 (7.45%)
Primary Language	
English	503 (98.93%)
Spanish	3 (0.59%)
Other	4 (0.78%)
Education	
Grade 1 through 11	0
High school, GED or equivalent	49 (9.61%)
Some college	81 (15.88%)
Associate's/Vocational degree	55 (10.78%)
Bachelor's degree	232 (45.49%)
Master's degree	71 (13.92%)
Doctorate's degree	18 (3.53%)
Annual Income	
$0-24,999	71 (13.92%)
$25,000-49,999	141 (27.65%)
$50,000-74,999	145 (28.43%)
$75,000-99,999	86 (16.86%)
$150,000-199,999	17 (3.33%)
$100,000-149,000	44 (8.63%)
$200,000+	6 (1.18%)
Region	
Midwest	125 (24.51%)
Northeast	121 (23.73%)
South	208 (40.78%)
West	54 (10.59%)
Regional Population Density	
Large city	91 (17.84%)
Small city	95 (18.63%)
High density suburb	120 (23.53%)
Low density suburb	120 (23.53%)
Rural	84 (16.47%)
Regional Hospital Density (1 hour from home)	6.74±6.61
Insurance	
Private	309 (60.59%)
Medicare	55 (10.78%)
Medicaid	56 (10.98%)
Marketplace (ACA)	35 (6.86%)
Tricare	8 (1.57%)
Other	6 (1.18%)
Uninsured	41 (8.04%)
Doctor visit per year	2.91±4.99
Prescription medications/day	1.33±2.85
Previously visited orthopaedist	166 (32.55%)

Table 2: Importance of Surgeon Characteristics

	Most important	Very important	Somewhat important	Low importance	Does not matter
Surgical Skill	418 (81.96%)	69 (13.53%)	18 (3.53%)	2 (0.39%)	3 (0.59%)
Years in Practice	257 (50.39%)	200 (39.22%)	41 (8.04%)	9 (1.76%)	3 (0.59%)
Medical School	182 (35.69%)	160 (31.37%)	110 (21.57%)	45 (8.82%)	13 (2.55%)
Bedside Manners	152 (29.80%)	183 (35.88%)	112 (21.96%)	43 (8.43%)	20 (3.92%)
Online reviews	96 (18.82%)	171 (33.53%)	163 (31.96%)	57 (11.17%)	23 (4.51%)
College	95 (18.63%)	157 (30.78%)	146 (28.63%)	80 (15.69%)	32 (6.27%)
Fellowship	94 (18.43%)	166 (32.55%)	139 (27.25%)	72 (18.43%)	39 (7.65%)
Reputation (friends, family, community)	90 (17.65%)	161 (31.57%)	130 (25.49%)	64 (12.55%)	65 (12.75%)
Academic Affiliations	80 (15.69%)	188 (36.86%)	164 (32.16%)	55 (10.78%)	23 (4.51%)
Surgeon distance from home	54 (10.59%)	146 (28.63%)	171 (33.53%)	87 (17.06%)	52 (10.2%)
Sports Team Affiliations	42 (8.24%)	93 (18.24%)	138 (27.06%)	105 (20.59%)	132 (25.88%)
Recognition/Awards	36 (7.06%)	99 (19.41%)	200 (39.22%)	123 (24.12%)	52 (10.2%)
Surgeon Age	29 (5.69%)	97 (19.02%)	201 (39.41%)	125 (24.51%)	58 (11.37%)
Number of Publications	31 (6.08%)	65 (12.75%)	136 (26.67%)	197 (38.63%)	81 (15.89%)
Community Service	14 (2.75%)	31 (6.08%)	72 (14.12%)	152 (29.8%)	241 (47.25%)
Surgeon Gender	11 (2.16%)	32 (6.27%)	47 (9.22%)	113 (22.16%)	307 (60.2%)
Surgeon Race	15 (2.94%)	17 (3.33%)	42 (8.24%)	104 (20.39%)	332 (65.1%)
Surgeon Religion	9 (1.76%)	26 (5.09%)	28 (5.49%)	97 (19.02%)	350 (68.63%)

Table 3: Importance of Surgeon Characteristics (Cont.)

	Respondents n=510
Foreign Medical Graduate	
Very positively	66 (12.94%)
Somewhat positively	76 (14.90%)
No difference	275 (53.92%)
Somewhat negatively	80 (15.69%)
Very negatively	13 (2.55%)
Surgeon Gender Preference	
Female	65 (12.75%)
Male	125 (24.51%)
Non-binary/third gender	1 (0.2%)
No preference	319 (62.55%)
Surgeon Race	
American Indian or Alaskan Native	0
Asian	19 (3.73%)
Black or African American	16 (3.14%)
Native Hawaiian or Pacific Islander	1 (0.2%)
White or Caucasian	122 (23.92%)
No preference	353 (69.02%)
Ideal surgeon work experience	11.2±6.13
Distance to ideal surgeon (minutes)	94.21±246.95
Most effective marketing for choosing a surgeon	
Referral from physician or PT	368 (72.16%)
Family/friend recommendations	119 (23.33%)
Social Media	13 (2.55%)
Traditional Advertisement (TV, radio, mail, etc.)	10 (1.96%)
Utilization of Internet to research your surgeon	401 (78.63%)