

Research Articles

What Makes Patients Stick with an Orthopedic Surgeon?

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Keywords: loyalty, patients, physician, orthopedic

<https://doi.org/10.58616/001c.85076>

SurgiColl

Vol. 1, Issue 3, 2023

Objectives

Patient loyalty is a determinant of continued care, adherence to the provider's recommendations, and patient compliance which affects the overall health care. This study aimed to assess the determinants of patient loyalty to an orthopedic surgeon.

Methods

This cross-sectional study was performed on 190 patients in an academic orthopedic clinic. The checklist included 14 items grouped into three categories scoring from 1 (unimportant) to 5 (very important), including cheerful face, tone of speech, follow-up, truthfulness, empathy, gender, age, attire, attentive posture, skill and expertise, number of publications, academic activity, the title of certification (MD, Ph.D), and position (e.g., chief of service, dean of the department). Each item was scored separately for "staying with a physician" and "recommending to others." Other variables collected were age, education, condition, and type of visits (new patient, follow-up, and postop).

Results

Providers' physical characteristics (gender, age, attire, and attentive posture) and academic achievements (position, publication, and degree) scored low to moderate, between 2 and 3 out of 5. The 'skill and expertise' item scored the highest, followed by all behavioral aspects, including cheerful face, tone of speech, follow-up, truthfulness, and empathy. There was no significant difference between "staying with the same physician" and "recommending to others." The item scores showed no significant difference between males and females, occupation, education, and the type of visit.

Conclusion

Providers' attitudes and expertise are the most important determinants correlated with patient loyalty indicating the critical role of the provider's behavior in patient adherence and being recommended to friends and family. Of note, the physical characteristics of the provider showed little role in sticking with the same provider for continued care. Although skill and expertise might correlate with scheduling the first visit, still attitude and behavioral factors may be correlated with sticking with the same provider for continued care.

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INTRODUCTION

Today, healthcare providers must ensure that their patients are satisfied with the quality of medical services they receive, as this plays a vital role in customer retention, loyalty, and repeated referral to the same provider.¹ Loyalty results in receiving continued care and preventive services, which benefits patients by promoting health.² Patient loyalty is establishing an emotional relationship between a provider and patients. This means that the patient prefers the medical services of a specific facility and provider even though the cost is higher.³ Loyal patients will likely return to the same providers, distribute the positive word of mouth, and finally recommend the physician to friends and acquaintances.⁴ Many factors are influential in the loyalty of patients to the doctor, such as reliability quality,⁵ doctors' interaction behavior,⁶ service quality,⁷ empathy,⁸ nursing care⁹ and patient satisfaction.¹⁰ Medical personnel's behavior, physicians' emotional behavior, and nurses' behavior are correlated with patient loyalty.¹¹

Delcourt et al. concluded that the emotional skill of medical staff in a clinic affects creating understanding between customers and medical staff, and this understanding creates customer satisfaction and loyalty.¹² The key factor in increasing the market share and creating a sustainable competitive advantage is paying attention to loyalty.³ The quality of the relationship between the patient and the physician is one of the dimensions of service quality, which is a strong predictor of the behavior of patients' loyalty. The physician's behavior should encourage the patient to continue medical care.¹³ Due to the importance of loyalty in the quality of care, patient adherence and use of medical services, we aimed to assess factors correlated with patient loyalty to an orthopedic surgeon. We secondarily aimed to assess factors associated with patients referring the provider to friends and family.

METHODS

DESIGN AND SETTINGS

This cross-sectional study was performed on 190 patients presented to an academic orthopedic clinic. The ethics committee of the Mashhad University of Medical Sciences approved the study (IRB no. 13960400, Study no. 951516). We included patients over 18 years of age regardless of the type of visit (new patient, follow-up, and postop). Exclusion criteria were dementia and cognitive impairment, preventing the completion of checklist.

We prepared a checklist after reviewing the literature and the previous studies. After extracting the possible related factors, the checklist was reviewed by two orthopedic surgeons. It was reconciled into three main categories with 14 items, including the provider's physical characteristics (gender, age, attire, attentive posture), provider's academic achievements (skill and expertise, number of publications, academic activity, the title of certification (MD, Ph.D), and position (e.g., chief of service, dean of the department), and provider's behavioral aspects (cheerful face, tone of

speech, follow-up, truthfulness, empathy). We found these items compelling in sticking with a provider based on the literature. Patients were asked to fill out the checklist in the waiting room before seeing the provider. Items scored on a Likert scale from 1 (unimportant) to 5 (very important). Moreover, each item was scored once about "staying with a physician" and again about "recommending to others (friends and acquaintances)." The majority of the office visits are new patient referrals and follow-ups. New patient referrals are mainly influenced by "recommending to others" and adherence to the follow-up visits is affected by "staying with the physician." Other variables collected in this study were age, education, condition (lower extremity, upper extremity, spine), occupation, and type of patient visit (new patient and follow-up). Jobs other than a desk job were considered a physically active job.

Patients were enrolled sequentially if they met the inclusion/exclusion criteria. We did not keep track of the number of patients refused to respond. However, in our experience, patients were eager to cooperate and non-response rate was negligible.

A researcher provided the checklist to the patients prior to seeing the physician and the completed checklists were collected while the patient was in the waiting area. The physician was not involved in completing the checklist at all. Checklists were completed before seeing the provider and while the patient was waiting in the waiting area.

STATISTICAL ANALYSIS

Categorical variables were presented as frequency and percentage. The scores for each item in the questionnaire were presented as mean \pm standard deviations. Categorical variables were compared between the groups using an Independent t-test for gender and Analysis of Variance (ANOVA) for the type of visit, education, condition, and occupation. The Kolmogorov-Simonov test was used to check normality and the data was distributed normally. A p-value less than 0.05 was considered significant.

RESULTS

The mean age of the patients was 39 \pm 16 years (range: 16-87), including 114 females (60%) and 76 males (40%). Most of the patients had a physically active job (n=118, 62.1%), undergraduate education (n=92, 48.4%), upper extremity conditions (n=93, 49%), and presented for a new patient visit (n=117, 61.6%). [Table 1]

Providers' physical characteristics (gender, age, attire, and attentive posture) and academic achievements (position, publication, and degree) scored low to moderate, between 2 and 3 out of 5. The 'skill and expertise' item scored the highest, followed by all behavioral aspects, including cheerful face, tone of speech, follow-up, truthfulness, and empathy. There was no significant difference between "staying with the same physician" and "recommending to others." [Table 2]

Table 1. Frequency of occupation, education, visit, and condition

Variable		Frequency	Percent
Occupation	Physically active	118	62
	Non physically active	57	30
	Not working	15	8.0
Education	Illiterate/school	41	22
	Undergraduate	92	48
	Graduate	55	29
	Post-graduate	2	1.0
Visit	New patient	117	61
	Follow up	47	25
	Postop	26	14
Condition	Upper Extremity	93	48
	Lower Extremity	75	40
	Spine	22	12

The item scores showed no significant difference between males and females, occupation, education, and the type of visit [Table 3].

DISCUSSION

We were curious about the effect of physicians' behavior on their relationship with the patients to increase patient loyalty for further care services. Many factors are shown to improve patient loyalty.

In our study, providers' physical characteristics including gender, age, attire, and attentive posture, and academic achievements including position, publication, and degree scored low to moderate, between 2 and 3 out of 5. As results revealed, the "skill and expertise" item had the highest score, followed by all behavioral aspects, including cheerful face, tone of speech, follow-up, truthfulness, and empathy, but there was no significant difference between "staying with the same physician" and "recommending to others" as well between two gender groups, occupation, educational level and the type of visit.

Li et al. and Shafiq et al. highlighted that service quality is crucial in enhancing patient loyalty.¹⁴ Indeed service quality can mediate the relationship between patient loyalty and physician.¹⁰ The quality of care services not only increases patient loyalty but also patient satisfaction and medication adherence, so the improvement of the patients can be affected.⁵ According to the report by Bentum-Micah et al., some non-specialized factors, such as assurance and empathy, can affect patient loyalty.⁸

"Skill and expertise" is a highly scored determinant. Appropriate behavior builds physician-patient trust, which has been shown to improve patient adherence and compliance.¹⁵ Although expertise is of important to choose a provider, it cannot stand alone to adhere patients to the same physician or even recommended to others. "Communication management" includes continued appropriate behavior throughout care and after-care.

Elwyn et al. described "shared decision-making" as a model for clinical practice which requires a good clinical relationship with the patient. Through this process, patients are engaged and supported to express their preferences and expectations during the decision-making process. "Shared decision-making" has three stages: 1) introducing the options, 2) describing the options, including risks, benefits, and expected prognosis 3) helping patients to discover preferences and make decisions through awareness and respect for "what is most important to the patient".¹⁶

Communication might be affected by a busy office and upset patients due to a long wait time. Almomani and Al-sarheed showed that enhanced outpatient clinic management software can reduce patients' waiting time and increase patients' satisfaction.¹⁷ Starr showed that enhanced digital image management software can improve patient care in the dermatologic surgery field.¹⁸ La Padula et al. developed simulation software to assess patient satisfaction following breast augmentation using augmented reality.¹⁹

Zhou et al., in a systematic review of patient loyalty, revealed eight determinants, including trust, satisfaction, quality, commitment, value, hospital brand image, organizational citizenship behavior, and customer complaints.³ Health service providers focusing on patient loyalty achieve more economic or noneconomic benefits.²⁰ Eleuch showed that patient loyalty depends on the technical quality standards and the behavior of the hospital staff and care service providers.²¹ The quality of service results in patient satisfaction affecting patient loyalty.²²

One of the main factors for the quality of service is skill and expertise, which in our study had the highest score in patient loyalty. Gender, age, attire, attentive posture, and position items scored between 2 and 3, showing a low value for patient loyalty. In contrast, cheerful face, tone of speech, follow-up, truthfulness, empathy, skill and expertise, and title scored between 4 and 5, showing the importance of patient loyalty. Our study showed no significant difference in scores between male and female patients,

Table 2. Mean score of loyalty checklist items

Variable		Mean	SD	P value
Cheerful face	Staying with a physician	4.7	0.6	0.006
	Recommending to others	4.5	0.8	
Tone of speech	Staying with a physician	4.7	0.6	0.168
	Recommending to others	4.6	0.8	
Follow-up	Staying with a physician	4.7	0.6	0.135
	Recommending to others	4.6	0.7	
Truthfulness	Staying with a physician	4.7	0.5	0.144
	Recommending to others	4.6	0.8	
Empathy	Staying with a physician	4.3	0.9	0.306
	Recommending to others	4.2	1.0	
Gender	Staying with a physician	2.5	1.6	0.223
	Recommending to others	2.3	1.6	
Age	Staying with a physician	2.6	1.5	0.194
	Recommending to others	2.4	1.5	
Attire	Staying with a physician	3.2	1.5	0.060
	Recommending to others	2.9	1.6	
Attentive posture	Staying with a physician	2.3	1.4	1
	Recommending to others	2.3	1.5	
Skill and expertise	Staying with a physician	4.9	0.5	1
	Recommending to others	4.9	0.5	
Number of publications	Staying with a physician	3.8	1.3	0.149
	Recommending to others	3.6	1.4	
Academic activity	Staying with a physician	4.0	1.3	0.031
	Recommending to others	3.7	1.4	
Title of certification	Staying with a physician	4.5	0.9	-
	Recommending to others	4.5	0.9	
Position	Staying with a physician	2.6	1.5	0.052
	Recommending to others	2.3	1.5	

among visit types, and occupations. There are some technique tactics to earn patients' loyalty, like asking about patients' experience after receiving medical services, focusing on team care, and being responsible for any side effects.²³ Enhancing a good experience has a strong correlation with a willingness to return to the same facility to receive the same or other services.²⁴ Wu et al. highlighted the effect of emotional interaction, perceived expertise, social norm, personalization, and perceived security on patient loyalty.²⁵ In addition, Yu et al. stated that psychological contracts between patient and physician must be reinforced.²⁶ Chen et al. emphasized nursing care as a leading factor in patient loyalty. They showed that patient experience with nursing care is a crucial direct and positive factor in patient loyalty.⁹

There are some limitations in our study such as the design of our research in which interventional studies can rigorously show the effect of specific interventions such as being nervous or cheerful in front of the patients (if appropriate ethically), and sample size in which larger studies

have more power in generalization of the findings. In addition, we used a checklist, which was not validated and can be influenced by the culture of the working place and does not reflect all regions.

CONCLUSION

According to our study, factors correlating with patient loyalty were cheerful face, tone of speech, follow-up, truthfulness, empathy, skill and expertise, indicating the critical role of the provider's attitude in keeping the patient and being recommended to friends and family. Of note, the physical characteristics of the provider showed little correlation in sticking with the same provider for continued care. Although skill and expertise might be correlated with scheduling the first visit, still attitude and behavioral factors may be correlated with sticking with the same provider for continued care.

Table 3. Comparison of mean score of loyalty checklist items by gender, visit, job types and education

Variable		Comparison	P value	Comparison	P value	Comparison	P value	Comparison	P value
Cheerful face	Staying with a physician	By sex	0.502	By visit type	0.590	By job type	0.686	By education	0.686
	Recommending to others	By sex	0.638	By visit type	0.242	By job type	0.332	By education	0.271
Tone of speech	Staying with a physician	By sex	0.444	By visit type	0.934	By job type	0.626	By education	0.536
	Recommending to others	By sex	0.511	By visit type	0.657	By job type	0.397	By education	0.376
Follow-up	Staying with a physician	By sex	0.861	By visit type	0.186	By job type	0.010	By education	0.106
	Recommending to others	By sex	0.242	By visit type	0.780	By job type	0.129	By education	0.101
Truthfulness	Staying with a physician	By sex	0.966	By visit type	0.601	By job type	0.294	By education	0.142
	Recommending to others	By sex	0.527	By visit type	0.680	By job type	0.668	By education	0.662
Empathy	Staying with a physician	By sex	0.149	By visit type	0.091	By job type	0.546	By education	0.504
	Recommending to others	By sex	0.207	By visit type	0.853	By job type	0.654	By education	0.730
Gender	Staying with a physician	By sex	0.143	By visit type	0.473	By job type	0.155	By education	0.182
	Recommending to others	By sex	0.550	By visit type	0.728	By job type	0.820	By education	0.858
Age	Staying with a physician	By sex	0.754	By visit type	0.770	By job type	0.373	By education	0.348
	Recommending to others	By sex	0.658	By visit type	0.675	By job type	0.875	By education	0.870
Attire	Staying with a physician	By sex	0.683	By visit type	0.549	By job type	0.522	By education	0.426
	Recommending to others	By sex	0.981	By visit type	0.337	By job type	0.838	By education	0.822
Attentive posture	Staying with a physician	By sex	0.304	By visit type	0.824	By job type	0.924	By education	0.885
	Recommending to others	By sex	0.326	By visit type	0.566	By job type	0.644	By education	0.722
Skill and expertise	Staying with a physician	By sex	0.575	By visit type	0.267	By job type	0.634	By education	0.553
	Recommending to others	By sex	0.639	By visit type	0.863	By job type	0.212	By education	0.179
Publications	Staying with a physician	By sex	0.984	By visit type	0.506	By job type	0.737	By education	0.873
	Recommending to others	By sex	0.368	By visit type	0.160	By job type	0.654	By education	0.515
Academic activity	Staying with a physician	By sex	0.682	By visit type	0.829	By job type	0.570	By education	0.532
	Recommending to others	By sex	0.416	By visit type	0.955	By job type	0.840	By education	0.821
Title of certification	Staying with a physician	By sex	0.518	By visit type	0.395	By job type	0.845	By education	0.839
	Recommending to others	By sex	0.860	By visit type	0.507	By job type	0.916	By education	0.925
Position	Staying with a physician	By sex	0.180	By visit type	0.044	By job type	0.138	By education	0.135
	Recommending to others	By sex	0.191	By visit type	0.237	By job type	0.539	By education	0.575

DECLARATION OF CONFLICT OF INTEREST

The authors do NOT have any potential conflicts of interest for this manuscript.'

DECLARATION OF FUNDING

The authors received NO financial support for the preparation, research, authorship, and publication of this manuscript.

DECLARATION OF ETHICAL APPROVAL FOR STUDY

The ethics committee of the Mashhad University of Medical Sciences approved the study (IRB no. 13960400, Study no. 951516).

DECLARATION OF INFORMED CONSENT

Written informed consent was obtained from the patients.

ACKNOWLEDGMENTS

Orthopedic Research Center at Mashhad University of Medical Sciences

Submitted: June 09, 2023 EDT. Accepted: September 10, 2023 EDT. Published: September 22, 2023 EDT.



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