Predictors of high quality care: Medical practice factors influencing patient satisfaction and re-treatment intentions after ambulatory surgery

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Abstract

The aim of this study was to identify predictors of high quality care in the context of ambulatory surgery. Using a comprehensive medical practice patient evaluations matched data set (*N* = 35515) we analyzed antecedents of patient satisfaction and re-treatment intentions. Results indicate that medical practice characteristics (e.g., practice size, presence of a professional anesthetist, time of patient education) play an important role for both outcome variables when controlling for patients' health conditions, type of anesthesia, and patients' sociodemographic characteristics. Implications for effective medical practice management are derived.

Introduction

Patient satisfaction is a major indicator of high quality care and has recently received increased interest in the context of ambulatory surgery (e.g., Burney & Jones, 2002; Capuzzo & Alvisi, 2008; Chanthong, Abrishami, Wong, Herrera, & Chong, 2009; Lemos et al. 2009). We contribute to the existing literature by analyzing the effects of medical practice characteristics on patient satisfaction and re-treatment intentions while controlling for type of anesthesia and patient condition. The goal of the present study was to identify important predictors of patient satisfaction and re-treatment intentions after ambulatory surgery using data from a large-scale survey of *N* = 35515 patients.

Method

Participants

We used a medical practice patient evaluations matched data set (*N* = 35515) of ambulatory operations. Data were collected by a German health care quality institute (medicaltex GmbH) during the years 2006 - 2008. Patients' mean age was *M* = 42.55 (*SD* = 14.54) years, 66% were female. Most patients had a statutory health insurance (87%), 12% had a private health insurance, and 1% were self-pay patients.

Measures

Patient satisfaction was measured using a 5-point Likert-type scale ranging from "very bad" to "very good". *Re-treatment intentions* were assessed by a dichotomous item asking patients whether they would again undergo ambulatory surgery (yes/no).

Patient condition (health condition before surgery and disease impairment) were measured by subjective patient ratings given on a 5-point Likert-type scale ranging from "very bad"/"not at all" to "very good"/"very strongly". Patients were also asked to indicate the number of days they would be unable to work (work incapacity).

Results

Descriptive statistics of all assessed variables are given in Table 1. As can be seen overall patient satisfaction was very high (*M* = 3.48 on a scale from 0 to 4) as were re-treatment intentions (98%). In order to identify the most important antecedents of patient satisfaction and re-treatment intentions we conducted an OLS and a probit regression, respectively (see Table 2). Regarding medical practice characteristics, patient satisfaction was significantly predicted by education on the day of operation, the presence of an anesthetist, and the size of the medical practice (proxy: number of questionnaires), whereas for re-treatment intentions only one medical practice characteristic (anesthetist) emerged as a significant predictor. Several types of anesthesia were negatively related to both patient satisfaction and re-treatment intentions. Patients' health condition was the main predictor within patient condition for both outcomes.

Conclusion

Different medical practice characteristics influence patient satisfaction and re-treatment intentions. In particular, patient education on the day of operation and medical practice size influence patient satisfaction but not re-treatment intentions. Results also indicate that both outcome variables are differentially influenced by different types of anesthesia. Interestingly, whether a doctor or a non-doctor assistant is present during surgery has no significant effect neither on patient satisfaction nor re-treatment intentions.

References

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Table 1: Descriptive statistics (*N* = 35515)

Variable	Mean	SD	Median	Min.	Max.
Patient evaluations					
Patient satisfaction	3.48	0.48	3.55	0.30	4.00
Re-treatment intentions	0.98			0	1
Medical practice characteristics					
Education on the day of operation	0.76			0	1
Anesthetist	0.94			0	1
Doctor assistant	0.02			0	1
Non-doctor assistant	0.88			0	1
Number of questionnaires (in 1000)	5.55	5.91	3.57	0.01	17.84
Type of anesthesia					
Intubation anesthesia	0.15			0	1
Mask anesthesia	0.10			0	1
Laryngeal mask airway	0.63			0	1
Intravenous block	0.02			0	1
Spinal anesthesia	0.00			0	1
Regional anesthesia	0.04			0	1
Local anesthesia	0.06			0	1
Nerve blockage	0.01			0	1
Patient condition					
Health condition before operation	3.10	0.65	3	0	4
Disease impairment	2.22	1.12	2	0	4
Work incapacity (days)	10.44	10.43	8	0	99
Sociodemographic characteristics					
Private health insurance	0.12			0	1
Self-pay patient	0.01			0	1
Male	0.34			0	1
Age	42.55	14.54	43	0	103
Single	0.18			0	1
Self-employed	0.08			0	1
Civil servant	0.05			0	1
Retiree	0.06			0	1
Homemaker	0.08			0	1
Vocational training	0.05			0	1
Unemployed	0.04			0	1

Table 2: Regression analyses (*N* = 35515)

Model	M1	M2
Dependent Variable	Patient satisfaction	Re-treatment intentions
Method	OLS	Probit
Medical practice characteristics		
Education on the day of operation	0.021*	0.014
Anesthetist	0.044*	0.354*
Doctor assistant	-0.015	-0.070
Non-doctor assistant	0.000	0.068
Number of questionnaires (in 1000)	-0.008*	0.007
Type of anesthesia		
Intubation anesthesia	-0.009	-0.398*
Mask anesthesia	-0.021	-0.255*
Laryngeal mask airway	-0.038*	-0.359*
Intravenous block	0.005	0.331
Spinal anesthesia	0.016	-0.671*
Regional anesthesia	-0.018	0.113
Local anesthesia	0.030	-0.086
Nerve blockage	-0.053*	0.289
Patient condition		
Health condition before operation	0.096*	0.089*
Disease impairment	0.009*	0.081*
Work incapacity	-0.001*	-0.013*
Sociodemographic characteristics		
Private health insurance	-0.012	0.052
Self-pay patient	-0.122*	-0.188
Male	0.000	0.169*
Age	0.003*	0.005*
Single	0.007	0.140*
Self-employed	0.012	-0.084
Civil servant	-0.036*	0.097
Retiree	-0.002	-0.198*
Homemaker	0.002	-0.181*
Vocational training	-0.027*	-0.133
Unemployed	0.040*	-0.053
Constant	3.065*	1.277*
Model characteristics		
N	35515	35515
R^2	0.037	
Adj. R^2	0.036	0.045

* $p < .05$