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Original Article

Analysis of the relationships among perceived service encounter quality, service value, satisfaction and behavioral intention for physical therapy patients

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Abstract. [Purpose] The purpose of this study was to investigate the relationships among perceived service encounter quality, service value, patient satisfaction, and behavioral intention in physical therapy patients. [Subjects and Methods] This study surveyed 335 patients who received physical therapy treatment at five medical institutions in Jeonju-si, Republic of Korea. This study conducted path analysis on the collected data using Smart PLS 2.0 M3. [Results] The analysis of this study showed that service encounter quality had significantly positive relationship with service value, patient satisfaction, and behavioral intention. Service value had significantly positive relationship with patient satisfaction and behavioral intention. Patient satisfaction had significantly positive relationship with behavioral intention. [Conclusion] Improving the perceived quality of service encounters for physical therapy patients increases service value and patient satisfaction, and positively influences behavioral intention.

Key words: Physical therapy patients, Service encounter quality, Service performance

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INTRODUCTION

In modern societies, the need for physiotherapy has increased with growing elderly, chronically ill, and disabled populations[1)]. Accordingly, the number of physical therapists has increased and the breadth of the practice has grown[2)]. Competition within the physical therapy market has intensified, and medical services are shifting from a provider-centric service to a customer-centric service[3)].

The concept of service marketing in the literature has evolved over time: it was originally focused on service quality, but has expanded to include satisfaction research and, most recently, the study of service value[4)]. Service value can be defined as a consumer's overall assessment of the utility of a product, based on the perceptions of what is received and what is given[5)]. Although what is received and given varies among consumers, service value represents a tradeoff between these two salient factors[5)]. Previous studies on medical services have reported that perceived service value encompasses service quality as well as associated with cost factors[6, 7)], and that this perceived value has meaningful relationships with satisfaction and behavioral intention[3, 4, 8)].

In most types of service, the impression of quality is conveyed during service delivery, usually in an interaction between the customer and service firm personnel[5)]. Service encounters are critical moments in which customers may develop indelible impressions of a firm[9)]. It has been defined as the moment of interaction between a customer and a firm[10)]. Therefore, service encounters have emerged as a critical source of potential competitive advantage in the medical market.

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Table 1. Results of measurement model

	AVE	CR	Cronbach's α	SEQ	SV	PS	BI
SEQ	0.574	0.915	0.893	[0.758]			
SV	0.792	0.919	0.870	0.611	[0.890]		
PS	0.877	0.955	0.930	0.640	0.800	[0.936]	
BI	0.813	0.929	0.885	0.627	0.720	0.825	[0.901]

AVE: average variance extracted; CR: construct reliability; SEQ: service encounter quality; S: service value; PS: patient satisfaction; BI: behavioral intention; [ ]: square root of AVE on each variable

Service encounters cannot be separated from medical services, because medical services are highly dependent on human resources and simultaneously generate both production and consumption[11]. In particular, physiotherapy provides a direct service to patients for a typically longer period of time than other medical services[12]. For this reason, physiotherapy is an area of great importance for service encounters within the field of medical services.

In light of the importance of service encounter quality management for physical therapy patients, the present study analyzes the relationship between perceived service encounter quality, service value, patient satisfaction, and behavioral intention. This study also provides basic data necessary for developing a customer-centric management strategy for enhancing competitiveness.

SUBJECTS AND METHODS

The study participants included 350 physical therapy patients at five medical institutions in Jeonju-si, Republic of Korea. The patients were visited November 2–13, 2015 to distribute and collect questionnaires. Among the completed questionnaires, 15 questionnaires were excluded owing to erroneous or insufficient responses. The remaining 335 questionnaires were included in analysis. All subjects provided written informed consent prior to participation in this study. The experiment was conducted under the approval of the Institutional Review Board of Jeonju University (jjIRB-150915-HR-2015-0907).

The questionnaires included questions related to service encounter quality, service value, patient satisfaction, and behavioral intention. Service encounter quality was measured using the eight-items of Seo and Suh[13]. Service value was measured using the three-items of Choi et al.[8]. This study adjusted these tools in an institution-specific manner based on the definition of service value outlined by Zeithaml et al[5]. Patient satisfaction was also measured using the previously mentioned three-items of Choi et al[8]. Behavioral intention was measured using three-items (reuse, recommendation, and positive word of mouth) based on the system developed by Zeithaml et al[14]. Each factor was measured on a Likert 5-point scale ranging from 1 (disagree) to 5 (strongly agree).

Smart PLS 2.0 M3 software was used to statistically analyze the measurements and structural models based on a regression technique derived from path analysis[15]. It has emerged as a powerful approach for studying causal models involving multiple constructs with multiple indicators[16]. In the present study, this study used a bootstrapping resampling method to test the statistical significance of the relationships. The threshold for statistical significance was set at p=0.05.

RESULTS

The analysis of this study found that all factors had loadings greater than 0.6 (range, 0.612–0.949) and Cronbach' alpha values of above 0.7 (service encounter quality: 0.893, service value: 0.870, patient satisfaction: 0.930, behavioral intention: 0.885). This confirmed the reliability of the indicators used in the study[17]. Construct Reliability (CR) were all greater than 0.7 (service encounter quality, 0.915; service value, 0.919; patient satisfaction, 0.955; behavioral intention, 0.929), and the correlation among the variables was smaller than the square-root of the average variance extracted (AVE). These results confirm the convergent validity and discriminant validity of the measurements used in this study (Table 1)[17].

Path analysis showed that service encounter quality was positively correlated with service value (0.611, t=17.180, p<0.001), patient satisfaction (0.240, t=5.340, p<0.001) and behavioral intention (0.147, t=3.494, p<0.001). Service value was positively correlated with patient satisfaction (0.653, t=14.047, p<0.001) and behavioral intention (0.126, t=2.525, p<0.05). Patient satisfaction was positively correlated with behavioral intention (0.629, t=11.668, p<0.001). The R^2 values for each path were as follows: service value, 0.374; patient satisfaction, 0.676; and behavioral intention, 0.703 (Fig. 1). The calculated global goodness of fit (GoF) was 0.67, which exceeded the reference value of 0.36[18]. Therefore, this study concluded that the research model had a good overall fit.

DISCUSSION

This study analyzed the relationship between perceived service encounter quality, service value, patient satisfaction, and behavioral intention among physical therapy patients. Perceived service encounter quality had a statistically significant

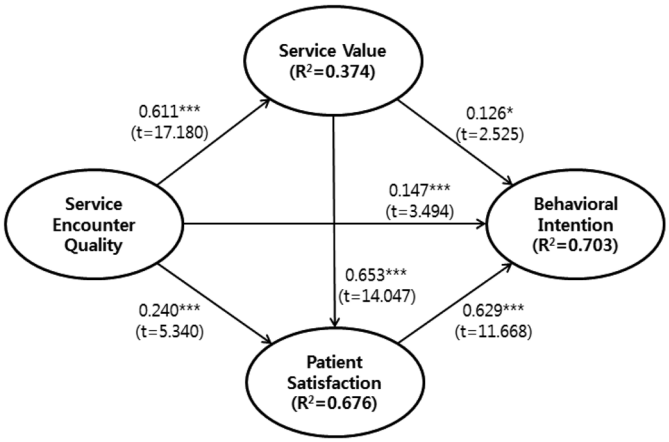

Fig. 1. Result of path analysis
*p<0.05, ***p<0.001
GoF=0.67

positive relationship with service value, patient satisfaction, and behavioral intention. Previous studies have shown that service encounter quality significantly affects service value, satisfaction, and behavioral intention, which is consistent with the results of the present study[10, 19–21]. In particular, this study found that the influence of service encounter quality on service value was t=17.180, which was much greater than its effects on patient satisfaction (t=5.340) and behavioral intention (t=3.494). Therefore, in physical therapy settings, service encounter quality is the most important factor that determines the service value perceived by the patient.

Service value had a statistically significant positive relationship with satisfaction and behavioral intention, which is consistent with the results of previous studies[3–5, 8]. Notably, the effect of service value on patient satisfaction was t=14.047, which was much higher than its effect on behavioral intentions (t=2.525). This shows that patients assess the value of services in terms of service encounter quality as well as the cost of obtaining the service, which proved to be an important factor influencing satisfaction level[5].

Behavioral intention had the strongest positive relationship with patient satisfaction among the factors in the model, which is consistent with the results of previous studies[3, 4, 8]. This indicates that positive results from physiotherapy services make patients more likely to become repeat visitors and share their experience with others.

In conclusion, for physical therapy patients, improving perceived service encounter quality increases service value and patient satisfaction, and has a positive influence on behavioral intention. Therefore, this study suggests that improving service encounter quality is a key step towards developing an active strategy for customer-centric management in physical therapy settings.

The present study had several limitations. First, because the study surveyed patients at five medical facilities within a single city (Jeonju-si, Republic of Korea), the results may not be generalizable to other geographic regions. Second, because the study was based on cross-sectional data, it was not possible to infer causality among variables. Future research should focus on verifying causality through broader longitudinal study designs.

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