

Applying Importance-Performance Analysis for Improving Internal Marketing of Hospital Management in Taiwan

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Abstract

Importance-performance analysis enables management to evaluate and identify the major strengths and weaknesses of a hospital's key success factors. The author attempts to understand employee expectations and perceptions of hospital internal-marketing and shows the usefulness of the Importance-performance analysis grid in evaluating hospital internal-marketing benefits from employee perspectives in Taiwan. The author identified a list of 18 items from the internal-marketing literature reviews, and each item was rated using a 5-point Likert scale. Responses were obtained from 257 usable questionnaires. The importance-performance grid shows that 4 items fall into the "Keep up the good work" quadrant, 5 items fall into the "Concentrate here" quadrant, 4 items fall into the "Low priority" quadrant, and 5 items fall into the "Possible overkill" quadrant. The findings suggest that an internal-marketing orientation is necessary to better match organizational characteristics and enhance service quality. The results are useful in identifying areas for strategic focus to help hospital managers develop internal-marketing strategies.

Keywords: importance-performance analysis, internal marketing, hospital management, Taiwan

1. Introduction

Internal marketing is an important concept that has raised scholarly interest in numerous industries. Crosby and Seven (1987) attributed the source of customer satisfaction to three factors: the interaction between customer and service personnel, the degree to which customer needs were met, and organizational image as a whole. In the service industry, all three factors involve the performance of frontline employees (Jou et al., 2008). Berry (1981) devised the internal-marketing term, focusing primarily on organizational views of the employee role in creating service-quality perceptions. He proposed that organizations should view employees as they would customers. The hospital is the service industry. Employees must be satisfied with their work environment, motivation, and educational training before they can serve patients effectively. In the past few years, concern has been increasing regarding the internal-marketing quality of health care services in Taiwan (Chen & Liu, 2001; Tsai, Wu, & Chang, 2008). Importance-performance analysis (IPA) is a simple yet effective technique that can be applied to study customer satisfaction as a function of both expectations related to importance and performance (Wu & Shieh, 2010). IPA provides management with a useful focus for developing marketing strategies (Martilla & James, 1977), and many researchers have recently used IPA to improve external service quality (Geng & Chu, 2012; Huang et al., 2006; Musa et al., 2010; O'Neill & Palmer, 2004; Smith & Costello, 2009; Tahir et al., 2010; Wu & Shieh, 2009). However, their studies focus on external marketing strategies and service quality, and not on internal-marketing strategies.

The author attempts to understand employee expectations and perceptions of hospital internal-marketing and shows the usefulness of the IPA grid in evaluating hospital internal-marketing benefits from employee perspectives in Taiwan. The author presents the results of a survey-based random sample of 257 employees working at a Taiwan hospital. The remaining part of this paper, a case study, is presented as follows. Sections 2 and 3 introduce previous research and definitions related to IPA and internal marketing. Section 4 presents a description of the instrument, data collection and response rate, and data analysis. Section 5 provides a

presentation and discussion of the results, including the pilot study and IPA, and lastly, Section 6 offers a conclusion based on Section 5.

2. Importance-Performance Analysis

Matrilla and James (1977) first proposed IPA as a useful tool to provide management insights to identify company strengths and weaknesses for improving company performance. IPA is a simple and useful method for simultaneously considering the strengths and weaknesses of a business when evaluating or defining a strategy (Linda & To, 2010). IPA provides management with a useful focus for developing marketing strategies for expectations related to importance and performance (Matrilla & James, 1977). Certain researchers have used IPA to study customer satisfaction to identify improvement opportunities and to guide strategic planning efforts (Wu & Shieh, 2009, 2010; Yavas & Shemwell, 2001). IPA has been used as a tool to evaluate service quality and marketing strategies in educational organizations (O'Neill & Palmer, 2004), in health care systems (Miranda & Chamorro et al., 2010), and in government projects (Wong et al., 2011).

The IPA model is divided into four quadrants, with importance on the y-axis and performance on the x-axis. The four-quadrant IPA matrix is shown in Fig. 1. Quadrant I is labeled "Keep Up the Good Work," with high importance/high performance, which indicates that the firm has been performing well to gain competitive advantage. Quadrant II is labeled "Concentrate Here," with high importance/low performance, indicating that the firm has been performing poorly and requires improvement to be a top priority. Quadrant III is labeled "Low Priority," with low importance/low performance. Any attributes falling into this quadrant are non-important and pose no threat to organizations. Employees do not perceive this feature as important. Quadrant IV is labeled "Possible Overkill," with low importance/high performance, indicating that employees are satisfied with the performance, but the specific attribute is relatively non-important. In this situation, the leader should allocate more resources to manage attributes that reside in Quadrant I (Matrilla & James, 1977; Shieh & Wu, 2009; Wong et al., 2011).

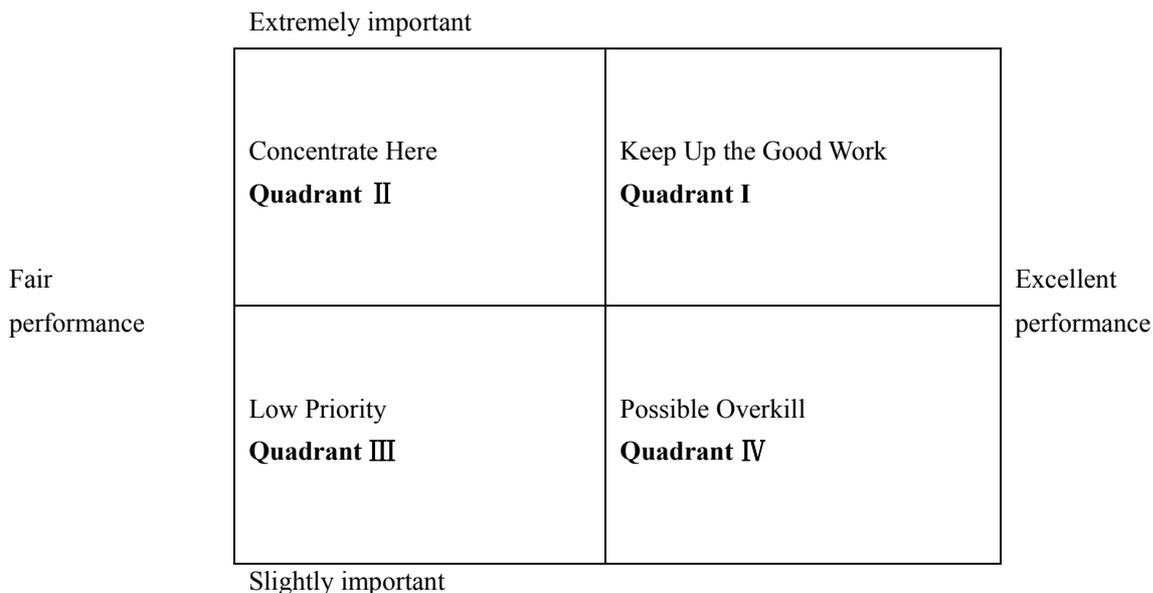


Figure 1. Importance-performance analysis

Source: Matrilla & James (1977).

Although IPA is a traditional tool, it can help evaluate organizational service and provide guidance to formulate strategies, to allocate resources to the right place and the right people. IPA enables management to evaluate and identify the major strengths and weaknesses of key organizational success factors. Therefore, this study used the IPA model to evaluate the importance and performance of hospital internal-marketing in this research.

3. Internal Marketing

The internal marketing concept was first proposed in the mid-1970s to achieve consistent service quality, a major problem in the services area (Ahmed & Rafiq, 2002). The internal-marketing concept emerged from services marketing, which includes interactive marketing, external marketing, and internal marketing. Internal marketing is the relationship between an organization and employees. Ahmed and Rafiq (2003) delineated this concept and

stated that the logic of satisfying internal customer needs places an organization in a better position to deliver the desired quality to satisfy external customers. Internal marketing seeks to enhance customer interaction in all those involved in service encounters (Nikbin et al., 2010). It can play an important role in all organization types as a method of delivering high-organizational service quality.

Internal marketing theories state that the organization emphasizes the importance of employee satisfaction and approaches jobs as internal products, aimed toward developing and motivating best-qualified personnel (Grönroos, 1994; Zampetakis & Moustakis, 2007). The organization can train and motivate its employees to provide enhanced customer service. Ahmed and Rafiq (2002) similarly defined internal marketing as "...a planned effort using a marketing-like approach directed at motivating employees, for implementing and integrating organizational strategies toward customer orientation." Internal marketing emphasizes achieving customer satisfaction through implementing customer-orientated strategies by motivating employees and coordinating cross-functional efforts (Ahmed & Rafiq, 2002). Investing time and effort is important to train and motivate employees to serve customers well.

Numerous internal marketing strategies exist, such as job rotation, reward system, training, and empowerment. Naudé, Desai, and Murphy (2003) used 15 items to measure on a 7-point scale, such as "Our organization offers employees a vision that we can believe in," "This organization prepares employees to perform well" and "Our organization's vision is well communicated to all employees." Numerous conceptual and empirical studies have been developed on internal marketing (Aburoub et al., 2011; Chi et al., 2008; Finney, 2011; Kale, 2007; Mosahab & Mahamad, 2011; Nikbin et al., 2010; Papsolomou & Vrontis, 2006a, 2006b; Schultz, 2004).

Certain scholars have declared that internal marketing affects customer satisfaction through mediation factors such as organizational support, organizational commitment, or work-group socialization (Chang, 2003; Jou et al., 2008; Lings, 2004; Liu, 2002). Jou et al. (2008) used a 24-item scale of six factors to effectively define and measure the internal marketing concept. The final scale consisted of six factors, including empathy and consideration, benchmarking, job quality, upward communication, information sharing, and promotional activities. Gounaris (2008) focused on three specific facets of an internal marketing program: empowerment, participative management, and communication formality. In the banks studied, four major rituals appeared to constitute internal marketing (Papsolomou, 2006):

- 1) Internal customer image;
- 2) Training and education;
- 3) Internal performance standards;
- 4) Reward systems.

For internal marketing to effectively operate as an organizational management and strategy implementation tool, it requires clarification at the definitional level. This study explored numerous studies before proposing internal-marketing strategies. Drawing from these perspectives, the author offers the following expanded definition of internal marketing: "Internal marketing is the process of creating conditions within an organization to ensure that the needs and wants of internal customers are met." Effective internal marketing not only responds to employee needs, but also enables them to perform well in their job. Internal marketing consists of better work support, empowerment, communication, a reward system, educational training, and an environment. The research questionnaire was developed based on an extensive literature review and the author's practical experience.

4. Methodology

4.1 Instrument

The author measures the degree of internal marketing in a hospital by surveying employee perception of organizational internal-marketing behaviors. A research-developed instrument was used to collect information and employee hospital perceptions. The questionnaire, covering most internal-marketing aspects, was developed based on an extensive literature review (e.g., Chang, 2003; Gounaris, 2008; Jou et al., 2008; Ling, 2004; Liu, 2002; Papsolomou, 2006) and the author's practical experience. The instrument comprised two sections. The first section consisted of 18 items that measured employee activities from the internal-marketing literature and the author's practical experience. The second section consisted of six questions to collect respondent demographics: gender, work years, age, occupation, marriage, and education.

A 5-point Likert scale measured the importance and performance attributed to each item in the first section. The "importance" of each attribute was rated using a 5-point Likert scale ranging from 5 (very important) to 1 (very

unimportant). The “performance” of each attribute was rated from 5 (very satisfied) to 1 (very unsatisfied). Respondents to the 18-item survey were asked to rate the degree to which they agreed with each item description, with 1 representing the lowest degree and 5 representing the highest. A total of 110 employees completed the instrument for the pilot study in this hospital, and the result is described in Section 5.1.

4.2 Data Collection and Response Rate

This study focused on employee attitudes toward internal-marketing quality provided by the hospital administrative support. Data were collected at a selected hospital in Yi-Lan City, Taiwan, from March to April of 2011. The author contacted hospital managers, and was granted permission to survey hospital employees over a 2-month period. The author distributed 320 questionnaires at this hospital, and 257 usable questionnaires were returned. The valid return rate was 81%. The percentage of men and women in the sample was 19.07% and 80.93%, in which 33.46% of the total respondents were single. Other demographic information such as gender, work years, age, occupation, and education is shown in Table 1.

Table 1. Demographic information from the survey

Item	Classification	Number of times	Percentage (%)
Gender	Male	49	19.07
	Female	208	80.93
Work-years	3 and below	43	16.73
	3-10	110	42.80
	11-20	65	25.29
	20 and above	39	15.18
Age	20 and below	3	1.17
	21-30	69	26.85
	31-40	111	43.19
	41-50	48	18.68
	51-60	24	9.34
	60 and above	2	0.78
Occupation	Doctor	27	10.51
	Nurse	121	47.08
	Other	109	42.41
Marriage	Married	171	66.54
	Single	86	33.46
Education	Senior high school and below	12	4.67
	Bachelor	222	86.38
	Master	19	7.39
	Doctor	4	1.56

4.3 Data Analysis

The author computed descriptive statistics, including the number of respondents and sample percentage, based on respondents’ demographic profile. The author then applied exploratory factor analysis (EFA) with varimax rotation to examine perceived importance, and calculated Cronbach’s alpha coefficients to check the internal marketing of the factors in the pilot study. Consequently, the author used IPA to compare the importance and performance of hospital internal marketing in this case study.

5. Results and Analysis

5.1 Pilot Study

The pilot study was used to determine whether the instrument was valid and reliable. A total of 110 employees completed the instrument for the pilot study during the spring of 2011. Factor analysis was conducted prior to the final questionnaire and was run to understand the factor structure of the hospital sample in the pilot study. The author applied factor analysis to the “importance” responses of all respondents. The factor analysis structure coincided with the questionnaire structure by the Kaiser-Meyer-Olkin statistic of 0.938 and Bartlett’s test of sphericity with $\chi^2 = 1738.616$ (p value = .000). The results indicated that the sample data were suitable for factor analysis.

The author analyzed the data by principal component analysis (PCA) with varimax rotation, retaining factors

with eigenvalues greater than 1 (Kaiser, 1960). Attributes with rotated factor loadings greater than 0.50 in absolute value were considered significant (Hair et al., 1998) and were retained as constitutive attributes (Linda & To, 2010). The factor analysis results are shown in Table 2.

The author differentiated internal marketing strategies into five categories by factor analysis: (a) work support and environment, such as establishing programs that cater to employees with different needs to enrich organizational soft/hardware equipment (6 items); (b) educational training to encourage employees to participate in activities (3 items); (c) organizational communication such as listening to employee opinions (3 items); (d) employee motivation, such as raising the salary when employees achieve predetermined results (3 items); and (e) employee empowerment, such as employees participating in decision-making processes (3 items). Based on the five categories, eighteen 5-point Likert-type questions were selected. A full list of the 18 refined scale items is shown in Table 2.

Table 2 shows that these five factors explain 81.60% of the total variance. Factor analysis showed each item to have good construct validity. Reliability of the measures was assessed using Cronbach's alpha. The closer Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the scale items. Cronbach's alpha of 0.7 or above is considered adequate (Watson & Thompson, 2006). The alpha coefficients for each of the dimensions under importance and performance are good. Cronbach's alpha coefficients of "importance" ranged from 0.79 to 0.94, and "performance" ranged from 0.77 to 0.93, well above the accepted level of 0.70 (Nunnally, 1978). Factor analysis showed each item to have satisfactory reliability and validity.

Table 2. Pilot study factor analysis of employee perceptions

Item	Factor loadings				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
<i>Work support and environment</i>					
1. Give immediate assistance	.645				
2. Meet employee needs	.784				
3. Work according to rules and processes	.814				
4. Provide good soft hardware equipment	.749				
5. Improve the working environment according to employee demand characteristics	.797				
6. Provide a comfortable work environment	.538				
<i>Organizational communication</i>					
7. Construct good interaction between staffs				.655	
8. Listen and respect employee suggestions				.575	
9. Provide good official channels of appeal				.694	
<i>Educational training</i>					
10. Encourage participation in educational training activities			.774		
11. Conduct educational training activities			.782		
12. Conduct training activities that match employee needs			.737		
<i>Motivation</i>					
13. Offer good salaries		.821			
14. Offer many promotion opportunities		.763			
15. Offer good fringe benefits		.823			
<i>Empowerment</i>					
16. Support patient treatment					.509
17. Decide and participate in different types of educational training activities					.748
18. Discuss organizational development and decisions					.737
Eigenvalue	4.20	3.27	2.73	2.51	1.97
Percentage of variation	23.34	18.17	15.18	13.96	10.95
Percentage of cumulative variance explained	23.34	41.51	56.69	70.65	81.60
Cronbach's Alpha	.944	.847	.891	.917	.788

Note: n = 110.

5.2 Importance-Performance Analysis

The next analysis stage examines the response across the scale items to assess employee perceptions of internal marketing and the relative importance assigned by respondents to each item. Table 3 shows the mean difference between importance and performance for 18 items, which are grouped around the previously identified factor

structure. A paired-sample t test was run to evaluate where mean-importance scores differed significantly from mean-performance scores. All importance scores are shown to significantly differ from performance scores. A further examination showed that the importance means for all items were higher than the performance means. This reflects the existence of an internal-marketing quality gap. Whereas respondents considered each of these items to be of significant importance in their overall evaluation of the internal-marketing experience, the hospital is not performing at a level that reflects the assigned importance.

Translating the findings in terms of quadrants as in Fig. 2, 18 items fell under Quadrants 1-4. In Fig. 2, the x-axis represents their performance perception, and the y-axis represents their importance perception. The crosshairs (vertical and horizontal lines) were located at the grand-mean scores. The mean values for overall importance (4.33) and overall performance (3.13) were used to split the axes, similar to the suggestion by Martilla and James (1977) that cross-hair placement is a relative judgment, rather than an absolute measure. The following paragraphs describe each IPA quadrant in detail.

1) The “Keep up the good work” quadrant. All items that fall into this quadrant are the internal-marketing strength of the hospital. Employees believe this specific attribute to be crucial and are satisfied with performance. This quadrant, comprising 4 items (Items 4, 6, 9, and 16), suggests areas where the hospital is doing well and must continue the good work.

2) The “Concentrate here” quadrant. Items that fall into this quadrant represent key areas that must improve as a top priority. Five items (Items 1, 8, 13, 14, and 15) are located in this zone. All 3 items (Items 13, 14, and 15) belong to the motivation factor that demands immediate action.

3) The “Low priority” quadrant. Any item that falls into this quadrant is non-important and does not pose a hospital threat. Consequently, it is unnecessary for management to focus additional effort here. Four items (Items 2, 5, 17, and 18) are located in this zone.

4) The “Possible overkill” quadrant is overly emphasized by the hospital, which should allocate more resources to manage items that reside in the “Concentrate here” quadrant. This quadrant reflects a misuse of hospital resources. Five items (Items 3, 7, 10, 11, and 12) belong to this quadrant. The five “Educational training” factors are all located in this zone, a low-priority region.

Table 3. Mean difference between each item importance and performance

Items	Importance (A)		Performance (B)		A-B	t-value	Sig. (two-tailed)
	Average	Variance	Average	Variance			
<i>Work support and environment</i>							
1	4.42	0.75	3.00	0.80	1.42	22.69	0.00
2	4.27	0.75	2.91	0.76	1.37	20.58	0.00
3	4.25	0.79	3.18	0.79	1.07	17.40	0.00
4	4.44	0.72	3.33	0.84	1.11	18.10	0.00
5	4.30	0.75	2.95	0.81	1.35	19.67	0.00
6	4.58	0.67	3.38	0.91	1.20	18.47	0.00
<i>Organizational communication</i>							
7	4.32	0.73	3.56	0.81	0.77	14.66	0.00
8	4.34	0.79	2.90	0.83	1.44	19.99	0.00
9	4.39	0.73	3.35	0.90	1.05	16.18	0.00
<i>Educational training</i>							
10	4.16	0.73	3.56	0.80	0.60	10.49	0.00
11	4.25	0.73	3.79	0.85	0.46	8.61	0.00
12	4.09	0.80	3.19	0.83	0.89	14.46	0.00
<i>Motivation</i>							
13	4.58	0.70	2.64	0.98	1.94	24.65	0.00
14	4.51	0.73	2.81	0.91	1.71	23.52	0.00
15	4.48	0.72	2.78	0.91	1.70	23.18	0.00
<i>Empowerment</i>							
16	4.43	0.68	3.26	0.76	1.17	19.42	0.00
17	4.25	0.72	3.09	0.93	1.15	16.19	0.00
18	3.94	0.81	2.69	0.85	1.25	17.31	0.00

Note: n = 257.

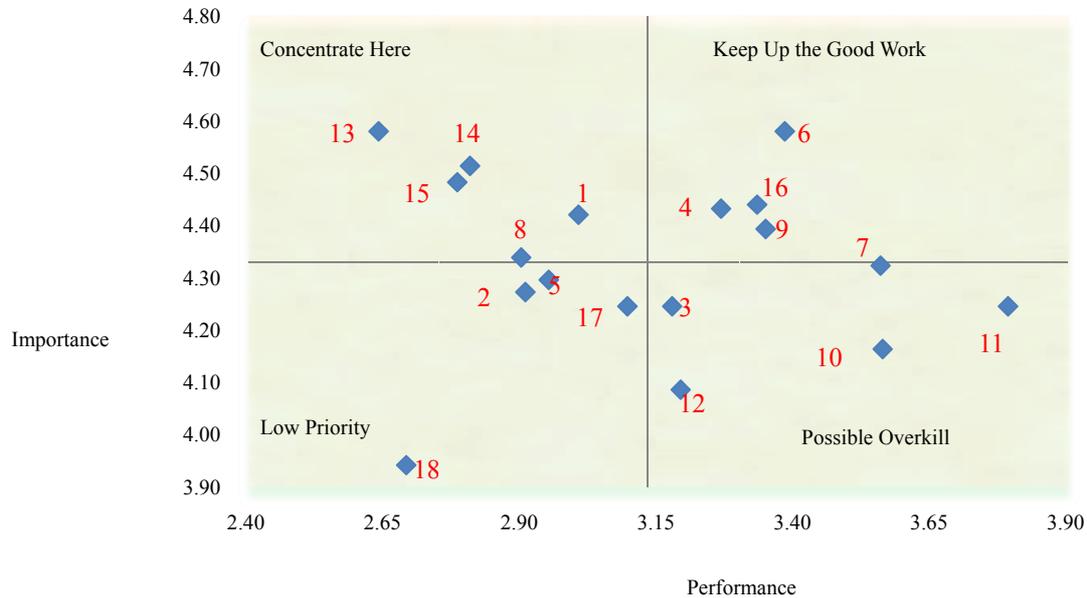


Figure 2. The IPA grid

6. Conclusion

The IPA technique was discussed and applied to measure internal-marketing scores from the hospital-employee perspective to find focus areas for allocating resources. A satisfaction-gap score is an area of potential improvement that requires immediate action. The debate continues as to the best way to evaluate the internal-marketing construct, and IPA identifies the quality of hospital-service performance, and helps target corresponding improvement efforts and specific internal-marketing improvements.

The “Concentrate here” quadrant should direct attention and allocate resources to making improvements in this zone. By improving the employee-importance judgment, hospitals could achieve desired outcomes. Five items fell into this quadrant, including all three motivation strategies: (a) offering employees good salaries; (b) offering many opportunities for a promotion; and (c) offering employees good fringe benefits. Maslow has set up a hierarchy of five levels of basic needs. In the levels of the five basic needs, the person does not feel the second need until the demands of the first have been satisfied (Simons, Irwin, & Drinnien, 1987). In Maslow’s theory of the hierarchy of needs, organizations must meet all employee demands for salaries. Managers should be more concerned with this strategy and motivation to improve actual perceptual-problem areas first.

Five items fell into the “Possible overkill” quadrant. The study results indicate that managers should allocate more resources to manage other items. Three educational training-factor items were all located in the possible overkill zone, including encouraging employees to participate in educational training activities, conducting educational training activities, and conducting training activities that match employee needs. An overemphasis exists in the hospital-resource allocation on items that were deemed non-important, showing the necessity to allocate more resources to the “Concentrate here” quadrant. All educational-training items were located in this zone. Managers must focus on the information and decide what to do next.

IPA indicates what it takes to satisfy hospital employees. Organizations cannot function without people, and employees play important organizational roles. This paper provides further evidence of the importance of internal marketing to hospital managers. Hospital managers can use these IPA results to create developmental strategies based on the importance and perceived performance shown in the four quadrants from the employee perspective. IPA is an effective method to measure employee perspectives on the benefits of providing internal-marketing services, and managers should undertake extensive internal-marketing research to identify factors that employees deemed most important in their work experiences. The findings suggest that an internal-marketing orientation is necessary to better match organizational characteristics and enhance service quality.

A significant limitation of this study is that the author used data from only one hospital. Although the survey research obtained good responses from 257 participants, future studies could make the findings more generalizable to entire health care systems and develop IPA models based on different employees from other

hospitals or industries. This is because the importance and performance ratings might be influenced by respondents' demographic experiences and backgrounds. Future studies can explore internal-marketing differences between various organizations. This study did not allow for applying methods such as the AHP, conjoint analysis, and other multi-attribute utility frameworks. Perhaps interested researchers could conduct similar studies from these perspectives.

Despite the study limitations, this research outcome could provide complementary information to facilitate enhanced understanding of internal marketing in health care systems in East Asia.

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