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Surveying on the service quality of physical checkup: KANO Model and IPA approach

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INTRODUCTION

Physical checkup, an essential tool for managing our health, enables the early detection of risks and potential diseases. There is a gap between the citizens' recognition and utilization of checkups, and if the service meets the citizens' expectations, it can increase the willingness of physical checkups.

AIM

This study combined the KANO model and IPA approach to investigate the demand for physical checkup services.

METHOD

The study site is a regional teaching hospital in central Taiwan. We surveyed the importance and satisfaction of physical checkup services to customers. Based on the PZB service quality model (Gap 5), a questionnaire was designed using the five factors of the ServQual scale. We used the IPA method to identify the most important items for improvement, followed by the KANO model to classify the quality characteristics of the services received by our customers.

CONCLUSIONS

This study was conducted through a structured survey and analysis to address customer expectations, with the purpose of encouraging people to use preventive health services. Reliability is the most important of the five dimensions of the ServQual scale, so our check-ups must be provided or performed reliably and on time.

RESULTS

The survey was conducted in March 2022 and 364 valid questionnaires were returned. A total of 194 (53.3%) males participated. There were 131 (36.0%) participants aged 40-49, followed by 105 (28.8%) aged 30-39. IPA analysis showed that the overall importance mean was 4.36 and the satisfaction mean was 3.97. The item with high importance but low performance was dietary or nutritional guidance (importance score was 4.40, satisfaction score was 3.95), which indicated that quality improvement should be prioritized. The secondary zones of improvement (low importance and low performance) included medical referral services (importance 4.22, satisfaction 3.86), and annual health examination planning and recommendations (importance 4.29, satisfaction 3.91).

Under the KANO two-dimensional quality classification, dietary or nutritional guidance was classified as high charisma quality. In addition, medical referral services are of low value-added quality, with annual health examination planning and recommendations being the required quality. Therefore, we focused on the improvement of personalized guidance services, including developing health education SOPs, providing dietary menus and counseling, teaching lifestyle eating tips, and providing further service planning.

Table 1. Demographic data

Variables	Categories	Frequency	Percentage (%)
Gender	Male	194	53.3
	Female	170	46.7
Age	< 20 years	9	2.5
	20-29 years	18	4.9
	30-39 years	105	28.8
	40-49 years	131	36.0
	50-64 years	55	15.1
	> 65 years	46	12.6

Table 2. Independent T-test Analysis for Importance

Items	Male (SD)	Female (SD)	t value	p-value
Physical fitness assessment and exercise guidance	4.39 (0.113)	4.21 (0.314)	2.249	0.023
Suggestions for health maintenance and conditioning in traditional Chinese medicine	4.18 (0.396)	4.33 (0.195)	-2.384	0.017
Items	< 40 yrs (SD)	> 40 yrs (SD)	t value	p-value
Historical Trends in Health Values	4.44 (0.341)	4.55 (0.134)	-2.431	0.011

Table 3. Independent T-test Analysis for Satisfaction

Items	Male (SD)	Female (SD)	t value	p-value
History of physiological values (heartbeat, blood pressure, pulse)	3.95 (0.349)	4.08 (0.168)	-2.412	0.013
Items	< 40 yrs (SD)	> 40 yrs (SD)	t value	p-value
Health Management Consulting Services	3.92 (0.388)	4.08 (0.151)	-2.563	0.006

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