

Study of Customer Service Satisfaction Survey and Influencing Factors in Hospital Health Management Centers

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Abstract: To provide a basis for improving service quality by conducting a satisfaction survey on medical checkups. Methods 160 examinees were randomly selected from the health management center of a general hospital in Baise, Guangxi, China, in May-June 2023, and the survey was conducted by distributing questionnaires (paper questionnaires and electronic questionnaires). Results 153 questionnaires were validly recovered, with a questionnaire recovery rate of 99.5%; 44.4% were male, 55.6% were female. The age group of 18-30 accounted for 49.02%, and those with a college degree or above accounted for 77.13%. The satisfaction with the physical examination environment of the health management center, the professional level of medical staff, center guidance signs, physical examination equipment, follow-up services, and appointment services has reached more than 94%. Among them, the three items of physical examination equipment, guiding signs and physical examination environment have the lowest customer satisfaction. Customers think that the waiting time for medical examination appointment is long accounting for 41.83%, and the total waiting time for medical examination is 1-2 hours accounting for 52.29%. Conclusion It is found that the hospital has problems such as poor experience of physical examination equipment, vague physical examination guidance signs, too noisy physical examination environment, and long waiting time for physical examination in the physical examination center. In response to these problems, suggestions were made to create a good physical examination environment, optimize the physical examination procedure to increase the service window, and carry out humanistic personalized and detailed services.

Keywords: Hospitals; Health Management; Satisfaction; Influential Factors.

1. Introduction

With the continuous improvement of living standards, people pay more and more attention to health, more and more people choose to go to the hospital for medical checkups, health checkups have become a simple and fast way to pay attention to their own health, medical checkups industry is more and more prevalent, has become a very development space of the emerging field. As a new type of health consumption, health checkup has become an important means for people to understand their own health status, early detection of diseases, early treatment of diseases and regulation of healthy life. (Sun, R., Wang, Y., & Liu, Z. 2012). In this context, the quality of service of health management centers has gradually been widely valued by all walks of life, and health management centers have undoubtedly ushered in a better development trend. Physical examination institutions are also springing up, but the development of health management centers is uneven, and problems such as long waiting time, poor physical examination environment, poor staff service attitude, poor experience of physical examination center facilities, and privacy of physical examination are also common problems. In order to further understand the problems and factors affecting satisfaction in the health management center of a general hospital in Baise City, Guangxi, China, and to provide countermeasures for service improvement, this project conducted a survey on customer service satisfaction and factors affecting satisfaction in May-June 2023 for health checkups at the center.

2. Objects and Methods

2.1. Research Object

By means of a questionnaire survey, 153 clients who came to the hospital's health management center for health checkups in May-June 2023 were selected as respondents, with the inclusion criteria: healthy people with normal intelligence who were able to complete the questionnaire independently, and the exclusion criteria: people with disabilities, and people with abnormal intelligence who needed to be supervised by others. Respondents fill out the questionnaire on a voluntary basis, and when it is inconvenient for them to fill out the questionnaire, their accompanying person, that is, their children or relatives, will fill it out on their behalf. The staff of the health management center will randomly send a questionnaire to the customer when the customer submits the physical examination form after the physical examination and ask the customer to fill it in according to the actual situation in an anonymous survey method to ensure the completeness and authenticity of the filling. A total of 160 questionnaires (paper questionnaires and electronic questionnaires) were distributed this time, and a total of 153 valid questionnaires were recovered, with a recovery rate of 95.6%.

2.2. Research Methods

On the basis of researching relevant literature and consulting with experts from the health management center, we compile a customer satisfaction survey form, which mainly includes gender, age, education level, physical examination methods, reasons for choosing our hospital for

physical examination, length of waiting time for physical examination, and environment of the physical examination center. , physical examination equipment, professionalism of medical examination nurses, service attitude of medical examination nurses, privacy during physical examination, etc. The survey is carried out by issuing questionnaires, and the customers of the physical examination fill in their satisfaction with the physical examination according to their actual conditions. Satisfaction adopts the Likert five-point scoring method, and each option is given a score of 1-5, and the higher the score, the more satisfied with the item.

3. Results

3.1. Basic Information of the Survey Object

The basic information of the customers of the health management center includes gender, age, education level and

other information. In terms of gender distribution, there are 68 males, accounting for 44.44%, and 85 females, accounting for 55.56%. In terms of age distribution, the 18-30 age group has the most respondents, with 75 respondents, accounting for 49.02%; 31-40 years old ranked second, with 42, accounting for 27.45%; 41-50 years old ranked third, with 24, accounting for 15.69%; <18 years old had 7, accounting for 4.58% ; There are 3 respondents over the age of 60, accounting for 1.96%; From the perspective of education, most of the respondents have a higher education level, and the vast majority of respondents have a college degree or above, accounting for 77.13%, of which 35 have a college degree, Accounting for 22.88%, 83 with a bachelor's degree or above, accounting for 54.25%; there were fewer people with a high school education or lower, 15 from high school, 15 from junior high school, and 5 from primary school, accounting for 9.8%, 9.8%, and 3.37% of the surveyed people respectively.

Table 1. Basic information of customers in the health management center

project name	options	frequency	Percentage (%)
Gender	male	68	44.44%
	female	85	55.56%
Age	<18 years old	7	4.58%
	18-30 years old	75	49.02%
	31-40 years old	42	27.45%
	41-50 years old	24	15.69%
	51-60 years old	2	1.31%
	Over 60 years old	3	1.96%
Educational background	primary school	5	3.37%
	junior high school	15	9.80%
	high school	15	9.80%
	junior college	35	22.88%
	Bachelor degree or above	83	54.25%

3.2. Reasons for Customers to Choose this Health Management Center for Physical Examination

The survey results show that the most important reason for customers to choose the health management center for physical examination is the good service attitude of medical staff, accounting for more than half, accounting for 58.17%. The second is the professionalism of the medical team, which shows that professionalism is also the main reason for attracting customers, accounting for 47.71%. The public

hospital followed closely, ranking third in the selection reasons, accounting for 44.44%. The hospital is a tertiary general hospital in the city, and it is understandable to choose this hospital for this reason. Considering geographical location and work unit-related factors when choosing, such as convenient transportation and designated units for medical examinations, there are also many reasons, accounting for 34.64 and 33.33% of the surveyed people respectively. However, those who chose the hospital's popularity, physical examination procedures or process convenience, and reasonable medical examination fees accounted for only 18.95%, 20.26%, and 8.5% of the respondents respectively.

Table 2. Reasons for customers to choose health management center.

Reason for choosing	number of people	Percentage (%)
convenient transportation	53	34.64%
public hospital	68	44.44%
Professional medical team	73	47.71%
Good service attitude of medical staff	89	58.17%
Well-known hospital	29	18.95%
Designated place for unit physical examination	51	33.33%
Medical examination procedures and process convenience	31	20.26%
The medical examination fee is reasonable	13	8.5%
Others	5	3.27%

3.3. Appointment Mode, Appointment Process, Waiting Time Situation

In order to improve the efficiency of physical examination, the health management center has opened an appointment mode. Appointment modes include online appointment (WeChat official account, telephone appointment) and offline appointment (reservation at the hospital triage desk). According to the survey results, there is not much difference between the number of people who make reservations online and offline, but the number of people who make reservations online is relatively more. Some customers may not like the reservation procedure or do not know that there is a reservation procedure, so they do not make an appointment directly. Accounting for 23.53%.

To understand the problems that may arise in the medical examination appointment process, this time we also specially investigated the problem of "possible problems in the appointment process". The results show that the long waiting

time for medical examination appointments is the main problem, accounting for 41.83%; the cumbersome medical examination appointment procedure is the second, it accounted for 23.53%; while 20.92% thought there was no problem with the medical examination appointment process; only 13.73% believed that the medical examination appointment items were not clear, indicating that in the medical examination appointment, the clarity of the customer's medical examination item selection is still very strong.

An important factor affecting the satisfaction of physical examination is the length of waiting time for physical examination. The results show that the waiting time of customers for physical examination is more than half of 1-2 hours, accounting for 52.29%; the proportions of <30 minutes and 3-4 hours are similar, respectively 22.22% and 23.53%; 4-6 hours or even 6 hours There are almost none of the above, which can show that the waiting time for physical examinations is mostly 1-4 hours.

Table 3. Satisfaction and scores among various items of customers of the health management center

project name	options	number of copies	Percentage (%)
Medical examination appointment mode	online appointment	64	41.83%
	Offline appointment	53	34.64%
	no appointment	36	23.53%
Think there are problems with the medical examination appointment process	Long wait times for checkup appointments	64	41.83%
	The appointment procedure is cumbersome	36	23.53%
	Appointment inspection items are not clear	21	13.73%
	no problem	32	20.92%
	<30 minute	34	22.22%
Total waiting time for physical examination	1-2 hours	80	52.29%
	3-4 hours	36	23.53%
	4-5 hours	2	1.31%
	5-6 hours	0	0
	>6 hours	1	0.65%

3.4. Customer Satisfaction Status of the Health Management Center

Table 4. Satisfaction and scores among various items of customers of the health management center

Satisfaction Survey Project	satisfaction	$\bar{x} \pm S$
What do you think of the physical examination environment in the Health Management Center? (Environment is clean and tidy)	95.6%	4.27±0.592
What do you think of the physical examination environment in the Health Management Center? (Medical staff have a good service attitude)	95.3%	4.25±0.662
How do you feel about the privacy during the medical examination?	95.7%	4.24±0.602
What do you think of the professionalism of the medical staff in the health management center?	94.9%	4.23±0.691
What do you think of the physical examination environment in the Health Management Center? (Environment is orderly)	94.9%	4.19±0.72
What do you think of the physical examination environment in the Health Management Center? (Quiet environment)	93.2%	4.10±0.792
Do you think the guidance signs of the Health Management Center are clear? (Mark clarity)	94.9%	4.06±0.740
What do you think of the medical examination equipment in the health management center? (New or old)	94.5%	4.06±0.635

The satisfaction survey on the health management center has 8 items, including satisfaction with the physical examination environment, professionalism of physical examination, service attitude of medical staff, privacy of physical examination, etc. Satisfaction is graded using the Likert five-point scoring method, and each item is given 5 points. The higher the score, the more satisfied, and the satisfaction scores of each item can be obtained. The measurement data are represented by mean $\bar{x} \pm S$, and the count data are represented by percentage. From the perspective of satisfaction, the satisfaction level of each project is above 90%, with the highest reaching 96.2%. However, there are still some differences in the specific analysis of various satisfaction levels. Using descriptive analysis, it is found that the overall average of each item is 4.18 points, and the top three scores in the remaining items are clean and tidy environment, good service attitude of medical staff, and privacy of physical examination, with scores of 4.27 points, 4.25 points, 4.24; while the customer's score on the physical examination equipment and the guidance signs of the physical examination is only 4.06 points, ranking last, indicating that the customer is not very satisfied with this item.

4. Conclusion and Discussion

4.1. Customer Dissatisfaction Factors of Health Examination

4.1.1. Insufficient or Outdated Equipment for Physical Examination

As an independent department of a comprehensive tertiary first-class hospital, the health management center of a certain city hospital should have all kinds of basic inspection equipment. However, due to various conditions, the health management center currently only has small inspection equipment and other specialized inspection departments, such as nuclear magnetic resonance and other equipment rely on the inspection of relevant departments of the hospital, and inspection items such as nuclear magnetic resonance are items that take a long time to check. In addition, the sharing of inspection equipment between medical examination customers and inpatients will increase the discomfort of physical examination customers.

4.1.2. Unreasonable Distribution of Physical Examination Space Environment

Although the Health Management Center is a separate department within the hospital, it occupies only one floor, with an area of only 800 square meters and a crowded environment. In addition, various departments are distributed in different areas, including places where doctors issue checklists, payment counters, and various functional departments. Even the blood collection area and physical examination facilities are not adjacent to each other, which will inevitably cause customers to go back and forth many times, greatly prolonging the time for physical examination. In addition, the waiting area and the dining area are only separated by partitions, which cannot effectively isolate noise, which may dissatisfy those medical examination customers who need a quiet environment and have a negative impact on their medical examination experience. This physical layout limitation also leads to insufficient setting of guide signs. To save space, the signs are all placed in one place to facilitate medical examination customers to find their way. However,

for older or less educated customers, such an arrangement may increase their distress and seem unreasonable. To sum up, these factors have affected the operation of health management centers and the experience of medical examination customers to a certain extent.

4.1.3. Long Waiting Time for Medical Examination

The survey results show that the waiting time for medical examinations is generally long, mostly between 1 and 4 hours, especially as the number of medical examinations and items increase, the waiting time between various examinations may be further extended. This is because some medical examination customers arrive at the same time, and they strictly follow the items on the checklist one by one, resulting in congestion of the inspection items at the same time, and the inability of the guide and triage staff to divert them in time, which increases the waiting time. At the same time, because most of the physical examination clients come by appointment, when there are too many physical examination clients, the staffing and scheduling are not flexible enough, the division of labor of the guides is not clear, and they cannot take care of the same medical examiners at the same time, resulting in a large number of people waiting in line for some projects, while others The project was idle, which also caused customers to feel that the waiting time for the medical examination was too long.

4.1.4. Insufficient Windows Allocated for Time-Consuming Examination Procedures.

With the increasing awareness of health, most of the medical examination clients are no longer satisfied with simple routine check-ups. Many individuals have specific purposes for certain aspects of their health assessments. For example, women tend to focus on gynecological examinations, which can be time-consuming, while elderly individuals lean towards cardiovascular checks. However, there are limited windows available for examinations such as gynecological checks and electrocardiograms (ECGs), leading to queues and congestion, resulting in extended waiting times and causing dissatisfaction among clients.

4.2. Measures to Improve Customer Satisfaction

4.2.1. Actively Create a Good Physical Examination Environment.

A good physical examination environment is crucial to customer satisfaction, so it must be actively created. In the health management center, the physical examination areas of some projects have not been separated from men and women. This can be solved by setting up separate examination departments based on the prediction of the number of physical examinations in the past. In terms of environmental layout, it needs to be adjusted to clearly separate the dining area and the physical examination area, and relatively concentrate specialized departments such as blood collection and physical examination to improve the environmental quality. In addition, a good physical examination environment also includes the clarity of the guide signs. Medical examination guidelines and precautions can be prominently posted in the lobby to facilitate the medical examiners to accurately find the location of the physical examination. In addition, since health checkups are special medical services, more attention should be paid to health work. The health management center should always pay attention to sanitation and cleaning work, and

establish strict disinfection and cleaning systems to ensure a clean, tidy and comfortable physical examination environment for medical examiners. These measures together create a good physical examination environment and help to improve the satisfaction of medical examiners.

4.2.2. Appropriately Increase Waiting Seats in Specialized Departments.

At present, in the health management center, waiting seats have been placed in the blood collection area, but there are no seats at the entrance of the B-ultrasound room, electrocardiogram and other departments. Only waiting areas are set up in the calling equipment area, and these waiting areas are a certain distance from the departments. This is inconvenient for many medical examination clients, especially the elderly, who prefer to wait at the door of the department. Therefore, it is recommended to place waiting seats at the entrances of the B-ultrasound room, electrocardiogram and other departments to improve the comfort and convenience of the examiners.

4.2.3. Optimize Medical Examination Procedures and Increase Service Windows.

Although the staff of the health management center is relatively small, a series of measures can be taken to cope with the peak hours of medical examinations. First, you can consider reducing some unnecessary procedures to save time. Secondly, increase the staff's medical guidance and guidance services so that they can assist medical examiners more flexibly. In addition, depending on the situation, it may be considered to expand the inspection site or increase the service window to improve the processing capacity. In addition, appointment service can be taken according to the actual situation, and medical examinations can be carried out in different time periods, which can effectively reduce the occurrence of congestion, optimize the medical examination process, and improve efficiency. These measures will help provide better service and improve customer experience during peak medical examination hours.

4.2.4. Carry out Humanized, Personalized, and Detailed Services.

With the continuous increase in the number of health checkups, improving service quality is an important part of the health management center. Due to the improvement of people's health awareness in modern society, most of the customers who come for physical examination are people who have not yet shown obvious clinical manifestations, so their requirements for the services provided are much higher than those of patients who come to see a doctor, so they pay more attention to providing Humanized and personalized services are the most humanized and personalized services in health checkup service organizations, (Yang, C., Bai, X., & Wei, J., 2011) such as "the degree of privacy of checkups", "the service attitude of medical staff", "the newness and cleanliness of medical equipment", etc. It is closely related to the satisfaction of physical examination.

To achieve humanized, personalized, and detailed services, it is necessary to remind customers of the precautions before the physical examination during the process of making an appointment for medical examination customers. When the examinee asks about the items of the physical examination, listen patiently, understand the purpose of the examinee's physical examination, and then provide suggestions according to the wishes of the examinee. During the physical examination process, if there are many people undergoing

physical examinations on that day, personnel should be arranged to guide them in time. The guiding staff can guide several examinees at the same time, perform physical examination items flexibly, and reduce waiting time. At the same time, after the customer completes the items that require fasting, the customer can be guided to receive breakfast before proceeding to the next item of inspection. When encountering elderly and disabled customers, ask in time so that we can help in time; for projects involving private inspections, we must pay attention to protecting customer privacy and ensuring customer privacy security. After the physical examination, the customer's electronic health file must be established. Although the physical examination report can be obtained on the official account, it is necessary to analyze the customer's health condition, make a specific explanation for each influencing factor, and carry out personalized health care according to its influencing factors. Helping clients with health promotion initiatives.

4.2.5. Actively Extend Post-Inspection Services.

Improving the follow-up services of physical examination and making medical services more humanized is an effective measure for hospitals to grasp customer resources, improve service capabilities, and improve hospital efficiency. With the advancement of science and technology, many health management centers have opened the function of receiving physical examination reports online, but they may lack the specificity and detail of face-to-face reading report methods. Physical examination health management centers can open some channels, such as opening QQ and WeChat, email and other communication platforms, allowing physical examination customers to join, and can consult medical staff if they have any questions. Medical staff can also release some health education knowledge regularly or irregularly and provide suggestions for health promotion of physical examination customers. In this way, medical staff can also create a group of key observation objects, conduct regular post-examination visits, and carry out health management of key groups.

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