



Factors Influencing Employee's Satisfaction with Public Space in Medical and Elderly Institutions

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Abstract

This Article aimed to study, to examine the relationship between spatial quality, perceived value, employee expectations and employee satisfaction, like wise investigate the mediating effect of perceived value on the relationship between spatial quality and employee satisfaction, and analyse the mediating effect of employee expectation on the relationship between spatial quality and employee satisfaction. Data were collected from employees of medical and nursing institutions in Shanxi Province, China (n=463). The tool used to collect the data was spss21.0 and the analysis software was AMOS21.0. data were analysed through descriptive statistics. Spatial quality has a significant effect on employee satisfaction; spatial quality has a significant effect on perceived value; spatial quality has a significant effect on employee expectation; employee expectation has a significant effect on perceived value; perceived value has a significant effect on employee satisfaction; employee expectation has a significant effect on employee satisfaction; perceived value has a mediating effect between spatial quality and employee satisfaction; employee expectation has a mediating effect between spatial quality has a mediating effect on employee satisfaction. Suggestions Based on the model study in this thesis, it is recommended that hospital logistics and other employee can take the following steps to improve spatial quality, employee satisfaction, employee expectations and perceived value. Strengthen the maintenance and renewal of equipment: hospital logistics can regularly inspect medical equipment, furniture, air conditioning and other facilities, and timely repair or replace ageing equipment to ensure that the facilities and equipment are in good condition. And other employee can improve their service awareness and service quality through regular training to provide a better service experience for hospital employee and enhance their perceived value and satisfaction.

Keywords: Employees, Space Quality, Perceived Value, Employee Expectations



Introduction

With the rapid development of urbanization in China, there is an increasing demand for the construction of medical and elderly care institutions (Li et al., 2016). There are many new and renovation projects, which also bring new development opportunities for the architectural design of medical and elderly institutions. Humanized, human-centred design is receiving more and more attention as medical technology advances and people's material living standards improve, with people demanding a more comfortable environment and more comprehensive functions in medical and elderly institutions (Moller, T. & Kettley, S. 2017). This has led to increasingly complex architectural designs for medical and nursing institutions, and has placed increasingly high demands on designers. This study addresses this phenomenon by taking doctors and nurses in medical and elderly institutions in Shanxi Province as the research subjects and examining the survey of employees' satisfaction with space quality in medical and elderly institutions, together helping to improve the space quality of medical and elderly institutions in Shanxi Province and in China, ensuring staff satisfaction and providing suggestions for better service and development of the institutions. Francis, J., et al (2012).

This study focuses on the relationship between spatial quality and employee satisfaction in medical and old-age care institutions in Shanxi Province. taking perceived value and employee expectation as mediating variables to explore whether perceived value and employee expectation have a Based-on Maslow's hierarchy of needs theory, public goods theory, two-factor theory and Vroom expectation theory, the study was conducted to examine whether perceived value and employee expectation have an intermediary effect between spatial quality and employee satisfaction. based on Maslow's hierarchy of needs theory, public goods theory, two-factor theory and Vroom expectation theory, based on the analysis of spatial quality, employee satisfaction, perceived value and employee expectation, the theoretical framework as shown in figure 1.

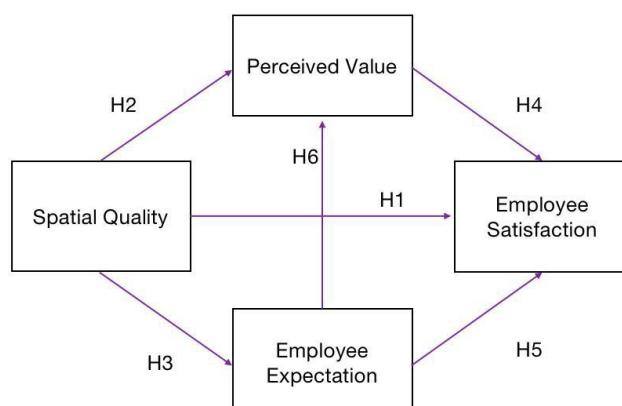




Figure 1 Conceptual framework

Research Objectives

To explore the influencing factors of employee satisfaction in medical and pension institutions.

Analyze the influence of related factors on the satisfaction of employees in medical and pension institutions.

To provide solutions for employee satisfaction of medical and pension institutions in Shanxi Province and even China, to continuously improve the

To provide solutions for employee satisfaction of medical and pension institutions in Shanxi Province and even China, to continuously improve the service level and quality of medical and pension institutions in China, and to ensure the sustainable development of medical and pension institutions.

Literature Review

The extent to which the public space of a combined healthcare facility meets the requirements of its users in terms of both "quality" and "quantity" as the quality of the space (Francies et al., 2012). The quality of the public space of a combined health and care facility and its facilities. The better the quality of the public space of a healthcare integration facility, the higher the satisfaction felt by employees during their stay or experience; conversely, if the quality of the space is poor, Li, X., et al. (2016). the lower the satisfaction felt by employees. In order to analyses how space quality affects employee satisfaction and the relationship between space quality and perceived value, the following hypotheses are proposed:

H1: Space quality has a significant positive impact on employee satisfaction

H2: Spatial quality has a significant positive impact on perceived value

H3: There is a significant positive effect of space quality on employee expectations

According to Maslow's hierarchy of needs theory, the satisfaction of human security needs is a prerequisite for the satisfaction of other higher-level needs (Ozguner, Z & Ozguner, M.2014). Combined with the physiological needs level of the hierarchy of needs theory, physiological needs refer to the basic requirements of an individual as an organism for food, shelter and sleep, etc. With reference to this theory, this study considers basic value perception



as the most basic need of employees as users of the public space of a combined healthcare institution, which is reflected in the degree of subjective perception of the function of the public space of the combined healthcare institution. Therefore, it is important to investigate the level of employees' perceived safety needs in the public space of integrated healthcare institutions, taking employees as the research target, in order to construct the public space of integrated healthcare institutions (Bedimo-Rung et al., 2005). In view of this, the hypothesis is proposed:

H4: Perceived value has a significant positive effect on employee satisfaction. Employee expectations, which are the desire for successful public spaces among employees of health care integration institutions when using the public spaces of health care integration institutions, have a significant impact on the variables related to employee satisfaction. If the expectations of employees of health care integration institutions are relatively high and the public spaces of health care integration institutions can meet their needs more effectively, then employees of health care integration institutions will have a positive perception of the spatial quality of the public spaces of health care integration institutions, the health care quality of the public space of the combined institution and the quality of the public space of the combined institution will be perceived positively. Furthermore, the findings suggest that employee expectations have a positive predictive effect on perceived value and that this relationship shows a stronger effect in high-pressure work environments (Cooke, F. L. et al. (2019). In addition, a significant positive relationship between employee expectations and perceived value in their study. Therefore, the following hypothesis is proposed in this study.

H5: Employee expectations have a significant positive effect on employee satisfaction

H6: Employee expectations have a significant positive impact on perceived value.

Several studies have pointed out that perceived value is a mediating variable that influences the relationship between spatial quality and employee satisfaction (Lai, W. T., & Chen, C. F. (2011). The relationship between spatial quality, perceived value and employee satisfaction in Iranian hospitals and found that perceived value mediated the relationship between spatial quality and employee satisfaction. In another study, employees' expectations mediated the relationship between spatial quality and employee satisfaction. Therefore, the following hypothesis is proposed in this study.

H7: Perceived value mediates the effect of spatial quality on employees satisfaction.

H8: Employee expectations mediate the effect of space quality on employee satisfaction.



Research Methodology

In order to highlight the representativeness of the sample and better analyse the satisfaction of employees in medical and elderly institutions, this study selected the employees of medical and elderly institutions in Shanxi Province as the research object to explore the influence of employee satisfaction in medical and elderly institutions. Separate samples were selected from 15 medical and elderly institutions in Shanxi Province. Through the Questionnaire Star APP, 500 questionnaires were collected from the 15 medical and elderly institutions in Shanxi Province, of which 463 were valid, with an effective rate of 93%. To test the theoretical framework, questionnaires developed in previous studies were used as survey instruments. The Likert scale ranges from 1 (strongly disagree) and 5 (strongly agree). The valid data obtained from the questionnaire were analyzed using SPSS21.0 and AMOS21.0 software.

Research results

1. Descriptive Statistical Analysis

Demographic data of the questionnaire respondents was analyzed via frequency distribution and percentage statistics.

Table 1 Demographic Information of Respondents Basic Information Statistics

Projects	Category	Frequency	Percentage
Gender	Male	102	22
	Female	361	78
	Under 25 years old	70	15.1
Age	25 - 45 years	264	57
	45+ years	129	27.9
Marriage	Married	315	68
	Unmarried	148	32
	Tertiary and below	288	62.2
Education level	Undergraduate	112	24.2
	Master and above	63	13.6
Position	Medical and nursing	246	53.1



Projects	Category	Frequency	Percentage
Years of work	Administration	88	19
	Other	129	27.9
	Less than 1 year	195	42.1
	2 years - 3 years	167	36.1
	More than 3 years	101	21.8
	Total	463	100

Source: Author develops from various sources

Looking at the basic descriptive statistics, the gender data statistics show that there were 102 male employees, accounting for 22% of the survey respondents, and 361 female employees, accounting for 78% of the survey respondents. The statistics show that the proportion of female employees is significantly higher than that of male employees, and by looking at the medical and elderly facilities, the ratio of male to female employees is 2:8, which is within the normal range.

2. Correlation analysis

Correlation analysis can explain the degree of correlation between variables, but there are limitations in the interpretation of causality. In order to further explain the causal relationship between the variables, the article use Pearson correlation analysis to analyses the relationship between the variables in this study.

Table 2 Correlation analysis of total dimensions

	Average value	Standard deviation	Quality of space	Perceived value	Staff Expectations	Staff satisfaction
Quality of space	3.304	0.944	1			
Perceived value	3.591	0.722	.520**	1		
Staff Expectations	3.639	0.589	.415**	.437**	1	
Staff satisfaction	3.559	0.794	.594**	.557**	.547**	1

Note: *** indicate $p < 0.001$ ** $p < 0.01$ * $p < 0.05$

The results of the correlation analysis show that the correlation coefficients of space quality, perceived value, employee expectations and employee satisfaction are 0.594, 0.557 and 0.547 respectively, with the corresponding p-values less than 0.01, which are statistically



significant, indicating that space quality, perceived value, employee expectations and employee satisfaction all have significant positive correlations.

3. Path Analysis

Based on the theoretical model, a structural equation model was developed using AMOS 21.0 with career identity as the spatial quality as the independent variable, perceived value and employee expectations as the mediating variables and employee satisfaction as the dependent variable (Figure).

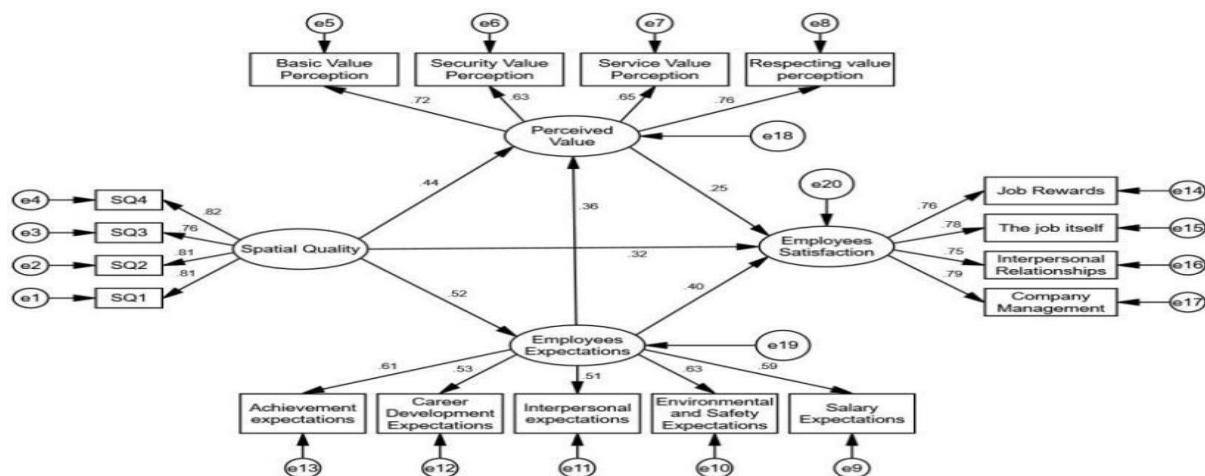


Figure 2 Structural Equation Modeling

Table 3 Model fit goodness of fit metrics

Indicators	X2/df	GFI	AGFI	NFI	TLI	CFI	RMSEA
Statistical values	2.171	0.94	0.919	0.928	0.951	0.96	0.05
Reference values	<3	>0.8	>0.8	>0.9	>0.9	>0.9	<0.08

Source: Data and information from this research

According to the criteria of model fit index, the model fit indexes all meet the requirement of requirements, so the path analysis of the employee satisfaction model of medical and elderly institutions was carried out.

Table 4 Path coefficients between variables

Paths	Standardized	Standard	Critical Ratio	P
	path coefficients	Error S.E.	C.R.	



Staff expectations <- Quality of space	0.517	0.038	7.85	***
Perceived value <- Spatial quality	0.437	0.05	6.935	***
Perceived Value <- Employee Expectations	0.359	0.097	5.104	***
Staff satisfaction <- Quality of space	0.323	0.049	5.588	***
Employee satisfaction <- Employee expectations	0.399	0.1	5.852	***
Employee satisfaction <- Perceived value	0.248	0.07	3.761	***

Note: *** indicate $p < 0.001$ ** $p < 0.01$ * $p < 0.05$

4. Mediation effects test

The upper and lower intervals of the spatial quality-perceived value-employee satisfaction mediation path does not contain 0, and the p-value is less than the significant level of 0.05, so the hypothesis is valid and the mediation effect holds.

The upper and lower intervals of the spatial quality-employee expectation-employee satisfaction mediation path does not contain 0, and the p-value is less than the significant level of 0.05, so the hypothesis is valid and the mediation effect holds.

The upper and lower intervals of the spatial quality-employee expectation-perceived value-employee satisfaction chain mediation path does not contain 0, and the p-value is less than the significant level of 0.05, so the hypothesis holds and the mediation effect holds.

Table 5 Intermediary effects test

Parameter	Estimate	Lower	Upper	P
Spatial quality - perceived value -employee satisfaction (mediating effect)	0.108	0.029	0.198	0.06
Space quality - employee expectations -employee satisfaction (mediating effect)	0.207	0.124	0.311	0
Spatial quality - Employee expectations- Perceived	0.046	0.014	0.082	0.0



*Note: *** indicate $p < 0.001$ ** $p < 0.01$ * $p < 0.05$*

Discussion

This study examines how the quality of space in healthcare and retirement institutions specifically affects employee satisfaction and looks at this willingness in terms of perceived value and employee expectations. Based on previous work on Maslow's Hierarchy of Needs Theory, Public Goods Theory, Two-Factor Theory and Vroom's Expectancy Theory, analysis and empirical research, a mechanistic model of the impact of spatial quality on employee satisfaction in healthcare and retirement institutions is developed. Through an in-depth analysis of this paradigm. This study aims to provide theoretical and empirical support for the advancement of healthcare and elderly care institutions.

Perceived value and employee expectation have a significant mediating effect on employee satisfaction in healthcare and elderly facilities in terms of space quality. In this study, through empirical analysis and hypothesis testing, the effect of space quality on employee expectations and perceived value was found. Space quality, as a physical attribute of the work environment, can influence employee expectations and perceived value. Same way Bedimo-Rung, et al. (2005). Employee expectations and perceived values are employees' perceptions and evaluations of the work environment, and they have a significant impact on employee satisfaction. If employees' expectations and perceived values are met, they will feel satisfied and happy, thus increasing their job satisfaction. Employee expectations and perceived values play a mediating role between spatial quality and employee satisfaction. Specifically, space quality can increase employee job satisfaction by meeting employees' expectations and perceived values. Working in a comfortable, safe and challenging environment can lead to employee satisfaction and pleasure, which in turn increases employee job satisfaction.

Conclusions

Based on the findings of this study, we developed a model of the effect of space design on employee satisfaction in healthcare and retirement facilities. At the same time, we evaluated the mediating role of perceived value as well as employee expectations. Using a sample of 463 for testing and hypothesis testing, we formulated eight hypotheses and eight were confirmed. Spatial quality has a significant positive effect on employee satisfaction. Good space quality can improve



employee productivity and job satisfaction. Improving the quality of space in the workplace of healthcare and senior living facilities can improve employee satisfaction and work efficiency, help attract and retain good employees, and increase the productivity and creativity of healthcare and senior living facilities. Spatial quality has a significant positive effect on perceived value. The quality of space directly affects the perceived value of employees. Space designers need to consider the perceived value of employees in the design process and make full use of space quality and environmental factors to improve the perceived value of space so that employees can have a better experience and feeling of using it. Perceived value has a significant positive effect on employee satisfaction. Employees are typically less satisfied with their jobs at health and senior care organizations when they feel they are not receiving adequate value and benefits. Spatial quality has a significant positive effect on employee expectations. Good space quality in a medical retirement facility can meet the expectations of employees and improve their productivity and quality. Space quality and employees' expectations are mutually reinforcing. Superior space quality increases employee productivity, and employee expectations contribute to space improvements in medical and senior living facilities. Employee expectation has a significant positive effect on employee satisfaction. When employees' expectations are met, they are usually satisfied and happy, and are willing to contribute more to the healthcare and senior living organization. Employee expectations have a significant positive effect on perceived value. When employees' expectations are aligned with perceived value, employees feel satisfied and happy, and are willing to contribute more to the medical retirement organization. Perceived value mediates the effect of spatial quality on employee satisfaction. Organizations should focus on employees' perceived value of the work environment and improve job satisfaction and performance by improving the quality of the space. Employee expectations play a mediating role in the effect of spatial quality on employee satisfaction. Organizations should focus on employee expectations of the work environment and improve employee job satisfaction and performance by improving the quality of the space.

Suggestions

Based on the model study in this thesis, it is recommended that hospital logistics and other employee can take the following steps to improve spatial quality, employee satisfaction, employee expectations and perceived value. First, strengthen the maintenance and renewal of equipment: hospital logistics can regularly inspect medical equipment, furniture, air



conditioning and other facilities, and timely repair or replace ageing equipment to ensure that the facilities and equipment are in good condition. Secondly, improve the standard of cleanliness and hygiene: hospital logistics should strengthen the management of hygiene standards and regularly clean and disinfect the public areas and wards within the hospital to keep it tidy and hygienic. Third, improve catering and transport services: hospital logistics can strengthen the management of catering services and transport services, provide more convenient food and transport services, and improve the efficiency and quality of life of employee. Fourthly, training and improving service awareness: other employee can improve their service awareness and service quality through regular training to provide a better service experience for hospital employee and enhance their perceived value and satisfaction.

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