

# PATIENTS SATISFACTION OVER IN-HOUSE PHARMACY AT HOSPITALS IN COIMBATORE- TAMILNADU

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**ABSTRACT--***Pharmacy is an extensively used therapeutic division and many patients attend for their prescriptions. Patients arrive at the pharmacy randomly after visiting different hospital departments. Patient satisfaction depends upon service quality. To increase the likelihood that patients return to the same organization, it is important that they should be satisfied with the facilities, which decreases the possibility that they will seek similar services elsewhere. Holding on to the same customer can save time and money owing to less advertisement and promotion, creating accounts for fresh patients and explaining hospital procedures and treatment guidelines. Moreover, the cost required to attract new customer is five times more than retaining current patients. Therefore, patient satisfaction over the pharmacy is very important that is going to estimate*

**Keywords--** *Customer Service, Patient, satisfaction, facilities, pharmacy*

## I. I.INTRODUCTION

Patient satisfaction is an important humanistic testimony to determine the outcome, serves and sustainability of any health care system. The evidences promulgate that satisfied patients uphold good relations with their health care providers and adhere to treatment that ultimately lead to better health outcomes. It is also a vital tool to monitor the advancement and quality improvement in health care delivery systems. Patient satisfaction studies are useful for drawing a baseline when launching new strategies.

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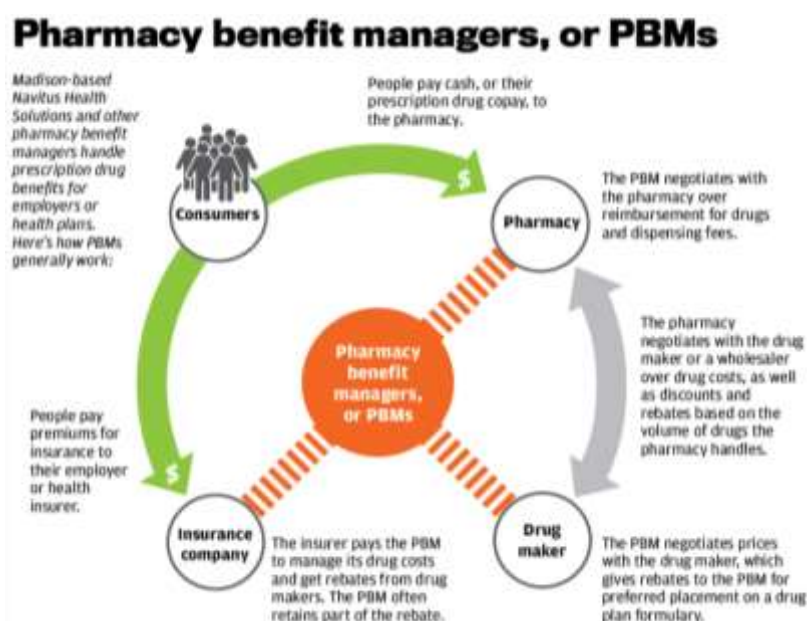


Figure 1: Proposed Block Diagram

## II. LITERATURE REVIEW

**Mobach, M. (2013)**, "The impact of physical changes on customer behavior", In this paper approach uses a field experiment. At two sites patient behaviors were directly observed before a reconstruction of waiting areas during two weeks; at both sites a two-week follow-up was performed after the reconstruction. The responses of patients were surveyed in a convenience sample in the same periods of weeks and the data on sales were collected with desk research. This paper also aim is to determine whether shopping facilities in a waiting area influence customer behavior and whether these behaviors positively influence their satisfaction or not.

**Abdelhadi, A. and Shakoor, M. (2014)**, "Studying the efficiency of inpatient and outpatient pharmacies using lean manufacturing", In this paper the lean manufacturing concept is used as a method to improve the quality of the service and reduce the time needed to deliver the medicine by comparing the efficiency between these two pharmacies based on a values and metrics used in lean manufacturing called task time. A team was formed to study the current situation, and recommendations based on lean manufacturing were suggested for implementation.

**Rabbanee, F., Burford, O. and Ramaseshan, B. (2015)**, "Does employee performance affect customer loyalty in pharmacy services?", In this study it is cleared mentioned that the employee performance positively affects pharmacy customers' perceived value (PV), trust and loyalty. Perceived value and trust fully mediates the relationships between employee performance and customers' attitudinal and behavioral loyalty.

**Aaron AsibiAbuosi, MahamaBraimah, (2019)** "Patient satisfaction with the quality of care in Ghana's health-care institutions, this paper conclude they are generally satisfied with the quality of care in respect of geographical access, convenient operating hours, interpersonal aspects of care and neatness of the health facility. However, they are less satisfied with the process of care, especially in relation to waiting time. Efforts must therefore be made to reduce long waiting times at various service delivery points.

**Alam, S., Osama, M., Iqbal, F. and Sawar, I. (2018)**, "Reducing pharmacy patient waiting time", This paper states that various techniques and methods, including automated queuing technology, tele-pharmacy, automated

pharmacy device for quick and accurate filling and dispensing, computer simulation modelling, evidence-based pharmacy infrastructure for smooth workflow and Six Sigma methodology can improve customer satisfaction, reduce more waiting time, attract some new customers, decrease workload and improve the organization's reputation.

**Sitzia, J. and Wood, N. (1997)**, Patient Satisfaction: A Review of Issues and Concepts, Sitzia and Wood review the literature and suggest that patient satisfaction could be assessed by measuring the degree to which patients believed that care possesses certain attributes and they also suggest that satisfaction is not single concept made up of multiple determinants, but that there exists three independent models of satisfaction, each associated with one determinant. Thus, there is the "need for the familiar," the "goals of help seeking" and the "importance of emotional needs." Furthermore, there is evidence that there are two states of satisfaction, stable ones related to health care generally and dynamic ones related to specific health care interactions.

### **III. STATEMENT OF THE PROJECT**

Pharmacy is an extensively used therapeutic division and many patients attend for their prescriptions. Patients arrive at the pharmacy randomly after visiting different hospital departments. Patient satisfaction depends upon service quality. To increase the likelihood that patients return to the same organization, it is important that they should be satisfied with the facilities, which decreases the possibility that they will seek similar services elsewhere. Holding on to the same customer can save time and money owing to less advertisement and promotion, creating accounts for fresh patients and explaining hospital procedures and treatment guidelines. Moreover, the cost required to attract new customer is five times more than retaining current patients. Therefore, customer services influence the organization's bottom line.

### **IV. OBJECTIVES**

- 1.To study the level of patient satisfaction at In-house pharmacy in KMCH.
- 2.To study the different factors affecting patient satisfaction over In-House pharmacy.
- 3.To determine if pharmacy setting influences patient satisfaction
- 4.To suggest measures for improvement of pharmacy services leading to better patient satisfaction.

### **V. RESEARCH GAP**

Even though, several studies have been conducted with regard to patient satisfaction over in house pharmacy. Only limited studies have been conducted in giving suggestions for reducing the waiting time and improving the satisfactions over the patients. Therefore, this study intended to study the overall satisfaction over pharmacy services in KMCH hospital.

#### **5.1 SCOPE OF THE STUDY**

This study establishes statistical evidence that patient satisfaction is positively influenced by service promptness, pharmacist attitude, medication counselling, pharmacy location and waiting area. Several socio-demographic characteristics have statistically different effect on satisfaction.

## 5.2 METHODOLOGY

A descriptive study was conducted at KMCH Multi specialty hospital. A validated self-administered, anonymous and descriptive questionnaire was used to address the study and find the satisfaction level of patients. Eligible participants were patients or caregivers aged 18-80 years old, who visited the In-house pharmacy for filling their prescription during their visiting hours. Participants were selected based on convenient. Participants who wished to fill the survey were asked voluntarily to fill the survey and handed back it at the same time in overall pharmacy. Any participant who couldn't read the survey in English was excluded. In this study the population was infinite and the participations were selected based on their convenient level, because of this Non probability convenient sampling technique is used for this project. The sample size of this project is 182 from different sections of population

The survey consisted of 24 questions divided into 5 sections: The first section included five questions related to social and demographic characteristics, the second section contained within five questions assessed patients satisfaction with pharmacy layout and waiting area; the third section evaluated patients perception regarding their interaction with pharmacists in six statements, The fourth section included four questions about pharmacists' skills and the last section evaluated the overall satisfaction in two statements. For additional comments, participants were asked to write their feedback in additional section. Questionnaire items were measured using a five-point Likert scale responses: 1) strongly agree, 2) agree, 3) neutral, 4) disagree and 5) strongly disagree.

## 5.3. LIMITATIONS

1. There is a need to manage the crowd and mentality of the people who are under the medications in order to get the survey in In-house pharmacy at KMCH hospital
2. Only samples around 200 patients are going to take out of those many peoples who using the In-house pharmacy at KMCH hospital

# VI. RESULTS

**6.1 ONE WAY ANOVA:** The one-way analysis of variance (ANOVA) is used to determine whether there are any statistically significant differences between the means of two or more independent (unrelated) groups (although you tend to only see it used when there are a minimum of three, rather than two groups).

To measure the significances association between demographic factor and commitment factors.

**Table 6.1.1:** one way anova analysis

		Sum of Squares	df	Mean Square	F	Sig.
considerationB1	Between Groups	.040	2	.020	.073	.930
	Within Groups	49.946	183	.273		
	Total	49.986	185			

explanationB2	Between Groups	1.463	2	.731	2.465	.088
	Within Groups	54.294	183	.297		
	Total	55.757	185			
generalaspectsB3	Between Groups	.878	2	.439	1.370	.257
	Within Groups	58.611	183	.320		
	Total	59.489	185			
financialaspectsB4	Between Groups	.658	2	.329	1.032	.358
	Within Groups	58.344	183	.319		
	Total	59.002	185			
accessabilityB5	Between Groups	.186	2	.093	.331	.719
	Within Groups	51.535	183	.282		
	Total	51.721	185			

#### ***Consideration Aspects:***

##### ***HYPOTHESIS***

H<sub>0</sub>: There is no significant relationship between the age of patients and with consideration aspects.

H<sub>1</sub>: There is significant relationship between the age of patients and with consideration aspects.

##### ***INTERPRETATION***

The above table shows the one-way Anova between the age of patients and with the consideration aspects, From the table it is inferred that the P-value(P=0.930) which is greater than the significance level states that there is no significance difference between age of patients and with consideration aspects. Therefore H<sub>0</sub> is accepted and H<sub>1</sub> is rejected.

#### ***Explanation Aspects:***

##### ***HYPOTHESIS***

H<sub>0</sub>: There is no significant relationship between the age of patients and with explanation aspects.

H<sub>1</sub>: There is significant relationship between the age of patients and with explanation aspects.

##### ***INTERPRETATION***

The above table shows the one-way Anova between the age of patients and with the explanation aspects. From the table it is inferred that the P-value ( $P=0.088$ ) which is lesser than the significance level states that there is significance difference between age of patients and with the explanation aspects. Therefore  $H_1$  is accepted and  $H_0$  is rejected.

#### ***General Aspects:***

##### ***HYPOTHESIS***

$H_0$ : There is no significant relationship between the age of patients and with General aspects.

$H_1$ : There is significant relationship between the age of patients and with General aspects.

##### ***INTERPRETATION***

The above table shows the one-way Anova between the age of patients and with the General aspects. From the table it is inferred that the P-value ( $P=0.257$ ) which is greater than the significance level states that there is no significance difference between age of patients and with General aspects. Therefore  $H_0$  is accepted and  $H_1$  is rejected.

#### ***Financial Aspects:***

##### ***HYPOTHESIS***

$H_0$ : There is no significant relationship between the age of patients and with Financial Aspects.

$H_1$ : There is significant relationship between the age of patients and with the Financial Aspects.

##### ***INTERPRETATION***

The above table shows the one-way Anova between the age of patients and with Financial Aspects. From the table it is inferred that the P-value ( $P=0.358$ ) which is greater than the significance level states that there is no significance difference between age of patients and with Financial Aspects. Therefore  $H_0$  is accepted and  $H_1$  is rejected.

#### ***Accessibility:***

##### ***HYPOTHESIS***

$H_0$ : There is no significant relationship between the age of patients and with the age of the employees and Accessibility.

$H_1$ : There is significant relationship between the age of patients and with the age of the employees and Accessibility.

##### ***INTERPRETATION***

The above table shows the one-way Anova between the age of patients and with Accessibility. From the table it is inferred that the P-value ( $P=0.719$ ) which is greater than the significance level states that there is no significance difference between age of patients and with the Accessibility. Therefore  $H_0$  is accepted and  $H_1$  is rejected.

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.702 <sup>a</sup>	.493	.479	.35852

a. Predictors: (Constant), accessibilityB5, considerationB1, explanationB2, financialaspectsB4, generalaspectsB3

## 6.2 REGRESSION

Regression is a statistical method used in finance, investing, and other disciplines that attempts to determine the strength and character of the relationship between one dependent variable, This analysis is used as a tool to test the hypotheses.

In some situations regression analysis can be used to infer causal relationships between the independent and dependent variables. Importantly, regressions by themselves only reveal relationships between a dependent variable and a collection of independent variables in a fixed dataset. To use regressions for prediction or to infer causal relationships, respectively, a researcher must carefully justify why existing relationships have predictive power for a new context

**Table 6.2: 1 ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	22.520	5	4.504	35.041	.000 <sup>b</sup>
Residual	23.136	180	.129		
Total	45.656	185			

a. Dependent Variable: waitingtime

b. Predictors: (Constant), accessibilityB5, considerationB1, explanationB2, financialaspectsB4, generalaspectsB3

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.515	.136		3.797	.000
considerationB1	.076	.065	.079	1.173	.242
explanationB2	.150	.075	.166	2.002	.047
general aspectsB3	.196	.080	.224	2.446	.015
financial aspectsB4	.146	.072	.166	2.043	.043
accessibilityB5	.199	.068	.212	2.913	.004

a. Dependent Variable: waiting time

## VII. CONCLUSIONAND FUTURE IMPLEMENTAION

Thus the above results and the models shows that the main reason for lag in patient satisfaction is depends on waiting time of out-patients, whereas when we compared to the pharmacy services over in -patients they provide a pneumatic structures and a belt drivers to transfer medicine within 30 second over any wards inside the hospital but its comes to the problem on waiting time over out-patient pharmacy

Due to this there is lag on patient satisfaction over pharmacy services because of this problem on waiting time , around 40 percentage of people prefer outside pharmacies, so there is a need to arise a solution to improve the satisfaction level

Use of colored bill as like the color cards used in football matches some colored prescription bills are used that could be allocated with respective color counters ,so by using this for example

- Green color -only less prescript medicines available in bills
- Red color-Severe and emergency prescript medicines are available in bills
- Yellow color-normal medications available
- Black -medications with physical guide from the pharmacist also needed or some counselling is needed

Like this way of using separate counters along with needed manpower this waiting time is so much reduced. Which in turn improves the patient satisfaction, Thus the solution for the problem is successfully obtained



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