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Original Research

An Examination of the Disparities Between Patient Expectations and Perceptions about Drug Delivery Operations at the Outpatient Pharmacy in the Hospital

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Abstract

Patient satisfaction with services can be determined by comparing patient perceptions and expectations. The Outpatient Pharmacy of Hospital X in Pangkalpinang City experienced problems in drug delivery because the information was not based on medical records and patient clinical data, resulting in biased information being conveyed. It conveyed information can cause differences between patient expectations and perceptions. It analyzed the differences between patient expectations and perceptions of drug delivery activities at the Outpatient Pharmacy of Hospital X Pangkalpinang City based on the 5 SERVQUAL dimensions: reliability, responsiveness, assurance, empathy, and tangibles. This research was a comparative analytic study using a cross-sectional approach. The research instrument was a questionnaire, and it was analyzed using Mann-Whitney. Respondents were patients/families of the Outpatient Pharmacy patients at Hospital X in Pangkalpinang City, totaling 130 people. The results showed significant differences between patient expectations and perceptions of drug delivery activities at the Outpatient Pharmacy at Hospital X Pangkalpinang City, with a P-value <0.05. The most enormous gap between expectations and perceptions was in the empathy dimension. Outpatient Pharmacy officers at Hospital X Pangkalpinang City can improve drug delivery services by focusing on the dimensions of assurance, tangibles, and responsiveness and addressing improvements to empathy and reliability.

Keywords: Expectations, Drug Administration, Perceptions, Hospitals, SERVQUAL

INTRODUCTION

Pharmaceutical service standards are guidelines for pharmaceutical personnel providing pharmaceutical services (Ministry of Health, 2016). The paradigm of pharmaceutical services has shifted from being only drug-oriented to being drug- and patient-oriented so that pharmacy officers are required always to maintain service quality. Quality health services mean satisfying patients in accordance with the established code of ethics (Novaryatiin et al, 2018).

The Outpatient Pharmacy installation at Hospital X in Pangkalpinang has improved the appearance of the pharmacy unit, which differs from pharmacy units in other hospitals. These improvements were made to support superior service by delivering medicines in a particular room to create more private consultations regarding medicines between patients and pharmacists. However, there are problems when dispensing drugs at the outpatient pharmacy because the explanation is based on something other than the patient's medical record data and clinical data. This is because the hospital's Management Information System (SIM) is not yet connected, so the information conveyed is biased.

In 2022, there will be an increase in the number of prescriptions at the Outpatient Pharmacy of Hospital X in Pangkalpinang by 41% compared to the previous year. The increasing number of prescriptions is not offset by an increase in the number of Human Resources (H.R.) providing medication delivery. The absence of additional human resources affects the quality of service and patient satisfaction when delivering medicines. The Ministry of Health (2008) states that the standard indicator of patient satisfaction with outpatient services is ≥ 90%. The Outpatient Pharmacy installation Hospital X in Pangkalpinang has never conducted a patient satisfaction survey regarding drug delivery activities, so it is necessary to see the extent of patient satisfaction with the drug delivery service with the implementation of the new system.

Patient satisfaction can be said to be a benchmark for determining the quality of services provided by the Hospital Pharmacy Installation (IFRS). Measuring service quality in general can be done using the SERVQUAL method, which is a term for service quality. SERVQUAL analysis is based on five dimensions of service quality, namely reliability, responsiveness, assurance, empathy, and tangibles (Parasuraman et al, 1998). The SERVQUAL method is built on comparing two main factors; namely, customer perceptions of the service received and customer expectations. If the perception is more than what the customer expects, then the service can be said to be of quality, whereas if the perception is less than what the customer expects, then the service can be said to be of poor quality (Sinollah and Masruro, 2019).

Patient satisfaction can be determined by comparing the patient's perceptions and expectations of the services provided. Through analysis of patient expectations and perceptions of drug delivery activities, it can be seen to what extent the SERVQUAL dimensions that have been implemented can meet patient expectations (Haryono, 2020). If the resulting patient satisfaction is reasonable, it means that the drug delivery service provided by the outpatient pharmacy installation is also good. However, if the resulting patient satisfaction is not reasonable, it means that a special evaluation needs to be carried out regarding the drug delivery services provided by the hospital (Rahmawati et al, 2020).

Based on the above background, the formulation of the problem in this study is that there are differences between patient expectations and perceptions of drug delivery activities at the Outpatient Pharmacy of Hospital X Pangkalpinang City in terms of 5 SERVQUAL dimensions, namely reliability, responsiveness, assurance, empathy, and tangibles.

METHODS

This research was a comparative analytical, quantitative research with a cross-sectional approach that analyzes patient expectations and perceptions of drug delivery activities at the Outpatient Pharmacy Hospital X in Pangkalpinang with five dimensions of SERVQUAL, namely reliability, responsiveness, assurance, empathy, and realness.

The study population consisted of patients and their families who received medication from the Outpatient Pharmacy Installation. The participants in this study were individuals or families of individuals receiving outpatient care at Hospital X in Pangkalpinang, who satisfied the specified criteria for inclusion and exclusion as research subjects. The study included a total of 130 outpatient samples. The study's inclusion and exclusion criteria encompassed outpatient patients and their families who were willing to participate as respondents, aged between 17 and 65 years, had proficient reading and writing skills, and having filled prescriptions or taken medicine at least twice in the medicine delivery room. However, individuals who were not employed or related to employees were not included in this study.

The sampling technique used in this research was accidental sampling. Accidental sampling was a technique for determining samples based on chance, namely patients who happen to meet researchers at the Outpatient Pharmacy Hospital X in Pangkalpinang while the research was in progress. This research used an instrument in the form of a questionnaire containing statements from the dimensions of reliability, responsiveness, assurance, empathy, and tangibles to determine patient expectations and perceptions regarding drug delivery activities. The questionnaire was tested for validity and reliability on respondents at the Regional General Hospital (RSUD) Dr. (H.C.) Ir. Soekarno, Bangka Belitung Islands Province, because it has the same characteristics as the researcher's research site, namely a government hospital, and drug delivery activities are carried out by pharmacists.

Data analysis in this research consisted of univariate and bivariate analyses. Univariate analysis was carried out to determine the frequency distribution of respondent characteristics with the help of a statistical program. Bivariate analysis aimed to test hypotheses regarding whether or not there are significant differences in the variables studied (Sutriyawan, 2021). This research was a hypothesis test on the average. The hypothesis testing was carried out with the help of a statistical program. It was tested statistically parametrically using the T-Test Independent. However, in cases where the test assumptions were not fulfilled, the analysis proceeded with a non-parametric test known as the Mann-Whitney test.

RESULTS

Validity and Reliability Test

This research uses an instrument in the form of a questionnaire combined and modified from Arsinta (2021) and Prihartini et al. (2022). A total of 15 statements from Arsinta (2021) and ten statements from Prihartini et al. (2022) were combined and modified, after which validity and reliability tests were carried out. The validity and reliability test of the questionnaire was carried out on 30 respondents who were patients/families of patients at the Outpatient Pharmacy Installation at Dr. RSUD. (H.C.) Ir. Sukarno, Bangka Belitung Islands Province.

Based on the validity test using the Pearson Correlation method, 25 questionnaire statements were declared valid with a calculated r value > r table (0.361); therefore, all statements in the questionnaire could be used in research. After the validity testing, a reliability test was carried out to determine the consistency of respondents' answers if the instrument was used again at a different time and place, as stated (Haryono, 2020). Reliability testing was carried out on 25 valid statements. The results of the reliability test showed that the Cronbach's Alpha value for the expectation statements was 0.950 (>0.600) and the Cronbach's Alpha value for the perception statements was 0.939 (>0.600); therefore, the instrument was declared reliable and could be used in the research.

Characteristics of Respondents

Respondents in this study totaled 130 respondents with predetermined inclusion and exclusion criteria.

Table 1. Characteristics of Respondent

Characteristics Respondent	Number of Respondents (n=130)	Frequency (%)
(1)	(2)	(3)
Gender		
Man	42	32,3
Woman	88	67,7
Age		
17-25	17	13,1
26-35	31	23,8
36-45	34	26,2
46-55	28	21,5
56-65	20	15,4
Education		
Elementary school	27	20,8
Junior high school	22	16,9
Senior high school	53	40,8
D3	9	6,9
S1/S2/S3	19	14,6
Work		
Does not work	5	3,8
Student/Students	3	2,3
Government employees	9	6,9
Private employees	14	10,8
Self-employed	15	11,5
Etc:		
Housewife	51	39,2
Farmer	9	6,9
Daily Laborer	5	3,8
Honorary	7	5,4
Retired	7	5,4
Teacher	1	0,8
Sales	2	1,5
Fisherman	1	0,8
Others	1	0,8
Number of Visits		
1 times	27	20,8
2 times	15	11,5
3 times	10	7,7
4 times	78	60,0

Data source: Primer data

In this study, the respondents who visited the Outpatient Pharmacy at Hospital X in Pangkalpinang were 88 women (67.7%) compared to men. Mahendro et al. (2022) stated that women use health services more because they are more susceptible to disease than men. According to Yanti et al. (2021) women pay more attention to detailed services so that the assessment of drug delivery will be more objective.

Based on the age of the respondents, the most significant number of respondents were in the age groups 36-45 years and 26-35 years, with the respective numbers being 34 people (26.2%) and 31 people (23.8%). This age range falls into the categories of late adulthood and early adulthood. Age plays a role in a person's assessment of the drug delivery activities given. According to Mujiburrahman et al. (2020), the more mature a person is, the more mature their

thinking patterns and comprehension skills are so that the answers to the statements can be justified.

The highest education level of respondents was SMA/SMK/MA, with the number of respondents being 53 people (40.8%). Education is closely related to knowledge. According to Ngula (2019), patients with higher education tend to critically evaluate services because they have extensive information so that the majority of respondents have an education equivalent to high school, which can provide an objective assessment of the statements given.

Based on the type of job, respondents who filled in the most other options with jobs were housewives, 51 people (39.2%). Mothers pay more attention to health services for themselves and their families. According to Yanti et al. (2021), women pay more attention to detailed services so that housewives can provide a more factual assessment of drug delivery because a mother is more critical and detailed in the service.

Based on the number of visits, the respondents who made the most visits to the Outpatient Pharmacy at Hospital X in Pangkalpinang were >4 times, 78 people (60%). The number of patient visits influences the patient's assessment of medication delivery activities. According to Kalijogo et al. (2019), the higher the frequency of patient visits, the more patients understand the advantages and disadvantages of a service in detail so that patients can describe a service well.

Table 2. Mann-Whitney Mean Difference Test Results between Expectations and Perceptions of Drug Delivery Operations at the Outpatient Pharmacy

Dimensions	Expectations (n=130)	Perceptions (n=130)	P-value
Reliability	4,6 (3,6-5)	4,4 (2,8-5)	0,001
Responsiveness	4,6 (3,4-5)	4,3 (3,2-5)	0,010
Assurance	4,6 (3,8-5)	4,4 (3-5)	0,025
Empathy	4,6 (2-5)	4,2 (2-5)	0,002
Tangible	4,6 (3,4-5)	4,4 (3,4-5)	0,037

Data source: Primer data

There was a significant difference between patient expectations and perceptions of delivery activities at the UPTD Outpatient Pharmacy of Hospital X Pangkalpinang City on the SERVQUAL dimension, indicated by a P-value < 0.05 (Table 2). The gap between expectations and perceptions occurs in the SERVQUAL dimension. This showed that patient expectations were higher than perception. The smallest gap value is in the tangible dimension, and the most enormous gap was in the empathy dimension (Table 3). The smallest gap indicates that the patient's perception was close to expectations, while the most significant gap indicates that the patient's perception differed considerably from expectations.

Table 3. Analysis of Differences in Expectations and Perceptions Based on Average Dimensions of SERVQUAL

Dimensions	Average		Gap
	Expectations	Perceptions	
Reliability	4,56	4,37	-0,19
Responsiveness	4,51	4,36	-0,15
Assurance	4,58	4,45	-0,13
Empathy	4,51	4,30	-0,21
Tangible	4,56	4,44	-0,12

Data source: Primer data

ORIGINAL RESEARCH

DISCUSSIONS

Reliability

There was a significant difference between patient expectations and perceptions of delivery activities at the Outpatient Pharmacy Hospital X Pangkalpinang on the reliability dimension. The gap between expectations and the smallest perception of this dimension was in the statement, "Staff provide information about drugs in a language that was easy to understand," with a gap value of -0.10. The patient's perception of this statement is close to expectations, although there is still a gap. Outpatient Pharmacy Officers at Hospital X in Pangkalpinang need to improve the delivery of drug information in a more communicative language so that there is no gap between patient expectations and perceptions in the future. According to the Ministry of Health (2016), pharmacists must provide drug information that is correct, clear, easy to understand, accurate, unbiased, ethical, wise, and up-to-date to patients. Providing drug information using language that is easy to understand will reduce the risk of medication errors. Sudarsono (2023) stated that drug delivery at the UPTD Outpatient Pharmacy at Hospital X in Pangkalpinang City through the stages of the pharmacist assessing the patient is included in categories 1, 2, 3 or 4. Next, the pharmacist dispenses the drug based on the drug information needed by the patient. Drug delivery for each prescription considers the level of complexity of the clinical information that must be conveyed. Submission of drug information is explained by the pharmacist in language that is easy to understand so that patients understand that the expected therapeutic effect is achieved.

The biggest gap between expectations and perceptions was in the reliability dimension in the statement "staff delivered the medicine quickly," with a gap value of -0.34. Isabella (2020) states that the speed with which the staff delivers the drug will make patients feel comfortable while receiving service, thereby affecting patient satisfaction with service because patients do not have to wait long, which can cause patient boredom. The level of time pharmacists need in drug delivery based on the prescription category is sorted from the fastest, namely 1> 2> 3> 4. The community does not understand the new system because usually, the delivery of drugs to patients only conveys minimal information, so the time needed is fast. Patients who do not understand the proper usage rules can experience difficulties in taking the drug correctly, thereby affecting the effectiveness of treatment (Sudarsono, 2023). Therefore, to improve drug delivery services quickly, the pharmaceutical installation can analyze the most drug delivery categories in the Outpatient Pharmacy at Hospital X.

Responsiveness

There was a difference between patient expectations and perceptions of delivery activities in responsiveness dimension. The gap between expectations and the slightest perception of this dimension was in the statement "staff answered all patient questions," with a gap value of -0.11. The patient's perception of this statement is close to expectations, although there is still a gap. Outpatient Pharmacy Officers at Hospital X in Pangkalpinang need to increase their alertness in answering patient questions so that there will be no gap between patient expectations and perceptions.

According to the Ministry of Health (2016), in drug information services, when delivering drugs, pharmacists are required to answer patient questions related to drugs. The importance of answering patient questions aims to avoid drug use errors (Parihatun, 2018). Sudarsono (2023) states that answering patient questions is an attitude of respecting patient rights. Pharmacists are obliged to fulfill patient rights by providing information needed by patients.

The biggest gap between expectations and perceptions was in the responsiveness dimension in the statement "staff demonstrating how to use special drugs to patients," with a gap value of -0.25. Demonstrating how to use particular drugs such as insulin, eye ointments, suppositories, and ear drops is very important for pharmacists and patients to avoid drug use errors. The Ministry of Health (2016) states that counseling can be carried out by

demonstrating and explaining how to use drugs, checking patient understanding, and identifying and solving problems related to how to use drugs to optimize therapeutic goals. Sudarsono (2023) stated that the number of pharmacists in the Outpatient Pharmacy of Hospital X in Pangkalpinang totaled two people, namely, one person in charge of dispensing and one person distributing drugs to patients. The number of prescriptions in 2022 at the Outpatient Pharmacy of Hospital X Pangkalpinang City is an average of 50/day. This compares to 1 pharmacist for 50 patients. Therefore, to improve services demonstrating the use of particular drugs to patients, the pharmacy installation can review the adequacy of the number of pharmacists in the outpatient pharmacy not only based on pharmaceutical service standards but also based on the conditions at the Hospital X Pangkalpinang City whether it is necessary to add pharmacists and rooms for drug delivery.

Assurance

The gap between expectations and the slightest perception of this dimension was in the statement, "the officer delivered the medicine in good condition," with a gap value of -0.05. The patient's perception of this statement is close to expectations, although there is still a gap. UPTD Outpatient Pharmacy Officers at Hospital X, Pangkalpinang City, need to improve monitoring of drug conditions every week so that there is no gap between patient expectations and perceptions in the future. Drugs in good condition mean that the quality and efficacy of the drug are maintained. Pharmacy officers ensure that the drugs given are in good condition and not damaged. The potential effect that can be caused if the drug is damaged is a decrease in the quality of the drug. A decrease in the quality of the drug will have an impact on the patient's therapeutic effect, which could be more optimal (Dinna, 2021). Ranti et al. (2021) stated that drugs that are not in good condition can cause damage to pharmaceutical preparations so that they affect patients. According to Sudarsono (2023), a prescription review covers administration, pharmaceuticals, and clinicals when a patient submits a prescription. Pharmaceutical and clinical studies were not carried out due to time constraints and medical record accessibility. Dispensing is carried out by the TTK and the pharmacist in charge of dispensing after verifying the prescription review. Before the medicine is handed over to the pharmacist in the drug delivery room, a final check is carried out to make sure the nine are correct, namely correct patient, correct polyclinic, correct doctor, correct drug, correct dosage form, correct drug strength, correct amount of drug, correct order of use, and correct expiration date.

The gap between expectations and perceptions was most significant in the assurance dimension in the statement "full drug availability guaranteed," with a gap value of -0.24. Amirudin and Septarani (2019) stated that the availability of drugs used for health services must at least be equal to the number of drug needs that should be available. If the availability of drugs is fulfilled, there will be a supply of drugs, which will result in treatment services not being carried out effectively, efficiently, and not optimally. Guaranteed drug availability can support health services (Satibi, 2015). Kaunang et al. (2020) stated that incomplete drugs caused patients to redeem prescriptions at other pharmacies, indirectly slowing down patients getting the drugs according to the prescriptions needed. According to Sudarsono (2023), the drugs at Hospital X in Pangkalpinang City are complete, and there is plenty of stock. There is a gap between expectations and perceptions caused by differences in patient understanding regarding the collection of leftover drugs at the Kimia Farma Pharmacy in collaboration with Hospital X Pangkalpinang City. Uniform understanding between the pharmaceutical installation and the patient is needed so that there are no gaps in the completeness of the drug statement. Therefore, to improve service and ensure the availability of drugs, the pharmaceutical installation can review the regulations so that all drugs are provided by the pharmaceutical installation so that patients do not need to leave the hospital to redeem the remaining drugs at the pharmacy.

Empathy

There was a significant difference between patient expectations and perceptions of delivery activities at the Outpatient Pharmacy Hospital X Pangkalpinang City on the empathy dimension. The gap between expectations and the smallest perceptions of this dimension was in the statements "staff are willing to help patients solve drug use problems" and "staff give good attention to all patients," with each gap value of -0.16. The patient's perception of this statement is close to expectations, although there is still a gap. Outpatient Pharmacy Officers at Hospital X in Pangkalpinang need to increase their attention and willingness to help patients so that there is no gap between the patient's expectations and perceptions in the future.

The willingness of pharmacy staff to listen to complaints experienced by patients regarding problems using drugs makes patients calmer. It provides hope that the complaints they experience will be quickly resolved (Yuanita et al, 2021). According to Mahendro et al. (2022), if the patient feels comfortable with the services provided, it will indirectly cause a feeling of wanting to return. In addition, officers who provide pharmaceutical services in a considerate manner will make it easier for patients to receive information and comply with the recommendations. Sudarsono (2023) stated that helping patients solve drug use problems and giving good attention to all patients is a pharmacist's obligation to fulfill patient rights. Pharmacists must respect patient rights and carry out their obligations as health workers to ensure that patients get their rights as patients.

The biggest gap between expectations and perceptions on the empathy dimension was found in the statement "staff is fair to all patients," with a gap value of -0.27. Pantoan et al. (2020) stated that pharmacy staff must provide equal treatment without differentiating ethnicity, nation, religion, social status, and race in health services. Fair behavior toward all patients can increase patient satisfaction because patients feel they are treated as they should (Yuanita et al, 2021). According to Sudarsono (2023), gaps occur because there are problems with the patient's knowledge and understanding of pharmacy services. Patients need to be used to seeing the clinical service system implemented by Hospital X, Pangkalpinang City. The drug delivery time needed by Category 1 patients cannot be equated with Category 4 because information delivery depends on the patient's condition. The discrepancy occurs because the patient feels unfair. In addition, some SOPs have not been implemented, such as closing the door when administering drugs, which makes patients feel uncomfortable. Therefore, the pharmaceutical installation can educate patients on the estimated time for drug delivery based on the prescription category to improve service to fair staff to all patients.

Tangible

The gap between expectations and the slightest perception of this dimension was in the statement "officers in neat uniforms," with a gap value of -0.03. The patient's perception of this statement was close to expectations, although there is still a gap. Pharmacy staff need to improve the neatness of appearance so that there was no gap between expectations and patient perceptions in the future. Susanti and Sari (2018) stated that the neat appearance of drug delivery officers provided satisfaction for the patients served. Patients will feel reluctant and comfortable seeing the officers who serve them. According to Sudarsono (2023), pharmacists delivering drugs at the Outpatient Pharmacy Hospital X in Pangkalpinang City use uniforms and neat clothes when serving patients. Neat attire can convey a sense of professionalism and build patient confidence.

The most significant gap between expectations and perceptions of the tangible dimension was found in the statement "drug labels can be read properly," with a gap value of -0.20. According to Octasari and Fatimah (2021), excellent and legible drug labels are essential because patients can take the medicine precisely according to the instructions, so there are no mistakes in reading the rules for taking the medicine. Complete and transparent information on drug labels will reduce the risk of medication errors. Anggreani (2018) states that incomplete labels can result in errors in drug delivery. Information on the drug label must be complete, containing the patient's name, age, date, drug name, dosage form, dosage strength, drug indication, directions, and how to use it. According to Sudarsono (2023), the

drug labels in the Outpatient Pharmacy Hospital X in Pangkalpinang City were still handwritten, and they should use a medication-taking schedule. Drug labels experience several problems because patients often forget the instructions given by officers after they leave the drug delivery room. So, to prevent this, it is planned to make a schedule for taking medication to be printed in the form of a sheet of paper, including information about the hours and medicines that must be taken by patients at certain hours. Its implementation encountered obstacles related to time and the need to access patient medical records to arrange the proper medication-taking schedule. Access to patient medical records is a crucial step to ensure that the schedule for taking medication is prepared according to the conditions and needs of individual patients. Therefore, the pharmaceutical installation can print labels and hold meetings with management and medical records to discuss the accessibility of medical records for making medication-taking schedules to improve services related to the legibility of drug labels.

CONCLUSIONS

There was a significant difference between patient expectations and perceptions of drug delivery activities at the Outpatient Pharmacy Hospital X Pangkalpinang City. Further research could involve setting priorities for improving the quality of drug delivery at Hospital X in Pangkalpinang City using the Importance Performance Analysis (IPA) method.

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