OPEN ACCESS

# Patient Satisfaction and Sanitation Standards: A Study of Hospital Environments in Kathmandu

**Surakshya Adhikari**
Health Care Management
Atharva Business College, Kathmandu Nepal
adhikaris2021@gmail.com
https://orcid.org/0009-0003-5973-181X

**Gita Pandey**
Health Care Management
Atharva Business College, Kathmandu Nepal
grishmapandey11@gmail.com
https://orcid.org/0009-0001-5737-2441

**Pushkar Singh Raikhola, PhD\***
Associate Professor
Tribhuvan University, Nepal
pushkarraikhola@yahoo.com
https://orcid.org/0000-0002-3434-0594

**Corresponding Author\***

## Abstract

**Background***:* Hospital environments and sanitation play a critical role in influencing patient satisfaction and overall healthcare outcomes. Despite its significance, this aspect often remains underexplored, particularly in the context of diverse patient demographics in urban healthcare settings. **Objective***:* The study aimed to evaluate patient satisfaction with hospital environments and sanitation practices in Kathmandu, focusing on demographic influences and patient experiences. **Methods***:* A deductive and descriptive research design was employed, involving 109 patients from various hospitals in Kathmandu. Participants, aged 15 years and above, were selected through a convenient sampling method. Data were collected using a

structured questionnaire covering demographic factors, hospital admission methods, and patient perceptions of sanitation and treatment outcomes. Descriptive statistics, including frequencies and percentages, were used to analyze the data. **Results***:* The majority of participants were aged 20-25 years (38.5%), with a near-equal gender distribution (52.3% male and 47.7% female). A significant portion were single (67%) and held graduate-level education (39.4%). Nearly half of the respondents were students (49.5%), and 45.9% reported monthly incomes between NPR 5,000-10,000. Most participants accessed hospitals via the Outpatient Department (73.4%) and had been admitted 1-2 times (56%). Short hospital stays (2 days) were most common (47.7%). An overwhelming majority (98.2%) reported health improvements after treatment, highlighting patient satisfaction. **Conclusion***:* Patient satisfaction with hospital environments and sanitation in Kathmandu is influenced by demographic factors such as age, education, and income. Findings underscore the need for tailored strategies to improve hospital sanitation and enhance patient experiences, particularly for young adults and economically disadvantaged groups.

**Keywords:** Hospital environment, sanitation, patient satisfaction, Kathmandu hospitals, healthcare outcomes.

## Introduction

### Background

Hospitals are the basic organization of our society with the aim to indorse the health of the members of the society. World health organization defines hospital as "an integral part of social and medical organization, which provide complete health care both curative and preventive and whose outpatient services reach out to the family in its home environment." Hospitals complement and amplify the effectiveness of many other parts of the health system, providing continuous availability of services for acute and complex conditions. They concentrate scarce resources within well-planned referral networks to respond efficiently to population health needs. Hospitals are also an essential part of health system development.[1][28]

The environment and sanitation in a hospital are vital matters which can greatly influence patient care and the outcomes of health. In addition to preventing infection, a clean and well-maintained environment also improves patient comfort and confidence in the medical center. Good sanitation practices include, cleaning hospital facilities, disposing of waste properly and following strict infection rules. This include emptying patient rooms, operating theatres, and communal areas, cleaning surfaces, and sterilizing equipment [2]. Inpatient ambiance also includes ventilation, light control, noise control and aesthetics of the place of stay, the hospital in general.

In a hospital setting, proper sanitation is paramount to prevent infections. Regular cleaning, proper waste disposal, and ventilation are crucial. Sufficient hygiene practices among staff further ensure a safe environment. Healthcare facilities must also adhere to stringent sterilization protocols to minimize the risk of contamination [3]. Proper hand hygiene, sterilization of medical equipment, and disinfection of high-touch surfaces play a crucial role

in infection control. Additionally, implementing isolation procedures for patients with communicable diseases is essential to prevent the spread of infections within the hospital setting. Staff must undergo regular training sessions to stay updated on the latest infection control practices and guidelines [4][5][6]. By upholding these rigorous standards, hospitals can maintain a safe and sanitary environment for both patients and healthcare workers alike. Ensuring compliance with infection control measures is a shared responsibility among healthcare providers, patients, and visitors in hospitals. Active participation in hand hygiene promotion campaigns and adhering to proper personal protective equipment usage can significantly reduce the risk of infections. Collaborative efforts to maintain a hygienic environment not only protect individuals within the healthcare setting but also contribute to better patient outcomes and overall healthcare delivery [7].

In the recent year's patient satisfaction around the cleanliness and environment of hospitals provides attracted significant attention, reflecting accomplishments broader agenda of top quality health care provision. In the past, hospital care was largely about medical outcomes and the quality of surgeon and medical treatment. But with the increasing focus on patient-centered care as a fundamental characteristic of healthcare systems worldwide, the physical and environmental factors of patient care spaces are becoming central to this discussion [8]. Cleanliness and sanitation are the basic history in a hospital environment and these affect the direct perception & satisfaction of the patients. Research has consistently found that patients' perceptions of how clean hospitals are can influence their overall satisfaction, perceptions of the quality of care they received, and even whether they would recommend the hospital to others.

Nepal's healthcare system is a mix of public and private providers, with significant disparities in quality and access across urban and rural areas [9][10]. The hospitals of Nepal suffer not only from overcrowding, infrastructure constraints, and limited resources but subsequent decrease in the cleanliness and hygiene of health care facilities too. How satisfied a hospital is playing an important role in determining how well the care they deliver, for example patients' experiences and perceptions of, and their reflection on the quality of health care provided.

**Problem Statement**

Despite the growth in the development of hospitals in Nepal, the question of the environment and sanitation within hospital is a major concern because patient satisfaction towards the cleanliness and overall environment of hospitals is still a key issue of concern. Although there are erasures of the physical structure of healthcare facilities and ways of working, clean environments and responding to sanitation practices remain a critical and sensitive tug of war. This research addresses the following issues:

- Is there a relationship between environment/sanitation and the level of patient satisfaction in hospital?

- What role does environment/sanitation plays in providing good healthcare facilities to patients?

 - Does good relationship between patient and environment/sanitation provides better outcomes or productivity?

**Significance of the study**

Patient satisfaction is a crucial indicator of healthcare quality, directly impacting patient outcomes and overall health system efficiency. In Nepal, issues such as inadequate sanitation, poor waste management, and substandard hospital environments are prevalent, often exacerbated by limited resources and infrastructure constraints. Evaluating patients' satisfaction with these aspects provides critical insights into the existing gaps and areas requiring improvement. Furthermore, understanding patients' perspectives on hospital sanitation can drive policy changes and resource allocation to enhance hygiene standards, reduce infection rates, and improve patient well-being.

**Objectives**

- To determine the general level of satisfaction among patients regarding the hospital environment /sanitation conditions.
- To identify the weaknesses in the environmental and sanitation practices that may exist in the hospital and recommend likely ways to improve it to increase patient satisfaction.
- Analyze how environmental and sanitation circumstances impacted the patient experience, encompassing factors such as safety, wellness, and willingness to return/recommend this hospital.

**Theoretical frameworks**

A theoretical framework in research can be defined as a set of concepts, theories, ideas, and assumptions that help you understand a specific phenomenon or problem. It can be considered a blueprint that is borrowed by researchers to develop their own research inquiry. A theoretical framework in research helps researchers design and conduct their research and analyze and interpret their findings [11][12].

This study proposed to apply the Patient Satisfaction Behaviorally Minimal Model (PSB Model) for understanding patient satisfaction toward the environment and sanitation of hospitals taking that this concept is a form of behavior and to which has several items in the surroundings and in need to be understood the perception health quality, and perspectives, the environmental psychology and the patient satisfaction models were used. In terms of core model of healthcare quality originally conceptualized by Donabedian, quality is a framework which focuses on the inter-relationship between structure (hospital environment and facilities), process (sanitation practices and procedures) and outcomes (patient and health outcomes) [13] [14]. Conceptually, these findings agree with environmental psychology theories that the physical environment of the hospital influences patient well-being and recovery, signifying that an environment designed to be clean, well-maintained, and beautiful benefits identify patient satisfaction and perceived quality of care.
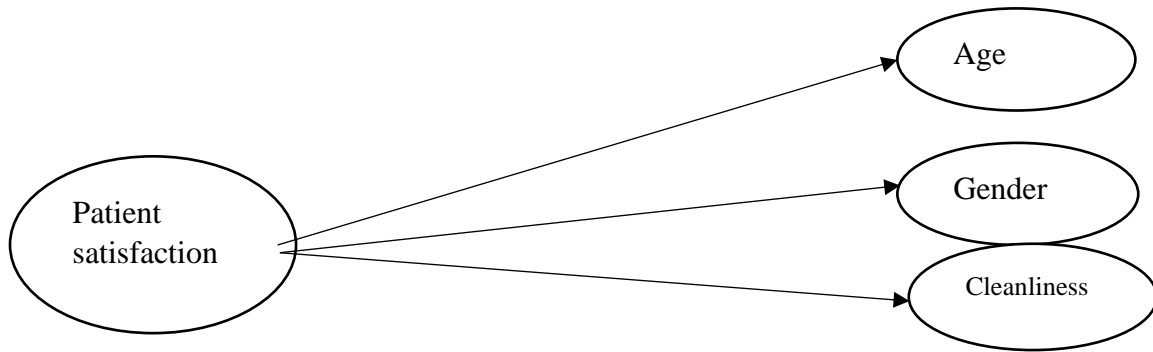
Figure 1 Conceptual Framework

## Literature Review

Overview of Global Healthcare It is fact that today there are so many challenges to healthcare all over the world comparatively in the past. Though, these challenges would push healthcare provider to modernize in different and moving ways and to produce technical medical advances which help in the development of health of the people around the world. Many countries around the world have a difficult challenge to achieve the fast rising cost of healthcare [15].

In a hospital setting, proper sanitation is paramount to prevent infections. Regular cleaning, proper waste disposal, and ventilation are crucial. Sufficient hygiene practices among staff further ensure a safe environment. Healthcare facilities must also adhere to stringent sterilization protocols to minimize the risk of contamination. Proper hand hygiene, sterilization of medical equipment, and disinfection of high-touch surfaces play a crucial role in infection control [16] [17].

Patient satisfaction is a measure of the extent to which a patient is content with the health care they received from their health care provider. Patient satisfaction is one of the most important factors to determine the success of a health care facility. The purpose of this study was to determine patient satisfaction with healthcare services (environment and sanitation) and encompass the physician's behavior as moderation between patient satisfaction and healthcare services [18] [19].

The hospital environment is a complex one and contains a large variety of microbial flora. Various parts of the hospital environment can harbor reservoir(s) of microbes many of which can constitute an infection risk to patients as well as visitors and healthcare workers. Surfaces with higher frequency of hand contact are more likely to be a source of infection than surfaces with low degree of contact. It was concluded from the findings of the study that clean and pure food, clean medical equipment's and cleanliness in the premises of hospital were the dimensions which had impact on patients" satisfaction [20] [21]. Thus high touch surfaces (e.g., handles, bedside tables, etc.) in the patient care area are a more significant source of infection than low touch surfaces such as walls and floors. Thus proper sanitation and maintenance of hygiene through proper cleaning and disinfection of hospital circulation areas,

environmental surfaces and patient care items assume significant importance in any healthcare setting [22] [23].

The factors which were cleanliness in washrooms and cleanliness in wards were found associated with patient's perception [24]. In many studies it was found that clean and hygienic environment, clean and pure food and cleanliness in the labs and wards of the hospital found positively associated with patient's satisfaction. Several studies were done in the china and it was found that clean and hygienic environment of the hospital was associated with patient's satisfaction. It was concluded from the findings of the study that clean and pure food, clean medical equipment's and cleanliness in the premises of hospital were the dimensions which had impact on patient's satisfaction. It was concluded in a study conducted in America that hospital clean and hygienic environment was found associated with patient's satisfaction. Again, in another study clean hospital environment was found associated with patient's satisfaction.

## Methods and Materials

This study employed an deductive research approach, suitable for analyzing environmental and sanitation aspects of hospitals, particularly with a relatively small sample size. A descriptive research design was utilized to gather detailed insights into patient satisfaction with hospital environments and sanitation. The study was conducted in various hospitals in Kathmandu, ensuring diversity in patient perceptions. The target population included male and female patients aged 15 years and above who had been admitted for at least 24 hours, provided informed consent, and were capable of understanding and responding to survey questions. Patients in critical conditions, with severe cognitive impairments, or unable to communicate effectively were excluded. A total of 109 patients were selected using a convenient sampling technique. Data were collected using a structured questionnaire, administered directly to patients and their visitors, with each survey requiring approximately 5–10 minutes to complete.

## Results and Analysis

**Data Analysis**

Table 1: Demographic Information (Age)

| Age | | | | | |
|-----|-----|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 15-20 | 17 | 15.6 | 15.6 | 15.6 |
| | 20-25 | 42 | 38.5 | 38.5 | 54.1 |
| | 25-30 | 21 | 19.3 | 19.3 | 73.4 |
| | 30 above | 29 | 26.6 | 26.6 | 100.0 |
| | Total | 109 | 100.0 | 100.0 | |

The table displays the age distribution of a sample population of 109 hospital patients surveyed regarding their satisfaction with the hospital environment. The age group 20-25 is the most represented, with 42 respondents, constituting 38.5% of the sample. This is followed by the

age group 30 and above, with 29 respondents making up 26.6%. The 25-30 age group includes 21 respondents, accounting for 19.3% of the sample. The youngest age group, 15-20, has 17 respondents, which represents 15.6% of the sample. The cumulative percentages show the progressive addition of each age group's contribution to the total, reaching 100% with the 30 and above group. These figures indicate a diverse age representation, with the largest segment being young adults aged 20-25, which could be useful for understanding how age impacts patient satisfaction with the hospital environment.

Table 2: Demographic Information (Gender)

| Gender | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Male | 57 | 52.3 | 52.3 | 52.3 |
| | Female | 52 | 47.7 | 47.7 | 100.0 |
| | Total | 109 | 100.0 | 100.0 | |

The table presents the distribution of gender among a sample population of hospital patients surveyed for their satisfaction towards the hospital environment. Out of the 109 respondents, 57 are male, accounting for 52.3% of the sample, while 52 are female, representing 47.7%. The percentages are consistent when considering both valid percent and cumulative percent, indicating that males make up slightly more than half of the sample population, with females comprising just under half. The total sample size of 109 ensures that the data captures the perspectives of both genders fairly equally, which is crucial for a balanced analysis of patient satisfaction across gender lines.

Table 3: Demographic Information (Marital status)

| What is your marital status? | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Single | 73 | 67.0 | 67.0 | 67.0 |
| | Married | 35 | 32.1 | 32.1 | 99.1 |
| | Widowed/Separated | 1 | .9 | .9 | 100.0 |
| | Total | 109 | 100.0 | 100.0 | |

The table summarizes the marital status distribution among 109 hospital patients surveyed about their satisfaction with the hospital environment. The majority of respondents are single, with 73 individuals representing 67.0% of the sample. Married respondents make up 35 individuals, accounting for 32.1%. Only 1 respondent, or 0.9%, is either widowed or separated. The cumulative percentages illustrate the progressive addition of each marital status category to the total, with singles comprising the largest group, followed by married individuals, and finally, the widowed/separated category reaching 100%. This distribution highlights that a

significant proportion of the surveyed patients are single, which may provide insights into how marital status influences perceptions of the hospital environment.

Table 4: Demographic Information (Educational degree)

| What is your educational degree? | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Illiterate | 1 | .9 | .9 | .9 |
| | Primary | 7 | 6.4 | 6.4 | 7.3 |
| | Secondary | 15 | 13.8 | 13.8 | 21.1 |
| | High school | 38 | 34.9 | 34.9 | 56.0 |
| | Graduate | 43 | 39.4 | 39.4 | 95.4 |
| | Post graduate | 4 | 3.7 | 3.7 | 99.1 |
| | 7 | 1 | .9 | .9 | 100.0 |
| | Total | 109 | 100.0 | 100.0 | |

The table presents the educational degree distribution among 109 hospital patients surveyed about their satisfaction with the hospital environment. The majority of respondents have a graduate degree, with 43 individuals making up 39.4% of the sample. This is followed by those with a high school education, comprising 38 individuals or 34.9%. Respondents with a secondary education total 15, accounting for 13.8%. Those with primary education number 7, representing 6.4%. There are 4 postgraduates, making up 3.7%, and 1 illiterate respondent, accounting for 0.9%. Additionally, 1 respondent is categorized separately, also at 0.9%. The cumulative percentages show a progressive addition, with the majority of the sample having completed high school or higher education, indicating a relatively well-educated sample population. This diverse educational background can provide valuable insights into how education level influences patient satisfaction with the hospital environment.

Table 5: Demographic Information (Profession)

| What is your Profession? | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Student | 54 | 49.5 | 49.5 | 49.5 |
| | Unemployed | 2 | 1.8 | 1.8 | 51.4 |
| | Work in public sector | 9 | 8.3 | 8.3 | 59.6 |
| | Work in private sector | 18 | 16.5 | 16.5 | 76.1 |
| | House wife | 10 | 9.2 | 9.2 | 85.3 |
| | 7 | 16 | 14.7 | 14.7 | 100.0 |
| | Total | 109 | 100.0 | 100.0 | |

The table outlines the professional distribution of 109 hospital patients surveyed about their satisfaction with the hospital environment. The largest group comprises students, totaling 54

respondents and representing 49.5% of the sample. This is followed by those working in the private sector, with 18 individuals accounting for 16.5%. Housewives make up 10 respondents, or 9.2%, while those employed in the public sector number 9, making up 8.3%. There are 2 unemployed respondents, representing 1.8%. Additionally, there are 16 respondents categorized separately, accounting for 14.7%. The cumulative percentages illustrate the progressive addition of each professional category, with students forming nearly half of the sample. This diverse professional background helps provide a comprehensive view of how different occupational statuses might influence patient satisfaction with the hospital environment.

Table 6: Demographic Information (Income)

| How much do you earn per month? | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 5000-10,000 | 50 | 45.9 | 45.9 | 45.9 |
| | 11,000-20,000 | 16 | 14.7 | 14.7 | 60.6 |
| | Above 20,000 | 43 | 39.4 | 39.4 | 100.0 |
| | Total | 109 | 100.0 | 100.0 | |

The table presents the monthly income distribution among 109 hospital patients surveyed about their satisfaction with the hospital environment. The largest group of respondents, 50 individuals, earns between 5,000 and 10,000 per month, representing 45.9% of the sample. Those earning above 20,000 per month number 43, accounting for 39.4%. The smallest group, with an income range of 11,000 to 20,000, includes 16 respondents, making up 14.7% of the sample. The cumulative percentages indicate that nearly half of the respondents fall into the lowest income bracket, with the remaining respondents almost evenly split between the middle and highest income brackets. This income diversity provides valuable insights into how monthly earnings may influence patient satisfaction with the hospital environment.

Table 7: Demographic Information (Admitted)

| You admitted or visited the hospital through | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | OPD | 80 | 73.4 | 73.4 | 73.4 |
| | Emergency | 29 | 26.6 | 26.6 | 100.0 |
| | Total | 109 | 100.0 | 100.0 | |

The table details how 109 hospital patients were admitted or visited the hospital, categorized into two main groups: Outpatient Department (OPD) and Emergency. The majority of respondents, 80 individuals, visited the hospital through the Outpatient Department (OPD), constituting 73.4% of the sample. On the other hand, 29 respondents, representing 26.6%, accessed the hospital via the Emergency department. The cumulative percentages show the

complete distribution of patients across these admission methods, totaling 100%. This breakdown provides insight into the different pathways through which patients interact with the hospital, which is crucial for understanding their perspectives on the hospital environment and sanitation.

Table 8: Demographic Information (No. of admission times)

| How many times have you been admitted in the hospital? | | | | |
|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1-2 times | 61 | 56.0 | 56.0 | 56.0 |
| | More than 2 times | 48 | 44.0 | 44.0 | 100.0 |
| | Total | 109 | 100.0 | 100.0 | |

The table summarizes the frequency of hospital admissions among 109 surveyed patients regarding their satisfaction with the hospital environment. A majority of respondents, 61 individuals, have been admitted 1-2 times, representing 56.0% of the sample. Meanwhile, 48 respondents, accounting for 44.0%, have been admitted more than 2 times. The cumulative percentages show the complete distribution of hospital admission frequencies, totaling 100%. This breakdown offers insights into the varying experiences of patients based on their frequency of hospitalization, which can influence their perceptions and satisfaction with the hospital environment and sanitation practices.

Table 9: Demographic Information (Staying in hospital)

| How many days have you been staying in the hospital? | | | | |
|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 2 days | 52 | 47.7 | 48.1 | 48.1 |
| | 4 days | 19 | 17.4 | 17.6 | 65.7 |
| | 6 days | 9 | 8.3 | 8.3 | 74.1 |
| | More than 6 days | 28 | 25.7 | 25.9 | 100.0 |
| | Total | 108 | 99.1 | 100.0 | |
| Missing | System | 1 | .9 | | |
| Total | | 109 | 100.0 | | |

The table provides information on the duration of hospital stays among 108 surveyed patients regarding their satisfaction with the hospital environment. The majority of respondents, 52 individuals (47.7%), reported staying in the hospital for 2 days. Following this, 19 respondents (17.4%) stayed for 4 days, while 9 respondents (8.3%) stayed for 6 days. A significant portion, 28 respondents (25.7%), reported staying in the hospital for more than 6 days. The cumulative percentages demonstrate that nearly half of the patients stayed for 2 days, with additional percentages increasing progressively as the duration of stay extends. One respondent's data

regarding the duration of stay is missing. This breakdown provides insights into the varying lengths of hospital stays among patients, which can influence their experiences and perceptions of the hospital environment and sanitation conditions over time.

Table 10: Demographic Information (feeling of improvement)

| Are you feeling improvement health condition after treatment? | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Yes | 107 | 98.2 | 98.2 | 98.2 |
| | No | 2 | 1.8 | 1.8 | 100.0 |
| | Total | 109 | 100.0 | 100.0 | |

The table presents responses from 109 surveyed hospital patients regarding their perception of improvement in their health condition after treatment. A significant majority, 107 individuals (98.2%), reported feeling improvement in their health condition. Only 2 respondents (1.8%) indicated that they did not experience improvement after treatment. The cumulative percentages show that nearly all respondents acknowledged positive changes in their health status post-treatment, reflecting a high level of perceived effectiveness of the hospital's medical interventions. This data underscores the importance of patient-reported outcomes in evaluating the quality of healthcare services provided by the hospital.

Table 11: Demographic Information (reference)

| Who has given you the idea to go to Public Hospital? | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Mother/Father | 43 | 39.4 | 39.4 | 39.4 |
| | Brother/Sister | 3 | 2.8 | 2.8 | 42.2 |
| | Husband/Wife | 7 | 6.4 | 6.4 | 48.6 |
| | Friend | 15 | 13.8 | 13.8 | 62.4 |
| | Relative | 8 | 7.3 | 7.3 | 69.7 |
| | Self-referred | 19 | 17.4 | 17.4 | 87.2 |
| | General practitioner | 11 | 10.1 | 10.1 | 97.2 |
| | By media | 3 | 2.8 | 2.8 | 100.0 |
| | Total | 109 | 100.0 | 100.0 | |

The table outlines the sources of influence that led 109 surveyed hospital patients to choose a public hospital for their healthcare needs. The most common source of recommendation was from mothers or fathers, cited by 43 respondents (39.4%). Friends also played a significant role, with 15 respondents (13.8%) indicating they were influenced by friends' recommendations. Self-referral was another prominent factor, with 19 respondents (17.4%)

choosing to go to the hospital on their own accord. Other influencers included husbands or wives (6.4%), relatives (7.3%), and general practitioners (10.1%). A smaller number of respondents (2.8%) mentioned being influenced by siblings or by media sources. The cumulative percentages illustrate the combined influence of these factors in patients' decision-making processes regarding seeking care at a public hospital. This breakdown provides valuable insights into the diverse factors influencing patient healthcare choices and underscores the importance of both personal and interpersonal factors in healthcare decision-making.

Table 12: Patient satisfaction towards the hospital environment/sanitation

|  |  | Count | Layer Total N % |
|---|---|---|---|
| Hospital has clean and hygienic environment | Agree | 67 | 61.5% |
|  | Strongly agree | 4 | 3.7% |
|  | Neutral | 21 | 19.3% |
|  | Strongly Disagree | 7 | 6.4% |
|  | Disagree | 10 | 9.2% |
|  | Total | 109 | 100.0% |
| Medical OPD is clean and tidy | Agree | 64 | 58.7% |
|  | Strongly agree | 20 | 18.3% |
|  | Neutral | 20 | 18.3% |
|  | Strongly Disagree | 4 | 3.7% |
|  | Disagree | 1 | 0.9% |
|  | Total | 109 | 100.0% |
| Wards are clean and well maintained | Agree | 57 | 52.3% |
|  | Strongly agree | 12 | 11.0% |
|  | Neutral | 27 | 24.8% |
|  | Strongly Disagree | 11 | 10.1% |
|  | Disagree | 2 | 1.8% |
|  | Total | 109 | 100.0% |
| Toilets are clean and well maintained | Agree | 23 | 21.1% |
|  | Strongly agree | 3 | 2.8% |
|  | Neutral | 29 | 26.6% |
|  | Strongly Disagree | 39 | 35.8% |
|  | Disagree | 15 | 13.8% |
|  | Total | 109 | 100.0% |
| Labs are clean and well maintained | Agree | 68 | 62.4% |
|  | Strongly agree | 20 | 18.3% |
|  | Neutral | 15 | 13.8% |
|  | Strongly Disagree | 6 | 5.5% |
|  | Disagree | 0 | 0.0% |

| | | | |
|---|---|---|---|
| | Total | 109 | 100.0% |
| Operation Theater has clean environment | Agree | 59 | 54.1% |
| | Strongly agree | 35 | 32.1% |
| | Neutral | 13 | 11.9% |
| | Strongly Disagree | 2 | 1.8% |
| | Disagree | 0 | 0.0% |
| | Total | 109 | 100.0% |
| Canteen environment is clean and comfortable | Agree | 38 | 34.9% |
| | Strongly agree | 6 | 5.5% |
| | Neutral | 32 | 29.4% |
| | Strongly Disagree | 29 | 26.6% |
| | Disagree | 4 | 3.7% |
| | Total | 109 | 100.0% |
| Cleanliness in the emergency department | Agree | 68 | 62.4% |
| | Strongly agree | 19 | 17.4% |
| | Neutral | 12 | 11.0% |
| | Strongly Disagree | 8 | 7.3% |
| | Disagree | 2 | 1.8% |
| | Total | 109 | 100.0% |
| Food is pure, clean and fresh | Agree | 45 | 41.3% |
| | Strongly agree | 3 | 2.8% |
| | Neutral | 24 | 22.0% |
| | Strongly Disagree | 32 | 29.4% |
| | Disagree | 5 | 4.6% |
| | Total | 109 | 100.0% |
| All the equipment s are clean in the labs | Agree | 63 | 57.8% |
| | Strongly agree | 18 | 16.5% |
| | Neutral | 18 | 16.5% |
| | Strongly Disagree | 9 | 8.3% |
| | Disagree | 1 | 0.9% |
| | Total | 109 | 100.0% |
| Drinking water is clean and pure | Agree | 65 | 59.6% |
| | Strongly agree | 14 | 12.8% |
| | Neutral | 22 | 20.2% |
| | Strongly Disagree | 6 | 5.5% |
| | Disagree | 1 | 0.9% |
| | Total | 108 | 100.0% |

The survey results provide a comprehensive overview of patient perceptions regarding the cleanliness and maintenance of various hospital facilities. A significant majority of respondents (65.2%) agree or strongly agree that the hospital has a clean and hygienic environment. Similarly, 77% believe that medical areas are clean and tidy, and 63.3% feel that wards are well-maintained. However, opinions on the cleanliness of toilets are less favorable, with only 23.9% agreeing or strongly agreeing, while 49.6% strongly disagree or disagree. Conversely, the cleanliness of labs and the operation theater is positively perceived, with 80.7% and 86.2% agreement, respectively. The canteen's cleanliness is less favorably viewed, with 40.4% agreement and 30.3% strong disagreement or disagreement. The cleanliness in the second department is positively rated by 79.8% of respondents. Food quality receives mixed reviews, with 44.1% agreement but 34% strong disagreement or disagreement. The cleanliness of lab equipment is positively noted by 74.3%, and drinking water cleanliness is affirmed by 72.4% of respondents. These findings highlight areas of strength in hospital cleanliness, particularly in clinical areas, while indicating areas needing improvement, such as toilets and the canteen.

## Conclusion

The study reveals that patient satisfaction with hospital environments and sanitation in Kathmandu is significantly influenced by demographic factors such as age, education level, and income. The majority of participants expressed positive perceptions of sanitation practices, with a high percentage reporting health improvements post-treatment. However, the findings also highlight disparities in access and satisfaction among economically disadvantaged groups and young adults, emphasizing the need for targeted improvements in hospital facilities and sanitation standards. These results underline the importance of prioritizing environmental hygiene and tailored healthcare services to enhance patient experiences and outcomes in urban hospitals.

# References

[1] Thakuri, M. M., & Shrestha, R. (2024). Perception and Attitude of Patients Towards Waiting Time and Quality in Out Patient Department. *International Journal of Atharva*, *2*(2), 222-230.

[2] Wagle, N., Neupane, D., Nyaupane, N. P., & Timalsena, C. (2024). Compassionate Care: Exploration of the Nurse-Patient Relationship and Behavioral Dynamics in Healthcare Settings. *International Journal of Atharva*, *2*(1), 65-77.

[3] Neupane, D., & Lourdusamy, A. (2024). Bibliometric Analysis of Human Aggression Research: Trends, Collaborative Networks and Emerging Themes in the Last Decade. *International Journal of Atharva*, *2*(2), 10-23.

[4] Phuyal, S. (2024). Perception of Health Professionals on Brain Drain in Nepalese Health Sector. *NPRC Journal of Multidisciplinary Research*, *1*(5), 30-49.

[5] Lamichhane, B., & Neupane, D. (2023). Perceived Organizational Support in Nepalese Banks. *International Journal of Atharva*, *1*(1), 1-13.

[6] Pandey, G., & Adhikari, S. (2024). A Relationship between Physical Infrastructure and Patient Satisfaction: A Case Study of Kantipur Dental Hospital. *NPRC Journal of Multidisciplinary Research*, *1*(4), 1–11. https://doi.org/10.3126/nprcjmr.v1i4.70471

[7] Karki, T. B., D'Mello, L., Poudel, G., Ghimire, M., Neupane, D., Shrestha, S. K., & Mahat, D. (2024). Exploring the Influence of Family Dynamics on Death Attitude among Elderly People: A Comparative Study of Chitwan and Jhapa District, Nepal. *International Journal of Applied and Scientific Research*, *2*(8), 703-716.

[8] Neupane, D., Pant, S., & Bhattarai, P. (2023). Preferred Learning Techniques among Bachelor's Level Students. *Nepal Journal of Multidisciplinary Research*, *6*(2), 145-154.

[9] Gurung, M., Thapa, N., Khadka, M., Karki, T. B., & Neupane, D. (2020). Access the Quality Service of Ganeshman Singh Memorial Hospital and Research Center. *Nepal Journal of Multidisciplinary Research*, *3*(3), 51-63.

[10] Neupane, D., Joshi, P., Acharya, A., & Acharya, D. (2018). A comparative study of multiple intelligence levels of secondary school students with reference to grade. *International Journal of Applied Research*, *4*(4), 79-82.

[11] Ghimire, M. N., Khanal, N., Neupane, D., & Acharya, A. (2018). Result analysis of mid-term examination of Trilok academy. *IJAR*, *4*(5), 82-84.

[12] Mahat, D., Neupane, D., & Karki, T. B. (2023). Exploring the Academic Landscape: A Critical Analysis and Review of the Nepal Journal of Multidisciplinary Research [NJMR]. *Nepal Journal of Multidisciplinary Research*, *6*(4), 128-138.

[13] Neupane, D. (2019). Food choice motives of adults from Kathmandu city with reference to ethnicity. *International Journal of Applied Research*, *5*(3), 182-185.

[14] Karki, T. B., Manandhar, R. B., Neupane, D., Mahat, D., & Ban, P. Critical Analysis of Noise Pollution and Its Effect on Human Health.

[15] Neupane, D., & Lourdusamy, A. (2024). Beyond Borders: The Accelerating Momentum of Domestic Violence Research Worldwide. *NPRC Journal of Multidisciplinary Research*, *1*(2 July), 34-52.

[16] Neupane, D., & Dawadi, C. (2018). Multiple intelligences among secondary level school students from Kailali, Nepal. *IJAR*, *4*(3), 252-256.

[17] Chaloeytoy, K., Dubsok, A., & Kittipongvises, S. (2024). Evaluating Thermal Comfort in Ward Areas of the Public Hospital in the Tropical Climates. In *E3S Web of Conferences* (Vol. 530, p. 05009). EDP Sciences.

[18] Neupane, D., & Timsina, T. (2015). Gender Role in Global Personal Self-Esteem and Narcissism among Nepalese School Adolescents. *Journal of Advanced Academic Research*, *2*(1), 74-82.

[19] Shrestha, S. K., Mahat, D., Neupane, D., & Karki, T. B. (2025). E-wallet usage and customer purchase intention: Understanding the mediating role of shopping satisfaction and E-wallet structure. *Multidisciplinary Reviews*, *8*(3), 2025091-2025091.

[20] Mahat, D., Karki, T. B., Neupane, D., Shrestha, D. K., & Shrestha, S. (2024). Decolonization in Focus: A Bibliometric Analysis of Scientific Articles from 2010 to 2023. *Nepal Journal of Multidisciplinary Research*, *7*(1), 1-21.

[21] Mabini Jr, S. P., Narsico, L. O., & Narsico, P. G. (2024). Service quality, patient satisfaction, and improvement indicators. *International Journal of Multidisciplinary: Applied Business and Education Research*, *5*(4), 1331-1345.

[22] Parraga, S. P., & Feldman, S. R. (2024). Patient satisfaction surveys: who benefits?. *International Journal of Dermatology*, *63*(4), 411-412.

[23] Sebera, E., Hagenimana, C., & Twagirumukiza, E. (2024). Patient satisfaction survey in a public hospital: Remera Rukoma District Hospital, Rwanda, 2023. *BMC Health Services Research*, *24*(1), 1478.

[24] Dangol, S., & Mishra, R. (2024). Patient Characteristics on Satisfaction with Healthcare Quality in a Teaching Hospital in Nepal. *Baneshwor Campus Journal of Academia*, *3*(1), 121-132.

[25] Ghimire, L. D., & Lamichhane, S. (2024). Exploring Physical Activity Awareness Among BMC Education Students, Kathmandu. *Baneshwor Campus Journal of Academia*, *3*(1), 1-12.

[26] Pandey, L. (2024). Interplay of Corporate Sector, Politics, and Media in Shaping News Contents in Nepal. *Baneshwor Campus Journal of Academia*, *3*(1), 143-155.

[27] Mahat, D., Neupane, D., & Shrestha, S. (2024). Advancing Self-Esteem Research in Business, Management, and Accounting: A Bibliometric Analysis of the Last Decade (2015-2024). *Journal of Logistics, Informatics and Service Science*, 11(9), 138-168. doi:10.33168/JLISS.2024.0910

[28] WHO. (1948). Retrieved from https://www.who.int/health-topics/hospitals#tab=tab_1