# A STUDY OF ISSUES RELATING TO COMMUNICATION PROBLEMS AMONG PATIENTS AND CARE PROVIDERS IN DISTRICT HOSPITAL

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## ABSTRACT

*SUMMARY*

**Purnia division** is an administrative geographical unit of Bihar, state of India. Purnia is the administrative headquarters of the division. Hindi is the principal language of the district. However other than that, people in different areas follow different dialects. Maithili is one of the prime dialect/languages spoken in the area. People also speak Surjapuri, Polia, Chhika-Chhiki or Angika and Santhali. In some parts of Purnia, Bangla is also spoken.

Hindi is the main language of the district; however, dialects are in vogue in different parts of the district for day-to-day use. People of Amour and Baisa blocks, speak Surjapuri. In the eastern side of Baisi block people speak Polia. Chhika-Chhiki or Angika is spoken in Rupouli and Bhawanipur and some part of Dhamdaha, K.Nagar and Purnia East Block. In Banmankhi, B.Kothi and some part of Dhamdaha. K.Nagar people speak a mix of Maithili and Chhika-Chhiki. Santhali people speak Santhali. In the east and South Baisi block Bangla is also spoken. Out siders speak their own dialects.

*PURPOSE*

The purpose of this chapter is to examine how language barriers contribute to health disparities among ethnic and racial minorities Language is the means by which a patient accesses the health care system, learns about services, and makes decisions about her or his health behavior. Language is also the means by which the health care provider accesses a patient's beliefs about health and illness, and thus creates an opportunity to address and reconcile different belief systems. In essence, communication between nurses and patients is the heart of nursing care. Without effective communication between patients, families and providers, truly adequate

healthcare cannot be achieved. Individuals who have difficulty communicating are especially vulnerable in hospital settings where poor communication can lead to unnecessary pain, confusion, medication errors, and even premature death.

*METHOD*

The study design involved semi structured face-to-face interviews & filling up questionnaire with the nurses & Paramedical Staffs about their routine work environments and activities, the language problems in which they recently had been involved. The themes reported here emerged from inductive analyses of the data.

*RESULTS*

Nurses & Paramedical Staffs reported numerous such incidents occurring daily. Aspects of "communication" and "patient management" were the two most commonly cited contributing factors. Nurses described themselves as embedded in a complex network of relationships, playing a pivotal role in patient management. Recurring patterns of communication difficulties occur within these relationships and appear to be associated with the occurrence of confusion.

*CONCLUSION*

The occurrence of everyday confusion in this study is associated with faulty communication. Communication failures are far more complex and interpersonal power and conflict. A clearer understanding of these dynamics highlights possibilities for appropriate interventions in medical education, training and in health care organizations aimed at improving patient safety.

## INTRODUCTION

Hospitals are microcosms in themselves. They are representative samples of community. They share the same culture and rules. Whatever is right or wrong with the society holds true for the hospitals too.

The study of issues about communication between the patients and the care providers is important because healing can happen only when there is complete and clear communication between the patients and the care providers.

Effective communication of the patient's state and feelings to the care providers helps in the diagnosis of the problem and the right kind of actions to be taken. Similarly understanding the care providers' instructions and explanations is imperative for the patient's well-being. It would be disastrous if the two concerned parties could not communicate fully with each other.

Poor communication due to faulty role perception is a fundamental problem faced in hospitals. This is due to the number of roles each employee of a hospital plays during the work-day. This is especially true for nurses. It is very interesting to observe how nurses and patients with uniquely

different paradigms of experience of illness can, within a very short space of time, make profound interpersonal connections, perceive and avoid unnecessary interpersonal conflict, and at times, address issues of significant personal vulnerability.

There are many such communication processes taking place in the hospitals but the uniqueness of communication between nurse and patient has motivated me to choose to study the communication between nurses and patients. This is a case study, where the patients' and nurses' responses to the questions are analyzed using graphical methods and cause-and-effect diagrams.

## BACKGROUND AND RATIONALE

The word 'communicate' is derived from the Latin word "communicare" which means to share, exchange, send along, transmit, talk, gesture, write, put in use and to relate. Communication in its simplest form is conveying of information from one person to another.

Communication is a general phenomenon. It occurs in nature, wherever life exists. Whether we recognize it or not, we have no choice but to communicate. If we try to avoid communicating by not replying to messages, we are nevertheless sending a message, but it may not be the one we want or intend. When we do not say yes, we may be saying no by default and vice versa. The only choice we can make about communication is whether we are going to attempt to communicate effectively.

Therefore, "Communication is the sum of all things one person does when he wants to create understanding in the mind of the other. It is a bridge of meaning. It involves a systematic and continuous process of telling, listening and understanding".

A few important characteristics of communication are listed below:

1. Communication is a two way process.
2. There is a sender and a receiver.
3. Communication always happens between or among two or more parties.
4. Communication involves an exchange of facts, ideas, opinions, emotions, or thoughts.
5. Communication can be verbal, like words spoken or written; or non-verbal like body language, gestures and postures etc.
6. Communication needs to have a mutuality of understanding of signals between the sender and the receiver.

The objective of any kind of communication is to convey the thoughts, intentions, emotions, facts or ideas to the receiver in the *same sense*, as the sender wants to convey.

## *PURNIA – LANGUAGES*

Hindi is the principal language of the district. However other than that, people in different areas follow different dialects. Maithili is one of the prime dialect/languages spoken in the area. People also speak Surjapuri, Polia, Chhika-Chhiki or Angika and Santhali. In some parts of Purnia, Bangla is also spoken.

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## *AIM AND OBJECTIVES*

### Aim

The aim of this Capstone Proposal is to ascertain the communication barriers, compare Demographic profile of nurses and paramedic staff and suggest tools and training required to overcome these barrier.

### Objectives

1. To study the process of communication between nurses and patients.
2. To observe the uniquely different paradigms of understanding in this communication.
3. To describe the process involved in this communication.
4. To understand both the nurses' and the patient's role in this communication process.
5. To identify the barriers in communication between nurses & patients.
6. To identify if there is noise or distortion in the nurse-patient communication process.
7. To develop a conceptual plan of the nurse-patient communication networks
8. To suggest ways to improve the nurse-patient communication.

## *SIGNIFICANCE OF RESEARCH*

Many researches are done on the communication process in organization. However, actual communication is neglected due to increased documentation and other such reasons. In Indian hospitals, healthcare professionals have to gear up to meet the technological changes and other

standards to be at par with the international hospitals. Due to this constant striving, the focus shifts from communication to performance on other fronts. Doctors and Nurses are the pillars of healthcare in hospitals and are in continuous contact with the patients. They need to be trained to communicate well with the patients. This aspect has been neglected in the past. Partially, this is because of the high work-pressure on the nurses in the hospitals.

This study will help the management to rethink their focus and reinforce an important management aspect namely communication, not just between nurses and patients but also among all the employees of the hospital.

### *LIMITATION OF THE STUDY*

The Study was limited to one District hospital (Sadar Hospital, Purnea – Bihar).

- This study took into account various segments of patients and employees. The turnover rate of patients was very high in the hospital and that is why the opinions of the patients were based on a very short-duration experience of the services in the hospital.
- Though every effort was made to explain the questionnaires to patients however multi-lingual questionnaire could have helped to elicit better responses, more representative of the patient population.
- The time frame of the survey was limited.

## REVIEW OF LITERATURE

### *UNDERSTANDING COMMUNICATION*

**Communication is** a process by which information are exchanged between individuals through a common system of symbols, signs and information.

**Communication Process**

Communication is a dynamic, ongoing behavior process.

Communication is a two way process. There is a sender and a receiver. They use a set of commonly understood signs and symbols to send messages to each other. These messages are coded by the sender before sending and are decoded by the receiver on reception. Effective communication depends on the ability of the sender and the receiver to code and decode these messages successfully. If the receiver understands the message in exactly the same way that the sender meant it, then the communication process is said to be successful and complete.

Effective communication includes a range of verbal and non-verbal skills like clear speech, choice of words, body language, and active listening.

There are some barriers to effective communication. These are as follows:

1. Unclear messages,
2. Lack of common language, signs and symbols
3. Poor choice of words while communicating,
4. Wrong timing of communication,
5. Bias against the speaker or listener,
6. Lack of interest,
7. Social status,
8. Faulty role perception and
9. Noise

Communication is incomplete if we don't listen actively.

Active listening involves:

1. Paying attention
2. Eye contact
3. Asking questions to clarify doubts
4. Repeating key terms to get confirmation

The following will give us an understanding of how the human communication process occurs:

- The process begins when the message is sent by the sender to the receiver
- The message enters the sensory world of the receiver
- Receiver senses accept the message and send to the brain

The message undergoes a filtering process in the brain of the receiver

- The receiver's mind reacts to the meaning the receiver understands and responds to the message
- Then the response is sent to the sender, i.e. the cycle is repeated.

All communication processes occur in a very similar way. It should be understood that the communication process is successful when the receiver receives the message in the same sense,

as the sender wants the receiver to understand, if the message is misunderstood then it is considered that a distortion or noise has occurred in the communication. Understanding the communication process can help us become better communicators. The process shows that communication is a unique event and that each mind is different from every other mind. No two of us know the same words; and no two of us understand a subject to the same extent. Obviously, such differences make communication difficult. Unless the words or the symbols used in a message have the same meaning in the minds of both the sender and the receiver, communication suffers. Communication scholars have tried to solve this problem by stressing the adaptation of messages to the minds of the receivers. By adaptation, we mean fitting the message to the receivers- using words and other symbols that they understand.

## *VERBAL COMMUNICATION PROBLEMS*

Verbal communication between clinicians generally is much less structured and consistent than written communication. In health care facilities, verbal communication is the primary way in which vital information about a patient's status and care is transmitted. Nurses and physicians give each other verbal reports with few guidelines to ensure completeness and accuracy, however. When information is transferred verbally, valuable data can be lost or misinterpreted. Problems with verbal communication in health care emerge in part from the fact that clinicians receive little education on how to communicate effectively with each other.

Other factors contributing to problems with verbal communication include a lack of structured policies and procedures about its content, timing, or defined purposes. Furthermore, most clinicians lack a shared mental model or framework for verbal health care communication. Rules exist for written documentation, but none exist for the frequent verbal transmissions of information that occur face-to-face or on the telephone.

Most health care professionals receive education that focuses on communicating with patients. These same programs offer little or no education about communicating with other clinicians or how to communicate effectively in urgent or emergency situations. Most recent graduate nurses have limited experience of calling a physician on the telephone to give a status report or giving a report when transferring a patient to another unit.

## *COMMUNICATION STYLES*

Communication problems have been associated with medical errors and adverse events in a number of studies. Errors related to communication problems may result from the lack of guidelines for clinician-to-clinician communication and the lack of a shared framework and approach to communication. A number of experts have begun to explore and identify approaches to improve clinician- to-clinician communication. Their goal is to enhance patient safety by preventing the loss of crucial clinical data and promoting sharing of pertinent information at the right time in the most effective manner.

Assertive communication contributes to situational awareness and a shared understanding of what is happening. Situational awareness helps clinicians understand and recognize clinical situations and act in an effective manner. It is not only a result of improved communication but also requires team training, ongoing briefings, and information verification in a regular, systematic manner. Imagine an OR in which members of the team never talk to each other. The circulating nurse would never know when the surgeon decides to convert to an open procedure instead of continuing with a laparoscopic approach. The required instruments would not be available when needed. Situational awareness in any clinical environment requires ongoing, effective, active communication.

## *COMMUNICATION IN HOSPITALS*

Hospitals are normal organizations as far as the communication processes go. As a matter of fact, communication in hospitals is a more complex phenomenon than in any other organization. This is because a hospital is a service industry and the communication is not just among the employees or while marketing the service to the customers, but also when providing the service to the customers i.e. the patient who comes in. Their illness itself that brings them to the hospital could be a block to effective communication.

To understand this complexity of communication in hospitals let us take an example of a patient coming to the District hospital for a consultation. To get a consultation from a doctor in a hospital, the patient has to go to the registration to get a OPD number, then pay the prescribed fees, then wait for the doctor and go in for the consultation when his/her turn comes. This very simple process consists of two-communication steps, and then one can imagine the level of complexity of the communication processes in the entire hospital, where complex procedures of treatment are handled.

There are various forms of communication process such as internal-operational, external-operational and personal communications. These consist of extremely complex formal and informal networks that involve a large number of communication barriers such as cultural differences, technological reasons and other barriers that vary from person to person. Communication happens at all times in the hospitals; especially in District hospitals.

## *COMMUNICATION BETWEEN NURSE AND PATIENT – A HOSPITAL PROCESS*

One such very important communication process in a hospital is the communication between nurses and patients. The nursing profession is crucial to the functioning of hospitals as they are directly involved with the patients and their attendants. A nurse must combine scientific and technical knowledge along with human communication, observation and clinical skills. In addition, the nurse must possess personal qualities like sympathy, perseverance and skill of good interpersonal relations**.**

The nurses' work is complementary to the physician's in caring for the sick, but her relationship with the patient is continuous and involves both the state of illness as well as the state of well-being.

A nurse is the intermediate link between the doctor and the patient. She is the most important health care team member as far as communication goes and hence should be contributing the most in generating effective communication between health care staff and patients. She can provide the personal touch, which is the key to the successful achievement of the hospital goals.

## RESEARCH DESIGN AND METHOD

The research method that has been selected is case study approach. In case study a particular case is examined in entities with intensities. This study involves examination of occurrence of phenomenon. The key factor of this study is that it depends on the attitude and integrative powers of the researchers. The findings of a case study are always suggestive rather than conclusive since the examination is being after the fact basis, and it is not possible to manipulate the variable.

As the study is done in a single hospital, District Hospital, Purnea which will represent various other hospitals mainly on the inpatients. The study is based on the facts that the patients and the nurses in the form of questionnaires and interviews.

Hence case study design is selected to conduct the study, despite the shortcoming that the interpretation is subject to error but yet is displays the striking features, which will be useful while performing and interpreting the study.

### *DATA COLLECTION AND ANALYSIS*

The data collection will involve both the secondary data and the primary data. The secondary data source would be the books, articles, journals and newspaper. The secondary data source would be mostly used to understand the aspects, the standards based on which the study can be performed.

The primary data source will be the responses given by the patients and the nurses. The primary data will be collected by questionnaire method from the patients and interview method from the nurses.

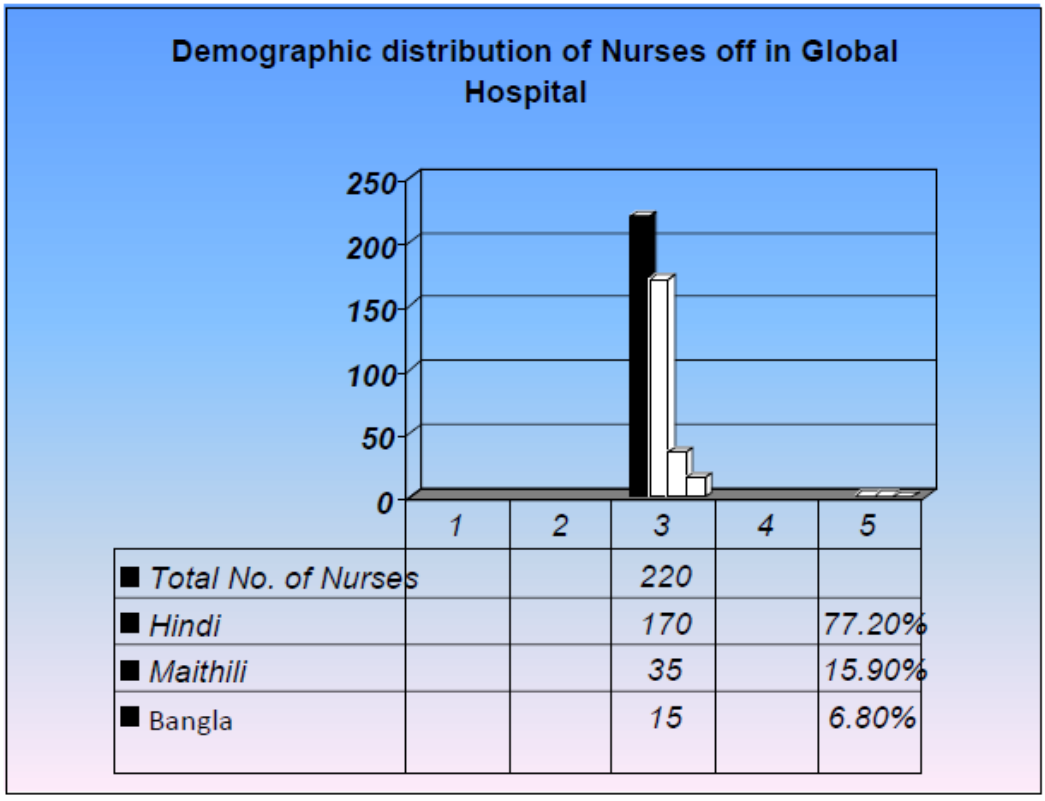
This would be the collected from the patients in the inpatient & outpatient departments by random sampling method with a sample size of around 100. The data from the nurses serving in the inpatient & outpatient departments will be taken as secondary data from HR department of Purnea District Hospital.

The data analysis would be done using the graphical methods and the cause and effect diagram, which will help in identifying the existing level of communication and also find the cause for the communication problems if there is any problem.

**Demographic Distribution of Nurses In District Hospital**

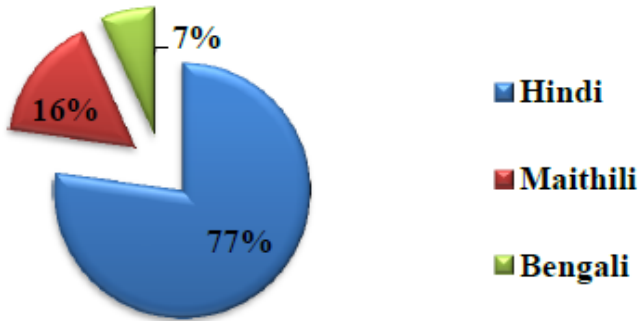
**TOTAL No of Nurses – 220**

| **Languages** | **Total Nurses Speaking** | **Percentage of Nurses Speaking** |
|---|---|---|
| **Hindi** | 170 | 77.2% |
| **Maithili** | 35 | 15.9% |
| **Bangla** | 15 | 6.8% |

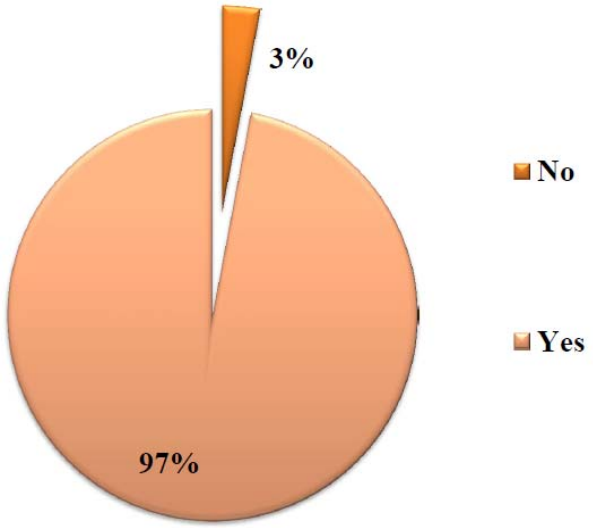



**Conclusion**

- Majority Population of Nurses is Hindi Speaking
- It was observed that most of the nurses could converse in Maithili
- Problems were mainly with Surjapuri, Santhali & Bengali.



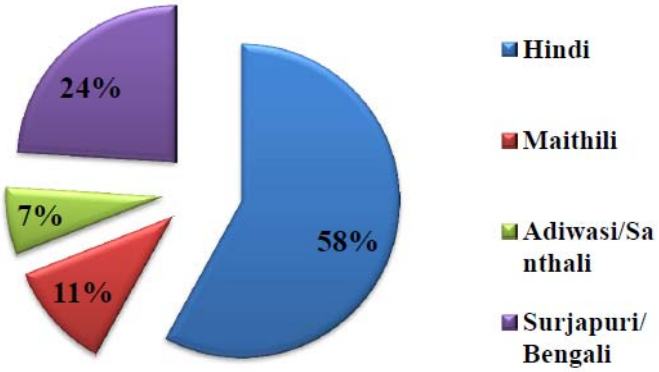

***Is The Nursing Staff Courteous & Adequately Trained in Soft Skill***




**Conclusion**

- 97% of patients were of the opinion that nurses were adequately trained in soft skills.
- Almost all nursing staff was approachable, polite and keen workers.

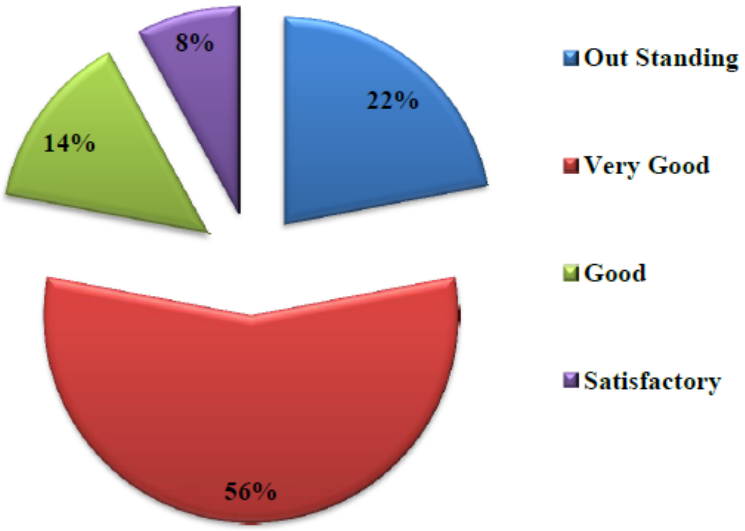
**What Language Would You Prefer to Communicate in with the Nursing Staffs**



## Conclusions

Being Gate way of North East & Major Medical Hub in the Koshi region, Purnea has a uniform mix of population though predominantly Hindi speaking however most of the people could understand all the three languages i.e. Maithili, Bengali and Hindi. Problem arises mainly with Santhali/Adiwasi & Surjapuri language

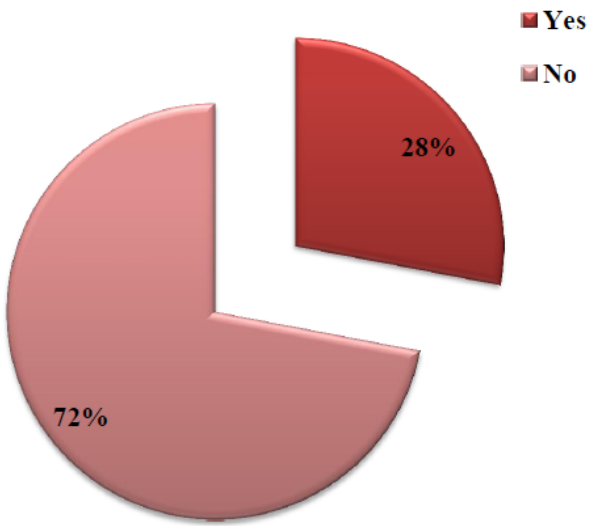
**How Do You Grade The Services Of Nursing Staffs**




## Conclusions

78% of patients were of the opinion that services of Nursing Staff were up to their expectations while only about 8% thought them to be below their expectations.

**Do You Have Difficulty in Understanding What Nursing Staffs want to covey**



**Conclusion**

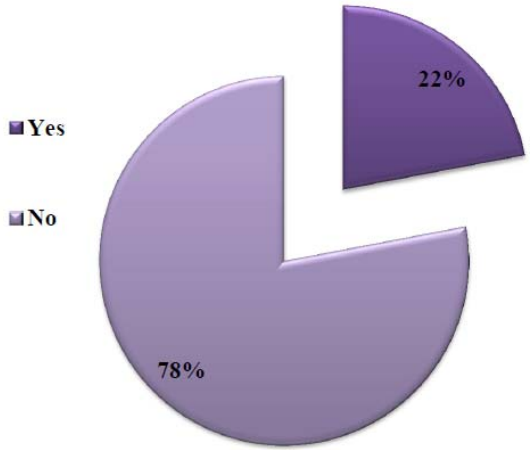
A little less than one third patients felt that they do have difficulty in understanding what the nursing staff wants to convey. The basic reasons quoted were as follows:

a. Language problem

b. Lack of Communications [Nurses avoid speaking]

c. Nursing staff not being pro-active toward queries of patients

**Do you feel the difficulty in communication is due to lack of Experience / Knowledge**

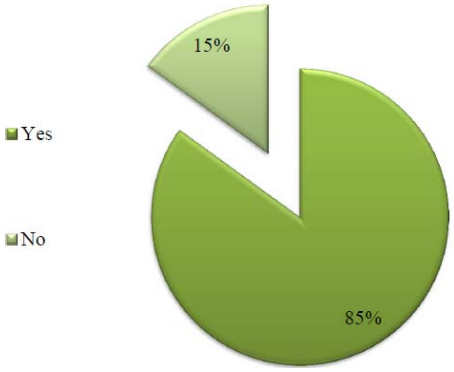



**Conclusion**

Almost one third of the patients were of the opinion that thought nursing staff was adequately trained in soft skills but experience and knowledge makes the staff more skillful and confident in execution of their task.

A uniform mix of trained and internee nursing staff can nullify this observation.

**Do you feel they are adequately trained**



**Conclusion**

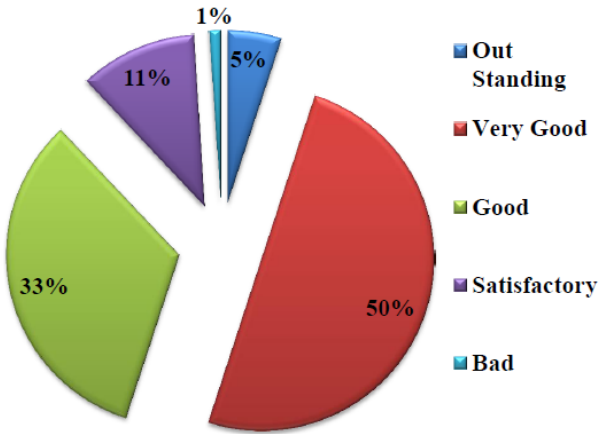
85% Patient were of the opinion that housekeeping/ward boys were adequately trained.

15% felt that performance could be better and communication gap exist because of language problem.

Educational qualification of most of the boys was middle school and below.

Most of the communication gap existed between people not conversant with Surjapuri, Bengali & Adiwasi/Santhali languages.

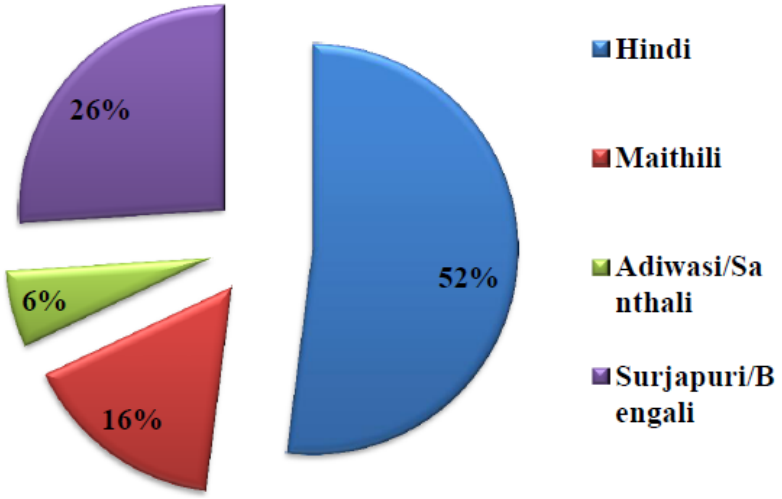
**How Do you grade the Services of Paramedic Staff**




**Conclusion**

88% of the patients were delighted with the services of Paramedic Staff while only 12% were of the opinion that there was a scope of improvement.

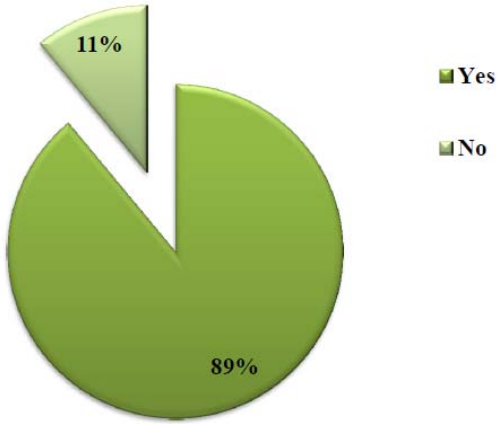
**What Language Would You Prefer to Communicate with them**



**Conclusion**

Being a Major District, majority of the patients could communicate in the languages understood by the paramedic staff.

**Do you feel the Paramedic Staff is Positive & Prompt in their response**




**Conclusion**

Paramedic staff that came in contact with patient is as follows:-

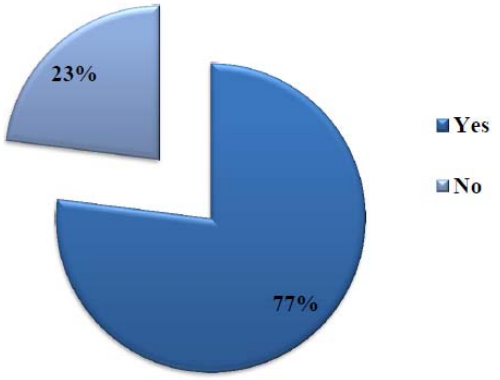
a. Ward boys.

b. Housekeeping:- For Cleaning /upkeep of rooms and maintenance.

Most of the paramedic staff being adhoc employees/contract work under zero error syndromes since a mistake /report of their inefficiency may cause them loose their job.

At times multi-tasking/overtasking over burden of work could be the reason of 11% negative opinion.

**Do you feel there is a communication gap between what you want to convey & what Paramedic Staffs Understand**



**Conclusion**

1. 23% of the patients were of the opinion that there is a Communication gap.
2. The Communication gap is not necessarily attributed to language only; there could be reasons like negative response to request or non-availability of Paramedic Staff.

## HYPOTHESIS TEST

1) Test of Hypothesis between Nurses and Paramedic staff predominantly services rendered in spite of communication problem?

**Assumptions**

The Scores were qualified as follows:-

(i) Outstanding - 50 (iii) Satisfactory - 20

(ii) Very Good - 40 (iv) Bad - 10

(v) Good - 30

**Data:- Tabulated primary data is as follows:-**

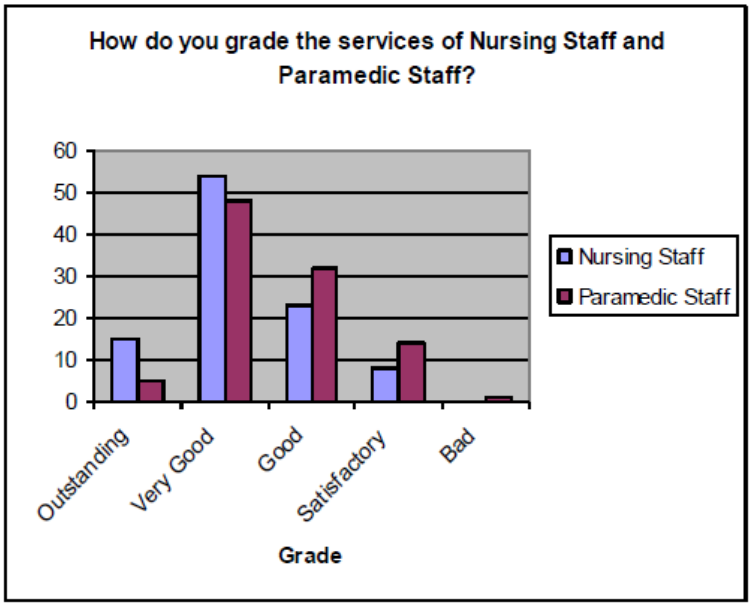
| **Patient** | **Grading of Services rendered by Nursing Staff** | **Grading of Services rendered by Paramedic Staff** | **Differences** | **Rank** | **+ve** | **-ve** |
|---|---|---|---|---|---|---|
| 1 | 50 | 50 | 0 | NR | NR | NR |
| 2 | 50 | 40 | 10 | 1.5 | 1.5 | - |
| 3 | 40 | 40 | 0 | NR | NR | NR |
| 4 | 30 | 30 | 10 | 1.5 | 1.5 | - |
| 5 | 40 | 40 | 0 | NR | NR | NR |
| 6 | 40 | 40 | 0 | NR | NR | NR |
| 7 | 40 | 40 | 0 | NR | NR | NR |
| 8 | 40 | 40 | 0 | NR | NR | NR |

| | | | | | | |
|---|---|---|---|---|---|---|
| 9 | 50 | 40 | 10 | 1.5 | 1.5 | - |
| 10 | 30 | 40 | -10 | 1.5 | - | 1.5 |
| 11 | 50 | 40 | 10 | 1.5 | 1.5 | - |
| 12 | 30 | 40 | -10 | 1.5 | - | 1.5 |
| 13 | 50 | 40 | 10 | 1.5 | 1.5 | - |
| 14 | 40 | 40 | 0 | NR | NR | NR |
| 15 | 40 | 30 | 10 | 1.5 | 1.5 | |
| 16 | 40 | 40 | 0 | NR | NR | NR |
| 17 | 50 | 30 | 20 | 48.5 | 48.5 | - |
| 18 | 40 | 20 | 20 | 48.5 | 100 | - |
| 19 | 50 | 40 | 10 | 1.5 | 1.5 | - |
| 20 | 40 | 30 | 10 | 1.5 | 1.5 | - |
| 21 | 40 | 30 | 10 | 1.5 | 1.5 | - |
| 22 | 40 | 30 | 10 | 1.5 | 1.5 | - |
| 23 | 30 | 30 | 0 | NR | NR | NR |
| 24 | 40 | 40 | 0 | NR | NR | NR |
| 25 | 40 | 40 | 0 | NR | NR | NR |
| 26 | 40 | 20 | 20 | 48.5 | 48.5 | - |
| 27 | 40 | 40 | 0 | NR | NR | NR |
| 28 | 20 | 30 | -10 | 1.5 | - | 1.5 |
| 29 | 40 | 40 | 0 | NR | NR | NR |
| 30 | 40 | 40 | 0 | NR | NR | NR |
| 31 | 40 | 40 | 0 | NR | NR | NR |
| 32 | 40 | 30 | 10 | 1.5 | 1.5 | - |

| | | | | | | |
|---|---|---|---|---|---|---|
| 33 | 30 | 30 | NR | NR | NR | NR |
| 34 | 40 | 40 | 0 | NR | NR | NR |
| 35 | 50 | 30 | 20 | 48.5 | 48.5 | - |
| 36 | 40 | 30 | 10 | 1.5 | 100 | - |
| 37 | 40 | 40 | 0 | NR | NR | |
| 38 | 40 | 30 | 10 | 1.5 | 1.5 | - |
| 39 | 40 | 50 | -10 | 1.5 | - | 1.5 |
| 40 | 40 | 40 | 0 | NR | NR | NR |
| 41 | 30 | 40 | 10 | 1.5 | 1.5 | - |
| 42 | 50 | 40 | 10 | 1.5 | 1.5 | - |
| 43 | 20 | 30 | -10 | 1.5 | - | 1.5 |
| 44 | 20 | 40 | -20 | 48.5 | - | 48.5 |
| 45 | 40 | 40 | 0 | NR | NR | NR |
| 46 | 30 | 40 | -10 | 1.5 | - | 1.5 |
| 47 | 30 | 40 | -10 | 1.5 | - | 1.5 |
| 48 | 30 | 30 | 0 | NR | NR | NR |
| 49 | 40 | 30 | 10 | 1.5 | 1.5 | - |
| 50 | 30 | 30 | 0 | NR | NR | NR |
| 51 | 30 | 20 | 10 | 1.5 | 1.5 | - |
| 52 | 50 | 40 | -10 | 1.5 | - | 1.5 |
| 53 | 40 | 20 | 20 | NR | NR | NR |
| 54 | 40 | 40 | 0 | NR | NR | NR |
| 55 | 40 | 40 | 0 | NR | NR | NR |
| 56 | 20 | 30 | -10 | 1.5 | - | 1.5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 57 | 20 | 20 | 0 | NR | NR | NR |
| 58 | 30 | 20 | 10 | 1.5 | 1.5 | - |
| 59 | 20 | 20 | 0 | NR | NR | NR |
| 60 | 30 | 20 | 10 | 1.5 | 1.5 | - |
| 61 | 30 | 20 | 10 | 1.5 | 1.5 | - |
| 62 | 20 | 10 | 10 | 1.5 | 1.5 | - |
| 63 | 30 | 20 | 10 | 1.5 | 100 | - |
| 64 | 30 | 20 | 10 | 1.5 | 1.5 | - |
| 65 | 30 | 30 | 0 | NR | NR | NR |
| 66 | 40 | 30 | 10 | 1.5 | 1.5 | - |
| 67 | 30 | 40 | -10 | 1.5 | - | 1.5 |
| 68 | 40 | 30 | 10 | 1.5 | 1.5 | - |
| 69 | 40 | 40 | 0 | NR | NR | NR |
| 70 | 40 | 40 | 0 | NR | NR | NR |
| 71 | 40 | 30 | 10 | 1.5 | +1.5 | - |
| 72 | 40 | 20 | 20 | 48.5 | 48.5 | - |
| 73 | 30 | 20 | 10 | 1.5 | 1.5 | - |
| 74 | 30 | 20 | 10 | 1.5 | 1.5 | - |
| 75 | 40 | 30 | 10 | 1.5 | 1.5 | - |
| 76 | 40 | 40 | 0 | NR | NR | NR |
| 77 | 40 | 40 | 0 | NR | NR | NR |
| 78 | 30 | 40 | -10 | 1.5 | - | 1.5 |
| 79 | 30 | 40 | -10 | 1.5 | - | 1.5 |
| 80 | 40 | 30 | 10 | 1.5 | 100 | - |

| | | | | | | |
|---|---|---|---|---|---|---|
| 81 | 20 | 30 | -10 | 1.5 | - | 1.5 |
| 82 | 40 | 30 | 10 | 1.5 | 1.5 | |
| 83 | 30 | 30 | 0 | NR | NR | NR |
| 84 | 40 | 40 | 0 | NR | NR | NR |
| 85 | 50 | 40 | 10 | 1.5 | 1.5 | - |
| 86 | 30 | 50 | -20 | 48.5 | - | 48.5 |
| 87 | 50 | 20 | -30 | 61.5 | - | 61.5 |
| 88 | 30 | 50 | -20 | 48.5 | - | 48.5 |
| 89 | 40 | 20 | 20 | 48.5 | 48.5 | - |
| 90 | 30 | 40 | -10 | 1.5 | - | 1.5 |
| 91 | 40 | 40 | 0 | NR | NR | NR |
| 92 | 40 | 40 | 0 | NR | NR | NR |
| 93 | 40 | 20 | -20 | 48.5 | - | 48.5 |
| 94 | 50 | 20 | -30 | 61.5 | | 61.5 |
| 95 | 40 | 10 | 30 | 61.5 | 61.5 | |
| 96 | 40 | 30 | 10 | 1.5 | 1.5 | |
| 97 | 40 | 40 | 0 | NR | NR | NR |
| 98 | 40 | 20 | 20 | 48.5 | 48.5 | - |
| 99 | 30 | 30 | 0 | NR | NR | NR |
| 100 | 40 | 20 | 20 | 48.5 | 48.5 | - |
| | | **280** | | | | **520** |




2) **Signed rank Test (Wilcoxon Matched – Pairs Test)**

**Sign Rank Test:** A test applied for matched pairs by taking the differences and assigning ranks for the differences for testing the significant difference between two samples.

The following conditions to be checked before applying this test:

- Two samples must be related and dependent so that we can have matched pairs.
- The relationships could be of two machines/person
- We determine Direction and magnitude of difference between matched values.

The following were the steps involved in the process:

i) Finding the difference between pairs.

ii) Assigning the rank to the differences from smallest to the largest

iii) Sum the Ranks by separating '+' and '-' differences

iv) Define T as the smaller of the two sums obtained in step-iii

v) Ignore the differences if they are 'Zero'

vi) In case of ties take "average" of those Ranks involved in tie.

If number of pairs is £ 25, then use table for critical values of T (critical values of T in Wilcoxon matched pairs test). If T (calculated) £ T (table), then Reject Ho.

**Note**

If number of pairs >25, the sampling distribution of T is taken as approximately normal (T~N) with (UT') where UT = n(n+1)

$$\sigma_T = \sqrt{\frac{n(n+1)(2n+1)}{24}} \quad ; \quad n = \{\text{No. of matched pairs} - \text{No.}$$

$$4$$

The rest Statistic is $Z = \frac{T-U_T}{\sigma_T} \sim N(0,1)$

The conclusion was drawn based on the value of a, the selected Level of Significance.

(i) $U_T = \frac{n(n+1)}{4}$

$$\Rightarrow \quad U_T = \frac{60(60+1)}{4} = \frac{60 \times 61}{4} = \frac{3660}{4} = 915$$

(ii) **To calculate Difference T**

| **Nursing Staff** | | **Paramedic Staff** | |
|---|---|---|---|
| 1.5 x 30 = | 45 | 1.5 x 14 = | 21 |
| 48.5 x 8 = | 388 | 48.5 x 4 = | 194 |
| 61.5 x 2 = | 123 | 61.5 x 2 = | 123 |
| Total = | 556 | Total = | 338 |

T = 338 [smaller value]

$$\sigma_T = \sqrt{\frac{n(n+1)(2n+1)}{24}} \qquad n = 60$$

$$\Rightarrow \sqrt{\frac{60(60-1)(2 \times 60+1)}{24}}$$

$$\Rightarrow \quad 135$$

(iv) $Z \quad \frac{T-U_T}{\sigma_T}$

$$Z = \frac{338-915}{135} = 4.27$$

**Conclusion**

Hence Z (Cal): 4.2, which is greater that Z (critical) hence the conclusion is a following

**(a)** Ho is rejected. There is significant difference among services of nurses and paramedic staff.

**(b)** The satisfaction level of patient nurses is much better than patient paramedic staff.

## CONCLUSIONS

### *THE COMMUNICATION GAPS – NURSING STAFFS & PATIENTS*

(a) 77% of nurses are from Central Bihar, Hindi being there mother tongue

(b) Nurses who have spent adequate time (4 to 5 years) could communicate freely with patients

(c) Nurses new to the profession had difficulty in communicating hence either do not communicate or take help of other nurses to communicate

(d) 28% of patient were of the opinion that communication is a problem

(e) 30% of the patients felt that other than communication barriers lack of knowledge could be the reason for lack of communication

(f) 21% of patient felt that language is the main barrier in communication

(g) 72% of the patient that they could be comfortable if nursing staff could communicate with them in Hindi language while 22% were more comfortable with Maithili

(h) Hindi being the most spoken language difference in common language is the most significant communication barrier

(i) 25% to 30% is too big a number which creates a wide gap between patient and provider which in required to be bridged. Implication of this significant number of a patients who felt the communication, are deprived to know the course of treatment and also express the difficulties to the nursing staff which always remains in the close vicinity of the patients to provide treatment and care as prescribed by the doctors.

(j) There is an urgent need to take corrective measures to bridge the gap between patients and providers.

### *THE COMMUNICATION GAPS – PATIENTS & PARAMEDIC STAFFS*

(a) Communication between patients and paramedic is lesser as compared to that between patient and nursing staff.

(b) 13% of the patients felt that communication problem was due to language problem

(c) There was lesser communication gap between paramedic staff and patients due to the reasons as follows.

- ✓ Most of the paramedic staff were from nearby areas within the state
- ✓ Majority of the paramedics staffs were from within the twin city hence were conversant with all the three languages that are Maithili, Hindi, and Bengali.
- ✓ Only 15% patients felt the paramedics were not adequately trained for their job.
- ✓ Quantitatively it was found that services of nursing staff were better as compared to paramedics staff and also patients felt that paramedics staff required to be more efficient and positive in their dealing with patients
- ✓ It was felt that patients at times had unreasonable expectations from paramedic staff like expecting them to get their daily needs from market or fetch tea/coffee from market and so on.
- ✓ At times their non-availability also adds up to the grievances of patients.
- ✓ Lack of communication and explanation of side effects to medication appear to correlate negativity with compliance and medication. The language barriers correlate negatively with patients' satisfactions.

## RECOMMENDATIONS

### *METHODS TO DEAL WITH COMMUNICATION GAP*

Successful performance of an organization depends on effective communication. In all interpersonal activity, communication is the key. This is true for any organization for eg. Business, Govt, education and especially so in health care environment where complete course of treatment is based on communication and objective outcome of diagnosis. Communication barriers also contribute to reduce quality, adverse health outcome, and health disparity. Solid evidence also show that language barriers between patients and provider may result in increased use of expensive diagnostic tests, increase use of emergency services and decrease use of primary health care services and poor follow up when follow up is indicated. Inability to communicate interferes with care hence some of the recommendations to bridge the communication gap are as follows.

**(a) At Policy Level**

**(b) At Hospital Management Level**

**(c) Paramedic Staff**

## *POLICY LEVEL*

- Priority to be given in the form of additional Weightage to those applicant on recruitment who have a fair knowledge of local language as well as other languages like Bengali, Hindi & Surjapuri.
- Develop a Pilot health care interpreters training program in the modular form where intensity of training varies depending on proficiency of language.
- Contact Govt agencies and NGO's who are ready to provide interpreters to overcome language barriers.
- Bihar Govt. has taken initiative to adopt BEB/CBSE pattern syllabus in all Schools to overcome language barriers and make coming generations more employable world over. The State of Kerala which is the main nursery of nurses in India as well as world over could be advised to make universal languages mandatory in the syllabus.

## *HOSPITAL MANAGEMENT LEVEL*

- Use a Uniform mix of nursing staff on duty, and ensure a nurse proficient in local language being put on duty roster.
- Make sure all nurses in need of language training are made to undergo a capsule course as well as refresher course to mitigate the effect of language as communication barrier.
- Make sign posters available to help communicate with patients we know who are proficient in one language or are illiterate.
- Feedback form could be modified by adding questions about communication gap if any.
- Frequent use of Hindi medical Terms.
- Professional interpreter could be employed to facilitate communication.

## *PARAMEDIC STAFFS LEVEL*

Recruitment process to include examining the language proficiency of paramedic staff.

Training program to include the following

- Soft skills
- Basic Training of conversation
- Familiarity with medical terms

Most of the dissatisfaction about paramedic services is due to arrogant behavior or non-availability of staff when required, Hence patients, nurses & paramedic staff have to be explained about their charter of duties or the charter of duties could be displayed in places like General ward.

Make paramedic staff answerable for their duties. A check list of duties to be displayed at various locations of work.

A time bound program for supervisor to check and sign the areas of work and be made responsible for the team of paramedic staff.