

## Pharmacists: Role and competencies in Indian Healthcare system

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### Abstract:

In many low- and middle-income nations, it can be difficult to ensure that the current public health care professional has the necessary skills to carry out crucial public health duties. (WHO, 2006, Bhandari et al, 2020) This task is made more difficult by the lack of a set of basic competencies that can be used as a foundation for creating and evaluating knowledge, skills, abilities, and attitudes. Pharmacists play a crucial role in the delivery of healthcare services at all levels because they are among the healthcare professionals who are most easily available in many nations. (ETHealth World, 2023) The duties of the pharmacists are constantly changing in a time of quickly accelerating change in healthcare delivery. Competency mapping plays a crucial role in ensuring the effectiveness and quality of healthcare professionals, including pharmacists (Global Pharmacy and Mitigation Report, 2006, Global Workforce Alliance, 2013)

The World Health Organization estimates that the current shortage of health workers, including pharmacists, is in excess of 7.2 million worldwide and that, by 2035, the shortage will reach 12.9 million. Pharmacists, in particular, are lacking in the workforce in many countries. (Bates et.al,2012). In the context of the Indian healthcare system, which is witnessing rapid advancements and evolving patient needs, it becomes imperative to assess and enhance the competencies of pharmacists. This paper presents a comprehensive analysis of competency mapping for pharmacists in the Indian healthcare setting, with the objective of understanding the current role of pharmacists in India and bridging the gap between their existing competencies and the evolving healthcare landscape. This study's main goal is to thoroughly assess the existing position of pharmacists in India's healthcare system.

The study used a mixed-methods approach to accomplish these goals. A thorough literature review was carried out to learn more about the current function of pharmacists in Indian healthcare system. Following this, qualitative interviews and surveys with pharmacists were conducted to learn more about their perspectives on the rapidly changing healthcare scene and the skills that pharmacists must acquire.

The results of this study brought out three most important competencies- Professional Knowledge, Communication skills, Data management & coding, Support and Ethical Practice for pharmacists (Francis Okeke, 2022, Pharmacy Council of India). Taking into consideration the vast population of India which relies on pharmacists for over the counter medications for headaches, mild fevers or even stomach related ailments, it becomes imperative to train the pharmacists in guiding and counselling the patients and their relatives towards a better health care delivery.

**Keywords:** competency mapping, pharmacists, Indian healthcare, competencies, health for all, health care professionals.

## 1. Introduction

Global health can only be enhanced by developing a workforce that has acquired the instruction required to promote health and care for those who are ill.(WHO, 2006) India has one of the most complicated healthcare systems in the world due to its large population and different healthcare demands. Numerous issues, such as poor accessibility, unequal care quality, financial limitations, and a lack of medical experts, plague India's existing healthcare system. (WHO report, 2016, Pharmacy Council of India, 2009) Despite these obstacles, the Indian healthcare system has made remarkable strides and undergone reforms aimed at enhancing the quality of care and patient outcomes.

The practice of people avoiding doctors and purchasing over-the-counter medications straight from neighbourhood pharmacies is a big problem inside the Indian healthcare system. The delivery of healthcare, patient safety, and the general efficiency of the healthcare system are all impacted by this practice, which presents special issues.

To address the needs of the society, there is a great need for competent physicians, nurses, lab technicians, and pharmacists. Skilled staffs are needed because the number of diseases is rising. Concerns have been expressed about whether healthcare providers have the information, skills, and abilities required to manage the current healthcare systems given the speed at which the industry is changing. Data on the frequency of patient injuries and deaths as a result of care mistakes have heightened these worries. A key tactic for enhancing the efficiency of healthcare providers is increasingly seen as competency-based methods to training, evaluation, and staff development.

The importance of core competencies in providing public health services, such as illness prevention, detection, and outbreak response, has been highlighted by the COVID-19 pandemic. However, in many contexts with limited resources, it can be difficult to ensure that the medical staff has the public health expertise required to successfully perform these and other public health responsibilities. (Rao M et al., 2011, Fren et al, 2011, OCED indicators, 2021)

In India, pharmacies are easily accessible, frequently situated near residential areas, and are open longer hours. Many people rely only on the advice of pharmacists for their healthcare needs because of this accessibility and the idea that over-the-counter treatments are more accessible and less expensive. The ability to diagnose and treat complicated medical illnesses may be outside the scope of a pharmacist training, despite the critical role they play in medicine delivery and drug information.(Benson et al, 2019)

Without a competent medical evaluation, the propensity to self-medicate or consult chemists for guidance can have detrimental effects. Negative health outcomes and problems can be brought on by misdiagnosis, incorrect pharmaceutical use, and postponed treatment of underlying diseases. Additionally, this practise might help the problem of antimicrobial resistance, which is getting worse, as people might misuse or overuse antibiotics if they don't get the right advice from medical experts.

Numerous factors, including restricted access to healthcare facilities, financial constraints, lack of awareness of the value of seeking medical counsel, and cultural considerations, can be linked to the preference for over-the-counter drugs and pharmacy consultations. Some people may view doctors as being expensive or time-consuming, which causes them to turn to pharmacies for prompt, affordable solutions. Additionally, people may be deterred from obtaining professional medical assistance due to the stigma attached to some health concerns, leaving them to rely only on pharmacy suggestions.

In the last few years, there have been substantial changes to the role of pharmacists in the Indian healthcare system. Pharmacists have traditionally focused on dispensing prescriptions and informing patients about medications. The role of pharmacists now encompasses a wider range of practise due to the changing healthcare environment and the complexity of healthcare needs. (Pharmacy Council of India, 2009).

The study aims to highlight the critical abilities that pharmacists must possess in order to successfully contribute to these areas by studying the evolving healthcare demands and future trends, such as personalized medicine, digital health technology, and expanding roles of pharmacists in patient care. The study attempts to determine the current skills and duties of chemists within the Indian setting by performing an exhaustive literature review and analysing pertinent publications. In addition, the study aims to close the knowledge gap between Indian chemists' current skill sets and the country's changing healthcare system.

### **Role of the Pharmacist**

Pharmacists are health professionals who possess a unique and complex body of knowledge and skills which they apply on behalf of other members of the community to optimize health outcomes from medicines. This commitment to act in the service of others carries with it an obligation to do so in accordance with expected behaviors as set down in professional codes of conduct/ethics. It also carries with it a fundamental ethical obligation to maintain professional competence and to practice within these limits. (Kokane and Ahvad, 2021)

The practice of pharmacy includes the custody, preparation, dispensing and provision of medicines, together with systems and information to assure quality of use. As readily accessible health professionals, pharmacists provide primary health care including education and advice to promote good health and to reduce the incidence of illness. (Pharmacy Council of India, 2009, Francis Okeke, 2022)

According to a 1963 discussion at a British pharmaceutical conference, a pharamcists is regarded as an expert in medications. "Without medicine there is no life, it acts as sanjivani for human beings, and such medicines are manufactured by only chemists,"

Sharma et al. (2019) did a systematic review to examine the function of chemists in the Indian healthcare system. The review made clear that pharmacists are essential to patient counselling, medication management, and promoting sensible medication use. They actively participate in medication reconciliation, assuring accurate dosage and administration, and keeping track of patients' compliance with prescribed treatment plans. Pharmacists also help to ensure the safety of medications by spotting and avoiding adverse drug responses and drug-drug interactions. Additionally, pharmacists are working more and more closely with other healthcare professionals to deliver clinical services. They do health exams, coordinate pharmaceutical therapy, and assist with disease management. To effectively interact with patients and healthcare teams, the research emphasized the necessity for chemists to have excellent communication skills and clinical understanding.

Singh et al. (2022) conducted a qualitative study to examine the changing responsibilities of chemists in India. According to the report, pharmacists are increasingly becoming responsible for tasks like pharmacovigilance, pharmacogenomics testing, and educating patients on lifestyle changes. They are also essential in encouraging the use of generic medications and enabling easy access to inexpensive medications.

This problem requires a multifaceted strategy to solve. Expanding primary care services is crucial to enhancing healthcare accessible, especially in rural and disadvantaged areas. It is

critical to raise public awareness of the value of getting expert medical advice and the dangers of self-medication. Campaigns for health literacy, neighbourhood engagement initiatives, and partnerships between pharmacists and healthcare professionals can all support optimal healthcare-seeking behaviour.

Additionally, regulatory actions are required to ensure ethical pharmacy practice and deter the inappropriate distribution of prescribed drugs without legitimate prescriptions. By giving pharmacists more education and training, we can improve their ability to advise patients efficiently, give accurate information, and, when necessary, direct patients to the best healthcare providers.

## **2. Methodology:**

Extensive literature review was done and Google Scholar, PubMed, BMC, SCOPUS databases were used. The researchers carried out a small survey for 60 pharmacists in the region of Vidarbha in the state of Maharashtra to understand the roles and skills of the pharmacist. A questionnaire having 15 questions was floated among the pharmacists- 4 questions were open ended and rest were on a Likert scale.

## **Objectives**

1. To understand the current role and responsibilities of pharmacists in the Indian healthcare system.
2. To identify the core competencies required for pharmacists to effectively perform their roles in Indian healthcare settings

## **Findings from Secondary data:**

A wide range of tasks that are involved in patient care, medication management, and healthcare delivery are part of the function and duties of pharmacists in the Indian healthcare system. In India, pharmacists are extremely important in assuring the efficacy and safety of drug usage. Depending on the practise location, such as community pharmacies, hospitals, or clinical pharmacy settings, a pharmacist's precise roles and responsibilities may change. Additionally, because of the dynamic nature of the Indian healthcare system, positions and duties may change over time.

- Medication delivering: Pharmacists are in charge of appropriately delivering medications that have been prescribed by medical professionals. They make sure that patients receive the appropriate drug, dosage, and instructions. (Bhandari et al, 2020)
- Patient counselling: Pharmacists provide advice and counseling to patients on how to utilize drugs properly. They inform patients of possible adverse effects, drug interactions, and safety measures must be observed when using particular medications. (Deshpande et al 2015)
- Pharmacists participate in medication management procedures such medication reconciliation, evaluating prescriptions to make sure they are suitable, and ensuring sensible drug usage. (Pharmacy Council of India, 2006)
- Medication Safety: Pharmacists are essential to maintaining the security of medications. They confirm the legitimacy and calibre of pharmaceuticals, look for drug interactions or contraindications, and offer details on correct medication disposal and storage.

- Pharmacy experts work together with other medical specialists, such as doctors and nurses, to improve patient care. They actively contribute to interdisciplinary healthcare teams by sharing their knowledge on problems involving medications.
- Clinical Pharmacy Services: Specialised clinical pharmacy services are offered by pharmacists in a variety of settings, including hospitals and clinics. They could be involved in performing medication evaluations, therapeutic drug monitoring, and informing medical practitioners about drugs.
- Pharmacists support public health activities by encouraging proper medication use, administering immunisations, and running health awareness campaigns. Additionally, they take a proactive role in pharmacovigilance efforts, disclosing bad drug responses and assuring the security of medications.

Several organizations from throughout the profession, including the following ones, participated in a consultative conference to develop the National Competency Standards Framework for Pharmacists in Australia (2010): Pharmaceutical Society of Australia; Pharmacy Board of Australia; Society of Hospital Pharmacists of Australia; The Pharmacy Guild of Australia; Association of Hospital Pharmacists; Association of Professional Engineers, Scientists and Managers, Australia; Australian Association of Consultant Pharmacy; Australian College of Pharmacy; Australian Pharmacy Council; Council of Pharmacy Schools: Australia and New Zealand Inc. The Pharmaceutical Society of New Zealand created three performance levels (Pharmacist, Practitioner Pharmacist, and Specialist Pharmacist) in 1999 in order to recognise three degrees of skill. A new medications management competence framework created by the Pharmacy Council of New Zealand took the place of this idea in 2006.

The competency standards outlined in this National Framework apply to both locations where the majority of pharmacists practice as well as those where there are fewer pharmacists. The Framework provides a general description of the knowledge, abilities, and characteristics that chemists need to operate successfully and to an acceptable quality in a variety of professional practice activities in Australia. Competency standards have been organized into domains of professional responsibility or areas of professional endeavor. No hierarchy in the relative importance or relevance of the standards covered in each area is implied by the order in which they are given.

1. Professional & Ethical Practice
2. Communication, Collaboration & Self management
3. Leadership and Management
4. Review and Supply prescribed medicines
5. Prepare pharmaceutical products
6. Deliver primary and preventive health care
7. Promote and contribute to optimal use of medicines
8. Critical analysis, research and education

### **Findings from the Primary data:**

#### **Educational Qualification**

To become a pharmacist you need to have a:

- D. Pharmacy (Diploma in Pharmacy)
- B. Pharmacy (Bachelors in Pharmacy)

When surveyed it was found out that only 13% of the respondents were not possessing the above mentioned degree. This shows that people are aware about the necessary educational qualifications. Having said this, it is important to mention that many a times, people working in the pharmacy stores do not have the required educational qualification. With experience, they understand the coding of medicines and assist the owner (main pharmacist) in running of the pharmacy (which are local ones.) Hospital pharmacies are situated within the clinics or hospitals and are managed by the trained people as they have to counsel the patients or their relatives about the dosage, timing and restrictions to be followed by the patient.

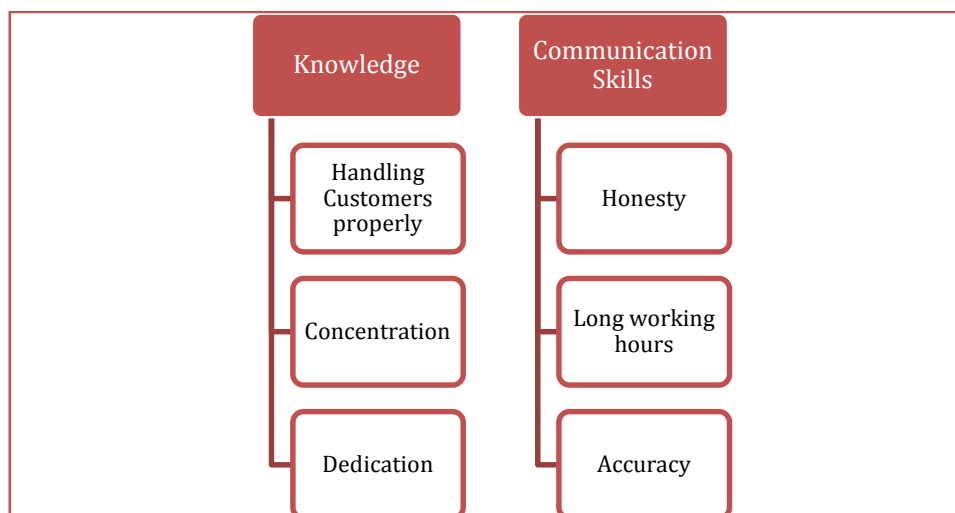
### Primary reason for Choosing the Profession

When the respondents were asked about the primary reason for Choosing the professional nearly 40% of them had their own business or wanted to start their business. While 38% of them wanted to serve the society and were interested in the profession. Rest of them had issues such as

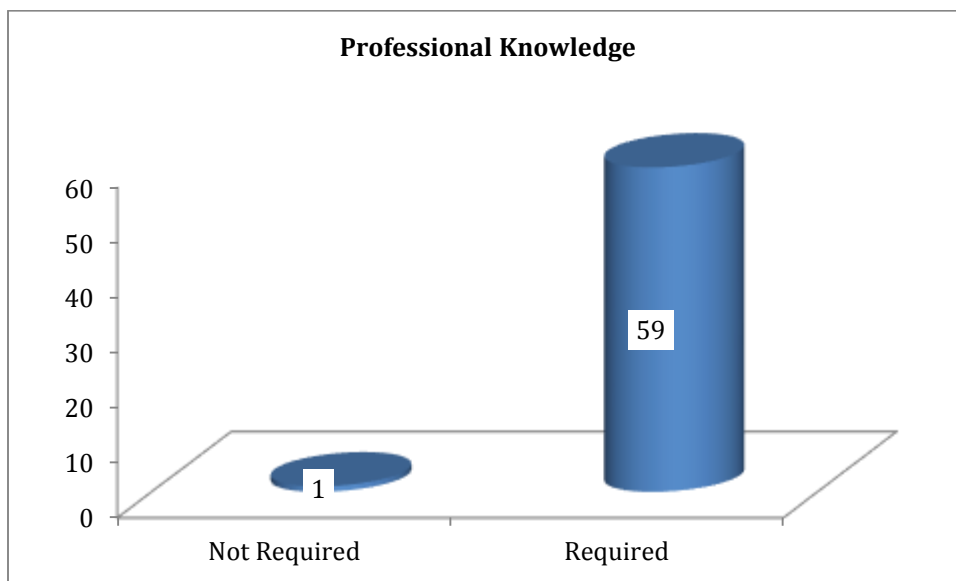
- Wanted a good job
- Money problems
- Easily available

### Skills required for doing the job effectively

When the respondents were asked about the skills required for doing the job effectively following answers were elicited:

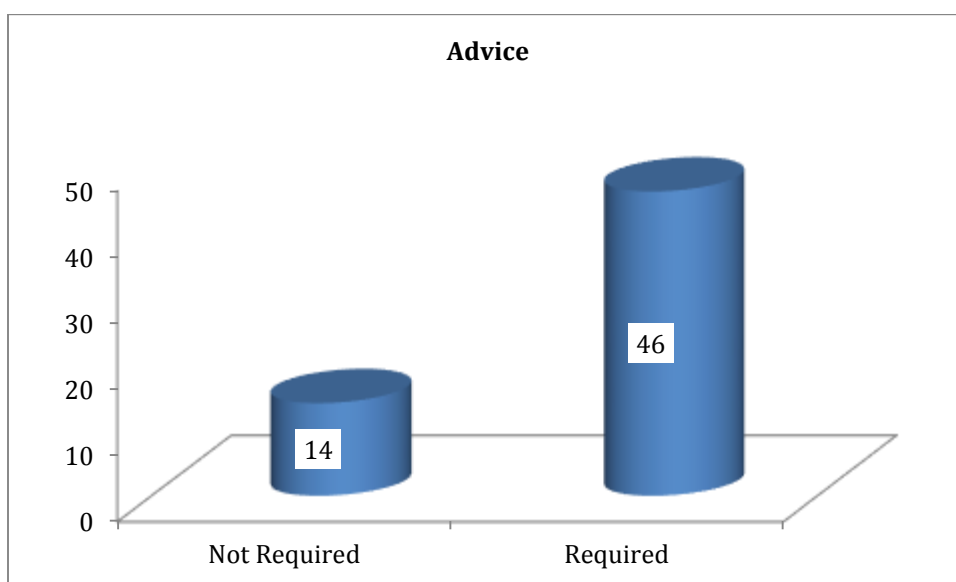


**Fig. 1. Skills required for Pharmacists**



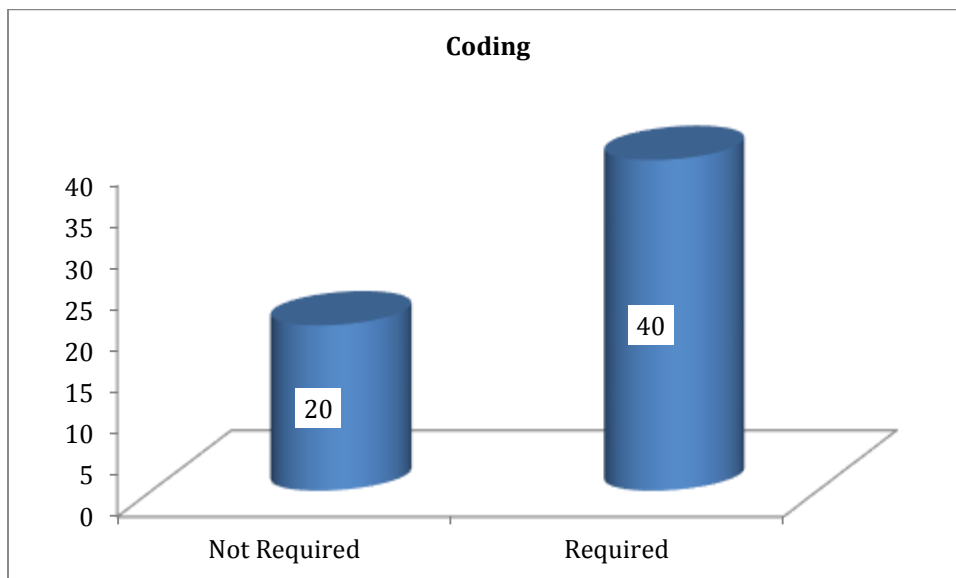
**Interpretation:** The graph depicts that out of total 60 pharmacists 59 respondents agree to the fact that professional knowledge is a required competency which every pharmacist must possess; while only 1 feel this is not required for the nursing profession.

**Root Cause Analysis:** Professional knowledge is of utmost importance in medical field. In India still many people go to medicine shops and ask for medicines on headaches, stomach aches, vomiting, etc. hence professional knowledge of medicines and their composition is highly important.



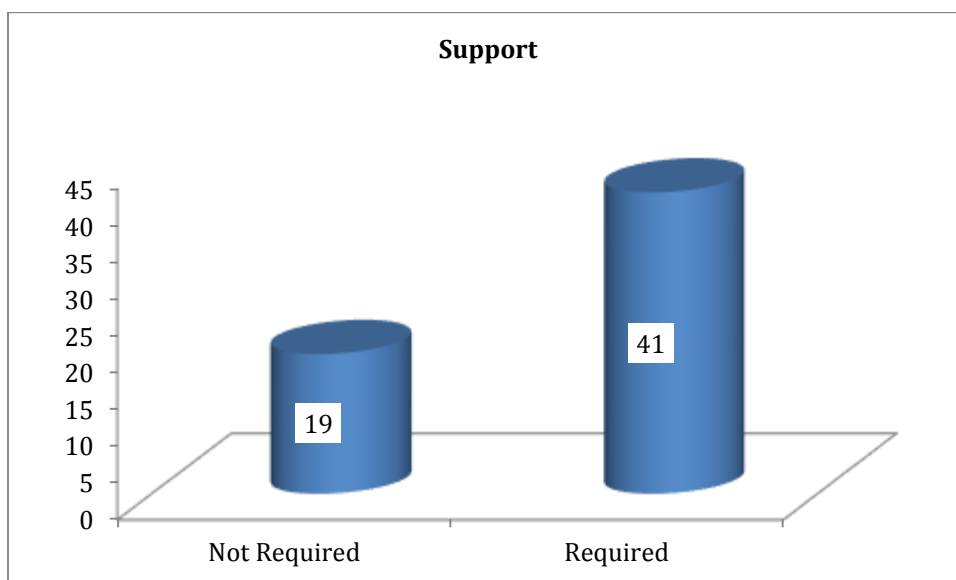
**Interpretation:** The graph depicts that out of total 59 pharmacists 46 respondents agree to the fact that advice is a required competency which every pharmacist must possess; while 14 feel this is not required for the profession.

**Root Cause Analysis:** Advice means guiding, suggesting and helping someone. Pharmacists have to advise patients regarding the dosage of the medicines; explain diet plans and other preventive things.



**Interpretation:** The graph depicts that out of total 59 respondents 40 respondents agree to the fact that coding is a required competency which every pharmacist must possess; while 20 pharmacists feel this is not required.

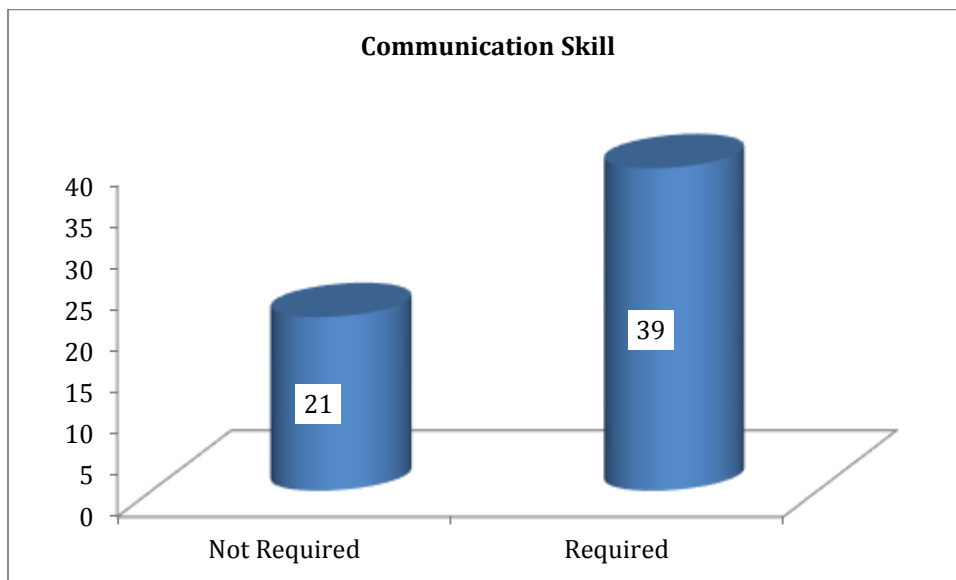
**Root Cause Analysis:** Coding means a System, structure, arrangement or classification. This is necessary to avoid goof ups. Coding helps in easy finding of the medicines.



**Interpretation:** The graph depicts that out of total 59 respondents 41 respondents agree to the fact that support is a required competency which pharmacists must possess; while 19 feel this is not required for the profession.

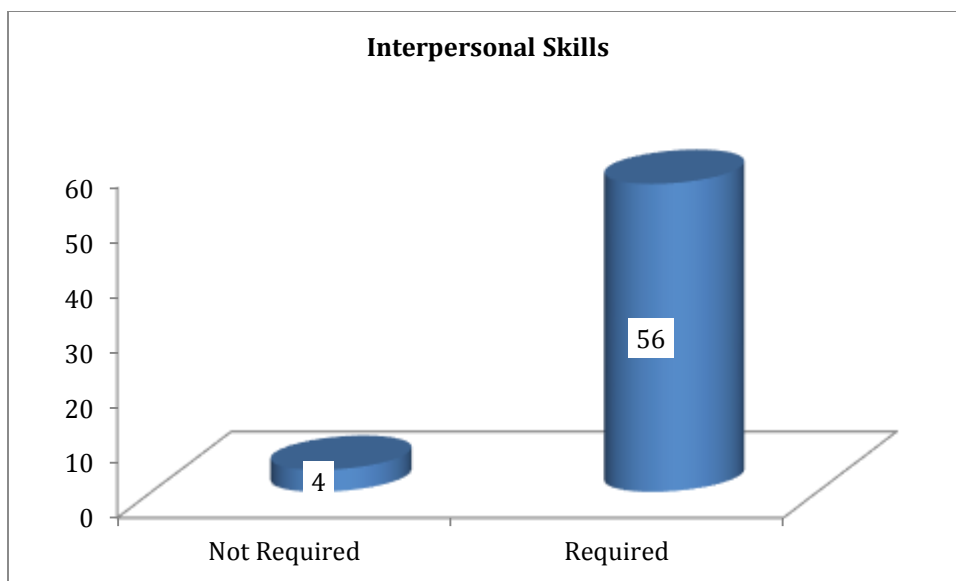


**Root Cause Analysis:** Support is an essential skill for healthcare professionals. Pharmacists have to support patients and their relatives and help them in understanding the prescribed medicines.



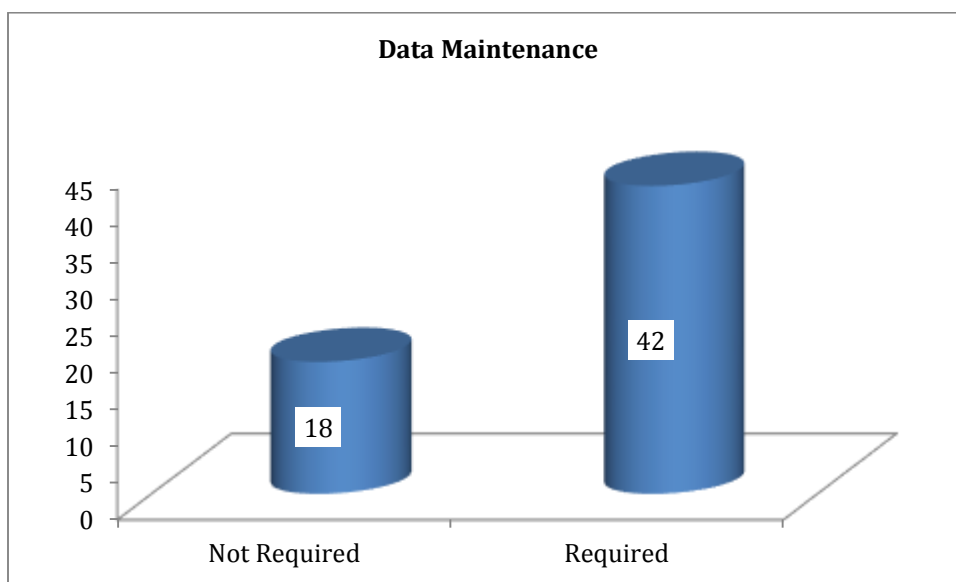
**Interpretation:** The graph depicts that out of total 59 respondents 39 respondents agree to the fact that communication skill is a required competency which every pharmacist must possess; while 21 feel this is not required for the profession.

**Root Cause Analysis:** Communication skill is an essential skill in every profession. Pharmacists have to explain the prescribed medicines to patients as many a times patients do not have the courage to ask the doctor and many a times doctors are busy. Communication skills not only mean speaking effectively but listening and responding too. Hence this is a highly required skill. In Indian context, the pharmacists needs to explain the prescription of the doctor to the patient or his relative in simple terms or easy language. Sometimes they need to show them the color of the tablet or syrup and tell them the time to take the medications.



**Interpretation:** The graph depicts that out of total 59 respondents 56 respondents agree to the fact that interpersonal skill is a required competency which every pharmacists must possess; while 4 feel this is not required for the profession.

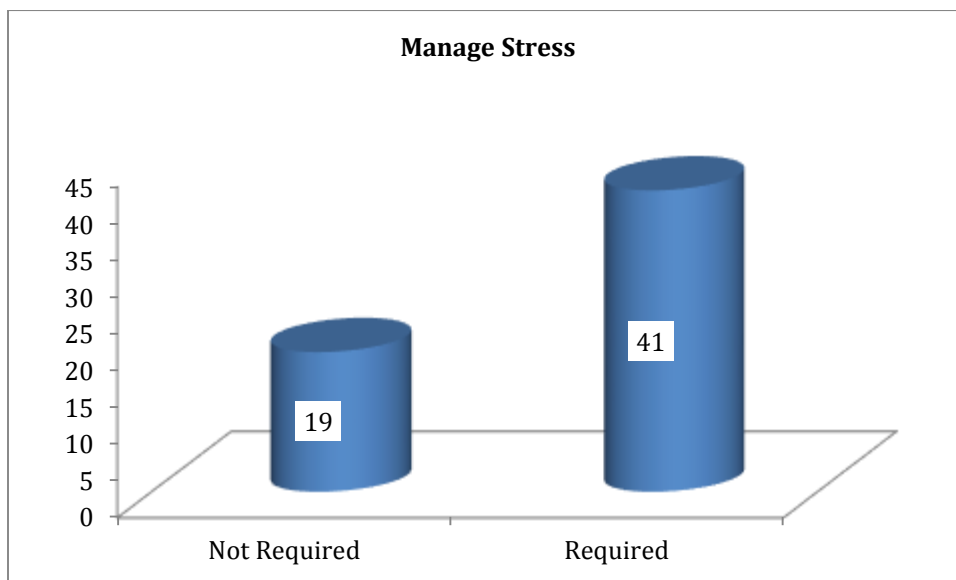
**Root Cause Analysis:** Interpersonal skill or social skills help and individual to work effectively in his work environment. It means communicating effectively, empathic attitude, optimism, confidence, calmness; assertive are a few skills which can be called as interpersonal skills.



**Interpretation:** The graph depicts that out of total 59 respondents 42 respondents agree to the fact that data maintenance is a required competency which every pharmacists must possess; while 18 feel this is not required for the profession.

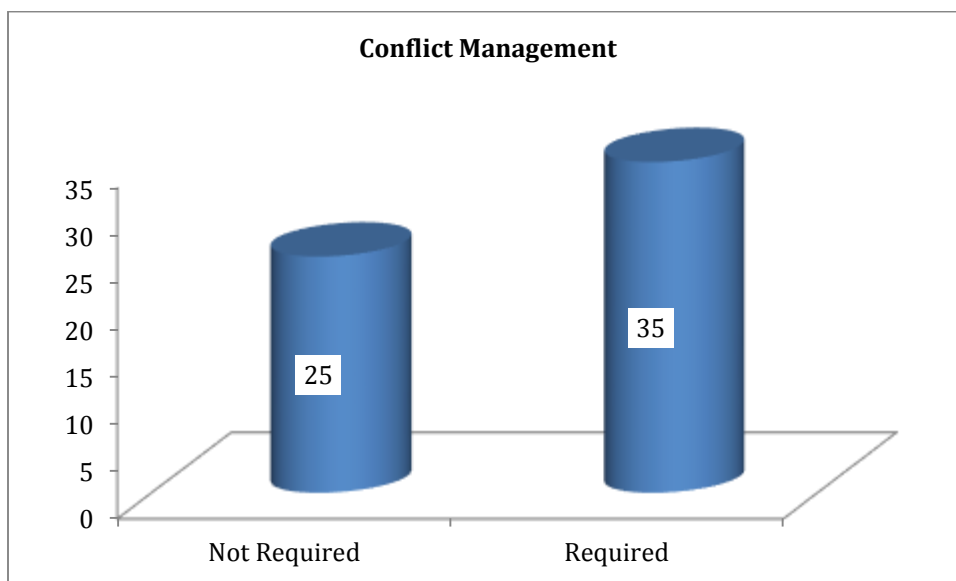
**Root Cause Analysis:** With advent of computer data maintenance had become very easy. Records of hundreds of medicines and their stock can be maintained any time. Data maintenance is nothing but preserving information about medicines and their expiry dates,

inventory management. These days, stores need to keep a record of each and every drug prescribed by the doctor and given to the patients. They need to keep a record of the patients such as name, age, diagnosis and prescribing doctors details to ensure transparency and manage frauds or misuse of drugs.



**Interpretation:** The graph depicts that out of total 59 respondents 41 respondents agree to the fact that managing stress is a required competency which every pharmacist must possess; while 19 feel this is not required for the profession.

**Root Cause Analysis:** Stress is our body’s response to warn us towards an impending situation. Pharmacy or pharmacists have Long working hours, endless queue of patients with their sadness, managing personal lives and maintaining owns good health are important aspects of health care professionals. At such time effective stress management becomes essential.



**Interpretation:** The graph depicts that out of total 59 respondents 35 respondents agree to the fact that conflict management is a required competency which every pharmacists must possess; while 25 feel this is not required for the profession.

**Root Cause Analysis:** Conflicts are nothing but differences of opinions, arguments, and disagreements and are very common in any organizations. When people from different backgrounds come together to work conflicts are bound to happen. Relatives of the patients are often argue with the patients. At such times conflict handling strategies come in handy. Indian pharmacy stores need people who can handle relatives and patients who are already tensed, stressed and are facing difficulties, and hence they should be good at crowd control and conflict management.



**Interpretation:** The graph depicts that out of total 59 respondents 38 respondents agree to the fact that Ethical practice is a required competency which every pharmacists must possess; while 22 feel this is not required for the profession.

**Root Cause Analysis:** Pharmacists should be ethical in giving medicines within expiry date, medicine should be stored properly. Rodent or pest control should be done properly as medicines need to be kept stored as per the directions and away from any chances of getting spoiled. Further it should be also kept in mind that drugs which should not be given the doctors prescriptions such as Anti-depressants, steroids, Sleep inducing medications or certain specific drugs need to be kept away from common man to prevent its misuse.

### 3. Conclusion:

Pharmacists play a crucial link between patient, nurse and the doctor. They are the ones who can pave the way for providing the right kind of medication to the common man. This paper has come out with skills such as professional knowledge, communications skills, data management, coding, counselling and conflict management as essential skills required by the pharmacists. Thus we can say that competency mapping of healthcare professionals not only paves way for future course of action but also provides a skill set to work on. This will help

during the recruitment process for pharmacy at clinics or hospitals and even at the local pharmacy stores. The goal of “HEALTH FOR ALL” can be achieved with the help from this under noticed but indispensable aspect of health care system

It can be recommended to design a training program for all pharmacists to make them understand the importance of dispensing drugs to the common illiterate people of India. Pharmacists are responsible for insuring that “Right drug to right patient at right time in right dose through right route in right way.”

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