# LITERATURE REVIEW

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LITERATURE REVIEW

2 Introduction:

In today’s world, every day, lakhs of people visit community pharmacies for their health care needs (Adepu & Nagavi, 2006). Pharmacists are healthcare professionals who work in a pharmacy or medical store. They own responsibility of dispensing medication to patients by giving medicines written in the prescription prescribed by doctor or over the counter (OTC) medicines. Several things are thought to be correlated with patient’s healthcare and community pharmacy. The role of pharmacists as a health advisor in developed countries like United States of America, Australia, Sweden, France, and the United Kingdom is highly respected. In spite of the respect, there is still a lack in research on the roles of pharmacists in developing countries (Poudel, Khanal, Kadir, & Palian, 2009). The community pharmacists perform various functions in their respective pharmacies, some examples include, dispensing of medicines, health promotion, patient counseling, giving services, providing drug information. The World Health Organization (WHO) has organized various meetings and has periodically, through their literatures, highlighted the potential role of pharmacists in the healthcare system.

In a research article by Eades, Ferguson, & O’Carroll (2011), they investigated the roles of pharmacists, in which, one of the five core roles of pharmacists is promotion of healthy lifestyles. Changing role was introduced in the new pharmacy contract which gave guidelines on the services to pharmacists. The researchers further state that both pharmacists as well as general public need to change their mindsets. It is important that pharmacists should focus themselves to serve the public and the general public should accept pharmacists as health service providers and should look at pharmacists as the most resourceful person, whom general public should approach to seek advice on their health related issues. (Eades, Ferguson, & O’Carroll, 2011) searched five electronic databases between 2001 and 2010. These articles searches included articles in English language only. They identified 5628 papers, out of which 63 studies were selected and 67 papers
included in their research. Their research puts an emphasis for the general public and role of pharmacists.

In the year 1990, two researchers, Charles Hepler and Linda Strand were one of the pioneers in coining the concept of “pharmaceutical care”. In their research article, opportunities and responsibilities in pharmaceutical care, they mention that pharmacy though, has come out of its apothecary role (preparing and selling medicinal drugs) but still is not given importance in medical care. They further put forward suggestions to pharmacists to accept patient centered pharmaceutical care, “Pharmacy’s re professionalization will be completed only when all pharmacists accept their social mandate to ensure the sale and effective drug therapy of the individual patient” (Hepler & Strand, Opportunities and responsibilities in pharmaceutical care, 1990).

In the research article they further write, starting from the twentieth century, apart from the primary obligation of apothecary, pharmacists began to perform newer functions; pharmacy had a secondary obligation of providing advice to customers, so called “patient-oriented practice”. But as pharmacies are independent and so this concept of “patient-oriented practice” had more than one meaning. This made Hepler and Strand (1990) to mention that pharmacy is still “a profession very much in a search of a role, and now it is a profession not able to choose from a variety of functions” (Hepler & Strand, Opportunities and responsibilities in pharmaceutical care, 1990). They mention, there are some pharmacists who have not yet identified patient-care responsibilities which will be similar to the secondary obligation of pharmacists which is to provide advice to customers. Hepler and Strand (1990) have quoted Cipolle (1986) words, “drugs do not have doses, patient have doses” (Cipolle, 1985). Pharmacists that time were on the verge of professional maturation and many pharmacists have been providing patient care. This patient care is nothing but a service bigger than serving our own self. They have highlighted that pharmacies should require having changes in the way pharmacy is practiced.

According to an article by Kenreich and Wagner (2006) there was a change in pharmacy practice after Hepler and Strand (1990) first used the term “pharmaceutical care”, which
includes a patient centered approach and pharmacy practicing outcomes-oriented practice. “This practice model promoted the pharmacist as a key member of the healthcare team, with responsibility for the outcomes of medication therapy” (Kenreigh & Wagner, 2006). They further add the real “pharmaceutical care” rests in the hands of the pharmacists and modifying the pharmacy environment and providing services to patient’s visiting the pharmacy, therefore pharmacists should be motivated to provide newer and innovative services from their pharmacies. Kenreigh and Wagner (2006), in their article have mentioned, from the pharmacy profession angle, it is essential for pharmacists need to get involved in patient care. In their article they have given a reference of a survey conducted by Harris Interactive for the National Association in the year 2005 of chain Drug Stores, around 86% of consumers had a n opinion that they should have an trusting relationship with their pharmacist and 69% of consumers had the same trust with pharmacist as other healthcare professionals. However, when consumers were asked to discuss a health issue only 26% customers gave an opinion to ask a pharmacist about a health issue than to ask a physician.

Despite these professional initiatives, recent studies suggest that the pharmacy practice revolution still has significant hurdles to overcome. According to a survey conducted in 2005 by Harris Interactive for the National Association of chain Drug Stores, 86% of consumers said it was important to them to have a comfortable, trusting relationship with their pharmacist and 69% indicated that they trusted the pharmacist as much as or more than other healthcare professionals. Yet, despite these positive feelings, only 26% said they felt it was easier to ask a pharmacist about a health issue than to ask a physician. (Kenreigh & Wagner, Pharmacists' Role in Healthcare Still Evolving, 2006)

Meanwhile, the body of literature about the value of pharmacists continues to grow. Studies continue to demonstrate that adding a pharmacist to the patient care team produces better outcomes, both clinical and economic. Even though challenges remain for the profession, pharmacy organizations are committed to expanding the clinical focus of pharmacy. (Kenreigh & Wagner, Pharmacists' Role in Healthcare Still Evolving, 2006)
2.1 **Pharmacists perception of Role:**

In a research article by Fang, Yang, Feng, Ni, & Zhang (2011) in Xi’an, Shaanxi Province, China, explored the community pharmacist’s perception towards the concept of pharmaceutical care, which was developed by originally by Helper and Strand in the year 1990. Apart from pharmacists understanding of pharmaceutical care, perceived frequency of activities related to pharmaceutical care were studied. (Fang, Yang, Feng, Ni, & Zhang, 2011) found that, pharmacists understanding on the basic definition of pharmaceutical care was not up to the mark, the sample of 130 pharmacists in Xi’an perceived pharmaceutical care as medication counseling service, moreover, most of the pharmacists had a misunderstanding of their role. Pharmacists ignored health promotion, both inside and outside the pharmacy.

Seven star pharmacists have on star for pharmacists as a lifelong learner. Keeping this concept, Hanson, Bruskiewitz, & DeMuth (2007) did a study twice, first in 1990 and then in 2003 on pharmacists lifelong learning. The focus of their study was on facilitators and barriers to pharmacists in their participation in the lifelong learning process. 274 pharmacists from Wisconsin, United States of America volunteered for the study of the year 2003, the response rate was 88%. The major three facilitators as noted in the study were, “1) personal desire to learn; 2) requirement to maintain professional licensure and 3) enjoyment/relaxation provided by learning as change of pace from the routine” (Hanson, Bruskiewitz, & DeMuth, 2007). Overall, highly positive side variables were pharmacists’ self-perception as lifelong learners, but better than self-perception were lifelong learning skills such as ability to identify learning objectives and to evaluate learning outcomes. Hanson et.al also reported that there has been a little change over their earlier research on the pharmacists view on lifelong learners.

Eades et.al (2011) had a review of literature on the perceptions of role of pharmacists, which covered various countries. A survey in Scotland, majority of pharmacists agreed (63%) or strongly agreed (16%) where they stated that public health is important and they should practice. A survey in Nigerian pharmacists revealed a majority (94%) were of the opinion that they would like to be involved in activities related to health promotion. In
Sweden, pharmacists and support staff were ready for their role as health promoter, to serve patients (consumers). Conversely, a study undertaken in Moldova rated other aspects of professional practice well above public health activities. To add to this, a survey in Scotland, found pharmacists would be rather prefer taking hypothetical jobs on minor illness service rather than jobs related to health promotion advice, even if they are paid less. This study had identified a gap which is a need for training to pharmacists related to public health services.

A research done by (Upasani, Shah, Ingle, & Patil, 2011) dealt with status of retail as well as their social status and role of community pharmacists in Amalner Tehsil in Khandesh Region of Maharashtra, India, threw the same light which earlier researchers had studied. Upasani et.al., mentions, pharmacists have opportunity to communicate with patients. Pharmacists are proving themselves as health care professionals through their services in developing countries. “The concept of good pharmacy practice is getting promoted, as a pharmacy practice; branch of pharmacy is under development in India” and that, “It is evident that a pharmacist has significant role to play in health promotional activities. The pharmacist is required to be an adept patient counsellor and drug information specialist”. (Upasani, Shah, Ingle, & Patil, 2011). The instrument for the study was developed which consist of various parameters which are directly and indirectly related to pharmacy profession and community pharmacist services like educational qualification, experience, source and dispatching system of medicines, clinical services etc.

### 2.2 Pharmacists as Entrepreneurs:

Mr. Robert Nickell a proud owner of Nickell Physician and Pharmacy services had opened pharmacy store after a year of graduating in pharmacy in Torrance, California, United States of America. Mr. Nickell has diversified his business to include orders via mail, retail and compounding businesses. His expansion into the compounding area includes collaboration with the physicians, thus having a scope for an expanded role for
pharmacists in patient care. Services offered by Nickell Physician and Pharmacy services also include “providing Drug-Drug interaction screenings, patient drug usage, and patient history and on-call pharmacists to answer any drug related questions.” (Eileen, 2012).

Dr. Marty Feltner, who is an community pharmacist in Kohll’s Pharmacy and Homecare in Nebraska, United States of America, engages in better patient care by conducting vaccination clinics and diabetes and cholesterol screenings, coordination with doctors related to patient care and investment in systems to meet the needs of patients. One of his own inventions, the Show and Tell Prescriptions Delivery method, which is implemented in all Kohll’s location helps to increase communication between pharmacists and patients, which in itself opens an area in patients counseling (Eileen, 2012).

Organized Pharma Retailers: Organized pharmacy retailers like Dial for health India, which is a subsidiary of Zydus Cadila Group has a tie up with other retailing companies to form a joint venture where they will appoint trained customer managers who will be offer free health checkups, provide free home delivery and also send reminders on dosage and on refill of medicines (Economic Times, 2005)

2.3 Pharmacy Services and Value added Services:

Pharmaceutical Services Negotiating Committee of Aylesburg in the United Kingdom in the year 1987 mentioned “pharmacists want to develop their dispensing services” (Rawlins, 1991). The Royal Pharmaceutical Society (1988) mentioned that if pharmacists develop domiciliary services, like collection and delivering prescriptions for patients, then the pharmacists do see that these domiciliary services benefit patients (Rawlins, 1991).

This was further substantiated by Edwards C (1987), Edwards C (1981) and Royal Pharmaceutical Society (1988) whom in their articles mentioned, “at least some pharmacists want to develop diagnostic services” (Rawlins, 1991). According to them, these diagnostic services included screening for hypertension, cholesterol, etc. In the
same article by (Rawlins, 1991) cites, Pharmaceutical Services Negotiating Committee (1987) and an editorial article in the Pharmaceutical Journal (1989) where both articles mentions pharmacists believe by getting repeat prescriptions they can relieve some burden for both the patients and the doctor.

These statements are interpreted by the researcher as pharmacists do lack some kind of homogeneity, and therefore the words, “some pharmacists” and “pharmacists want to develop”, which further leads to the fact that services play an integral part in the duties of the pharmacists.

In contrast, Edwards C (1981) was not certain on whether such activities like providing services would have any kind of impact on public health. Community pharmacists wish to take on advisory role in health care, and that too, for minor ailments and self-limiting conditions, such activities is not a recent phenomenon and pharmacists have had been performing such activities for centuries (Rawlins, 1991).

Morley et.al (1983), Cunningham-Burley and Maclean (1988), Cunningham-Burley (1988) and Morley et.al (1984) had clear evidence that pharmacists offer services which are of value and use to both consumers and many general practitioners.

Research done by Mobey et.al, (1986) and Consumer’s association (1985) highlight base for concern regarding the quality of advice given by pharmacists. Their research through reliable studies gave different concerns like, even the pharmacies offer wide range treatment but these pharmacies inadequately lack traditional treatment, majority of the time, pharmacists are not able to identify the symptoms and patients are referred to doctors, and when it comes to giving advice, counter assistants give lot of advice and pharmacists give less advice than the pharmacy counter assistants.

The researcher agrees with the views of (Rawlins, 1991) who, had in his article written about Pharmaceutical Services Negotiating Committee. (1987) that:

1) The pharmaceutical profession on their own should accept the extended role of pharmacists.

2) The government should accept the extended role of pharmacists.
3) Other bodies associated with the pharmacists should also accept their role. Maj- Hedvall and Paltschik (1991) study looks at pharmacy business and asks what kind of pharmacy services different customer group want, how these groups can be distinguished and what the implications are for pharmacy service development. The authors studied different customer group desire of the pharmacy services, distinguishing the different customer groups and the implications for pharmacy service development (Hedvall & Paltshik, 1991). The data was gathered from a questionnaire distributed to 1000 respondents in the region of Skelleftea in northern Sweden. 12 pharmacies in the region took part in the study. Both factor analysis and cluster analysis on factor scores were used to interpret the data. The study lacks many things, firstly, customers entering pharmacy have similar demands- purchasing medicine- the research indicates that customers fall in different subgroups regarding service. The core service of the pharmacy must be seen as customer health care and therefore this research has given me a way to proceed with my research. The author’s further mentions discontented customers will only be satisfied by improvements in quality and therefore the need of doing more research on quality improvements in pharmacy.

(Roberts, Hopp, Sorensen, & Shalom, 2003) used two theories to give insight in organizational change viz. Borum’s theory of organizational change and social network theory, to address the research objectives. The objectives were based on instrument covered on four themes i.e. roles, experiences, strategies and networks. This gave the researcher an opportunity to conduct in-depth interviews with the pharmacists to explore the CPS implementation and also practice change in community pharmacy.

(Gebauer, 2008) article presents a framework for repositioning pharmacies as healthcare service providers in the healthcare service supply chain. This article has given management implications for pharmacies as providing healthcare services has to be deliberate on the part of pharmacies because it requires both a clear motivation and specific strategic goals. This article concentrates on the implementation of the service development process however for healthcare services developing service related climate and culture and long term customer relationships have to be there.
(Panvelkar & Saini, 2009) examined and conducted an in-depth analysis of literature available which helped them to know and study patient satisfaction measurement with pharmacy services given by pharmacists in community pharmacies, in which they observed that patient satisfaction with three different levels of pharmacy services which are general services, intervention services and cognitive services. This research brings out important aspect of patient satisfaction is measured within the community pharmacy context to certain degree, further need for alternative approaches to measure satisfaction based on expectations and preference of patients towards pharmacies and comparing these to the services given by pharmacy.

(Benrimoj, Peacocke, Whitehead, & Ward, 2003) study was to determine appropriate professional pharmacy service for new Australian health care models and the optimal funding arrangements for professional pharmacy services within these models, to develop best practice guidelines and standards of practice for the delivery of professional pharmacy services, to recruit and train local community pharmacists to deliver and document professional pharmacy services within these models, and to determine the clinical and economic benefits resulting from the provision of these professional pharmacy services. The potential clinical and economic benefits of professional pharmacy services are such that the introduction of one or more of these services would be of benefit to the patients and funders of any health care model. The development and implementation of patient medication management services and patient medication concordance services within community pharmacy may have a beneficial impact on health of the population they serve, may reduce the costs of medications, and may serve to positively influence the perceptions of other health care professionals and the public about the role of community pharmacy in primary health care. Benrimoj et.al.(2003) study is concerning two service models and its relation to three healthcare models in metropolitan and rural Australia. This gives researcher an opportunity to look into these service models in the developed countries and look into implementation of these service models, if applicable, in Indian pharmacies context.
In some settings, pharmacists have been able to reassign the more technical aspects of pharmacy practice to technician counterparts, thus creating time and opportunity to perform “value-added” services; however this is not a universal truth. (Kenreigh & Wagner, Pharmacists’ Role in Healthcare Still Evolving, 2006)

2.4 Patient’s (Consumer) views on Pharmacists:

For review on consumer’s views, Literature review was done by Eades, Ferguson, & O’Carroll (2011). This study was done from 2001 to 2010. The major findings in the study by (Eades, Ferguson, & O’Carroll, 2011) were consumer’s perception of pharmacists was of a drug expert rather than experts on health and illness. Visit to the pharmacy by consumers was majorly for dispensing prescriptions and purchasing over the counter (OTC) medicines. Majority of consumers had never been offered any service related to public health. A survey in Australia of customers going to pharmacy found that a majority (88.2%) had never received advice on diet and exercise or (65.1%) on how to prevent health problems from pharmacists. In a survey in Sweden, most pharmacy customers (85%) expected to receive information related to drugs, but when it came to information related to general health issues the expectation were (36%) and a diet related information followed, where the expectation from pharmacy customers were (24%). A survey of pharmacy customers in Nigeria was similar to the earlier surveys, here customer satisfaction was less for public health services than other services related to medicine. However, there are few studies where customer’s satisfaction levels are high regarding pharmacy public health services. A survey in Australia found customers had positive attitudes on experiences of health screening in pharmacies.

A systematic review of peer reviewed and non-peer reviewed literature on the feedback from users of community pharmacy was studied by Anderson, Blenkinsopp, & Armstrong (2004). They studied literature on perceptions and experiences of customers on health related advice and services which were provided by community pharmacies. The researchers searched various electronic databases like Medline (related to medicine), Embase (on line research portal), Cochrane Library (related to medicine) and
International Pharmaceutical Abstracts. Data was collected from the year 1990 onwards. The review included both peer reviewed and non-peer reviewed papers. The results are similar to the study conducted by Eades et al. (2011) where they have mentioned, visit to the pharmacy by consumers was majorly for prescriptions and purchasing over the counter (OTC) medicines and consumer’s perception of pharmacists was of a drug expert rather than experts on health and illness. The study concludes by giving a strong message, “If usage of community pharmacies are to be done to their full extent, then public’s awareness has to be done and pharmacists role in advising will play an important part” (Anderson, Blenkinsopp, & Armstrong, 2004).

(SonalSekhar, Abraham, & Revikumar, 2008) documents, that safe and effective drug therapy occurs when patients are well informed about medications and their use. The concept of patient counseling in its modern form originated in India in 1990’s. While matching with the international concepts, the Indian patient counseling practice has established its own characteristic and features and the researcher has put light on the same. SonalSekhar et.al (2008) highlight, that the basic philosophy of pharmaceutical care is caring for the patient’s drug therapy and related needs. Patient counseling is an integral component of pharmaceutical care. The researchers explain the Indian Scenario, relevance of Patient counseling in India, Genesis of the concept of modern patient counseling concept in India and explained the problems and issues in Indian situation. This research mentions Hospital pharmacies in general are doing better services in the area of patient education in the country which suggests that more work is to be done as far as community pharmacies are concerned and so researcher should focus on community pharmacy in India. The financial constraints of Indian community pharmacies often make them unaffordable to utilize the services and thus the pharmacy location and the pharmacy category should be seen.

(Maguy, Salem, & Mansoor, 2011) explored the public’s attitudes towards the community pharmacists role in Qatar and determined the public’s views of satisfaction with community pharmacy services which are recently given in Qatar. Maguy et.al (2011) research conducted on patients on their opinion about pharmacies noted that, patients
were of the opinion that pharmacists in the community pharmacist should give not only medications, but also directions for use and advise them about the treatments of minor ailments. Pharmacy location was the top factor that affected patient’s choice of any pharmacy. This pilot study can be used as a base upon which more data could be collected.

2.5 **Patient’s (Consumer) views on satisfaction with services in Community pharmacies:**

With a lot of variation in the services provided by different pharmacies around the globe, there is lot of gaps in the current literature related to patient’s satisfaction with services in community pharmacies. A study was conducted by Liu et.al. (1999) with 106 respondents through a mail questionnaire in the United States of America on the patient perceptions related to importance given for counseling regarding educating people on asthma, patient satisfaction with counseling, patient-pharmacist relationship. The focus of the study was what should patient expect and their satisfaction with counseling services related with asthma. The results of the study were, majority of patients (62%) reported being ‘somewhat’ to ‘pretty satisfied’ with services provided by pharmacists even if counseling was not up to the mark level. The counseling was provided for less than 3 minutes. Majority of the patients (75%) were not ready to pay extra for the counseling by pharmacists.

In a study conducted in Finland, in the year 2002, by Kansanaho et.al. (2002) where the focus of study was patient satisfaction with pharmacy delivered counseling services. The researchers took a self-developed questionnaire and had telephone interviews with 200 samples of patients. Here the questions focused were on patient perceptions with respect to the pharmacy visit, counseling received by the patients, initiation of counseling and the use of counseling on patient’s health related behaviour. The results were almost all patients (97%) regarded counseling as important, which made a way to a positive effect
on patient’s health behaviours (31%) and good way of understanding of medications (36%). In majority of the cases (70%), pharmacist was the counseling initiator.

Bultman and Svarstad (2002) studied the consequence of pharmacist monitoring and patient satisfaction with antidepressant medication therapy, done in the United States of America, with 100 patient’s telephonic interviews. The instrument was self-developed by Bultman and Svarstad (2002) using previously published studies. 47% of patients were very satisfied, 28% were satisfied with their antidepressant therapy.

In the year 2003, researchers Pronk et al. (2003) conducted a major study in the Netherlands on general population. The study design was both pre-test post-test parallel control and had a convenience sampling method. The sample size was 6341 (pre-test) and 2034 (one year after intervention), 14 control Clinical Pharmacists, 14 intervention Clinical Pharmacists. The questionnaire was self-developed by Pronk et al. (2003) and was an mail back questionnaires distributed at pharmacies. The study was focused on patient satisfaction with pharmacy services and education activities program. The questions in the questionnaire were mainly on patient thinking about the services given by pharmacy with respect to waiting time of patients to get medicines, delay due to staff, provision of information, preferred person in pharmacy for asking doubts related to side effects and reasons for ways in retrieving information with low satisfaction for information obtained. The results were, high baseline for patient satisfaction with helpfulness, waiting time of patients to get medicines, preferred person in pharmacy for asking doubts about side effects. The intervention was related with positive increase ratings given to patient for ‘helpfulness’ (p<0.05). When it comes to source of information for medications, Pharmacy was regarded by majority of the patients (59.5%). The reasons given for difficulties to ask questions were related to absence of privacy (16.9%), waiting time of patients to get medicines (8.8%) and delay due to staff (6.7%). Lower satisfaction (7.5%) was for receiving too little information.

Kradjan et al. (1999) conducted a research on patients with asthma, where they met patient’s randomly at pharmacies. The total participants in the study were 678
intervention and 90 control patients. The researchers used MacKeigan and Larson (1989) instrument. The study was conducted in the United States of America, and the study was on what patient’s perceive as benefits and satisfaction with service provided for asthma management. The results showed general satisfaction with pharmacy services was high.

(Tinelli, Bond, Blenkinsopp, Jaffray, Watson, & Hannaford, 2007) had a study done in the United Kingdom. Their study focused on investigating attitudes, expectations, satisfaction and experiences of patients with a pharmacy management service. The sample size was 1232 patients, their method of data collection was mailed questionnaires, and the instrument questionnaire was self-developed by the researchers.

Patient satisfaction with community pharmacy services was studied by (Panvelkar, Saini, & Armour, 2009), the aim of their study was to conduct an in-depth analysis of literature to identify and evaluate studies used to measure patient satisfaction with pharmacy services delivered by pharmacists in community pharmacies. The researchers conducted literature search focused on patient satisfaction with community pharmacy services. There were three major keywords and within them synonyms in which search was conducted, which were first keyword “patient satisfaction” or “client satisfaction” or “consumer satisfaction”, second keyword “community pharmacy” or “pharmacies” and third keyword “pharmacy service” or “pharmaceutical services” or “pharmacy program” or “intervention” or “intervention studies”. A total of 531 articles were obtained by extensive search and exploring databases. The researchers, after elimination of duplicates and screening analyzed 24 articles. Out of twenty four articles, eleven articles measured patient satisfaction with general services, seven measured satisfaction with cognitive services and six measured satisfaction with intervention services.

Patients had a high level of satisfaction for all service types like general services, availability of medications, and location of pharmacy, facilities offered by pharmacy, pharmacists’ attitude and convenience. All services mentioned above, had a positive strong influence on patient satisfaction.
Furthermore, studies reviewed indicated that more and more patients satisfaction levels were observed with higher frequency of counseling and monitoring and with more focused the guidance leads to better rating of related satisfaction. (Liu. et.al 1999, Bultman et.al. 2002) and (Singhal et.al 2002). In one study, moreover, patient satisfactions were reported to be high even when below level ratings for counseling levels were there. (Liu. et.al 1999).

Patient satisfaction is an important outcome which given its importance needs to be measured in determining the sustainability of health care services. The researchers mentioned their review found that their research had been measured with the community pharmacy perspective to a certain degree, but more research is the need to develop and test instruments based on their proposed theoretical frameworks. Further, utilization of novel approaches that involve and understanding of expectation and preference related to patients and comparing those services provided by providers to enhance explain satisfaction levels can be an approach to provide a deep insight is often used, but it is a poorly understood concept (Panvelkar, Saini, & Armour, 2009).

The theoretical framework of patient satisfaction (Panvelkar, Saini, & Armour, 2009) is given in the next page. (Refer Table 2 [a])
2.6 **Pharmacists’ role:**

2.6.1 **Pharmacists’ role: Pharmaceutical Care**

Zeind and McCloskey (2006) in their article mentioned the importance to find out the advances in pharmacy education, training and finally practice for the transformation of the role of the pharmacist from apothecary which had a drug product focus to that of patient centered caregiver. (PharmD), was recommended by (Zeind & McClosey, 2006) for pharmacy practitioners for greater responsibility, they also recommended training program which would prepare pharmacists for greater responsibilities for patient care.

In many parts of the globe, for licensure renewal, pharmacists are required to receive continuing education in pharmacy; this is a condition without which their licenses are not renewed. Thus, the researchers conclude there is lot of gaps across the world in the way pharmacy is practiced, as there is a variation in the basic education, training and practice and thus, pharmacy practice continues to evolve significantly.

With a few fundamental concepts, (Zeind & McClosey, 2006) in their article mention, pharmacy profession has preserved its tradition and core professional values, by embracing the concept of pharmaceutical care as described by Hepler and Strand. The mission of pharmacy in the 1990s was to embrace clinical opportunities and to promote added social responsibility for pharmaceutical health care. Pharmacists in today’s world continue to receive knowledge and skills regarding dispensing medicine and related products, with this they strive for traditional pharmaceutical care, where pharmacists can provide pharmaceutical services, which can improve outcomes and reduce health care costs, as mentioned by Hepler and Strand (1990).

A case study written by (Waleed, Al-Shaqha, & Zairi, 2001) compared the term “Pharmaceutical care” by two researchers namely Hepler and Strand 1990 and Lohr 1990. The originator of the term, pharmaceutical care defines it as, “the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient’s quality of life”. Both definitions direct attention to the application of health
services for the purposes of achieving specific health outcomes (Hepler & Strand, Opportunities and responsibilities in pharmaceutical care, 1990). This is in line with definition of quality of care as “the degree to which health-care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” (Lohr, 1990). In addition to the above mentioned researchers, Waleed et al. 2001 mentioned, “the focus on quality in health care makes an increased attention on the processes which are required for providing services to patients” (Shah, Emonts, & Johnson, 1994). Pharmaceutical care results from the application of the principles of quality management to the use of medications. This study indicated that pharmacists must pay equal attention to the structure, process and outcomes of pharmaceutical care. This approach contains three basics elements:

1. A technique, “the application of scientific methods”;
2. A mechanism, “to understand and continuously improve the ability of all processes”; and
3. A goad, “to meet the needs of patients”.

### 2.6.2 Pharmacists’ role: Patient centered or Product centered

Hepler and Strand (1990) explored the opportunity for pharmacy to mature as a profession. This is because pharmacy has the work of social responsibility to decrease preventable drug related morbidity and mortality. The researcher further highlights four criteria must be met by pharmacists i.e. “the provider of healthcare should have adequate knowledge about providing care and skills, the healthcare provider must mobilize drug distribution systems, the healthcare provider should be able to develop relationships between him/her and the patient, and there should be adequate providers to serve the society” (Hepler & Strand, Opportunities and responsibilities in pharmaceutical care, 1990). The authors state, to prepare for the future, by designing a mission that reflects the mandate and exploring issues that arise from that mission. This helps the researcher to explore the roles and responsibilities of pharmacists from the patient’s angle.
An exploratory study was undertaken by Al Hamarneh, Rosenthal, McElnay, & Tsuyuki (2011) in two provinces namely Alberta (Canada) and Northern Ireland (United Kingdom) to understand what a pharmacist does. The categorizations of responses were in three parts; the first part is patient centered, the second was product focused and the third was ambiguous. Community pharmacists in Northern Ireland (40%) were more patient centered than their Alberta (29%) counterparts whereas community pharmacists in Alberta (45%) were more product focused than their Northern Ireland (39%) counterparts. The study further mentioned community pharmacists perceive product focused practice as a major activity and there is some positive movement of community pharmacists towards patient centered activities, though there is a comparative lack of patient care related terms which suggests “that patient care is still not the first priority for pharmacists in both Alberta and Northern Ireland” (Al Hamarneh, Rosenthal, McElnay, & Tsuyuki, 2012). This study is in line with the earlier study done by Eadeset. al 2011, which found that pharmacists agreed that they were comfortable with their role in public health improvement but their comfort level was lot more in medicine related health improvement work.

A study in Edmonton, Canada by Rosenthal, Breault, Austin &Tsuyuki (2011) to get an understanding on pharmacists of their self-description of pharmacists’ professional role, the results were similar to Al Hamarneh (2012), where pharmacists first thought themselves to be more product focused than patient centered. Rosenthal et. al (2011) study was with 115 community pharmacists at Edmonton, Canada and surrounding areas. The responses which can be used were of 100 pharmacists. 45% were product focused, 29% were patient centered and 26% ambiguous. 57% pharmacists used the word dispensing or its related word to explain their professional role in either their first or second response. “Sustainable pharmacy practice change will be possible only if the current culture aligns with change initiatives” (Rosenthal, Breault, Austin, & Tsuyuki, 2011). Limitation of this study is the intervention was by an telephone interview.
Hassali et.al, (2009) in their article, mentions a shift in recent years of pharmacists from their traditional role of compounding and dispensing of medicines to current role of patient care and delivery of pharmaceutical care.

### 2.6.3 Pharmacists’ role: Promoting Health

Joyce et.al. (2007) research discusses how to increase research and interventions on healthy behaviours in community pharmacy by placing community pharmacy’s role within a broader health promotion context by expanding community expectations of pharmacists and addressing barriers to performing a health promotion role. Literature search was conducted by researcher to assess the evidence for community pharmacy involvement in health promotion activities relevant to four health behaviors viz. “Smoking cessation, Alcohol consumption, healthy nutrition & physical activity” (Joyce, Sunderland, Burrows, McManus, Howat, & Maycock, 2007). Further the research mentions barriers to pharmacies offering health promotion services like remuneration, the level of skills and confidence of pharmacists & pharmacy assistants & community perceptions & their use of community pharmacy services. The authors mentions there is a growing research to recommend health promotion pharmacy practice and at this stage the research base for community pharmacy involvement in targeting healthy behaviors is limited. This gives the researcher an opportunity to think about, can pharmacists really change the health behaviors by addressing issues like smoking cessation and alcohol consumption and whether the community perception support pharmacies as a health promotion place.
2.6.4 Pharmacists’ role: Improving quality of healthcare

Pharmacists while studying pharmacy have studied health promotion and therefore have sufficient knowledge to promote healthy living to patients. Health promotion includes but is not restricted to blood pressure screening, blood glucose screening, various topics of counseling like smoking cessation, tobacco chewing cessation etc.

“Pharmacists play an important role in the health sector” (Hindustan Times, 2013)

(Barber, Smith, & Anderson, 1994) in their article discussed the contribution of their specialty to quality of patient care. Barber et. al. 1994 mention, “Not only do they need to adapt their roles to respond to these changes but they also need to monitor and evaluate the services they offer. The potential community pharmacists as primary health professionals have so far not been fully exploited” and “Pharmacists are well aware of the need to show quality in these services and they have been forced to acknowledge this need by the scrutiny of their role in responding to minor ailments by outside organizations”.

“Although a third of community pharmacists gave very poor advice, half of them gave very good advice. These issues are being addressed by pharmacists to ensure higher standards of care in the future”.

“Pharmacists are therefore centrally placed to monitor drug treatment. Research has highlighted inadequate monitoring of drug treatment in the community – for example, high incidences of adverse drug reactions and potential drug interactions”.

“For pharmacy the emphasis will be on a “value added” supply service, with much of the value being in providing information and monitoring quality. Although some of this can be undertaken by computers, there are limitations to this and there is no substitute for contact with patients”.

They further state; some pharmacies take an active participation in local initiatives related to health care and also display health promotion literature. Patients, when request advices
regarding minor ailments, pharmacists have opportunities to discuss disease prevention and health promotion.

2.6.5 Pharmacists’ role: Patient counseling

The word ‘counsel’ means to give advice. Counseling is an act of communication where there is an exchange of opinions, thoughts and ideas between two or more people. In pharmacy, the process of counseling is done by the pharmacists who are a knowledgeable person. Pharmacists give advice about medicines to the patients who come to the pharmacy to purchase medicines.

“The following points must be emphasized to the patients during counseling:

i) Drug name and its indication
ii) Drug regimen (dosage, frequency and duration)
iii) Special directions for preparation (e.g. freshly boiled and cooled water for reconstitution of antibiotic suspensions)
iv) Special directions for administration (e.g. correct use of inhalers and transdermal patches)
v) Potential drug-drug or drug-food interactions and other contraindications
vi) Common side effects that may be encountered, including their avoidance and the action required if they occur
vii) Adverse drug reactions
viii) Action to be taken in the event of missed dose
ix) Proper storage
x) Any other information that is peculiar to the specific patient or drug.”

(Pharmaceutical Society of Singapore, 2009)

(Palaian, Prabhu, & Ravishankar, 2006) have mentioned several techniques which can be adopted for effective counselling, some techniques include giving written information to the patient and audiovisual materials usage for counseling.
“Pharmacists, being active members of the healthcare team can play an important role in providing patient counselling so as to improve patient compliance and hence the therapeutic outcomes and quality of life. Moreover the patient counselling by pharmacists also enables the doctors to spend more time on examination and diagnosis the patients as the counselling part is taken care of by the pharmacist” and “Counselling also helps in many ways to improve the quality of healthcare system with better patient care and therapeutic outcomes” (Palaian, Prabhu, & Ravishankar, 2006).

Ashutosh Gaikwad (2010), in his article in Express Pharma magazine mentions, “There is a trend over the world of phama retail chain, which are moving from stocking care to health care. The important part is to be played by pharmacists as this movement would involve lot of change in the role pharmacist would have to play. The pharmacist would no longer dispense medicines as being written in the doctor’s prescription given of the patient and produced at the pharmacy rather pharmacist would maintain the patient’s drug profile, and would provide information related to drugs, their usage and services offering support on disease management.(Gaikwad, 2010).

2.6.6 Pharmacists’ role: Adverse Drug Reactions (ADR’s):

Reporting of Adverse Drug Reactions is a major concern. This may be because this has to be reported which involves time. Some countries permit pharmacists to report ADR, but even today some countries, the law do not permit pharmacists to report ADR’s.

Grootheest, Olsson, Couper, & Berg (2004) conducted both qualitative and quantitative research, first by review of literature to find out the involvement of pharmacists in reporting adverse drug reactions, and then, by survey in the year 2002 through sending an international questionnaire to countries involved in WHO Drug monitoring Programme. The questionnaire in (Grootheest, Olsson, Couper, & Berg, 2004) study had questions of reporting ADR as well as questions related to assessment of quality and questions related to contribution done by pharmacists. The study concluded by the researchers opinion on
pharmacists have to make a contribution to both quantity and quality of reports of adverse drug reactions, which in turn would lead to improvement of adverse drug reaction reporting system.

2.6.7 **Pharmacists’ role: OTC medicines:**

A study conducted by Caamano et.al (2005) assessed the opinion of pharmacists on medicines dispensed by them without requiring a doctor’s prescription. The study was conducted in Spain, where a cross-sectional study was undertaken to study 166 community pharmacists. In the study, pharmacists were asked for their opinion on their responsibility regarding the dispensed drugs and pharmacists’ perception of their work performed. The results were almost 66% pharmacists dispensed antibiotics (used for infections) without prescription, the percentage increased drastically to 83% when it came to non-steroidal anti-inflammatory drugs (NSAID used for pain) as compared to 46% for angiotensin converting enzyme inhibitor drugs (used for hypertension). The results further mentions, pharmacists which had more workload, did not insist on demand for medical prescriptions. “In contrast, pharmacists who stressed the importance of their duty in rationalizing the consumption of drugs more frequently demanded medical prescriptions” (Caamano, Tome-Otero, Takkouche, & Gestal-Otero, 2005).

Wazaify et.al (2005) study was to investigate the public’s perceptions and opinion about OTC medicines. The researchers divided the questionnaire into parts which addressed, “Attitudes towards community pharmacy and patient’s contacts with pharmacies” with “attitudes towards the use of OTC medicines” and “views on OTC medicines” (Wazaify, Shields, Hughes, & McElnay, 2005). The data was collected from 1000 respondents using a structured interview technique from Northern Ireland. Pilot was done in small sample, with general public (n=20). The results did show, almost, 70% patients reported they visit always or often the same pharmacy, and the reason being to obtain a prescription medicine, over 60% patients reported they are comfortable in seeking advice from pharmacists for minor ailments rather than visiting a doctor. Further, the results pointed out recommendation of the pharmacist were a major influence in the choice of
OTC medicines. According to the researchers, in recent years, there is a positive trend among patients in self medications with non-prescription drugs, these non-prescription drugs are often called over the counter (OTC) drugs. The common OTC drugs in Wazaify et.al (2005) study were Cough remedies, Painkillers, Indigestion/heart burn, Hay fever products, Vitamins and/ or minerals, Laxatives, Anti-diarrheal. Hughes et. al (2001) found there is an advantage of self-medication when it comes to healthcare systems, as it leads to good use of clinical skills of pharmacists, patient’s easier access to medication. But, increasing availability of OTC drugs may motivate patients to think that there is a drug for every disease/disorder. Moreover, Hughes C. (2003) states, the use of such over the counter products may delay or act as hindrance to the diagnosis of serious illness. Bissell et.al. (2000) and Hughes L. (2002) reported the reflection of the public’s growing confidence in self-care. This was substantiated by Wazaify et.al (2005) study mentioning a rise in number of people buying OTC medicines regularly.

Mr. Terry Spears in his article named, Community Pharmacists Play Key Role in Improving Medication Safety, mentions, “as trusted community health advisors, pharmacists can promote the safe use of medications and improve clinical outcomes” (Spears, 2010).
SAFETY ADVICE FOR PATIENTS

| Offer the following tips to patients to help them safely manage their medication |
| Get prescriptions filled far enough in advance to avoid running out. This is especially important for patients who take maintenance medications for high blood pressure or high cholesterol. |
| Follow any warning regarding food or alcohol interactions with medicines. Many medications interact with alcohol. |
| Purchase all prescription medications at one pharmacy. Drugs interactions are more likely to be caught if one pharmacist fills all a patients’ prescription. |
| Do not take someone else’s prescription medication. Just because 2 people have the same condition does not mean they can take the same medication. |

Table 2 (b): Safety advice for Patients

(Neoh C. F., Hassali, Shafie, & Ahmed, 2011) in their research related to nature and adequacy of information on dispensed medications delivered to patients in community pharmacies have highlighted patients should receive information related to their medications from healthcare professionals such as a community pharmacist, general medical practitioner or their assistants. Yet the information provided by these healthcare professionals may be inconsistent, incomplete and insufficient for patients to understand. Without adequate and appropriate information conveyed to the patients, medication errors are likely to occur. The researcher further state, “There is a globally growing trend for consumers to self-medicate with non-prescription medications for common ailments and pharmacists are the most accessible healthcare professionals who are equipped with specialized knowledge in relation to the safe and rational use of medications. Accordingly, pharmacists are in a unique position to deliver the correct and sufficient information about medications to their patients. The heart of pharmacy practice, particularly in community pharmacy setting, is the interaction between the pharmacist and the patient. During the interactions, pharmacists may provide medication-use and disease information, whereas patients may request medications and seek” (Neoh C. F., Hassali, Shafie, & Ahmed, 2011).

2.7 Recent studies in India on role of Pharmacist:

A study conducted by H. Sharma et.al in the National Capital Region (NCR) to assess the role of pharmacist in the community setting and the consumers during the year 2003-2004 mentioned “Many pharmacist are unaware of their professional roles and responsibilities” and “In India, the community pharmacists are more interested in trade than profession” (Sharma, Jindal, Aqil, Alam, Karim, & Kapur, 2009).
2.8 Researchers conceptual map on the role of pharmacist

Table 2 (c): Researchers conceptual map on the role of pharmacist

Source: Researchers own creation
2.9 INFORMATION REGARDING THIS RESEARCH

- This research is done on community pharmacies across the cities of Mumbai and Nashik, both the cities are in Maharashtra state of India.

- Pharmacy has various synonyms like Pharma retail, chemists, medical stores, chemists and druggist.

- Pharmacists’ duty and the pharmacy practice differ from country to country.

- An attempt have been made by the researcher to explore the role of pharmacist working in the pharmacy, and also taken patient’s views about the working of pharmacist in pharmacy.
REFERENCES:


