HEALTH CARE PROVISION AND PATIENT SATISFACTION

A CASE STUDY OF TWO HOSPITALS IN ISLAMABAD PAKISTAN

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List Of Acronyms

WHO	**:**	World Health Organization
UNDP	**:**	United Nations Development Program
NESCOM	**:**	National Engineering and Scientific Commission
NDC	**:**	National Development Complex
Servqual	**:**	Service Quality
CT scan	:	Computerized Tomography
MRI	**:**	Magnetic Resonance Imaging
X-Ray	:	Energetic High-Frequency Electromagnetic Radiation
GDP	**:**	Gross Domestic Product
SPSS	:	Statistical Package For the Social Sciences
HDR	**:**	Human Development Report

DEDICATION

I dedicate this humble effort to my husband, who always have been a source of encouragement for me

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All praise and because of be "**ALLAH ALMIGHTY**", the foremost gracious and merciful, real bless of the universe who gave me the state the flexibility to contribute a drop of awareness and noesis from the present ocean of data and knowledge. I provide my multitudinous salutation upon the "**HOLY PROPHET MUHAMMAD" (S.A.W)** the whole supply of steering for humanity as an entire forever.

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Abstract

This research has been carried out with the aim to analyze availability, requirement and patient perception concerning health services in selected two hospitals of Islamabad, Pakistan. This analysis work has been carried out at National Engineering And Scientific Commission (NESCOM) hospital Islamabad, and National Development Complex (NDC) hospital Islamabad. This research used original 'SERVQUAL' instrument so as to search out the Patient's perceptions regarding health services delivered to them within these hospitals. For this purpose three service quality dimensions are used in the study; Convenience, Courtesy, and Quality of Care. These dimensions consist of 17 items, having Convenience (6 items), Courtesy (5 items), and Quality of care (6 items).The total size of the population is consisted of 5,000 respondents out of which 200 respondents were selected randomly from NESCOM hospital and 150 respondents selected randomly from NDC hospital. Patients are the respondents of the study. The study findings explains in NESCOM hospital satisfaction level of patients regarding health services availability are slightly better as compared to NDC. However, overall study results concludes that a greater number of patients are availing health services from both hospitals; interpret that good services are delivered to patients by both hospitals.

CHAPTER 01

INTRODUCTION

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO 2013). Availability and un-availability regarding provision of health care services has an immediate effect on health (Kwon 2003).Countries, communities and humans could vary in terms of health care access, in the main influenced by way of socioeconomic dependencies additionally as health policies. A 1993 National Academies report, Access to health care in America outlined access as health care services provision means that "the well timed use of non-public health services to attain the best possible health outcomes"

According to National Academies Press 1993, US National Academies of Science, Engineering and Medicine elements to be taken into consideration in terms of health care access are economic barriers (such as insurance plan coverage), locality obstacles which includes expense due to transportation and time taken to apply such services, moreover private barriers (communication gap create difficulty to consult with healthcare support, inadequate health education, less earnings. Utilization of medical services, efficiency of treatments, and overall outcome (well-being, mortality rates) are negatively affected due to limitations of health care services.

Availability of fundamental health infrastructure (Health establishment and health personnel) leads to provision of health care services. In connection to growing population, state of health infrastructure is of superb significance. Health infrastructure has various indicators which include no of hospitals, basic health units (BHUs), dispensaries, number of beds, and health personnel etc.

Report published in 2002 under the WHO titled Provision of personal and Non personal health services explains that in a production process there are combination of inputs that occurs in a specific organizational or home environment leading to a series of services being provided which is then called as

provision function. Resources such as human resources, physical resources and consumables are the inputs for health service provision. Personal and non-personal health services are outputs. Health services that are delivered individually are known as Personal health services. Personal health services can be of therapeutic or rehabilitative nature, and may generate positive externalities. Actions applied to collectives like mass health education, basic non-human component of the environment like basic sanitation which generate positive externalities from individual and collective actions are termed as Non-personal health services.

Fig#1 **Health Service Provision:**

Source:WHO proposal for monitoring 2002,Provision of personal and non-personal health services.

1.1 Background overview:

To increase population health outcomes and to answer people's expectations is considered as the major aim of health services provision while reducing health and sensitivity inequalities. The population health care desires ought to be self-addressed with the simplest attainable quantity and quality of services being provided at borderline value. For a given amount of inputs the organizational structure and processes decide the amount and quality of outputs (WHO 2002).

In shaping human capital health contributes a lot. With the better health, skills and output of labor force are built and eventually it adds to economic growth and directs the human benefit. The health indicators and economic growth have a positive relationship. Better health measures particularly in childhood such

as good nutrition for infants and lower exposure to infectious diseases can increase their productivity within the future and build a strong base for sustainable economic development.

Whereas poor state of health in economies will harm economic growth mostly due to various infectious diseases. As a result to disease exposure, pre mature deaths occur and labor productivity can be affected. That also leads to bad effect on economic growth. Even rich countries can be severely affected by such health indicators and can take so time to gain strong and healthy progress. Tucker et all

observed by analyzing the endogenous growth model and incorporating infectious diseases such as influe nza, meningitis, dengue, strep throat etc. concludes that un healthy employees have an impact on the quality of employment and thus adversely affect economic growth .Governments subsidize health care services for their people in order to obtain improved, more skillful ,more knowledgeable and more productive human capital personnel, and for this reason the public sector pays full or part of the value of using health care services

Noreen et al (2017) in her article “Challenges in the Healthcare system of Pakistan” emphasized that a country needs a health system that protects its people against health and financial risk of disease. Pakistan is part of "Health for all by 2000." It shows commitment to achieving the goal by formulating and implementing health policies. Health care structure of Pakistan is underway and has been ongoing since last year, and has tried to make a lot of improvements in its health care delivery system, and has brought out many reforms. In Pakistan, There is little strength in the health care delivery system such as making health policies, In the Millennium Development Goals programme engagement, implementing vertical initiatives and forming public-private partnerships, enhancing the development of human resources and focusing establishment of infrastructure by making rural health centers and basic health units.

In the UNDP’s Human Development Index (HDI) Pakistan ranks 125th out of 180 countries which tests people wellbeing by holding their life expectancy, employment, education and living standards in mind.

UNDP 2014 report says that, large challenges relating to deprivation, illiteracy and an ever-increasing population are faced by Pakistan and the most important is the health care system poor performance.

1.2 Pakistan performance in terms of health indicators:

Schultz analyzes the health indicator performance, especially at an early age and infancy. When improved a child's health conditions later in his life turn him into a part of the competitive labor force and contribute positively to economic affairs (Schultz, 2010). Pakistan has also reported steady progress in terms of infant mortality per 1,000 births, but still behind the rates recorded by other countries.

From 1990 to 2015, infant mortality rates for Pakistan dropped from 106.1 to 55.0 compared with 44.09 in Bangladesh, 41.81 in India and 12.44 in China. Likewise, Pakistan's life expectancy rate is 67.39 years down from 70.94 in Bangladesh, 68.13 in India and 75.41 in China (HDR 2015).

According to a survey by Lancet, in terms of healthcare quality and accessibility, behind its South Asian counterparts Bangladesh, India and Sri Lanka. Pakistan ranks 154th among 195 countries .The report, conducted by The Lancet leading medical journal, noted that in terms of access and quality to health care Pakistan has seen changes since 1990, with its HAQ index rising from 26.8 in 1990 to 37.6 in 2016. Yet Pakistan remains behind China (48), India which ranks 145th, Sri Lanka (71), Bangladesh (133), and Bhutan (134).Pakistan has performed poorly in combating tuberculosis infections, diarrheal diseases, neonatal diseases, uterine cancer among others, according to the lancet report. Iceland (97.1 points), Norway (96.6), the Netherlands (96.1), Luxembourg (96.0), and Finland and Australia (95.9 each) were the five countries with the highest levels of access and quality to healthcare (in 2016).

The 2004 Social Policy Development Center (SPDC) reports that 123 of every 1,000 children surviving infancy die before they reach the age of five. A large proportion of survivors suffer from malnutrition which results in impaired immunity and increased susceptibility to infection. In Pakistan malnutrition is a huge problem. Report on Human Development (2003) clearly points out that about 40 per cent of children under the age of 5 are malnourished. Around 50% of the deaths of children under the age of 5

are attributable to malnutrition. However, the reach of all these initiatives is very small and that is why Pakistan's healthcare system is still not very efficient.

Pakistan's healthcare delivery comprised three stages of primary, secondary, and tertiary care. Pakistan has 1,142 hospitals, 5,499 clinics, 5,438 basic health units, and 671 maternal and child health centers.

Noreen et al (2017) demonstrate the fact that Pakistan only spends 2.6% of its national GDP towards health care while neighboring India spends 4.2%.Additionnally, there is a wide gap between rural and urban population which worsen the problem. A staggering 38.8% of the population lives in rural areas with limited access to hospitals. Whereas urban population has numerous private clinics and hospitals that is profitably better for investors.

In Pakistan's sense, author projected a strong positive human capital relationship (educational enrolment, decline in infant mortality rate, and physical capital) with economic growth. He projected a reduction in GDP of 2.47 percentage point as a result of a rise in infant mortality rate of 1 per cent. Margaret said poor-quality health systems contribute to more than 8 million deaths in LMICs per year, resulting in $6 trillion in economic welfare losses.

1.3 Research Questions:

- What are the health care service qualities at two hospitals of Islamabad, Pakistan? With suggestion to improve health care services in two hospitals.
- What are the problems regarding health services faced by the patients during treatment in two hospitals?

1.4 Objectives of the study:

- To inspect the health care service quality conditions provided by two hospitals of Pakistan in thought with the mediating role of patient satisfaction
- To provide policy guidelines, if there are any, based on those perceptions.

1.5 Statement Of the Problem:

Pakistan lacks health care service quality and there is need to study its impact on patient satisfaction and identify gaps and suggest measures to mitigate them.

1.6 Significance Of The Study:

This study has provided on ground situation regarding provisioning of health care service quality and patient satisfaction in two hospitals. Outcome of the study also comprises of constraints and future way forward for the respective hospital management.

1.7 Definitions of Key Terms:

1.7.1 Health:

The World Health Organization (WHO) defines health as 'a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity' (WHO, 1948)

1.7.2 Quality OF Health Care:

According to Schuster et al. good healthcare quality means "providing patients with appropriate services in a technically competent manner, with good communication, shared decision making and cultural sensitivity".

1.7.3 Patient Satisfaction:

It as an emotion, demonstrates an alternative approach to the perception. Additionally, patients' satisfaction can be considered as a feeling of being satisfied/dissatisfied (Larsson and Wilde-Larsson (2010).

1.8 Structure of the dissertation:

The organization of the study includes:

Chapter: 01 Introduction

Chapter: 02 Includes the relevant literature about quality of health care services and patient satisfaction. What is high quality health care?

Chapter: 03 Research Methodology

Chapter: 04 Conceptual Frameworks

Chapter: 05 Empirical Results

Chapter: 06 Analyses

Chapter: 07 Policy Recommendations and Conclusion.

References

Questionnaire and study timeline is given at the end in the Annex.

CHAPTER 02

LITERATURE REVIEW

For the designing of research objectives and methodology reviewing of relevant literature is important. For this purpose some of the relevant literature is under.so that to narrate the present study with previously conducted studies in Pakistan and other parts of the world.

2.1 Introduction:

To sustain in the business world and to gain success quality has been considered as a strategic advantage for the organizations. Quality improvement by improving structures and processes leads to waste reduction, rework and delays, lower rate, higher market share and a company positive image. Raising the quality standard of medical care by 10 percent results in only a 1.1 percent increase in patient satisfaction. The institute of drugs (1990) identified 6 dimensions of health care quality which incorporates safe, effective, person-centered, timely, efficient and equitable. Patient perceptions are considered to be the main element in health care when assessing the quality service of health organization. Patient satisfaction are seen as the most vital point in organizing, execution and appraisal of service delivery, in addition addressing the requirements of patient.

2.2 Definition of Quality Health Care:

Mosadeghrad in his paper "Factors influencing healthcare service quality" defined healthcare quality as

"Consistently delighting the patient by providing efficacious, effective and efficient healthcare services according to the latest clinical guidelines and standards, which meet the patients needs and satisfies providers"

Syed Saad Andaleeb state in study that quality of health care services had a major impact on patient behaviors (satisfaction, referrals, choice, usage, etc.) rather than access and price. In Nepal, In order to increase access the government had made substantial investments in health care. But due to patients

negative perceptions regarding quality, facilities utilization had remained low. In Vietnam and Uganda, private providers usage has increased due to poor quality of services in the government sector without ensuring quality spending scarce resources to expand access is wasteful and in-efficient. When countries start to move towards universal health coverage, services should be amid a national guarantee of quality .Access to care means little if services aren't effective.

Mosadeghrad in his paper “Factors influencing health care service quality” stated that in Iran health indicators has improved over the last 20 years that is their infant and maternal mortality rates have decreased and life expectancy at birth has increased remarkably. 73 years of age are the life expectancy at birth. 16.8 And 5.3 per 1,000 are the rates of birth and death respectively. The entire birth rate is 1.6 per woman. 21 per 10,000 births are the maternal mortality ratio but still Iran health care system are facing serious challenges regarding quality and efficiency.

Moreover Syed Saad Andaleeb also argued that if the quality of health care services is low then either by expanding access or holding the road on costs is not enough. He also discussed that Bangladesh is facing standard problems where government allocations to health sector were increased between 1991/92 and 1994/95 by almost US $70 million. Poor quality of health care discourages patient and they make perception regarding the available services because health concerns are among the foremost salient of human concern. Syed Saad Andaleeb study revealed that Bangladesh is facing problems because in their hospital critical staff were absent, essential supplies were unavailable, facilities were inadequate, and therefore the quality of staffing was poor. Problems of supervision and accountability increased the issues.

It is suggested by Dr Ali Sajid that sufficient utilization of health services is a essential policy concern in most developing countries. If the system can't be trusted to ensure a intensity of quality, it'll remain underutilized, be bypassed, used just for minor ailments, or used as a measure of last hope . Intertwined with the standard of health care services is patient satisfaction a crucial but grossly neglected measure of

performance. People could also be acting during a perfectly rational way once they avoid using health services of poor quality and A barrier to universal health coverage independent of access is the poor quality of care .

Lancet study in 2018, using data regarding health benefits from over 150 countries found that 'High-quality health systems could save over 8 million lives annually in LMICs'. In 2015 alone, these deaths resulted in US$6 trillion in economic losses. Poor-quality care is now a much bigger barrier to reducing mortality than insufficient access. 60% of deaths from conditions amenable to health care are thanks to poor-quality care, whereas the remaining deaths result from non-utilization of the health system. Moreover the study shows that in LMICs, fewer than one in ten people diagnosed with major clinical depression receive minimally adequate treatment. Serious conditions, like pneumonia, myocardial infarct, and newborn asphyxia diagnosis are frequently incorrect.

Margaret et al (2018) discussed the impacts of top quality health systems. Top quality health systems reduce mortality rates and increase morbidity rates. Top quality health systems have the potential to get economic benefits. Margaret et al describes that low premature death rate will improve people health, ability to figure, enhance literacy rate and as a result increase economic productivity. There comes confidence within the system which builds trust in doctors and appropriate care uptake.

It is suggested by Mosadeghrad (2014) that Quality isn't free. If you would like top quality services you've got to supply top quality resources. Health care organizations should provide their staff with the resources and support they have to deliver top quality services. Many countries spent a better percentage of the national GDP to health care system to enhance health care service quality. Al-Damen et al(2017) study revealed Jordan as a rustic that was ranked by the planet bank to be the amount one health care services provider within the region and among top five within the world.(Health in Jordan, Wikipedia). Jordan economy is service oriented. Where the services sector constitutes for 67% of Jordan GDP.

Mosadeghrad (2014) stated the important factors that affect the health care services standard. He discussed that there are three factors as individual, organizational and environmental factors that will lead to care givers satisfaction among job and commitment in providing health care services. Age, personality, education, abilities, and knowledge are considered as individual factors. Management style, working conditions, and relationships with co-workers are the Organizational factors. Economic and social influences are considered as the Environmental factors. Furthermore, customer related factors like attitude, and cooperation influence the standard of services provided. The provider's subjective attributes, including the priority they provide to worry, would have a moderating influence on the delivery of care. This study showed that the hospitals where staff is burdened with work, less salaries, inferiority of labor life, and mismanagement affects the delivery of quality patient services.

According to Kamal et al.(2018) ,customer satisfaction is that the most vital evaluation tool for measuring performance of hospital health care services. Patient satisfaction measurement adds a crucial dimension and knowledge on performance and contribute to total quality management of health system. He discussed patient satisfaction as an individual feeling of happiness or disappointment, in comparison of a product or services performance in reference to his expectations. If performance is below expectations, patient is claimed to be dissatisfied. If performance matches his expectations then customer is claimed to be satisfied. If the performance exceeds ones expectations the customer is claimed to be highly satisfied. Patient satisfaction encompasses variety of dimensions. Among them, three dimensions, named access to worry , professional staff(interpersonal interaction)and quality of care(technical competence).Kamal discussed these three dimensions to account for nearly two-thirds of the variance in overall patient satisfaction.

Kruk's 2018 study calculated the macroeconomic impact of mortality in LMICs that could be controlled by achieving good quality of care. The strategy calculated losses over 15 years on gross domestic product (GDP) due to results of mortality on labor force and physical capital accumulation. Across 91 LMICs, decent deaths due to inadequate good quality treatment will result in a total cumulative loss of US$ 11•2

trillion from 2015 to 2030. This loss of economic output was the highest in low-income nations, costing 2•6 percent of their GDP compared to 0•9 percent in upper middle-income.

Factor discussed by Kamal et al. that affect the level of satisfaction among patients is related to quality of services rendered. The service quality refers to the promptness of patient care, including things such as how much time patients have to wait before appointment, the length of treatment; how much time patient spent with the doctor afterwards, the rapid response to emergencies, medical items rapid dispensation , fast and precise laboratory tests. Satisfaction of the patients is just as critical like other behavioral health metrics, moreover a key indicator of the efficient health care delivery system. The current competitive environment has driven health care companies, to gain and retain market share, to concentrate on patient satisfaction.

CHAPTER 03

RESEARCH METHODOLOGY

3.1 Methods and Methodology:

Research methods refer to all those techniques that are used by the researcher to collect data relevant to a researcher's study, while Methodology is a process which aims at solving research problems systematically (Kothari 2004). Methods are defined as techniques employed by a researcher to collect data (Bryman 2015). This research work use quantitative analysis methods to address the Research Questions. This study has been done to analyze the patient satisfaction with health care services delivered to patients in two hospitals of Islamabad.

Original 'SERVQUAL' instrument is used in the study in order to analyze the Patient's perceptions about health care services provided to them in these two prescribed hospitals. For this purpose three service quality dimensions are used in the study; Convenience, Courtesy, and Quality Care. These dimensions consist of 17 items, having Convenience (6 items), Quality care (6 items), and Courtesy (5 items).

3.2 Dimensions of the study:

The dimensions which are used in the study are:

Satisfaction in term of convenience:

- Waiting time to obtain service
- Available care when required
- Base of receiving care

Satisfaction in term of courtesy:

- Friendly and polite attitude of the service provider
- Provision of what is necessary for welfare of a patient

Satisfaction in term of quality of care:

- The patient perception of the service performance

3.3 Data Collection tools:

Primary data is collected in this research by filling questionnaires among respondents at wards of selected two hospitals of Islamabad. .Moreover the purpose of questionnaires is to observe the patient perceptions regarding health services provided to them. The research used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" and fifth one stands for "Strongly disagree". Questionnaire was distributed among respondents who have gone through health services. Whereas the secondary data gives the information about supply side health services. The secondary data is obtained from the administration of the selected hospitals.

3.4 Study Area:

This study is conducted to analyze the health services available to patients at prescribed hospitals of Islamabad. This study has selected two hospitals. This research is carried out at NESCOM hospital and NDC hospital.

3.5 Sample Size:

The sample size is consisted of selected randomly 200 respondents out of 5000 patients at 7% confidence interval and 95% confidence level at NESCOM hospital. The sample size for NDC hospital Islamabad was consisted of 150 respondents selected randomly from the total population of 400 at 7% confidence interval and 95% confidence level. The patients are respondents of the study. The focus of the research is on emergency departments of NESCOM and NDC hospital along with 10 wards at NESCOM hospital and 6 wards at NDC hospital. Simple random sampling technique is used.

3.6 Data Analysis:

Descriptive statistics technique is used to examine the data which was collected through field survey. Statistical software SPSS is used for analysis. This research work uses multiple regressions for analysis. Data is also represented using figures and tables.

CHAPTER 04

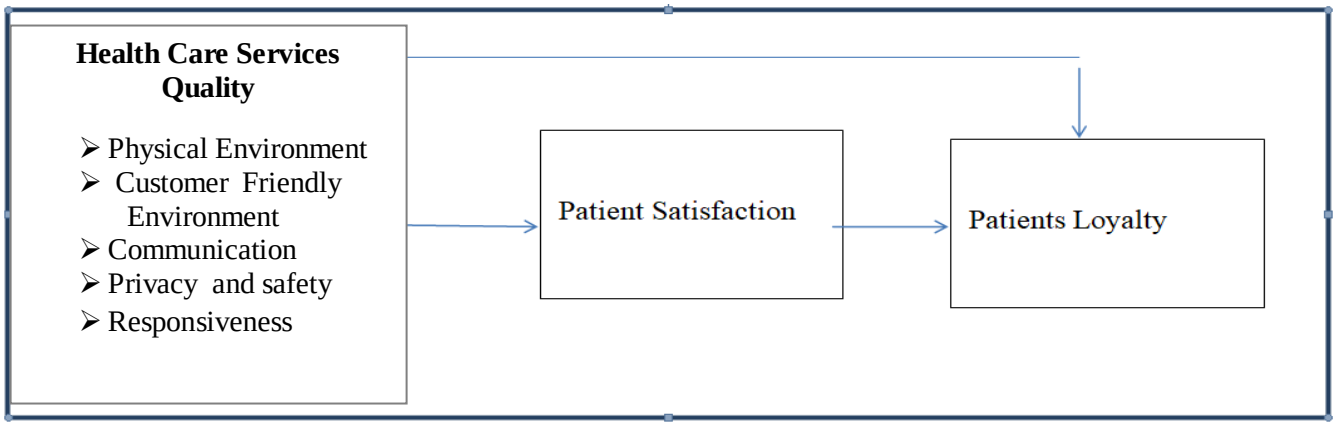
CONCEPTUAL FRAMEWORK

Various researches have carried out to decide a connection between health care services and patient satisfaction .Fatima and Shahab Alam (2018) done a study in which they describe the patient views towards health care providers. Their study focus is on hospital service quality and analyzed the relative significance of quality measurements in anticipating the patient satisfaction and loyalty. Their research framework inspects the relationship flanked by health care service quality, patient loyalty and patient satisfaction. The look at is based primarily on perceived HCSQ (Health care service quality) dimensions which include physical environment, customer friendly environment, communication, privacy and safety and responsiveness.

- **Health care service quality and patient loyalty:**

According to Fatima and Shahab Alam (2018) Health care quality has a positive link with patient satisfaction. Their research explains that, consumers basically build an attitude towards purchasing, whether to stay or leave a service in light of an earlier service experience. Fatima and Shahab Alam conclude that improved service quality stimulates the building of customer loyalty while this effect may be in-direct in that customer satisfaction has an intervening impact between service quality and customer loyalty.

Figure: 2 Framework (HCSQ, Patient satisfaction and Patient Loyalty):



Source: International journal of quality and reliability management,April 2018

- **Health care service quality and patient satisfaction:**

To upgrade proficiency, grant the hospital management to distinct the hospital premium service quality gains importance. Patients are the key asset in the hospital structure. The study of literature revealed as Fatima and Shahab Alam confirmed the relationship between health care perceived service quality and patient satisfaction. There comes positive relationship between healthcare service quality, and patient satisfaction .Cronin and Taylor (1992) have also found out the positive link between service quality and satisfaction. In addition, Badri et al. (2009) recognized that the patients and their satisfaction are the most basic point in organizing, executing and enhancement of service delivery.

- **Patient satisfaction and patient loyalty:**

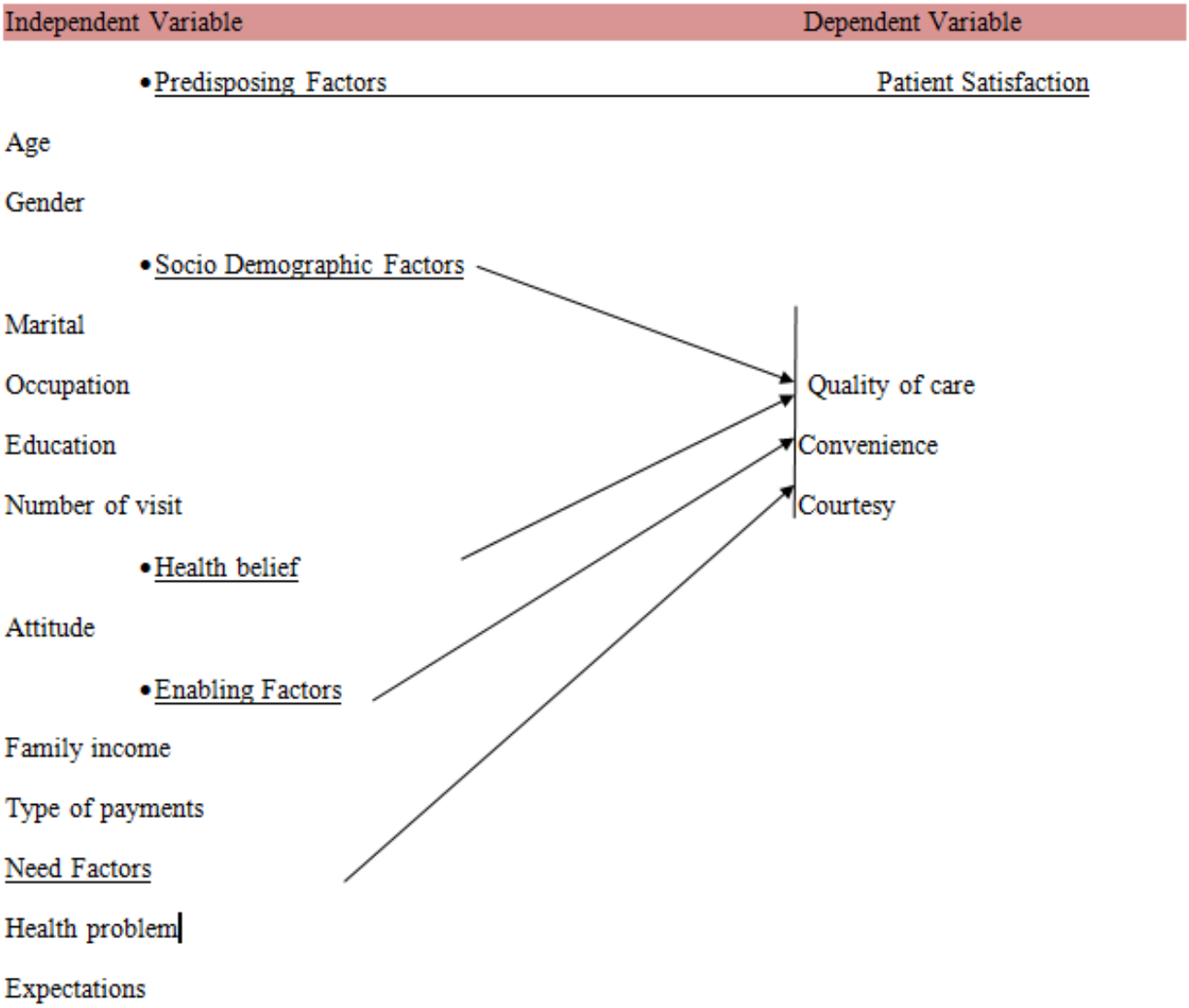
According to Fatima and Shahab Alam, Patient satisfaction and patient loyalty has a positive relationship with each other. Positive patient inclination will frame trust which can give positive judgments to the hospital .Shabbir et al. (2016) portrayed healthcare service quality and patient loyalty are drastically interconnected within the literature. Fatima and Shahab Alam observed that readiness to go back to the hospital and client loyalty is a characteristic of consumer satisfaction.

4.1 Proposed Conceptual Framework:

Previous studies have examined the effect of health care service quality factors influence the patient satisfaction that aides in constructing loyalty intentions in hospitals of Pakistan. In previous studies the information was only gathered from private hospitals but certain limitations need to be addressed. This research has adopted the scale in which patient satisfaction and new service quality dimension are taken. But there lies a gap for future studies that will guage the perception and desires of patients with other service quality dimensions. A conceptual framework with other service quality dimensions has been constructed. In this framework outcome is patient satisfaction. Convenience, Courtesy and Quality Care are dependent variables. Age, Gender, Marital Status, Patient Income are our independent variables. As there is a direct and positive link of dependent variables with patient satisfaction. As increase in these

variables would be resultant increase in patient satisfaction. This conceptual framework has been developed the aim determining the relationship between satisfaction and explanatory factors.

Figure 03: Conceptual Framework Diagram:



CHAPTER 05

EMPIRICAL RESULTS

Results and Discussion:

5.1 Social, Economic and Educational Background:

This chapter is based on the analysis and understanding of the data in order to address research questions. As this study is conducted with the aim to investigate health services delivered to patients and evaluate patient satisfaction at selected hospitals of Islamabad .The respondents are patients and find out their perceptions. For this purpose, a questionnaire is designed. Questionnaire is composed of questions and Likert scale five points is used. First point stands for "strongly agree" and fifth point stands for "strongly disagree".

Data was collected on 25 May 2019 by filling questionnaire through respondents who have undergone through health services. Given below are some of the tables of general characteristic of both selected hospitals NESCOM hospital and NDC hospital.

Brief overview and services available in said two hospitals:

- **Location:**-

  NESCOM hospital is located H11/4 Islamabad, Pakistan whereas NDC hospital is located at I-10 Islamabad.

- **Number Of catchment**:-

  NESCOM and NDC hospital are providing health care services to all its employees and the residents of Islamabad and Rawalpindi.

- **Resource description of both hospitals**:

	NESCOM	***NDC***
Doctors	115	18
Nurses	72	20
Total beds	137	50
Total patients (per day)	5000	400

- **As per WHO standard:**

Doctor : Patient	***Nurse : Patient***
1 : 20	1 : 5

- **Existing ratios in both hospitals:**

	NESCOM	***NDC***
Doctor to patient ratio	1:43	1:23
Nurse to patient ratio	1:65	1:20
Doctor to nurse ratio	1:2	1:1
Consultation fee(first visit)	1200	1200
Consultation fee(second visit)	1000	1000

- **Comparison of above said WHO standards and available human resources in Nescom and NDC hospital:**

In the above comparison it is observed that human resource of doctors and nurses at Nescom hospital are too scarce as compared to resources of NDC hospital .Keeping in view of above comparison ,hospital management of respective areas can better plan to enhance above said human resources which will reduce the waiting time of the patients and enable the patients to achieve high quality health services and patient satisfaction.

- **Different specialties offered by NESCOM and NDC hospital**:

In NESCOM hospital, there are 20 departments which include Nutritionist, vaccination, endoscopy, nuclear medicine, eye, Cardiology, Oncology, Pathology, Gynecology, ENT, Radiology, Physiotherapy, Plastic and burn, Radiology, Dentistry, Peads, and Medical departments, Orthopedic, Neurology, and surgical departments

In NDC hospital, there are 10 departments which include Dental, Gynae, Peads, Medical , Derma, ENT, Eye, Radiology, Oncology and Emergency.

5.1.1 Gender:

Table 01: Frequency Distribution Of Respondent By Gender

		Gender(Sex)		Total
		Male	**Female**	
NESCOM Hospital	Number	105	95	200
	Percentage	52.5%	47.5%	100%
NDC Hospital	Number	80	70	150
	Percentage	53.33%	46.66%	100%
Total	Number	**185**	**165**	**350**
	Percentage	**52.85%**	**47.14%**	**100%**

Figure 04: Respondents Gender

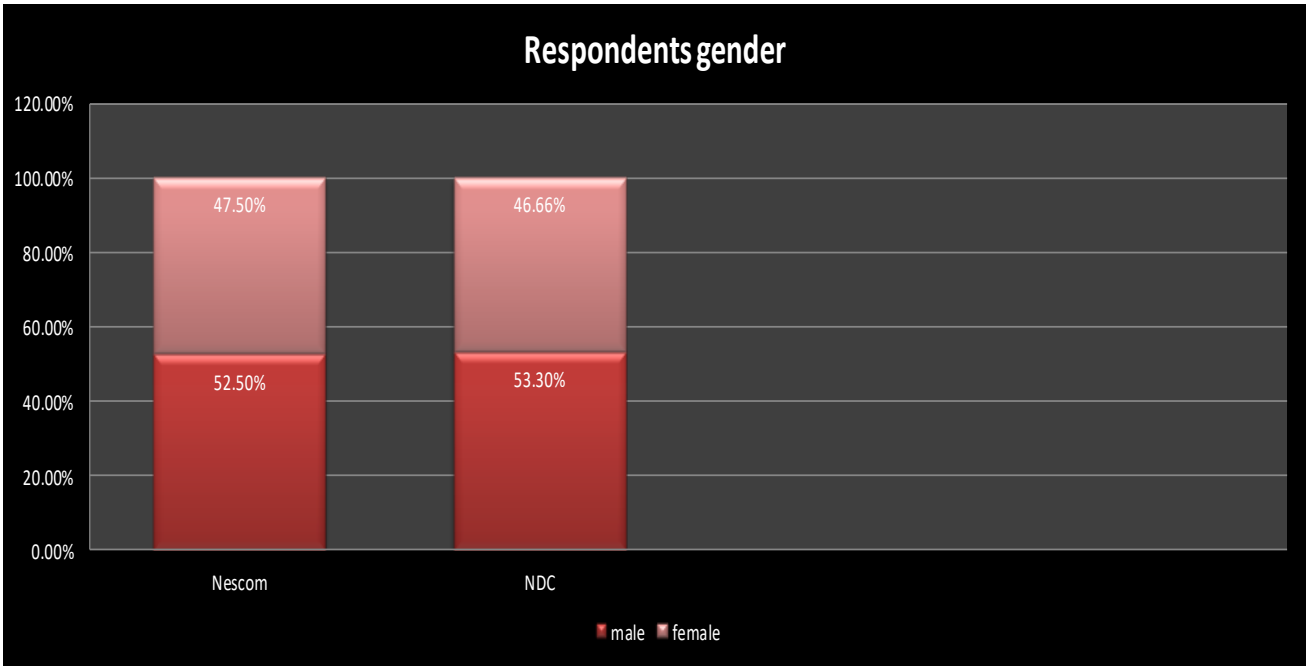


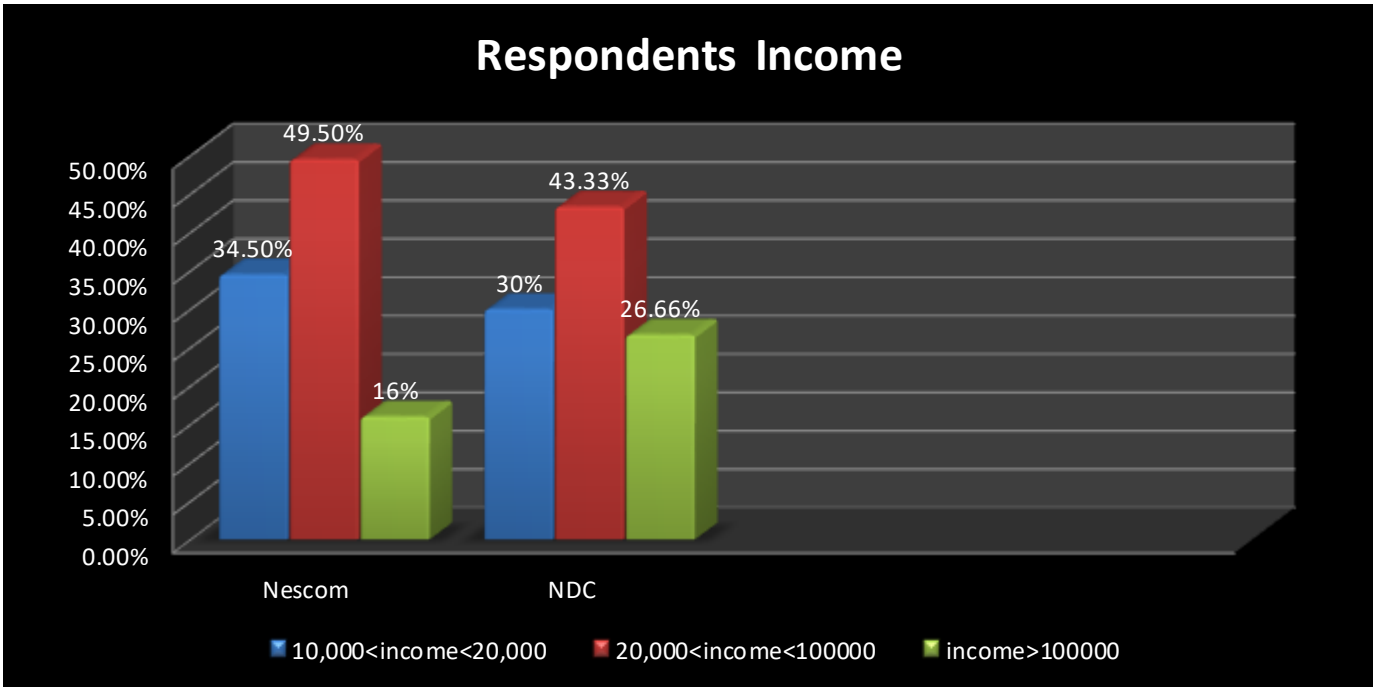
Table 1 show the frequency distribution of the gender which consists of both male and female. The study was conducted among **350** respondents, in which 200 respondents were selected from NESCOM Hospital,(ISLAMABAD) including **105** male representing 52.5% population of NESCOM and **95** were female participants representing 47.5%population of NESCOM. Similarly, in NDC hospital (ISLAMABAD)**150** respondents were selected including **80** male respondents representing **53.33** % population of NDC and **70** participants were female representing**46.66%** population of NDC. A total of 350 participants, 185 of them were male respondents representing 52.85 % of the total population while, 165 participants were female representing 47.14% of the total population of the study. A total of 350 respondents were selected from the total population of patients flow to both NESCOM and NDC hospital.

5.1.2 Patients Income:

Table: 02 Frequency Distribution Of Respondent By Income

		Patients monthly income			
		If 10,000 < Income <20,000	**If 20,000 < Income <100000**	**If income >100000**	**Total**
NESCOM Hospital	Number	69	99	32	200
	Percentage	34.5%	49.5%	16%	100%
NDC Hospital	Number	45	65	40	150
	Percentage	30%	43.33%	26.66%	100%
Total	Number	114	164	72	350
	Percentage	**32.57%**	**46.85%**	**20.57%**	**100%**

Figure 05: Respondents Income

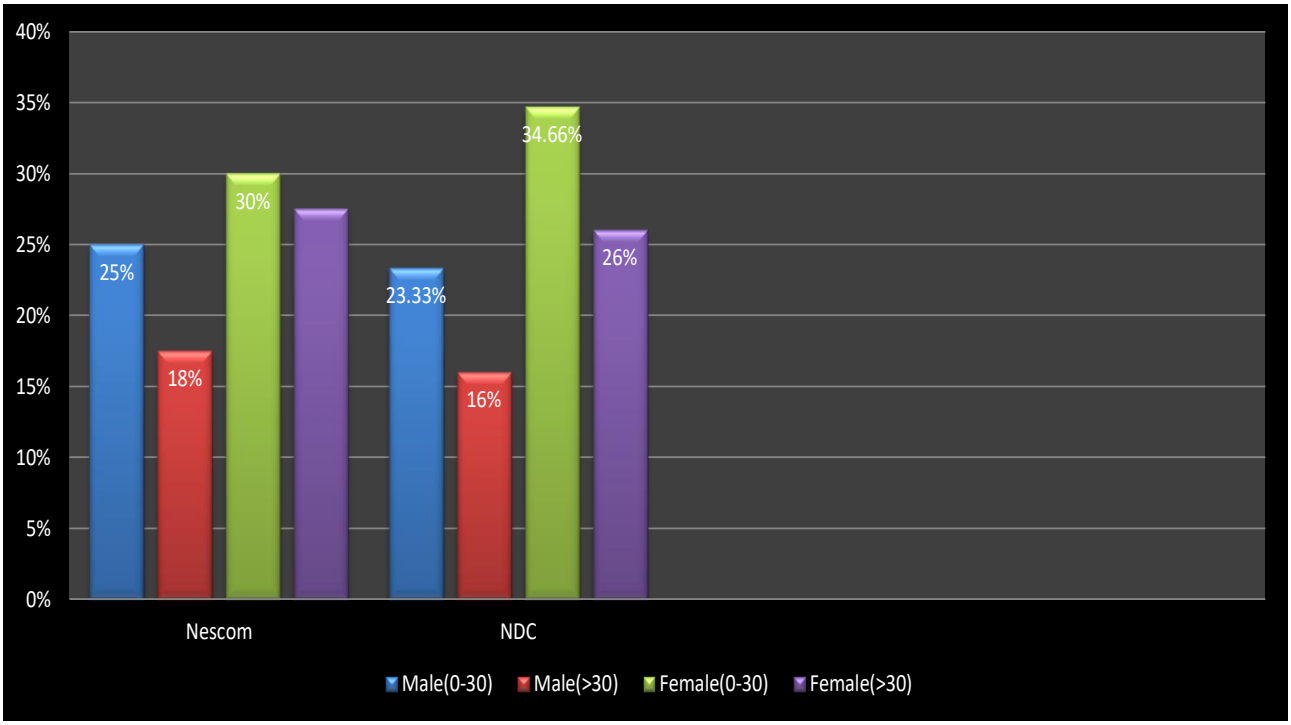


Above table shows frequency distribution of patients according to their monthly income level. The table shows that in NESCOM out of 200 respondents, **69** participants has monthly income around Rs. 10,000 to 20,000 representing 34.5% population and **99** respondent's monthly incomes were between Rs. 20,000 to 10,0000 representing 49.5% population and **32** respondents monthly incomes were greater than 100000 representing **16**% of population . In same case in NDC out of **150** respondents,**45** participants has monthly income of between Rs. 10,000 to 20,000 representing 30% population and **65** respondents monthly income were between Rs. 20,000 to 10,0000 representing 43.33% population of NDC. And 40 respondents had monthly income greater than 100000 representing 26.66% of population. A total of **350** participants,**114** participants has monthly income of between Rs. 10,000 to 20,000 representing **32.57** % population,**164** respondents monthly income were between Rs. 20,000 to 10,0000 representing **46.85%** population of the study. And 72 respondents monthly income is greater than 100000 representing 20.57% population of the study.

5.1.3 Respondents age:

Table:03 Frequency Distribution Of Respondent By Age

		Patients Age				Total
		Male 0-30	**Male > 30**	**Female 0- 30**	**Female >30**	
NESCOM Hospital	Number	50	35	60	55	200
	Percentage	25%	17.5%	30%	27.5%	100%
NDC Hospital	Number	35	24	52	39	150
	Percentage	23.33%	16%	34.66%	26%	100%
Total	Number	85	59	112	94	350
	Percentage	**24.28%**	**16.85%**	**32%**	**26.85**	**100%**



Above table shows frequency distribution of patients according to their age level. The table shows that in NESCOM out of **200** respondents, **50 male** participants has age between 0-30 representing 25% of population, **35 male** participants has age greater than 30 representing 17.5% population and 60 **female**

respondent's has age between 0-30 representing 30% population of NESCOM In same case in NDC out of **150** respondents, **35 male** participants has age between 0-30 representing 23.33% of population,**24 male** participants has age greater than 30 representing 16% population and **52 female** respondents has age between 0-30 representing 34.66% population of NDC and 39 female respondents has age greater than 30 representing 26% of population. A total of **350** participants,**85 male** participants has age between 0-30 representing **24.28%** of population, **59** participants has age greater than 30 representing **16.85**% population and **112 female** respondents has age between 0-30 representing **32%** population and 94 female respondents has age greater than 30 representing 26.85% of the population.

5.1.4 Patient Marital Status:

Table: 04 Frequency Distribution of Respondent By Marital Status:

		Marital Status			Total
		Single	**Married**	**Divorced**	
NESCOM Hospital	Number	75	120	05	200
	Percentage	37.5%	60%	2.5%	100%
NDC Hospital	Number	29	113	08	150
	Percentage	19.33%	75.33%	5.33%	100%
Total	Number	104	233	13	350
	Percentage	**29.71%**	**66.57%**	**3.71%**	**100%**

Figure 06: Respondents Marital Status

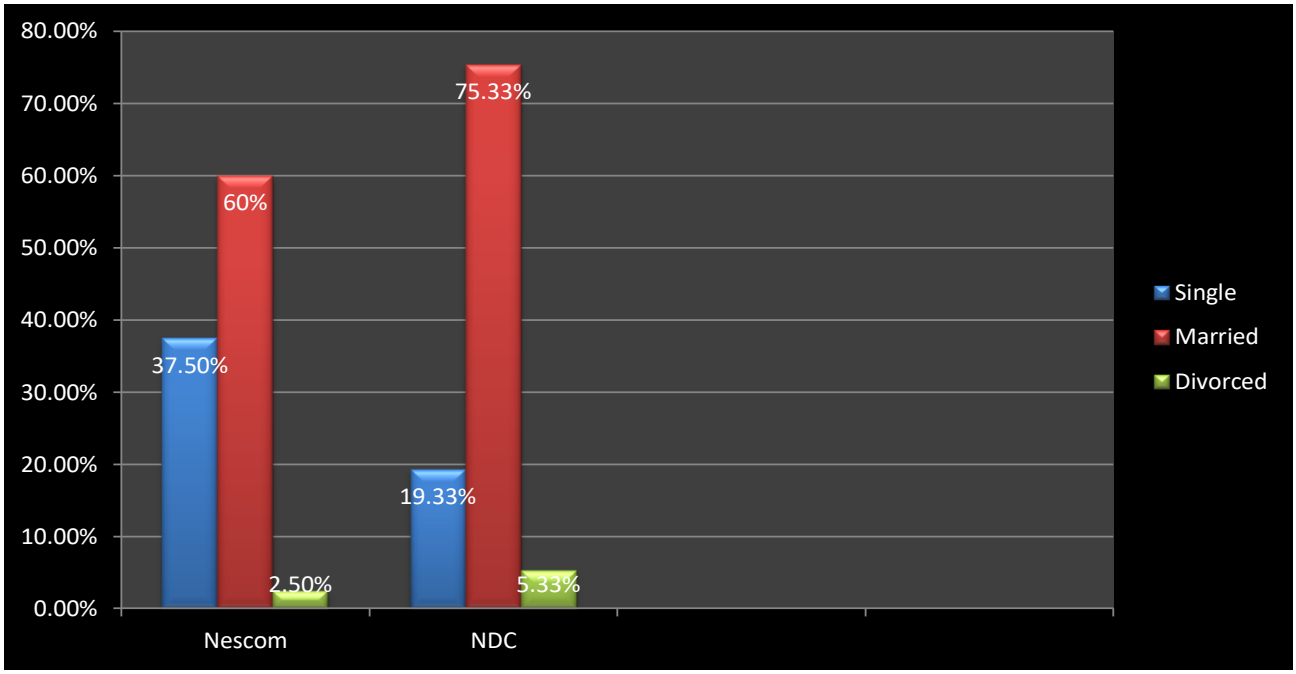


Table:05 Descriptive Statistics Of Convenience

Convenience	N	Sum	Mean	Std. Deviation	Total(NESCOM+ NDC)	
					Mean	S.D
Nescom Sr.No.1 Patients have to wait too long to get emergency treatment	200	451.00	2.2550 (69.1%)	1.22371	2.2625 50.7%	0.84464
Nescom Sr.No.2 For how many hours lab and pharmacy services are available	200	856.00	4.2800 (79.6%)	1.29615	3.5050 68.45%	1.06331
Nescom Sr.No.3 Patients find it hard to get an appointment for medical care	200	466.00	2.3300 (66.7%)	1.47376	3.1200 65.9%	1.08466
NescomSr.No.4 Patients are able to get medical care whenever they need it	200	413.00	2.0650 (75.6%)	1.29970	2.0025 66.2%	1.01805
NescomSr.No.5 Patient perception about negligence of care when shift changes	200	631.00	3.1550 (50.8%)	1.06614	3.4350 55.25%	0.84221
Nescom Sr.No.6 Patients are satisfied with the staff members provision of services during emergency cases	200	434.00	2.1700 (65.2%)	1.14352	2.5875 51%	0.87889
NDC Sr.No.1 Patients have to wait too long to get emergency treatment	150	369.00	2.4600 (32.3%)	1.18509		
NDC Sr.No.2 For how many hours lab and pharmacy services are available	150	310.00	2.0667 (57.3%)	1.13910		
NDC Sr.No.3 Patients find it hard to get an appointment for medical care	150	664.00	4.4267 (65.1%)	1.01893		
NDC Sr.No.4 Patients are able to get medical care whenever they need it	150	288.00	1.9200 (56.8%)	1.43082		
NDC Sr.No.5 Patient perception about negligence of care when shift changes	150	552.00	3.6800 (59.7%)	1.08263		
NDC Sr.No.6 Patients are satisfied with the staff members provision of services during emergency cases	150	500.00	3.3333 (36.8%)	1.31418		
Valid N (list wise)	150					

The above table describes that regarding first item of variable convenience majority of respondents have to wait too long to get emergency treatment having mean value of 2.2625.Their responses lies between the ranges of strongly agree to agree representing 50.7% population of the study. This means that 50.7% participants have to wait too long to get emergency treatment. The mean value of waiting time in NESCOM hospital Islamabad and NDC hospital are 2.2550 and 2.4600 respectively. However, in NESCOM hospital 69.1% respondents agree that they have to wait too long to get emergency treatment while in NDC hospital Islamabad this ratio was comparatively lower that is 47.2%.This means that in NDC hospital satisfaction level is slightly higher as compared to NESCOM hospital.

The mean value of second item of convenience is 3.5050 representing 68.45% population of the study. The majority of respondents in NESCOM hospital lies between the range of strongly agree to agree that lab and pharmacy services are available for 18 hours and 24 hours. Majority of the respondents are satisfied with the NESCOM lab and pharmacy services. As the percentage of NESCOM hospital is 79.6% higher than the 57.3% percent regarding Lab and pharmacy services.

The third item of convenience deals with the Are patients find it hard to get an appointment for medical care. The mean value of third item of convenience is 3.1200 representing 65.9% population of the study. It means that majority of the responses lies between strongly agree to agree having a mean value of 2.3300 representing 66.7%.66.7% respondents are of the view that they find it hard to get an appointment for medical care. While ,in NDC 65.1% are of the view that they are able to get an appointment for medical care and they did not find any difficulty. The satisfaction level regarding appointment is higher in NDC rather than NESCOM.

The fourth item of convenience is Are patients able to get medical care when they need it and the mean value of this item is 2.0025 which represent 66.2% population of the study. This statement says that around 66.2% of the participants are satisfied that are able to get medical care whenever they need it. The mean value of the fourth item of convenience in NESCOM hospital is 2.0650 and mean value in NDC

hospital is 1.9200 having percentages 75.6% and 56.8% respectively. It means that in NESCOM hospital patients are more satisfied as compared to NDC hospital.

The fifth item of convenience deals with the patient perception regarding negligence of care when shift changes. The mean value of this item is 3.4350 which represent 55.25% population of the study.55.25% respondents disagree with the statement that care is not neglected when shift changes. The mean value regarding this statement in NESCOM hospital is 3.1550 having percentage of 50.8% whereas the mean value regarding this statement in NDC hospital is 3.6800 having percentage of 59.7%.Respondents are satisfied with this statement in both hospitals and more comparatively in NDC hospital .

The sixth and last item of convenience is related to Are patients satisfied with the staff members provision of services during emergency cases. The mean value of this item is 2.5875 which represent 51%population of the study .and the mean value in NESCOM hospital is 2.1700 having percentage of 65.2%.This means that 65.2% participants are satisfied with provision of services during emergency cases in NESCOM hospital. Whereas mean val ue in NDC is 3.3333 having percentage of 36.8%.In NESCOM hospital patients satisfaction level is higher in terms of provision of services as compared to NDC hospital. In NDC hospital satisfaction level among respondents is high in terms of waiting time to get emergency treatment ,Easy appointments to get medical care, Care is not neglected when shift of doctors and nurses change. While in NESCOM hospital lab and pharmacy are good and satisfaction level of respondent in NESCOM regarding this item of convenience is better then NDC.

Table 06: Descriptive Statistics Of Courtesy

Courtesy	N	Mean	Std. Deviation	Total	
				Mean	SD
NESCOMSr.No.1 Doctors treat patient in friendly manner	200	2.2150 (69.6%)	1.18142	2.3525 (44.25%)	0.92127
NESCOMSr.No.2 Nurses treat patients in courteous manner	200	3.1900 (31.8%)	1.39053	3.7475 (40.8%)	1.05024
NESCOMSr.No.3 Paramedical treat patient in friendly manner	200	2.5800 (42.8%)	1.18347	2.5300 (37.8%)	1.19425
NESCOMSr.No.4 Receptionist help desk and general service staff deals patients in friendly manner	200	1.9350 (81.6%)	1.01287	2.1725 (51%)	0.83816
NESCOMSr.No.5 Patients feels protected against medical problems	200	2.7800 (32.8%)	1.55036	2.6675 (39.05%)	1.17370
NDCSr.No.1 Doctors treat patient in friendly manner	150	2.7133 (18.9%)	1.34781		
NDCSr.No.2 Nurses treat patients in courteous manner	150	4.5533 (49.8%)	.77318		
NDCSr.No.3 Paramedical treat patient in friendly manner	150	2.3933 (32.8%)	2.09152		
NDCSr.No.4 Receptionist help desk and general service staff deals patients in friendly manner	150	2.5733 (20.4%)	1.31765		
NDCSr.No.5 Patients feels protected against medical problems	150	2.5133 (45.3%)	1.46886		
Valid N (list wise)	150				

The above table describes that regarding first item of Courtesy majority of respondents mean value is 2.3525. It represents 44.25% population of the study. The statement of first item of courtesy is that doctors treat patients in friendly manner. 44.25% participants reported that the doctors treat patients in friendly manner. Moreover, the mean value of first item of courtesy in NESCOM hospital is 2.2150 representing 69.6% population of NESCOM. This means that about 69.6% respondents are satisfied with behavior of the doctors in NESCOM hospital. Whereas in National Development Complex hospital (NDC) the mean value of first item of courtesy is 2.7133 representing 18.9% population of the study. In both hospitals NESCOM and NDC patients are satisfied with doctors behavior but satisfaction level is higher in NESCOM as compared to NDC.

The second item of courtesy is that does Nurses treat patients in courteous manner. The mean value of this item is 3.7475 representing 40.8% population of the study. Majority of the respondents disagree with the statement and their perception regarding nurses' behavior is negative in NESCOM hospital and NDC hospital. The mean value regarding Nurse Behavior in NESCOM is 3.1900 having percentage of 31.8% whereas in National Development Complex the mean value regarding this second item of courtesy is 4.5533 having percentage of 49.8%.Satisfaction level is low in both hospitals in terms of nurses behavior The third item of courtesy deals with the respondent perception regarding paramedical friendly treatment. The mean value regarding this third item of courtesy is 2.5300 representing 37.8% population of the study. Majority of the responses lies in the range of strongly agree to agree says that 37.8% population are of the view that paramedical treat patients in friendly manner. The mean value in NESCOM is 2.5800 having percentage of 42.8% while in National Development Complex (NDC) the mean value is 2.3933 having percentage of 32.8%.This means that in NESCOM satisfaction level is higher as compared to NDC.

The fourth item of courtesy is that Does receptionist help desk and general service staff deals patients in friendly manner. The mean value of this item is 2.1725 representing 51% population of the study.51%

population agree with the statement having positive perception regarding this statement that receptionist help desk and general service staff deals patient in friendly manner. The mean value regarding this item in NESCOM is 1.9350 having percentage of 81.6%.Whereas in National Development Complex (NDC) the mean value is 2.5733 having percentage of 20.4%.Satisfaction level in NESCOM is comparatively higher in terms of receptionist and general service staff.

The last item of courtesy is Are patients feels protected against medical problems. The mean value regarding this item of courtesy is 2.6675 having percentage of 39.05%.Majority of the responses lies between the range of strongly agree to agree .39.05% Patients agree with the statement that they feel financially protected against medical problems. The mean value regarding this item of courtesy in NESCOM hospital is 2.7800 having percentage of 32.8% while in National Development Complex(NDC) the mean value regarding this item is 2.5133 having percentage of 45.3%.

Table 07: Descriptive Statistics Of Quality Care:

Quality Of Care	N	Mean	Std. Deviation	Total	
				Mean	SD
NESCOM Sr.No.1 The hospital has latest CT scan	200	2.0550 (75.1%)	1.24084	2.95 (73.35%)	1.08644
NESCOM Sr.No.2 The hospital has latest X-ray equipment	200	2.4550 (58.2%)	1.50309	2.8975 (46.5%)	1.06367
NESCOM Sr.No.3 Hospital has latest MRI equipment	200	4.4400 (82.1%)	.86611	4.5400 (73.1%)	0.68977
NESCOM Sr.No.4 Availability of lab and pharmacy services are good	200	2.8500 (38.8%)	1.38459	3.2437 (44.75%)	1.01112
NESCOMSr.No.5 Respondent perception regarding health services.	200	2.3800 (39.8%)	.98512	2.7225 (30.53%)	0.80778
NESCOM Sr.No.6 Is share of cost high for patient	200	2.9400 (59.7%)	0.95444	2.8675 (59.7%)	0.73409
NDC Sr.No.1 The hospital has latest CT scan	150	4.6533 (71.6%)	.65525		
NDC Sr.No.2 The hospital has latest X-ray equipment	150	3.6267 (34.8%)	1.56105		
NDC Sr.No.3 Hospital has latest MRI equipment	150	4.5200 (64.1%)	.88780		
NDC Sr.No.4 Availability of lab and pharmacy services are good	150	3.6400 (50.7%)	1.17742		
NDCSr.No.5 Respondent perception regarding health services	150	3.3333 (20.9%)	1.31928		
NDC Sr.No.6 Share of cost is high for patient	150	2.9533 (59.7%)	.70793		
Valid N (list wise)	150				

The above table describes that regarding first item of quality care mean value is of 2.9575. It represents 73.35% population of the study. The first item of quality of care is that Has the latest CT scan facility available within the hospital. The mean value regarding this item in NESCOM hospital is 2.0550 having percentage of 75.1%.This means that 75.1% respondents strongly agree with the statement that hospital has latest CT scan facility and respondents contain positive perception regarding this facility. Whereas in Nation Development Complex hospital (NDC) the mean value regarding this item is 4.6533 containing percentage of 76.1%.but in NDC hospital their responses lie between the range of disagree to strongly disagree This means that 71.6% patients in NDC complain that hospital does not contain latest CT scan facility. Satisfaction level in NDC regarding CT Scan facility is poor. Where NESCOM hospital contains high satisfaction level regarding CT scan.

The second item of Quality care is That Has hospital latest X-Ray facility. The mean value regarding this item is 2.8975 having percentage of 46.5%.The mean value regarding this item in NESCOM hospital is 2.4550 containing percentage of 58.2%.In NESCOM hospital majority of the responses lies in the range of strongly agree to agree. This means that around 58.2% respondents agree with the statement that hospital has latest X ray machine. And patients are satisfied with this facility. While in National Development complex (NDC) satisfaction level among respondents are very low regarding X-Ray machine. The mean value in NDC is 3.6267 having percentage of 34.8%.Their responses lies between the range of disagree to strongly disagree .This means that around 34.8% patients complain about X Ray machines in NDC.

The third item of Quality care has hospital latest MRI machine. The mean value regarding this item is 4.5400 having percentage of 73.1%.This means that 73.1% disagree or strongly disagree with the statement that hospital has latest MRI machine. Infact they complain that there is no MRI machine in both hospitals and patients contain negative perception regarding this facility. The mean value regarding this item in NESCOM hospital is 4.4400 having percentage of 82.1%.This means that 82.1% complain in

NESCOM hospital regarding MRI machine facility and they are not satisfied. In National Development Complex hospital(NDC),The mean value regarding this item is 4.5200 having percentage of 64.1%. 64.1% patients complain with the MRI facility and they strongly disagree with the statement.

The fourth item of Quality care is Are Lab and Pharmacy services available within the hospitals are good. The mean value regarding this item is 3.2437 having percentage of 44.75%.The mean value regarding this item in NESCOM hospital is 2.8500 containing percentage of 38.8%.Their majority of the responses lies in the range of strongly agree to agree means that 38.8% respondents in NESCOM hospital are satisfied with the Lab and Pharmacy services. While in National Development Complex(NDC) the mean value is 3.6400 having percentage of 50.7% but in NDC respondents disagree with the statement and they are of the opinion that Lab and Pharmacy services available within the NDC hospital is not good and they are not satisfied with the facility.

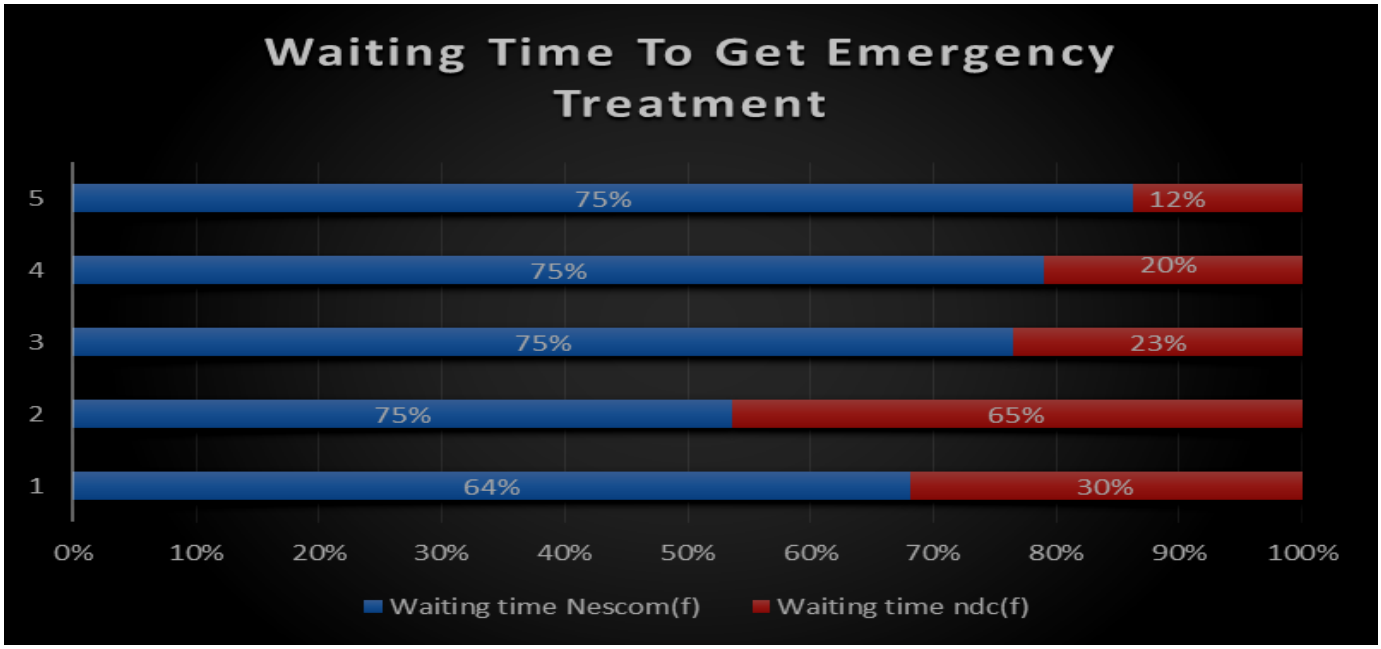
The fifth item of Quality care is Respondent perception regarding health services. The mean value regarding this item is 2.7225 having percentage of 30.53%.The mean value in NESCOM hospital is 2.3800 having percentage of 39.8%.In NESCOM majority of the responses lies in the range of agree .And 39.8% respondents are satisfied with the health care services available within NESCOM hospital. While in NDC, the mean value is 3.3333 having percentage of 20.9%.But in NDC patient responses lies in the range of strongly disagree and they contain the perception that they are not satisfied with the health care services available within NDC hospital.

Chapter: 06

ANALYSIS

The study did examination of healthcare service quality dimensions and patient satisfaction in selected hospitals of Islamabad that is NESCOM hospital and NDC hospital. Gender, Patient income, Age and marital status are independent variables. While in this research Convenience, Courtesy and Quality care are taken as dependent variables. The first item of Convenience is Does patients have to wait too long to get emergency treatment.

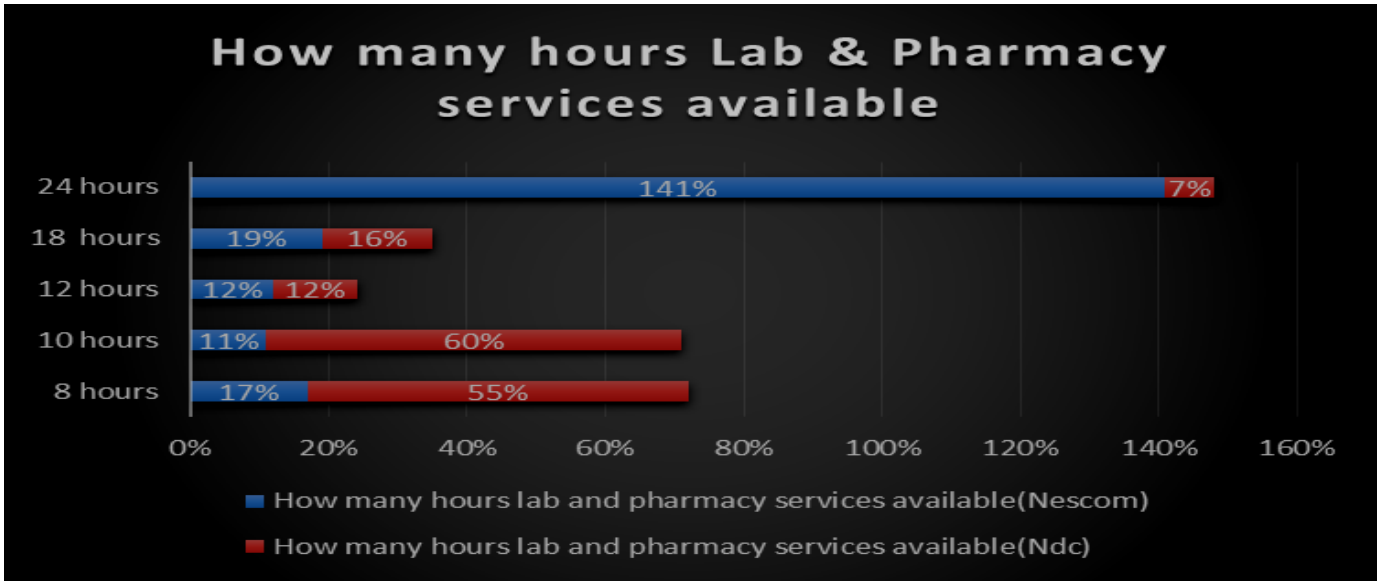
Figure 07: Waiting time to get emergency treatment in NESCOM hospital and NDC hospital:



Waiting time to get emergency treatment is the first item of variable Convenience. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies. Waiting time to get emergency

treatment in NESCOM hospital and NDC hospital are shown in the above graph. The graph shows that overall waiting time is high in NESCOM hospital as compared to NDC hospital. But what are the reasons behind this. In NESCOM hospital there are 41 ER beds. ER stands for emergency room beds. Waiting time in NESCOM hospital is high because of shortage of ER beds and higher patient flow in OPD and emergency. Patient flow in NESCOM hospital is around 1000 to 1200 per day. Whereas in NDC hospital, patient waiting time is less because of low patient flow. Patient flow in NDC hospital is around 200 to 300 per day.

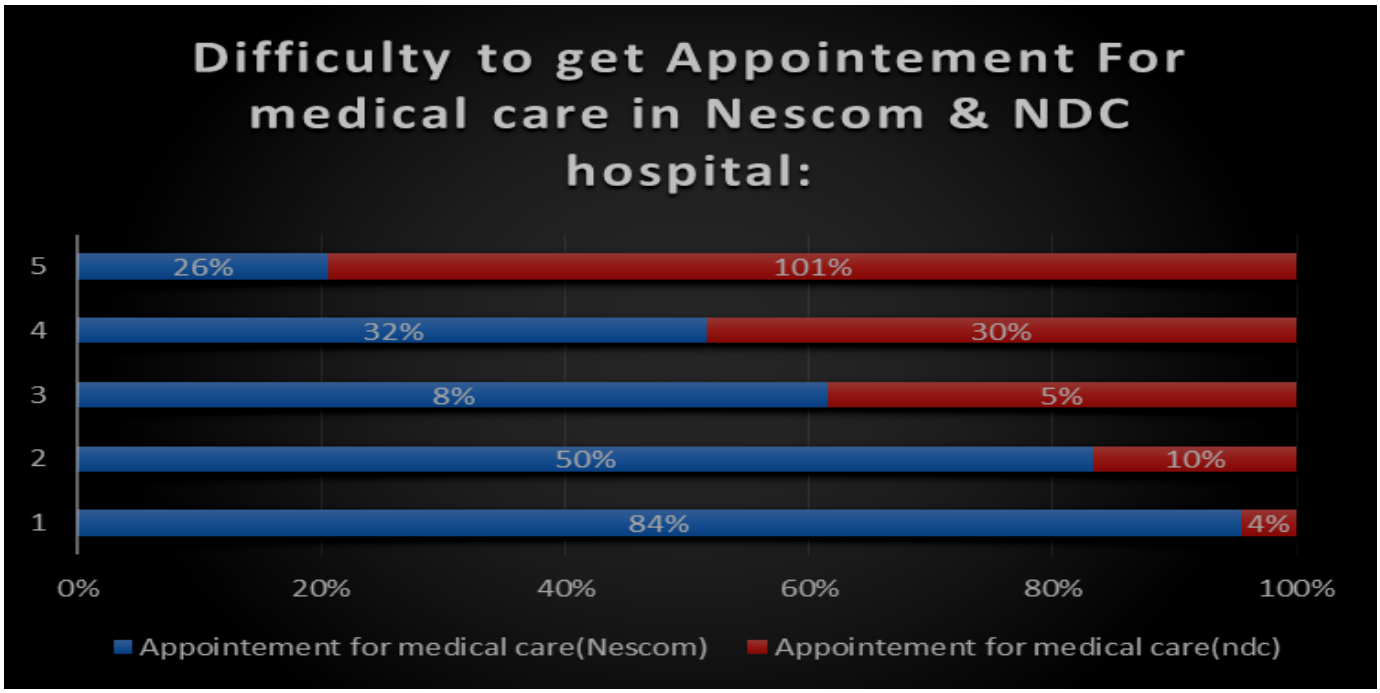
Figure 08: For how many hours Services regarding Lab & Pharmacy available in NESCOM hospital & NDC hospital:



How many hours Lab and pharmacy services available in NESCOM hospital and NDC hospital. This is the second item of variable Convenience. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies. Patient perceptions regarding NESCOM hospital services are good. Patient perceives that for 24 hours lab and pharmacy services are available in NESCOM whereas in NDC lab

services are only available for 10 hours. And patient satisfaction is comparatively less in NDC. But what are the reasons behind this? Firstly, NDC hospital faces problem regarding provision of advanced and high cost medicines. Quality of communication between paramedical employees and patients are not good and Pharmacy staff are not in a position to clearly define how the patient should use the medication they have been prescribed.

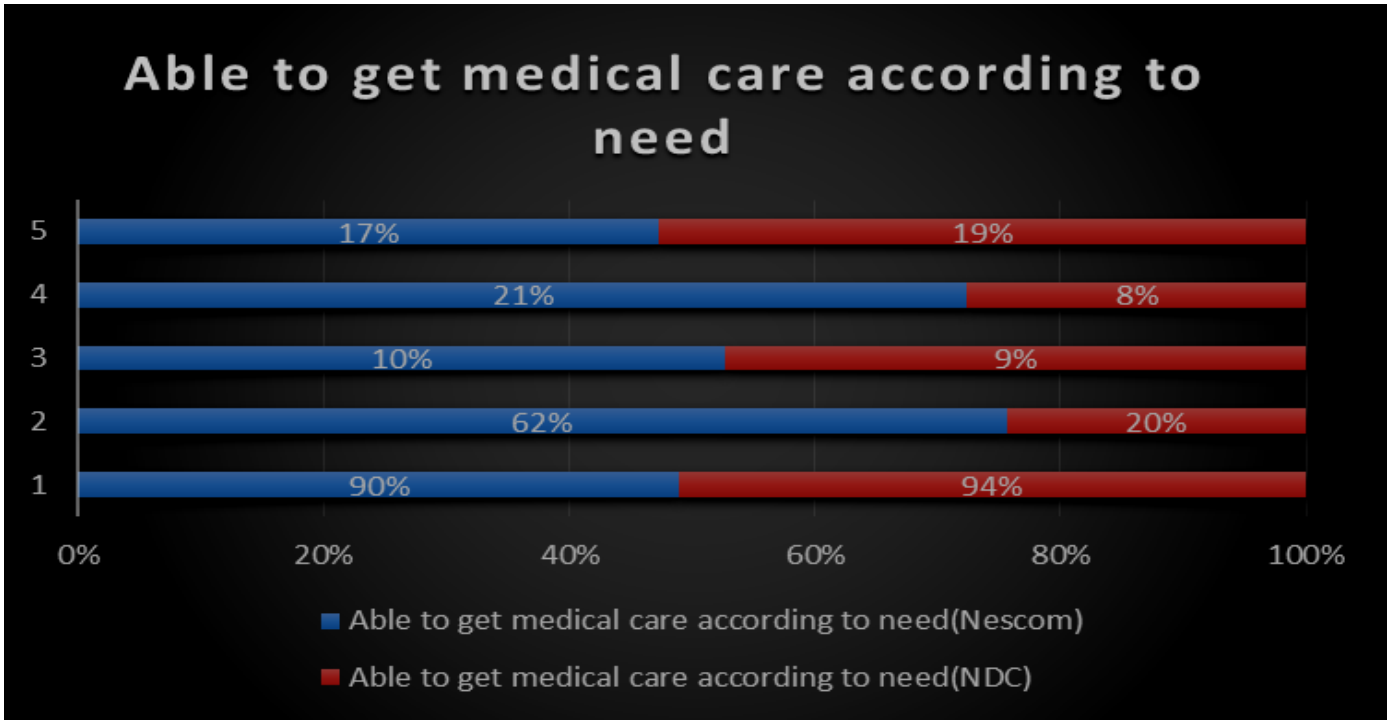
Figure 09: Is it difficult getting appointment for medical Care in NESCOM hospital & NDC hospital:



Appointment for medical care is the third item of variable Convenience. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies. 84% Patient agree with the statement that to take appointment for medical care they face so much difficulty in NESCOM hospital as compared to NDC hospital. But what are the reason behind this? Patients say that they face problem in taking appointment regarding operations and surgeries , CT scan, Ultrasounds, ETT, Echo because of shortage

of machinery and competent workforce, high patient flow, shortage of beds. Whereas in NDC hospital patients does not feel any difficulty to take appointment for medical care because of less patient flow.

Figure 10: Are patients able to get medical care according to Need:



Are patients able to get medical care up to need.in NESCOM hospital and NDC hospital. This is the fourth item of variable Convenience. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies. Patients say that they are satisfied from the medical care and care is available for them whenever they need.90% perceptions in NESCOM and 94% patient perceptions are positive regarding this statement

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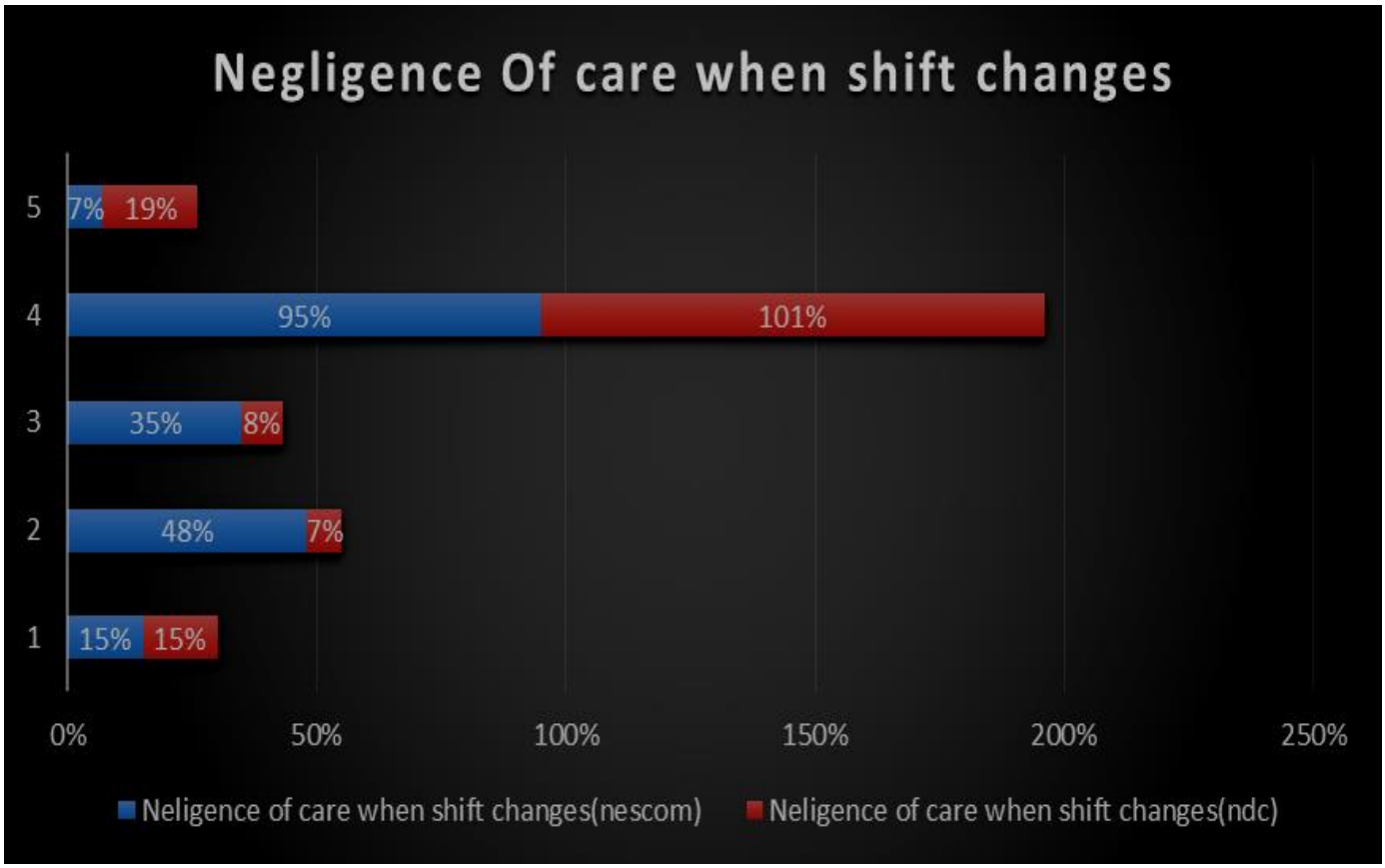
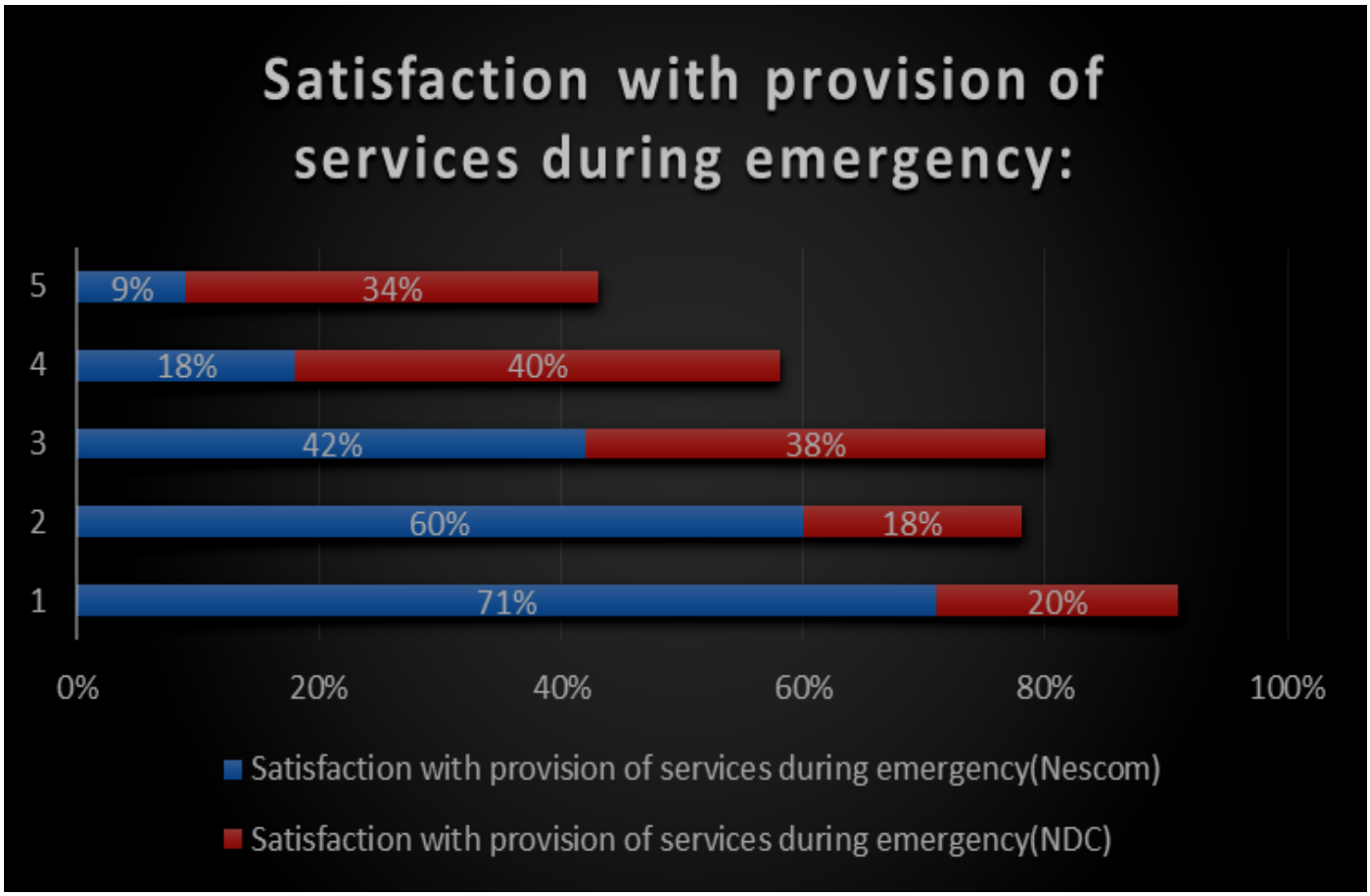
Figure 11: Perception About negligence of care when shift changes:



Patient perception regarding negligence of care when shift changes in NESCOM hospital and NDC hospital. This is the fifth item of variable Convenience. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies. In both hospitals .95% and 101% disagree with the statement regarding negligence of care when shift changes.

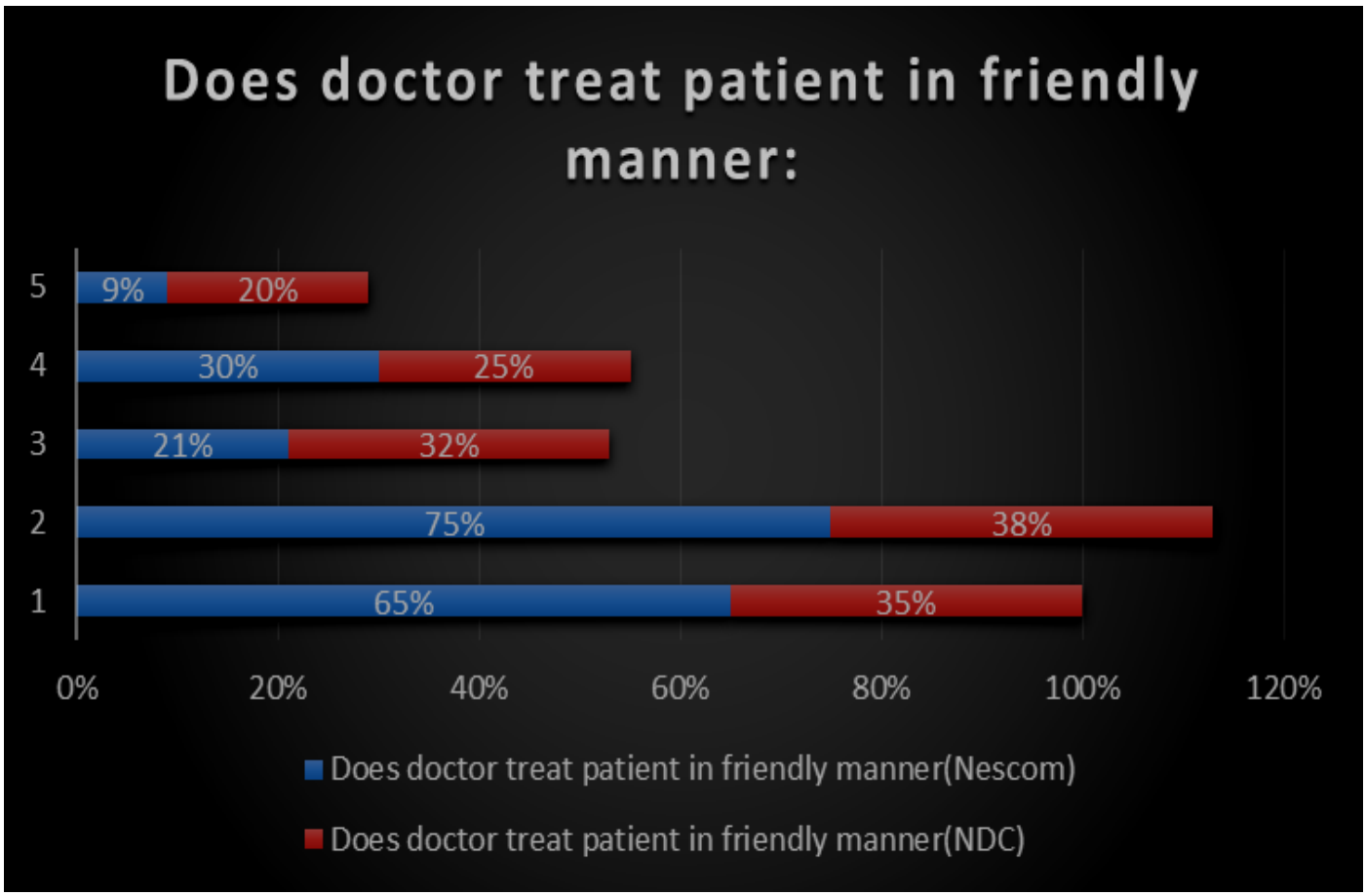
Figure 12: Are patients satisfied with the staff members' provision of services during emergency cases:



Patient perception regarding satisfaction with provision of services during emergency in NESCOM hospital and NDC hospital. This is the last item of variable Convenience. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies. In NESCOM hospital 71% patients say that they are satisfied regarding emergency service provision. NDC is small ranged hospital and 40% patient

opinion regarding this statement is negative because of lack of competent doctors in emergency, Lack of advanced diagnostic equipment in emergency.

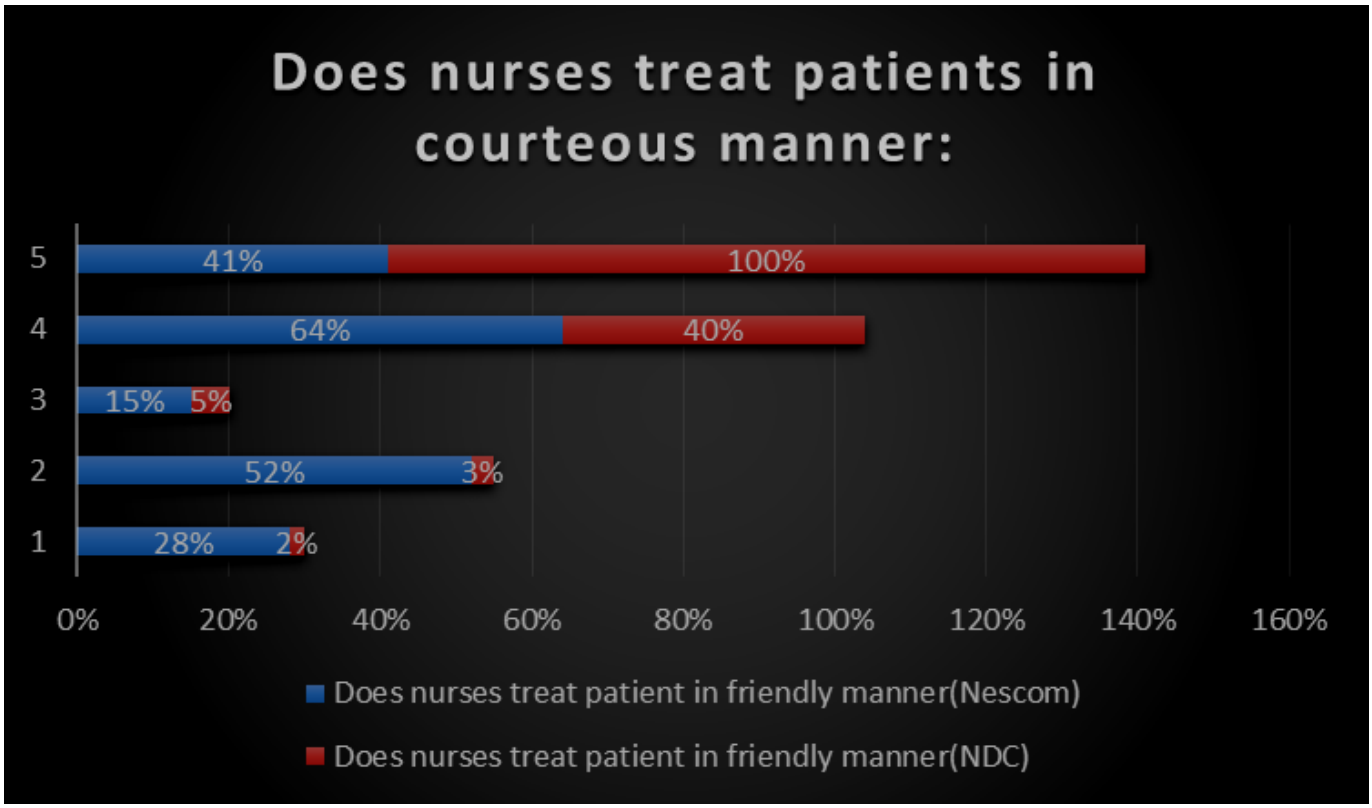
Figure 13: Does doctor treat patient in friendly manner:



Does doctor treat patient in friendly manner. This is the first item of variable Courtesy. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies. 75% patients in

NESCOM hospital agree that doctors treat them very friendly. Whereas in NDC hospital 38% patients say that they are satisfied with the doctor behavior.

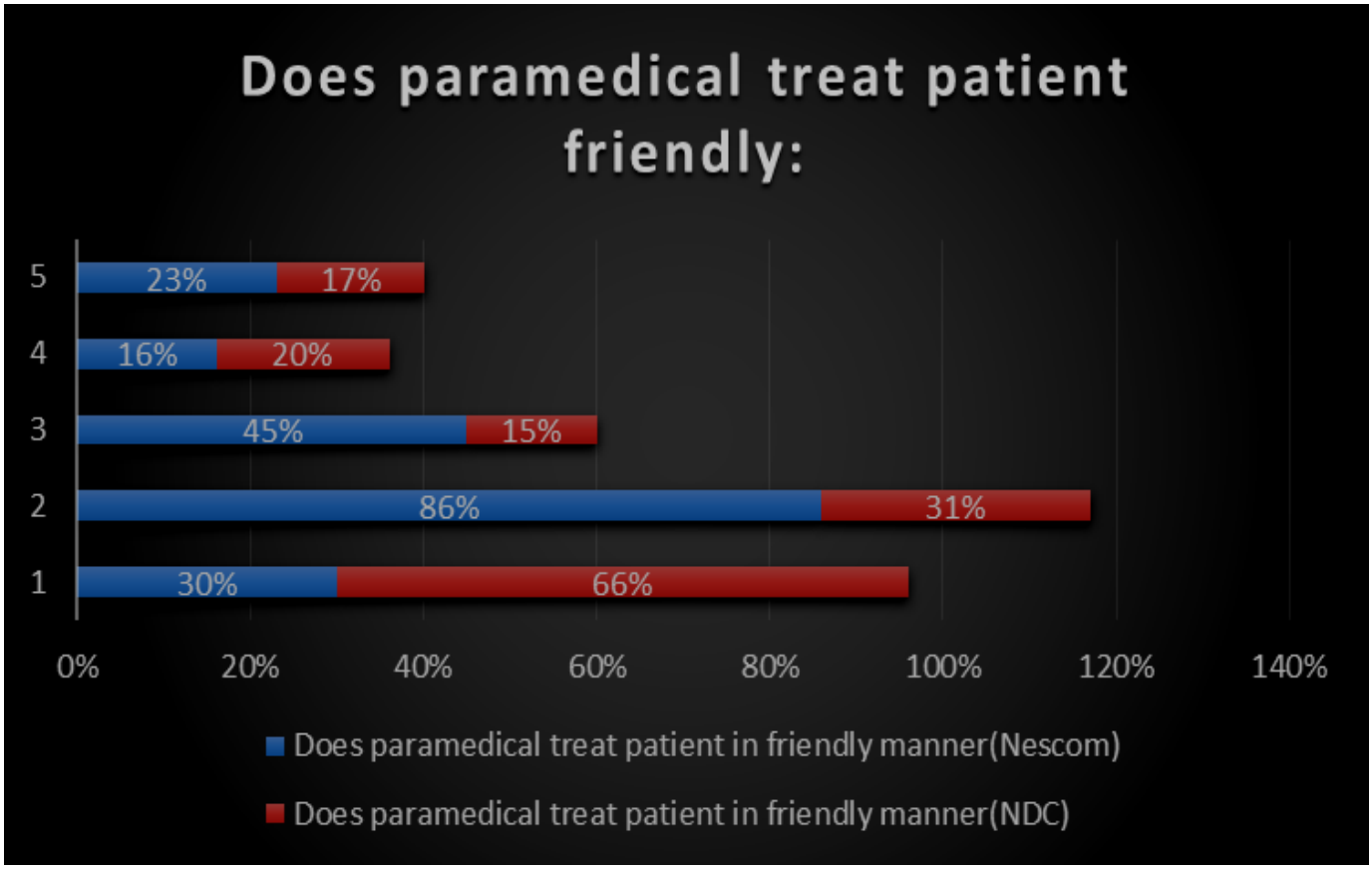
Figure 14: Does Nurses treat patients in courteous manner?



Does nurses treat patient in friendly manner. This is the second item of variable Courtesy. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies. 64% patients in NESCOM hospital disagree that nurses behavior are good whereas in NDC hospital this ratio is 100% and strongly disagree with the statement that nurses treat them friendly. But why? The major reason behind this is that the majority of nurses are aged having poor communication skill with patients.

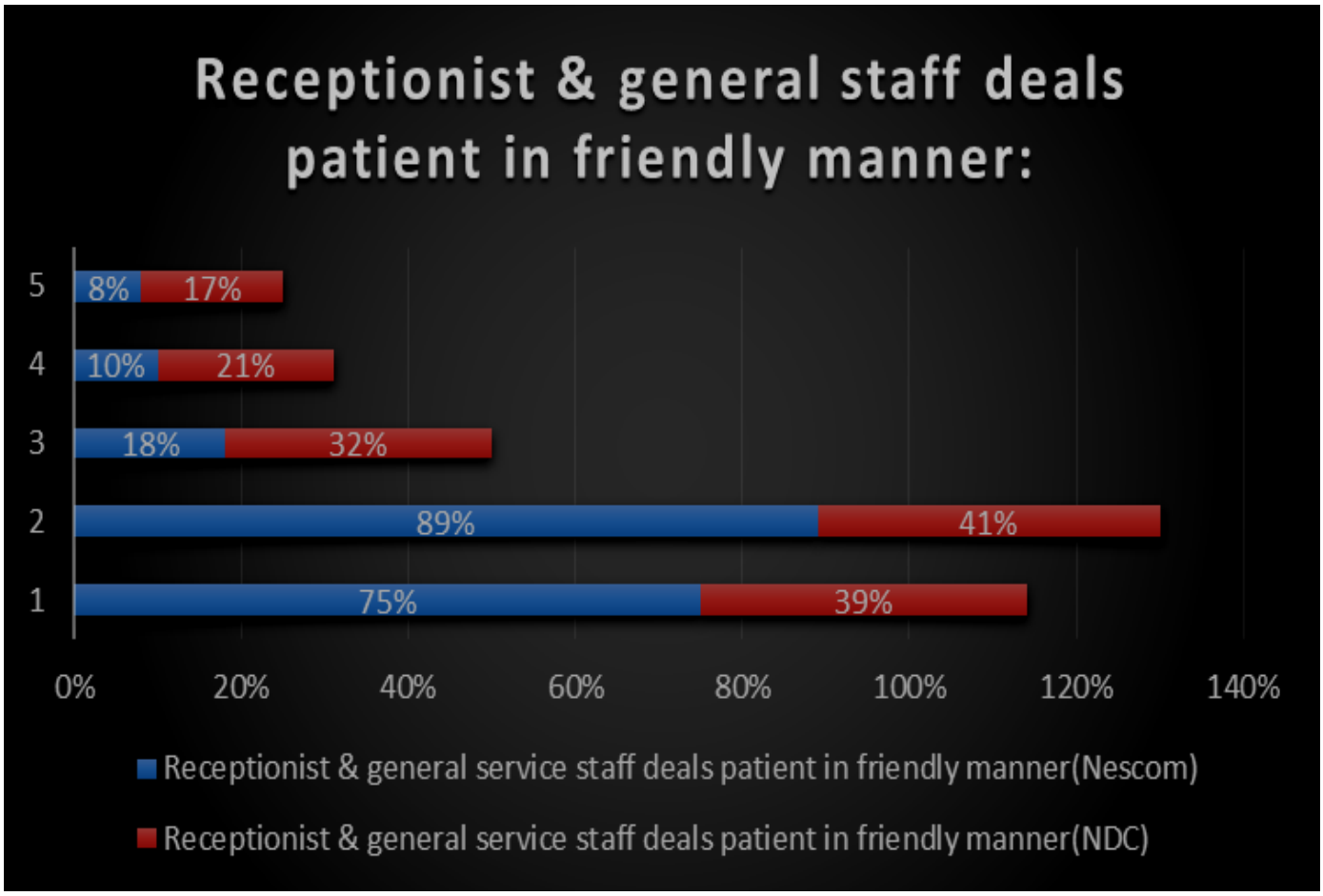
Moreover there is shortage of trained personnel. Proper training is required regarding communication skill and how to treat patients friendly.

Figure 15: Does Paramedical treat patient in friendly manner:



Does paramedical staff treat patient in friendly manner. This is the third item of variable Courtesy. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies .Patients agrees in both hospitals that paramedical treat them friendly. 86% patients in NESCOM hospital agrees that behavior of paramedical staff are really good whereas in NDC hospital 66% strongly agree with the statement that paramedical treat patients friendly.

Figure 16: Does receptionist help desk & general service staff deals patient in friendly manner?



Does receptionist and general staff treat patients in friendly manner. This is the fourth item of variable Courtesy. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies. 89% patients in NESCOM hospital agrees that receptionist and general staff deals patients in friendly manner. Whereas in NDC hospital this ratio is 41% and agrees with the statement that receptionist and other staff treat them friendly.

Figure 17: Does patient feels protected against medical problems:

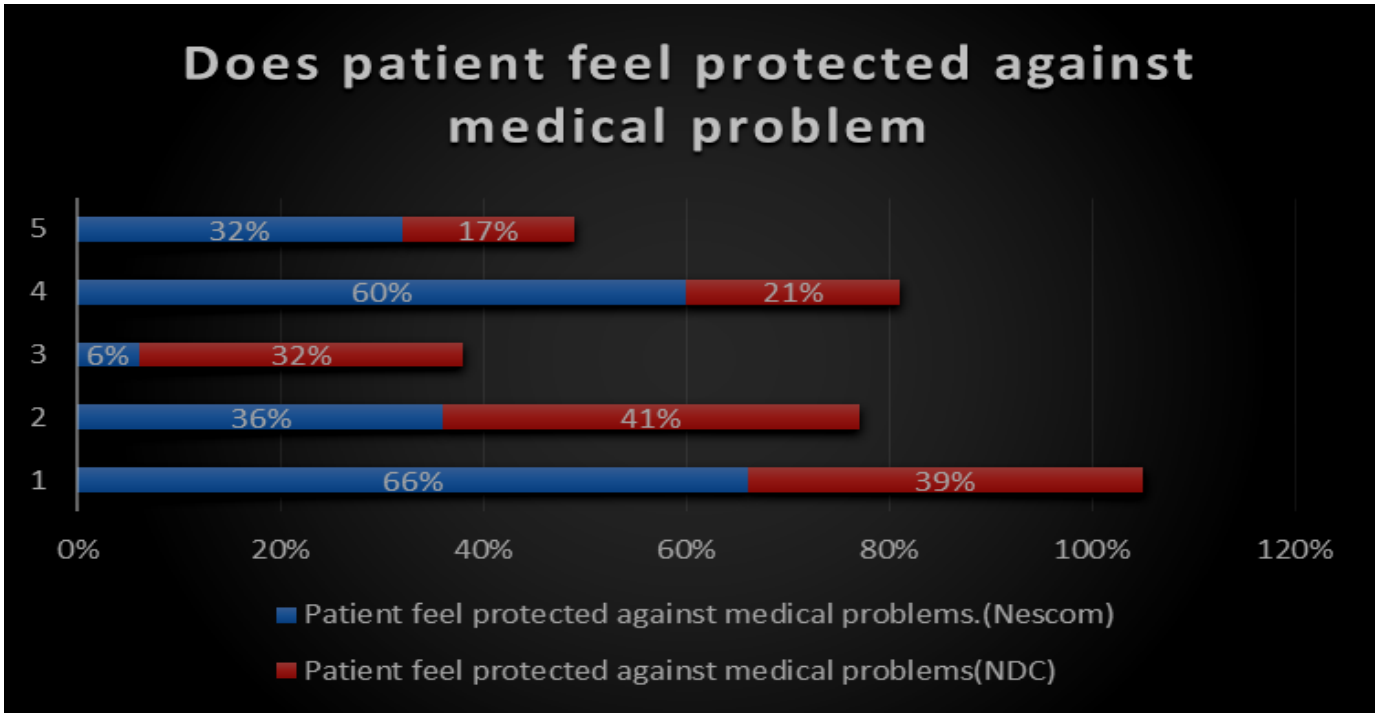
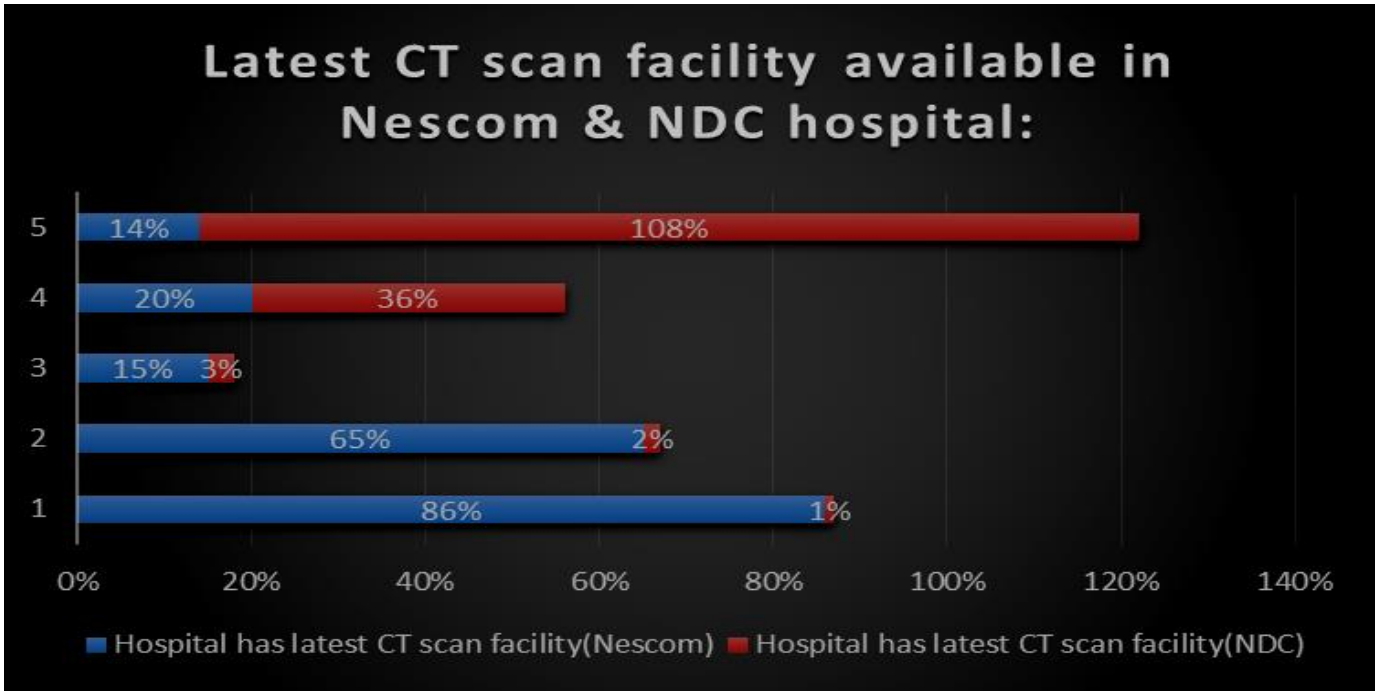


Figure 18: Had hospital latest CT scan facility:



The first item of variable Quality of care is had hospitals latest CT scan facility. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for “Strongly agree” to

five “Strongly disagree”. Codes were assigned to each point ranging from ‘1 to 5’ in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies. In NESCOM hospital, 86% patients strongly agrees that CT scan facility is available .While in NDC hospital 108% patients strongly disagrees that there lies no facility regarding CT scan .But why patients going to NDC hospital are unable to attain facility regarding CT scan. The major reason behind this is that there are not enough funds in hospital to purchase CT scan machine. Moreover, there is a lack of specialized **CT** technologists in hospital .Because two or more years of training in x-ray and **computed tomography** are required. CT scans can spot it or help doctors to see any change occurring in the body hence reduce the length of hospitalization.

Figure 19: Had hospitals latest X-Ray Equipment:

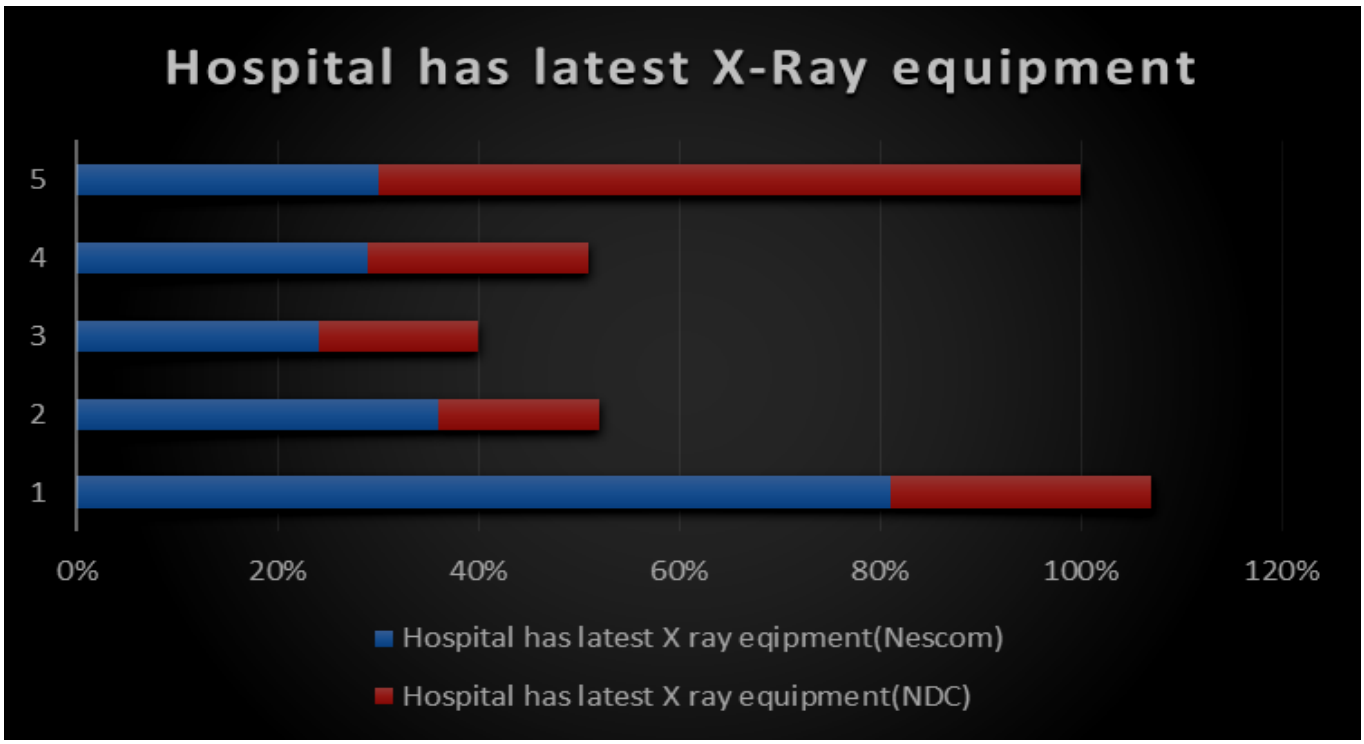
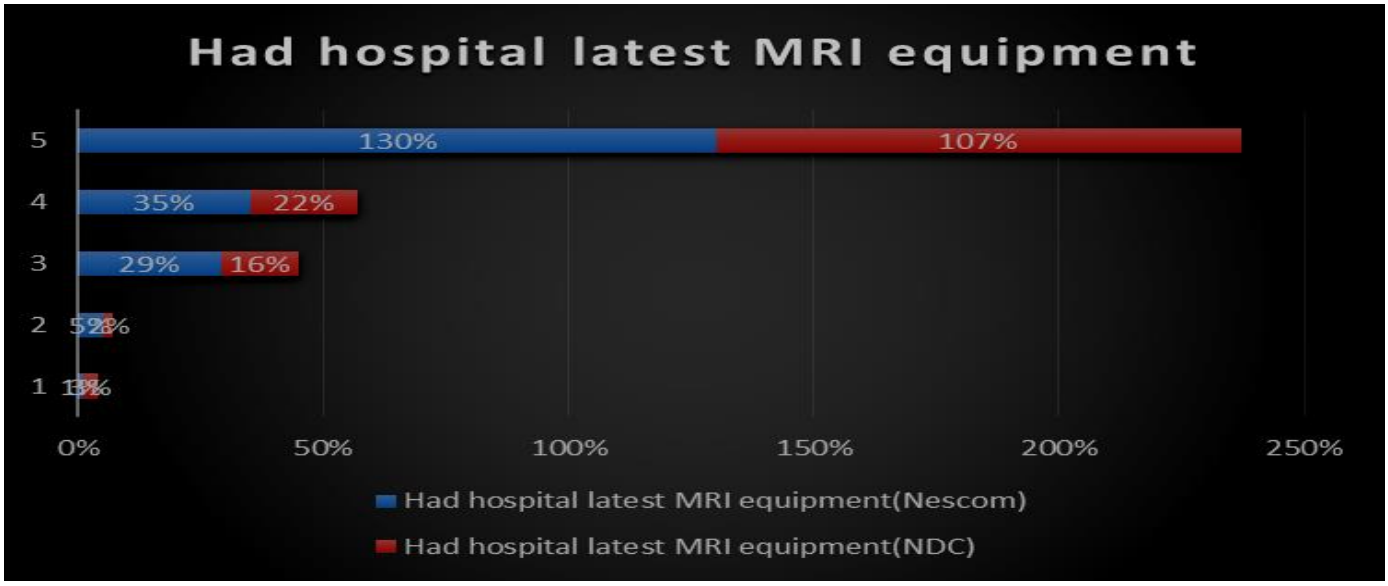
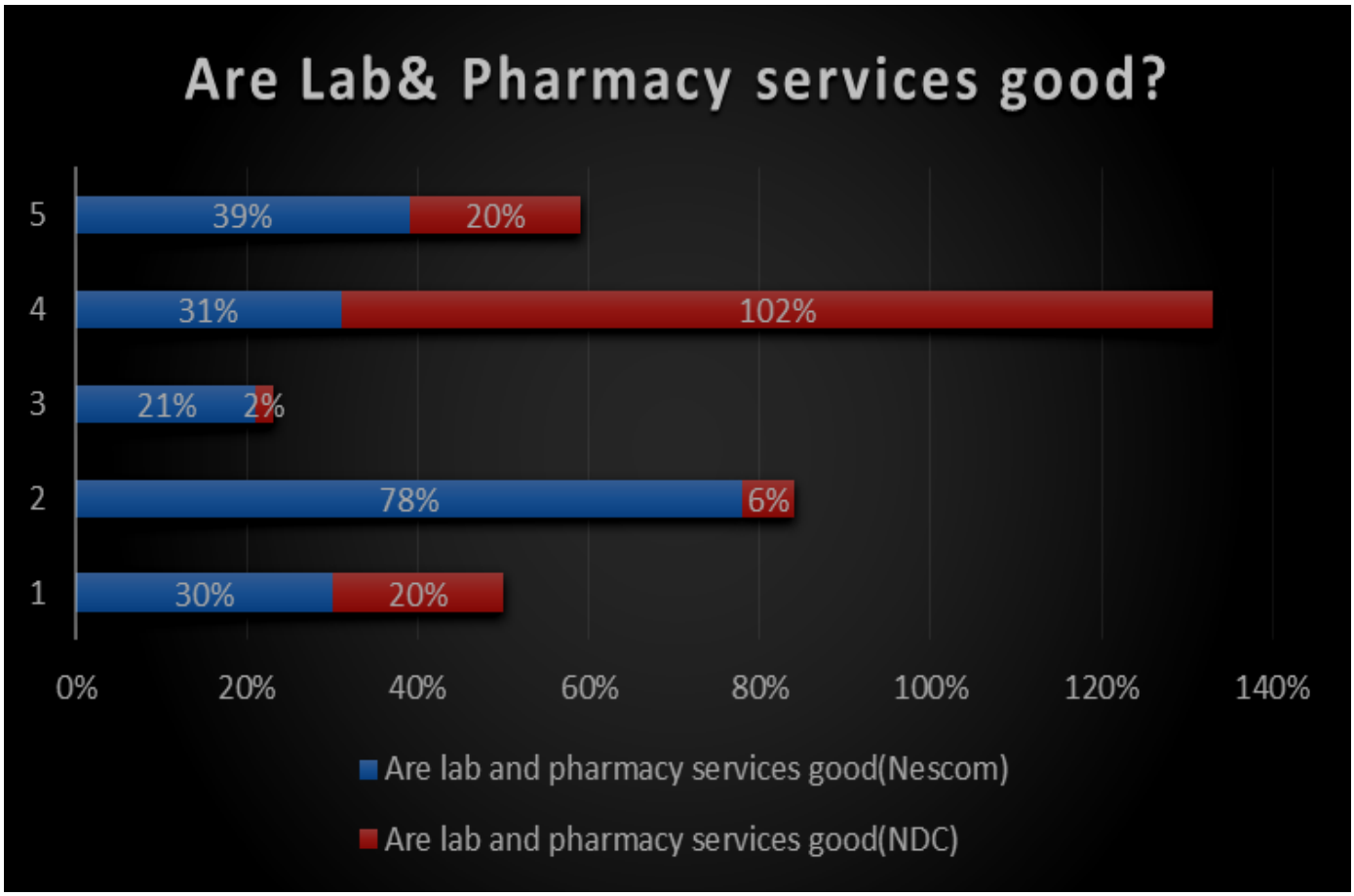


Figure 20: Had hospitals latest MRI equipment:



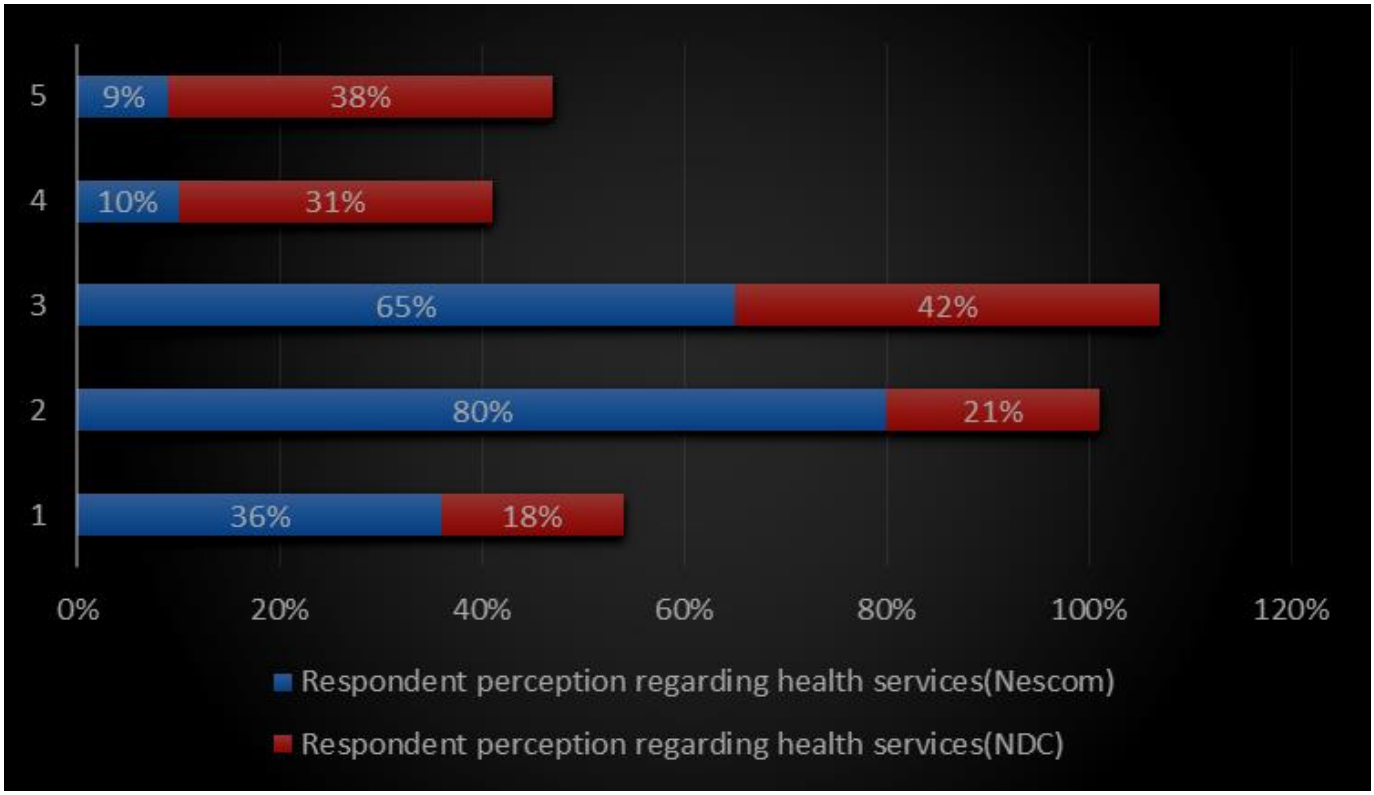
The third item of variable Quality of care is had hospitals latest MRI facility in hospital. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies. Patients in both hospitals strongly disagree with the statement that hospitals had latest MRI equipment.130% patients in NESCOM and 107% patients in NDC complain that hospital does not have MRI facility. But what are the reasons behind this? Firstly the MRI machines are costly. There are no MRI machine in both hospitals and then for proper utilization and running of machine Technologist must be skilled having level of training and certifications. And patient says that going to private diagnostic clinics, depending on the type of MRI, there lie different ranges. Majority of the cost can range anywhere between 10,000-15,000.While going to Government hospitals there are no timely access to MRI facility and waiting time is very high for the patient, Moreover in NDC hospital there is un-availability of proper space and rooms.

Figure 21: Are available Lab & Pharmacy services good?



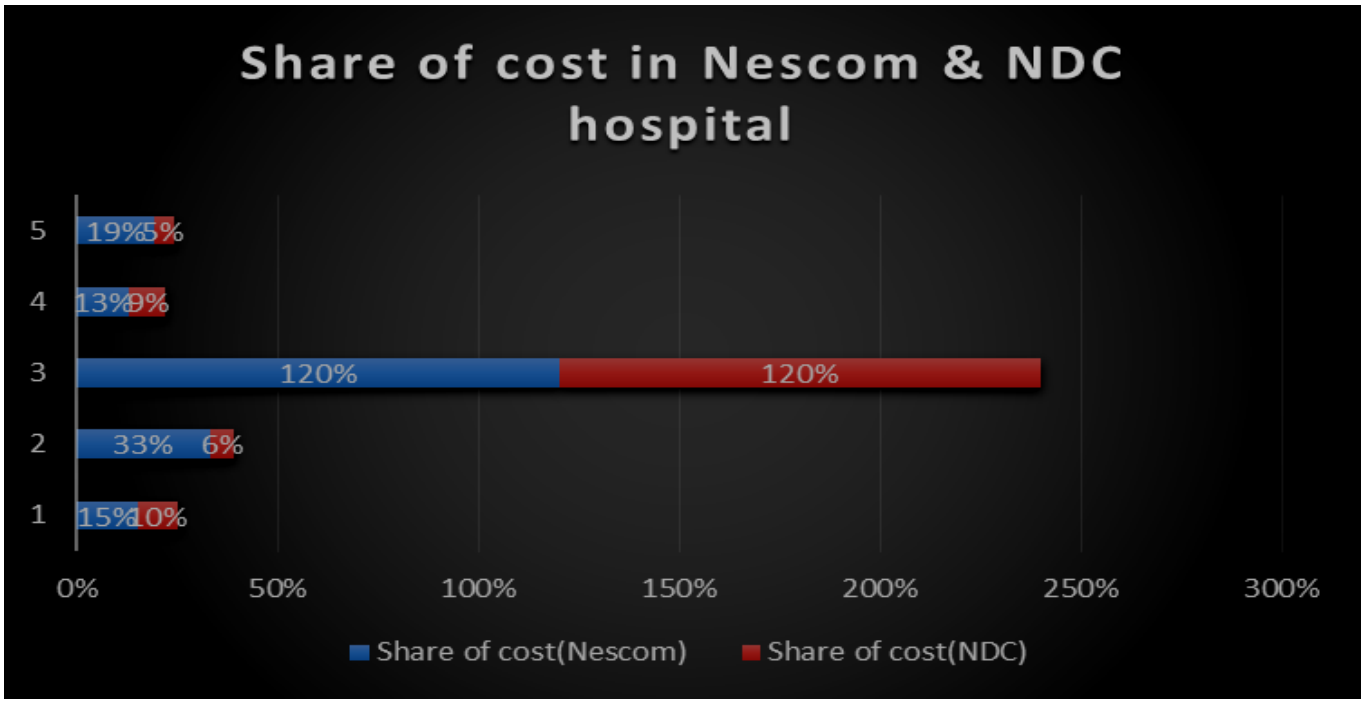
The fourth item of variable Quality of care is Are lab and pharmacy services good. This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies.78% patients in NESCOM hospital agrees with the statement that Lab and pharmacy services are good but in NDC hospital 102% patients disagree with the statement that lab and pharmacy services are good. But why ? The major reason behind this is that the quality of clinical facilities provided is not good. Lack of advanced medications accessibility. Quality of communication between patients and paramedical employees are not good in NDC hospital. And therefore comes decline in level of satisfaction.

Figure 22: Respondent perception regarding health services



The fifth item of variable Quality of care is Respondent perception regarding health services.This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies.80% patients in NESCOM hospital agrees with the statement that their perception regarding health services are good but in NDC hospital 42% patients are of the perception that they are un-certain regarding health services.

Figure 23: Is share of cost high for the patient?



The last item of variable Quality of care relates to is share of cost high for the patient .This study used closed ended questions and Likert scale five points in questionnaire. The first one stands for "Strongly agree" to five "Strongly disagree". Codes were assigned to each point ranging from '1 to 5' in questionnaire.1 stands for strongly agree, 2 for agree, 3 for uncertain, 4 for disagree and 5 stands for strongly disagree. Y-axis shows Likert scale five points and X axis shows frequencies.120% patients in NESCOM hospital are of the perception that they are un-certain regarding the statement. And similar 120% in NDC hospital are un-certain.

Table 08: Descriptive Statistics: Comparison Between NESCOM & NDC Hospital

Total Mean of Dimensions	*NESCOM*	*NDC*
	Mean	**Mean**
Convenience	2.7	2.98
Courtesy	2.33	2.48
Quality Care	2.83	0.8567
Total Mean(NESCOM+ NDC)	**2.6261**	**2.1068**

The above table describes the mean of the three dimensions used in study. Although there comes difference in total mean value of both hospital but results reveal that overall mean value of NESCOM is higher than NDC. This indicates that majority of the participants availing health services from NESCOM; perceive that NESCOM are delivering slightly better services to their patients than NDC hospital. However, the mean value of Convenience and Courtesy dimensions of NDC are high as compared to NESCOM. This means that majority of NDC respondents perceived positive perceptions regarding less waiting time to get emergency treatment, no care is neglected by doctors when shift changes due to less number of outdoor patients per day .But quality care dimension of NESCOM is high as compared to NDC .Because NDC hospital is not properly equipped with essential equipment like MRI, CT scan which is the basic need to identify illness cause and further treatment hence doctors suggests patients to do their MRI and CT scan from a private well standard lab . Patients face problems as majority of the patients are poor. For this, Government should manage and arrange health programs, providing more financial support and should focus on skillful and trained technical personnel. However, besides these

issues the results indicate that overall respondents are satisfactory regarding delivery of health services of both hospitals.

Figure 24: Comparison between NESCOM and NDC hospital

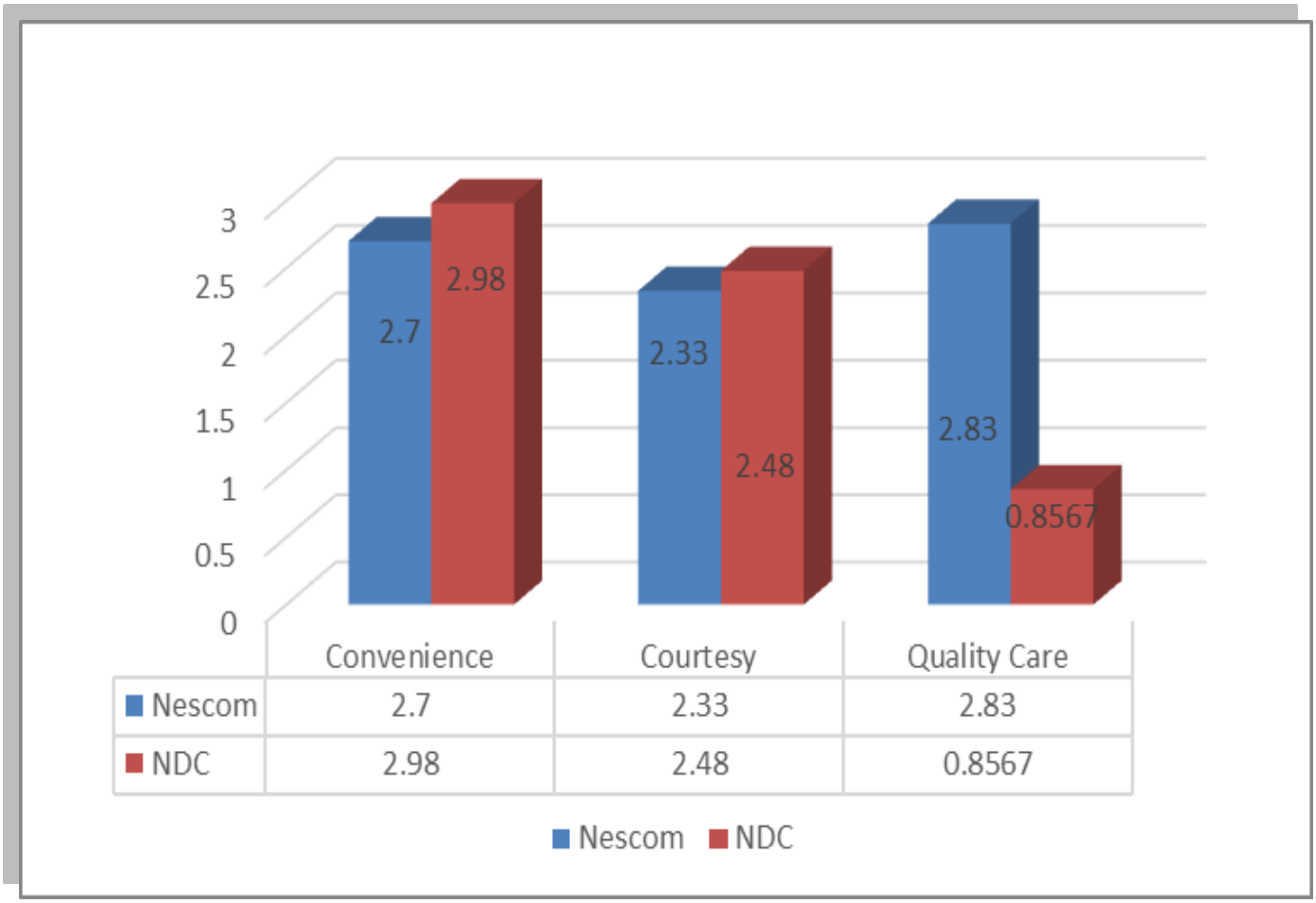


Figure indicates the graphical representation of mean value which gives a clear understanding about the health services provided by NESCOM and NDC hospital. These mean values are based on patient perception about the health services which they avail from both hospitals.

Regression Analysis:

Table 09: Regression Analyses

Variable	Convenience	Courtesy	Quality of care
Constant	2.364 (0.0178)	2.564 (0.186)	3.674 (0.123)
Gender	0.144 (0.161)	0.016 (0.168)	0.150 (0.111)
Patient Income	-0.028 (0.122)	-0.015 (0.127)	0.266 (0.084)
Age	-0.183 (0.073)	-0.165 (0.076)	0.112 (0.051)
Marital status	-0.026 (0.159)	-0.051 (0.166)	0.206 (0.110)

Interpretation OF Regression Model:

In the first regression, dependent variable is Convenience and independent variables are Gender, Patient Income, Age and Marital status. The co-efficient of the variable explains that how much our dependent variable change due to one unit change in independent variable. Means that much dependent variable Convenience change if there comes one unit change in Age, Patient Income and Marital status. If patient income increases by one unit then it it will bring decline in dependent variable by 0.028.Similarly,if age increases by one unit ,it will bring decline in dependent variable by 0.183 units. In marital status, there is no degree of dependence that convenience does not depend on marital status. If marital status changes, dependent variable convenience will decline by 0.026 units. And Parenthesis shows the standard error of the coefficient and also accuracy of the coefficient, minimum the standard error leads to better model.

In the second regression, dependent variable is Courtesy. and independent variables are Gender, Patient income, Age and Marital status. The co-efficient of the variable explains that how much our dependent variable change due to one unit change in independent variable. Means that much dependent variable

Courtesy change if there comes one unit change in Age, Patient Income and Marital status .If there comes one unit change in Patient income, it will bring decline in Courtesy by 0.015.Next is if their comes one unit change in age, Courtesy will tend to decline by 0.165 units. If marital status of patient changes, Courtesy will decline by 0.051 units.

In the third regression, Our dependent variable is Quality of care and independent variables are Gender, Patient Income, Age and Marital status. The co-efficient of the variable explains that how much our dependent variable change due to one unit change in independent variable. Means that much dependent variable Quality of care change if there comes one unit change in Age, Patient Income and Marital status. In my regression if their comes one unit change in Patient income, Quality of care will tend to increase by 0.266 units. Similarly, if their comes one unit change in Age, Quality of care will increase by 0.112 units. And marital status will increase quality of care by 0.206 units.

CHAPTER: 07

CONCLUSION

Like many other developing countries, Pakistan is a developing country lagging behind in health sector. Service quality dimensions in hospitals normally suffer due to scarce resources and its optimal utilization. This research work has been done at National Engineering And Scientific Commission (NESCOM) hospital Islamabad, and National Development Complex (NDC) hospital Islamabad. This research has been done with the plan to investigate availability, requirement and patient perception in connection to health services in selected two hospitals of Islamabad. In this study three service quality dimensions Convenience, Courtesy and Quality Care are taken, it is concluded that majority of the patients are availing health services from NESCOM and NDC hospital. Both hospitals are delivering better services to their patients. Whereas data and empirical analysis which is gathered through questionnaire and subsequent interviews with paramedical staff, doctors and patients shows that satisfaction level is high in NESCOM hospital as compared to NDC. Reference is made vide above mentioned table:8 concludes that total mean is high that is 2.6261 in NESCOM as compared to NDC hospital that is 2.1068.Which implies that patient perception regarding service quality of NESCOM hospital is high. However few improvements were observed that outdoor patient ratio is too high due to which getting appointment is difficult and slow. MRI facility is not available at NESCOM hospital due to which low income patients suffers. Patient admission Capacity need to be improved. Paramedical staff needs to be trained in patient courtesy and management.

7.1 Recommendation:

1. Professionally sound and skilled human resource should be inducted that is doctors and paramedical staff for efficient and effective patient service support

2. Sufficient medical equipment/machines like MRI , CT scan and Ultrasound facility should be available at these two hospitals

3. Doctors and nurses strength should be sufficient enough and enhanced which could meet patient service quality expectation as per WHO standard.

4 .Expensive and quality medicine should be available at hospital pharmacy

Appendix:

Table A.1: Respondent Perception regarding waiting time to get emergency treatment

			Patients have to wait too long to get emergency Treatment					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree	
Hospital Name	NESCOM Hospital	Count	67	73	18	30	12	200
		Percentage within Hospital Name	33.50%	36.50%	9%	15%	6%	100%
	NDC Hospital	Count	30	65	23	20	12	150
		Percentage within Hospital Name	20%	43.33%	15.33%	13.33%	8%	100%
Total		Count	97	138	41	50	24	350
		Percentage	27.71%	39.42%	11.71%	14.28%	6.85%	100%

Table A.1 shows frequency distribution of patient perception regarding waiting time to get emergency treatment. The table shows that a total of 350 participants, 97 participants were highly satisfied representing 27.71% of population, 138 participants were satisfied representing 39.42% of population, 41 patients were unsure representing 11.71% of population, 50 respondents were dissatisfied representing 14.28% of population and 24 participants shows high dissatisfaction representing 6.85% of the study population.

Table A.2: Respondent Perception regarding Lab & Pharmacy services

			For how many hours Lab & Pharmacy services available?					Total
			8 hours	10 hours	12 hours	18 hours	24 hours	
Hospital Name	NESCOM Hospital	Count	17	11	12	18	142	200
		Percentage within Hospital Name	8.5%	5.5%	6%	9%	71%	100 %
	NDC Hospital	Count	55	40	32	16	7	150
		Percentage within Hospital Name	36.66%	26.66%	21.33%	10.66%	4.66 %	100%
Total		Count	72	51	44	34	149	350
		Percentage	20.57 %	14.57%	12.57 %	9.71%	42.57%	100%

Table A.2 shows frequency distribution of patient perception regarding lab and pharmacy services. The table shows that a total of 350 participants, 72 participants says that lab and pharmacy services are available for 8 hours representing 20.57% of population, 51 participants says that lab and pharmacy services are available for 10 hours representing 14.57% of population, 44 patients were of the perception that lab and pharmacy services are available for 12 hours representing 12.57% of population, 34 respondents says that lab and pharmacy services are available for 18 hours representing 9.71% of population and 149 participants says that for 24 hours services are available representing 42.57% of the study population.

Table A.3: Respondent Perception regarding difficulty to get an appointment for medical care:

			Is it difficult to get an appointment for medical care					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree	
Hospital Name	NESCOM Hospital	Count	84	50	8	32	26	200
		Percentage within Hospital Name	42%	25%	4%	16%	13%	100%
	NDC Hospital	Count	4	10	5	30	101	150
		Percentage within Hospital Name	2.67%	6.66%	3.33%	20%	67.33 %	100%
Total		Count	88	60	13	62	127	350
		Percentage	25.14%	17.14%	3.71 %	17.71%	36.28%	100 %

Table A.3 shows frequency distribution of patient perception regarding difficulty to get an appointment for medical care. The table shows that a total of 350 participants, 88 participants strongly agree that they find it difficult to get an appointment for medical care representing 25.14% of population, 60 participants agree that they find difficulty representing 17.14% of population, 13 patients were uncertain representing 3.71% of population, 62 respondents disagree with the statement that they find difficulty regarding appointment representing 17.71% of population and 127 participants strongly disagree representing 36.28% of the study population.

Table A.4: Are patients able to get medical care whenever they need it

			Are patients able to get care up to need					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	
Hospital Name	NESCOM Hospital	Count	90	62	10	21	17	200
		Percentage within Hospital Name	45%	31%	5%	10.5%	8.5%	100 %
	NDC Hospital	Count	45	30	18	20	37	150
		Percentage within Hospital Name	30%	20%	12%	13.33%	24.66%	100 %
Total		Count	135	92	28	41	54	350
		Percentage	38.57%	26.28%	8 %	11.71%	15.42%	100%

Table A.4 shows frequency distribution of patient perception regarding are patients able to get medical care up to need. The table shows that a total of 350 participants, 135 participants strongly agree that they get medical care when they need representing 38.57% of population, 92 participants agree that they get medical care representing 26.28% of population, 28 patients are uncertain representing 8% of population, 41 respondents disagree with the statement representing 11.71% of population and 54 participants strongly disagree representing 15.42% of the study population.

Table A.5: Respondent perception about negligence of care when shift changes

			Perception regarding negligence of care when shift changes					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	
Hospital Name	NESCOM Hospital	Count	15	48	35	65	37	200
		Percentage within Hospital Name	7.5%	24%	17.5%	32.5%	18.5%	100%
	NDC Hospital	Count	15	07	8	101	19	150
		Percentage within Hospital Name	10%	4.66%	5.33%	67.33%	12.66%	100%
Total		Count	30	55	43	166	56	350
		Percentage	8.57%	15.71%	12.28 %	47.42%	16%	100%

Table A.5 shows frequency distribution of patient perception regarding negligence of care when shift changes. The table shows that a total of 350 participants, 30 participants strongly agree that care is neglected when shift changes representing 8.57% of population, 55 participants says that lab and pharmacy services are available for 10 hour representing 14.57% of population, 44 patients were of the perception that lab and pharmacy services are available for 12 hours representing 12.57% of population, 34 respondents says that lab and pharmacy services are available for 18 hours representing 9.71% of population and 149 participants says that for 24 hours services are available representing 42.57% of the study population.

Table A.6: Are patients satisfied with the staff members' provision of services during emergency cases

			Are you satisfied with staff members provision of services during emergency					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree	
Hospital Name	NESCOM Hospital	Count	60	71	42	18	9	200
		Percentage within Hospital Name	30%	35.5%	21%	9%	4.5%	100%
	NDC Hospital	Count	20	18	38	40	34	150
		Percentage within Hospital Name	13.33%	12%	25.33%	26.66%	22.66%	100%
Total		Count	80	89	80	58	43	350
		Percentage	22.85%	25.42%	22.85%	16.57%	12.28%	100%

Table A.6 shows frequency distribution of patient perception regarding satisfaction with staff members' service provision during emergency. The table shows that a total of 350 participants, 80 participants says that they are highly satisfied with staff members service provision representing 22.85% of population, 89 participants says that they agree with the statement representing 25.42% of population, 80 patients were of the perception that they are uncertain representing 22.85% of population, 58 respondents says that they disagree representing 16.57% of population and 43 participants says that they strongly disagree representing 12.28% of the study population.

Table B.1: Doctors treat patients in friendly manner

			Doctors treat patients in friendly manner					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree	
Hospital Name	NESCOM Hospital	Count	65	75	21	30	09	200
		Percentage within Hospital Name	32.5%	37.5%	10.5%	15%	4.5%	100%
	NDC Hospital	Count	35	38	32	25	20	150
		Percentage within Hospital Name	23.33%	25.33%	21.33%	16.66%	13.33%	100%
Total		Count	100	113	53	55	29	350
		Percentage	28.57%	32.28%	15.14 %	15.71%	8.28%	100%

Table B.1 shows frequency distribution of doctors' behavior with patient. The table shows that a total of 350 participants, 100 participants says that they are highly satisfied with doctor behavior representing 28.57% of population, 113 participants says that they are satisfied with the statement representing 32.28% of population, 53 patients were of the perception that they are uncertain representing 15.14% of population, 55 respondents says that they disagree representing 15.71% of population and 29 participants says that they strongly disagree representing 8.28% of the study population.

Table B.2: Nurses treat patients in courteous manner

			Nurses treat patients in courteous manner					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	
Hospital Name	NESCOM Hospital	Count	28	52	15	64	41	200
		Percentage within Hospital Name	14%	26%	7.5%	32%	20.5%	100%
	NDC Hospital	Count	2	3	5	40	100	150
		Percentage within Hospital Name	1.33%	2%	3.33%	26.6%	66.6%	100%
Total		Count	30	55	20	104	141	350
		Percentage	8.57%	15.71%	5.71 %	29.71%	40.28%	100 %

Table B2 shows frequency distribution of nurses behavior with patient during treatment. The table shows that a total of 350 participants, 30 participants says that they are highly satisfied with nurses behavior representing 8.57% of population, 55 participants says that they agree with the statement representing 15.71% of population, 20 patients were of the perception that they are uncertain representing 5.71% of population, 104 respondents says that they disagree representing 29.71% of population and 141 participants says that they strongly disagree representing 40.28% of the study population.

Table B.3: Paramedical treat patients in friendly manner

			Paramedical treat patients in friendly manner					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	
Hospital Name	NESCOM Hospital	Count	30	85	45	16	24	200
		Percentage within Hospital Name	15%	42.5%	22.5%	8%	12%	100%
	NDC Hospital	Count	65	32	15	20	18	150
		Percentage within Hospital Name	43.33%	21.33%	10%	13.33%	12%	100%
Total		Count	95	117	60	36	42	350
		Percentage	27.14%	33.42%	17.14%	10.28%	12%	100%

Table B.1 shows frequency distribution of paramedical behavior with patient. The table shows that a total of 350 participants, 95 participants says that they are highly satisfied with paramedical behavior representing 27.14% of population, 117 participants says that they agree with the statement representing 33.42% of population, 60 patients were of the perception that they are uncertain representing 17.14% of population, 36 respondents says that they disagree representing 10.28% of population and 42 participants says that they strongly disagree representing 12% of the study population.

Table B.4: Receptionist help desk and general service staff deals patients in friendly manner

			Behavior of receptionist and general staff with patients					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	
Hospital Name	NESCOM Hospital	Count	75	89	18	10	08	200
		Percentage within Hospital Name	37.5%	44.5%	9%	5%	4%	100%
	NDC Hospital	Count	86	40	15	4	5	150
		Percentage within Hospital Name	57.33%	26.66%	10%	2.66%	3.33%	100%
Total		Count	161	129	33	14	13	350
		Percentage	46%	36.85%	9.42%	4%	3.71%	100%

Table B.4 shows frequency distribution of receptionist and general service staff behavior with patients. The table shows that a total of 350 participants, 161 participants says that they are highly satisfied with receptionist and general service staff representing 46% of population, 129 participants says that they agree with the statement representing 36.85% of population, 33 patients were of the perception that they are uncertain representing 9.42% of population, 14 respondents says that they disagree representing 4% of population and 13 participants says that they strongly disagree representing 3.71% of the study population.

Table B.5: Did Patients feel protected against medical problems

			Did Patients feel protected against medical problems:					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree	
Hospital Name	NESCOM Hospital	Count	66	36	6	60	32	200
		Percentage within Hospital Name	33%	18%	3%	30%	16%	100%
	NDC Hospital	Count	51	40	15	20	24	150
		Percentage within Hospital Name	34%	26.66%	10%	13.33%	16%	100%
Total		Count	117	76	21	80	56	350
		Percentage	33.42%	21.71%	6 %	22.85%	16%	100%

Table B.5 shows frequency distribution that did patients feel protected against medical problems. The table shows that a total of 350 participants, 117 participants says that they are highly satisfied that they feel protected against medical problem representing 33.42% of population, 76 participants says that they agree with the statement representing 21.71% of population, 21 patients were of the perception that they are uncertain representing 6% of population, 80 respondents says that they disagree representing 22.85% of population and 56 participants says that they strongly disagree representing 16 % of the study population.

Table C.1: Had hospital latest CT scan

			Had hospital latest CT scan:					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	
Hospital Name	NESCOM Hospital	Count	86	65	15	20	14	200
		Percentage within Hospital Name	43%	32.5%	7.5%	10%	7%	100%
	NDC Hospital	Count	1	2	3	30	114	150
		Percentage within Hospital Name	0.66 %	1.33%	2%	20%	76%	100%
Total		Count	87	67	18	50	128	350
		Percentage	24.85%	19.14%	5.14 %	14.28%	36.57%	100%

Table C.1 shows frequency distribution that had the hospital latest CT scan facility. The table shows that a total of 350 participants, 8 7 participants says that they are highly satisfied with CT scan facility representing 24.85% of population, 67 participants says that they agree with the statement representing 19.14% of population, 18 patients were of the perception that they are uncertain representing 5.14% of population, 50 respondents says that they disagree representing 14.28% of population and 128 participants says that they strongly disagree representing 36.57% of the study population.

Table C.2: Had hospital latest X-ray equipment

			Had hospital latest X-ray equipment:					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	
Hospital Name	NESCOM Hospital	Count	80	36	24	30	30	200
		Percentage within Hospital Name	40%	18%	12%	15%	15%	100%
	NDC Hospital	Count	20	18	11	30	71	150
		Percentage within Hospital Name	13.33%	12%	7.33%	20%	47.33%	100%
Total		Count	100	54	35	60	101	350
		Percentage	28.57%	15.42%	10 %	17.14%	28.85%	100%

Table C.2 shows frequency distribution of hospital latest X-ray equipment. The table shows that a total of 350 participants, 100 participants says that they are highly satisfied with hospital latest X-ray equipment representing 28.57% of population, 54 participants says that they agree with the statement representing 15.42% of population, 35 patients were of the perception that they are uncertain representing 10% of population, 60 respondents says that they disagree representing 17.14% of population and 101 participants says that they strongly disagree representing 28.85% of the study population.

Table C.3: Had hospital latest MRI equipment

			Had hospital latest MRI equipment:					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree	
Hospital Name	NESCOM Hospital	Count	1	5	30	32	132	200
		Percentage within Hospital Name	0.5%	2.5%	15%	16%	66%	100%
	NDC Hospital	Count	3	2	16	22	107	150
		Percentage within Hospital Name	2 %	1.33%	10.66%	14.66%	71.33%	100%
Total		Count	4	7	46	54	239	350
		Percentage	1.14%	2%	13.14 %	15.42%	68.28%	100%

Table C.3 shows frequency distribution regarding hospital latest MRI equipment. The table shows that a total of 350 participants, 4 participants says that they are highly satisfied with hospital MRI equipment representing 1.14% of population, 7 participants says that they agree with the statement representing 2% of population, 46 patients were of the perception that they are uncertain representing 13.14% of population, 54 respondents says that they disagree representing 15.42% of population and 239 participants strongly disagree that hospital had latest MRI equipment representing 68.28% of the study population.

Table C.4: Are available lab & pharmacy services good

			Are available lab & pharmacy services good					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	
Hospital Name	NESCOM Hospital	Count	30	79	21	31	39	200
		Percentage within Hospital Name	15%	39.5%	10.5%	15.5%	19.5%	100%
	NDC Hospital	Count	13	20	10	77	30	150
		Percentage within Hospital Name	8.66%	13.33%	6.66%	51.33%	20%	100%
Total		Count	43	99	31	108	69	350
		Percentage	12.28%	28.28%	8.85 %	30.85%	19.71%	100%

Table C.4 shows frequency distribution regarding lab and pharmacy services. The table shows that a total of 350 participants, 43 participants says that they are highly satisfied with lab and pharmacy services representing 12.28% of population, 99 participants says that they agree with the statement representing 28.28% of population, 31 patients were of the perception that they are uncertain representing 8.85% of population, 108 respondents disagree that lab and pharmacy services are good representing 30.85% of population and 69 participants says that they strongly disagree representing 19.71% of the study population.

Table C.5: Respondent perception regarding health services

			Respondent perception regarding health services:					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	
Hospital Name	NESCOM Hospital	Count	36	80	65	10	9	200
		Percentage within Hospital Name	18%	40%	32.5 %	5%	4.5%	100%
	NDC Hospital	Count	18	21	42	31	38	150
		Percentage within Hospital Name	12%	14%	28%	20.66%	25.33%	100%
Total		Count	54	101	107	41	47	350
		Percentage	15.42%	28.85%	30.57%	11.71%	13.421%	100%

Table B.1 shows frequency distribution of patient perception regarding health services. The table shows that a total of 350 participants, 54 participants says that they are highly satisfied with available health services representing 15.42% of population, 101 participants says that they agree with the statement representing 28.85% of population, 107 patients were of the perception that they are uncertain representing 30.57% of population, 41 respondents says that they disagree representing 11.71% of

population and 47 participants says that they strongly disagree representing 13.42% of the study population.

Table C.6: Is share of cost high for the patient

			Is share of cost high for the patient					Total
			Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	
Hospital Name	NESCOM Hospital	Count	15	33	120	13	19	200
		Percentage within Hospital Name	7.5%	16.5%	60%	6.5%	9.5%	100%
	NDC Hospital	Count	7	9	120	9	5	150
		Percentage within Hospital Name	4.66%	6%	80%	6%	3.33%	100%
Total		Count	22	42	240	22	24	350
		Percentage	6.28%	12%	68.5%	6.28%	6.85%	100%

Table C.6 shows frequency distribution of cost for patient. The table shows that a total of 350 participants, 22 participants reported that share of cost is high for the patient representing 6.28% of population, 42 participants says that they agree with the statement representing 12% of population, 240 patients were of the perception that they are uncertain representing 68.5% of population, 22 respondents says that they disagree representing 6.28% of population and 24 participants says that they strongly disagree representing 6.85% of the study population

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