



Health Sector Reforms: An Empirical Analysis of Child and Maternal Health Program

Final Draft

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List of Acronyms

MNCH	Mother and Child Health
USAID	United States Agency for International Development
WHO	World Health Organization
OECD	Organization for Economic Co-operation and Development
SCT	Social Cognitive Theory
TTM	The Trans theoretical Model
HBM	Health Belief Model
PIMS	Pakistan Institute of Medical Sciences
LHV	Lady Health Visitor
PHC	Primary Health Care
GAVI	Global Alliance for Vaccines & Immunization
EPI	Extended Program of Immunization

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Abstract

Provision of health care is one of the basic human rights and needs. Health care provision is one of the services most of the government around the world provide to their citizens. Just like all the other developing countries Pakistan has been trying to improve its health sector through different reforms. These reforms include policy changes and introduction of different health programs. Although Pakistan has made some progress to increase the efficiency of health care in the country by introducing policy changes like decentralization and other administrative changes. However many other important factors like patient satisfaction are being ignored. This study aims to discuss important indicators of good health that are satisfaction and efficiency. It will find out how the health sector reform has contributed to these indicators. This study will briefly explore what health sector efficiency is according to different researches and how it can be achieved.

Pakistan faces huge challenges in controlling the maternal and child health problems. Compared to other developing countries it has a higher rate of child mortality. Different programs and policies are continuously being introduced by the government to cope with the issue. This study aims to see if the reforms in the specific area are effective or not. For the purpose of research an important health program “maternal and child health” will be studied thoroughly. In addition to this, some ground level surveys will be conducted and the impact of reforms will be seen. Moreover, based on the result of proper analysis we came to know that there is direct relation between the effectiveness of the services and performance. Effectiveness in services leads to increase in efficiency, higher level of satisfaction and easy accessibility of healthcare to each and every citizen. In order to increase the effectiveness, introduction of ICT in hospitals and raising health budget both at provincial and federal level is important.

CHAPTER 1

INTRODUCTION

1.1 Study Brief

World Bank defines maternal health as “the health of women during pregnancy, childbirth and the postpartum period”. The health care facilities for different dimensions such as family planning, pregnancy, prenatal and postnatal care is necessary for ensuring positive experience and decreased maternal morbidity and mortality. According to a report (2008) of United Nation population funds formerly known as United Nations fund for population activists, “A woman’s chance of dying or becoming disabled during pregnancy and childbirth is closely connected to her social and economic status, the norms and values of her culture, and the geographic remoteness of her home. Generally speaking, the poorer and more marginalized a woman is, the greater her risk of death. In fact, maternal mortality rates reflect disparities between wealthy and poor countries more than any other measure of health”. A healthy mother is on the other hand is important for a healthy child since it’s the mom who will feed and take care of the child. Mother receiving health care services is directly related to the health of the child, the better the services availed, better would be the health of the child. Child health care is essential for its physical and mental growth and general well-being throughout the different stages of life thereby giving a healthy and productive member to the society.

Generally the major factor responsible for maternal mortality and morbidity across the globe is unsafe abortion, infection, high blood pressure and hemorrhage. The indirect factors responsible for creating conducive environment where maternal health is endangered in developing countries

are; lack of primary health care facilities, lack of neonatal and postnatal care, child marriage and lack of knowledge. Very often new born child need special care up to the age of one year, during this period of time, infants remain vulnerable to different diseases such as pneumonia, diarrhea, and malaria which sometime prove to be lethal and also which are otherwise preventable diseases if child is given needed care.

Pakistan confronts huge challenges in creating a sound environment for providing services to improve maternal and child health across the country. Little progress has been made in reducing maternal and child mortality, yet overall progress is not completely satisfactory since neonatal mortality has not reduced significant enough. In this regard, unhappily, Pakistan has fallen behind other comparable economies in the developing world. On one hand population is growing rapidly, on the second hand dwindling economy don't allow both federal and provincial governments to spend money on addressing the basic factors which such as poverty, female education, clean water, under nutrition and sanitary condition across the country especially in rural areas. The absence of basic medical facilities along with aforementioned factors especially in the rural areas are majorly responsible for maternal and child mortality.

Pakistan is a country of 188.9 million people (World Bank, 2015), the sixth most populous country in the world. With the ongoing rate of population growth it is projected to be the 5th most populous country in the world by 2050. Estimated 21 percent population live below the poverty line. Most of the population live in the rural areas making up to 64% of the total population. According to the National demographic and health survey undertaken in 2013, the number of women receiving antenatal care from skilled service providers such as doctors, nurses, lady health workers, account for the 73% and 24% women receive no antenatal care at mostly

belonging to rural areas. 48 percent of women give birth to child in health facility and overall only 52% births take place under the supervision of health professionals.

Statistics show that Children under five mortality 1 in every 14 children die before reaching up to the age of one year and 1 in every 11 children does not reach up to age five (Pakistan demographic and health study, 2012-13). Neonatal mortality rate currently stands at 55 out of 1000 live births (PDH, 2012-23). There is also a variation in child mortality rate among the provinces; Punjab and Balochistan have relatively higher child mortality than in the rest of the provinces.

Government of Pakistan along with other NGOs and international organizations, is making efforts to improve the situation by introducing various programs across the country. One such program introduced is “mother and child health Program”, a program introduced in the country by the United States agency for International Development (USAID), which seeks to improve the services delivered to reduce maternal and child mortality and morbidity. The main activities of this program is to support the skilled birth attendant such as doctors, nurses by ensuring full provision of MNCH Services through public and private facilities, setting up means of transportation to main facilities in case of complication from far flung areas, mobilize the communities for a sustainable demand for MNCH facilities, creating a conducive environment for the usage of MNCH facilities by removing the bottlenecks.

This study is unique in the sense that it will try to focus on 3 indicators of overall impact of the program. More precisely the objective of the study is to determine 1) how much efficient was this program in catering service to ensure improved maternal and child health in Pakistan.

Efficiency in terms of the number of users, quality of service, and easiness to receive the health care services is important indicator to study and assess any program 2) How much satisfied are the users of the service, catered under the umbrella of this program? Satisfaction level among the service users is one of the biggest indicator because the end users get the real knowledge of the quality of the services they receive and their satisfaction level reveals the real success of failure of the health care facilities. 3) Are the health care service easily accessible to all the different sections of population? Because if the program addresses a particular strata of the society, it cannot be listed in the category of programs based on absolute equity.

1.2 Overview

The aim of the study is to look into the statistical and descriptive data related to health sector reforms in order to discuss the challenges faced by Pakistan in controlling the maternal and child health problems compared to other developing countries. The research is divided into chapters and sub chapters which cover all the important aspects of healthcare to support our hypothesis.

Chapter 1 is introduction which contains an overview of the study, study brief, its significance, contribution and research gap. Chapter 2 consists of background which discusses healthcare across the globe and gives us an overview about Pakistan's history related to healthcare. Chapter 3 contains literature review under which three important aspects are discussed that are healthcare efficiency, satisfaction and policy reforms. Chapter 4 covers theoretical framework in which different health models that are implemented by developed and developing countries are discussed. Chapter 5 includes research methodology under which problems related to the research, its objectives, research questions and hypothesis is discussed. Also research limitations

and ethical consideration is also a part of this chapter. Chapter tells us about our findings and data analysis which includes both descriptive and interview analysis. Overall health reform analysis is also discussed. Chapter 7 includes conclusion. Chapter 8 contains policy recommendations and chapter 9 includes bibliography. Then there comes Appendix A, B and C.

CHAPTER 2

BACKGROUND

Along with provision of other basic necessities, one of the important determinants of a welfare state is its health care policy. Provision of good health care by governments to its citizens defines the good governance and the social development of a state. Health care policy is the plans and decisions of government for the provision of health facilities and health care reforms are the changes in that policy that impact the service provision. The impact of these changes can be evaluated through different indicators like efficiency, acceptance, and effectiveness etcetera. The analysis of case studies from different countries have shown that these indicators have been improved in the countries where reforms have been implemented properly. For example a positive relationship between these indicators and reform implementation can be seen in case of Estonia (2007). Similarly, in Lithuania it was evident that doctors were more satisfied after decentralization was introduced in many areas of health care system.

2.1 Healthcare at Global level:

Globally, different researchers have worked on how governments can be more efficient and effective. They have suggested different changes in policies and administration like decentralization of decision making, giving more autonomy to bureaucrats, well planning, effective implementation and monitoring of resource allocation ETC. They have also suggested models and theories that can help in making health care provision easy and effective.

2.2 Pakistan's History – An overview

Health care provision in developing world is generally poorer than developed countries but Pakistan, specifically, is behind in this regard as compared to the other comparable developing countries. Although, we can see few important developments in health sector of Pakistan compared to the years immediately after independence. Like the adaptation of health policies, devolution plan 2001, MDGs and introduction of different health programs etc. However, this development is not significant, as, the provision of health care still needs a lot of improvement. Also, writers like Talib Lashari, criticizes over the process of policy making that in Pakistan the process lacks proper planning, resource allocation is inefficient and implementation and monitoring is poor. Which makes health care of the country poor. Since, a major chunk of the population lives under poverty line, private health care becomes costly and unaffordable to poor population.

For the purpose of research, here we will thoroughly study a program “maternal and child health” to see how such reforms have helped efficiency, satisfaction and acceptability in health care provision. Health of a child depends upon maternal health that is health care provision during pregnancy, during delivery and post-delivery. Despite considerable investments in different programs in this field, the impact on important mortality and morbidity indicators in both inconstant and slow. This research paper will observe “maternal and child health” as an example in health care reforms and analyze its impacts over efficiency, acceptability and satisfaction in health care.

2.3 Significance of the Study:

Health care system of any country is one of the important indicators of its development. Pakistan is continuously striving to achieve efficiency in its health care system. Like all the other developing countries Pakistan is introducing many programs and bringing reforms in its health care but it still lacks behind due to many reasons. One of the important reason is lack of governance in health care system.

As the problem statement of this research paper shows, this paper aims to study Pakistan health sector reforms and see how these reforms have impacted different indicators like efficiency, acceptability and satisfaction. The systematic search of the literature shows that Pakistan has brought many reforms in its health sector. Among which most important are introduction of health policy in 2001 which aimed to provide primary health care to the overall population. Moreover, participation in MDGs is another important step. All these reforms have brought many changes like introduction of new technology in health sector, increase in number of hospitals and new programs and campaigns. However, research shows that the scope of all the programs is limited and they lack proper planning, resource allocations, implementation instruments, monitoring and objectives like most of the programs were output driven and ignored other factors like public health.

To see the efficiency and satisfaction, this paper has studied the program “maternal and child health”. It includes surveys from patients and doctors and its descriptive analysis using different software. The maternal health and child program is one of its own kind. In this paper we will see

the program as a reform in health sector and through proper analysis we will observe changes in indicators like efficiency, satisfaction and acceptability.

This research aims to see the impacts of reforms over efficiency, satisfaction and acceptability and provide policy recommendations.

2.4 Research Gap and Contribution

The current situation of the health sector of Pakistan is beset with a number of issues. The motive of this research is to draw some attention the advancements which are needed to be made, especially considering the alarming situation of Child and maternal healthcare in Pakistan. The research aims to contribute to bring the issue of the poor condition of the child and maternal health into limelight by focusing on the aspects of efficiency and sustainability of the reforms.. Very few researches have been conducted previously on the essential issue of the child and maternal health in Pakistan whereby proper research is not carried, considering the urgency of the matter in the country. Provision of health services and especially child and maternal health is of extreme importance to ensure that millennium development goals are met and to guarantee that basic needs of citizens of a country are met. Therefore, this issue must be raised on every platform possible to raise awareness and contributing to society as a whole.

The findings of this study will prove to be of pivotal importance for the society since the research methods employed are not previously used. Our study uses ANOVA, regression and chi square analysis making the study very easy to interpret and calculate, this in turn enables us to carry forward our aim of making our research available to masses so that it could be easily

comprehended. The research gap lies with previous studies not opting for the methodologies we adopted, relying more on empirical analysis thus giving our study more generalizability as to assessing based on observation rather than theory.

CHAPTER 3

LITERATURE REVIEW

Health policy is an important component of the overall welfare objectives and duties of the state. It determines the health care goals of the country and helps in allocating resources for improving the quality of health care available to the citizens. WHO defines health policy as “decisions, plans, and actions that are undertaken to achieve specific health care goals within a society”

Health care reforms refer to with changes in the health policy by the government which impact health care delivery. There are certain variables associated with the reforms through which their impact and success is evaluated. They include efficiency, acceptability, satisfaction, equity, sustainability and access. A lot of literature has been written and considerable research has been carried out for assessing these variables of health reforms in different countries. Here we have reviewed studies conducted both in the global and local context of Pakistan. We have also looked into the studies of reforms carried out in transition countries. And lastly we have reviewed the policy area and how it affects governance and the working of institutions.

3.1 Health care efficiency:

One of the prime concerns of health sector reforms is efficiency which is propagated through the attainment of equity, sustainability and acceptability of the health policies in order to cater to the

needs and issues of the wider public. (Sein, 2000) Health care efficiency is described as “[...] how well health care resources are used to obtain health improvements” (Peacock C. M., 2001). Studies have been conducted to assess the efficiency of the health sector reforms using various approaches which include issues and opportunities (Sein, 2000); health worker motivation (Bennett, 1999); efficiency measurement techniques (Peacock, Chan, Mangolini, & Johansen, 2001); or health technology assessment (Commision, 2015).

To improve efficiency of health reforms it’s important to evaluate how the implementation would take place and by whom rather than focusing on how the contents are formulated. (Sein, 2000)

Bennet and Franco (1999) maintain that it’s vital to improve health workers motivation for improved efficiency and sustainability of reforms. It is essential to determine the organizational, sociocultural and environmental influences upon worker motivation in order to formulate reforms which take these internal and external factors into account. Furthermore differential impact needs to be considered during the development and implementation process of the health care reforms especially through the health workers perspective to improve efficiency. Khan and Akram (2007) affirmed that for efficiency, effectiveness and equity of health care it is essential for the public and private sector to work together, while Steinwachs and Hughes (2008) believe that in order to improve the workings and efficiency of health organizations it’s important to acquire first hand responses off all the parties involved which include feedback from healthcare staff (nurses & clinicians), administrative data and patient surveys specifically. This data can then be assessed to establish specialized health care plans which cater to the needs of the concerning parties. (Donald M Steinwachs, 2008)

Decentralization is an important policy which is employed to strengthen efficiency. In this respect, Singh (2013) maintains that it's important to create health departments at local level and policy makers must analyze the workings of the local health departments based on their efficiency of service provision. This would enable the policy makers to improve performance and allocate funds to the local health departments for the services they can most efficiently provide thereby reducing costs and enabling the health practitioners to better attend to the needs of the public. (Singh, 2013)

However decentralization has been viewed negatively as well. Hutchinson & Strumpf (2005), Homedes & Ugalde (2005), Khaleghian (2004) argue that decentralization can further create problems as health sector itself comprises of complicated functions.

Evaluation and monitoring of resources allocated to gauge their efficient usage is another factor which influences efficiency. Valdmanis and Rosko (2008) suggest that sources of inefficiency in health care provision can be identified to enable policy makers to alter input mixes to reduce the costs and diseconomies of scale. Efficient use of resources increases savings which is then reemployed for betterment of health facilities in the longer run. (Vivian G Valdmanis, 2008). Similarly Foo and Lim (2015) also stress that it's important for decision makers to evaluate the overall performance of resources especially where desired health care results are not achieved. (Chee Yoong Foo, 2015)

Political instability has a negative impact on efficiency. A study by Risso-Gill and McKee (2014) found that the changing governments in some countries have contributed towards inefficient delivery of health services. The change in leadership leads to the transition of the

political manifesto resulting in fluctuating policies. The authors maintain that the bureaucratic nature of the leadership hinders the smooth implementation of health reforms. Concerns over the managerial capacity of the government have also been deduced. The process of efficient implementation of the new health reforms can take about a generation and the increased globalization can result in more research leading to development of health sector.

The idea of coverage is a status that provides access to efficiency of any country. Docteur and Oxley (2003) found that very few OECD countries have ensured full coverage of their population. According to their study, this full coverage can be attained through public programs. However, it has been observed that coverage is not always sufficient enough to ensure health service accessibility as different countries have deficiencies in the supply of health facilities. Social and economic barriers also serve as an obstacle in enhancing the coverage and the availability of services in some countries.

It is important that reforms focus on local needs and demands. Mujinja and Kida (2014) believe that the origin of the reforms should circulate around the needs of the masses rather than the demands of the system. The quality of the health services should be improved in order to enhance the accessibility.

Acceptability of reforms is another critical dynamic to their success. If the reforms don't resonate with the social values, they are bound to fail. The gap between the local population and the health professionals leads to a lack of social acceptability. Dilip and Alba (2012) maintain that it is essential to encourage local as well as biomedical understanding of any disease to ensure society's acceptability towards the health reforms. Acceptability towards any kind of

health services can only be ensured if the concerns of the locals of the society at all levels are considered by the health professionals (Dillip, Alba, Mshana, 2012).

We have reviewed studies of reforms in transition countries in which the same variables of efficiency, satisfaction and acceptability have been analyzed. Analyzing the health reforms in Estonia and their satisfaction, acceptability and impact, Polluste (2007) found that most of reforms were implemented and that desired objectives were achieved. Health reforms have been actualized and financial security has been maintained. Some advance has been made in relation with public health reforms. Various national projects have been initiated to keep essential health risks away. Therefore proof of positive effect on population is evident as positive trends were seen in infant mortality, number of abortions, dietary habits and incidences of sexually transmitted infections and tuberculosis. Improvements taken from this were health education and promotion should be supported by political decisions so they can be fully effective and desired results could be achieved. For execution of reform there should be a comprehension of these changes will influence various levels of health systems and results. In order to enhance viability of approach and significance of research and feedback from perspective of people should likewise be pushed.

A study by Footman (2013) of the healthcare system of the former Soviet Union countries during two different point in time revealed the satisfaction level among the citizens. The cross sectional survey was conducted in 2001 and again in 2010. During this period of time the general satisfaction appeared to be improved as reform process matured. The study also discovered that the level of satisfaction varied among the countries but the pattern which was similar among the relatively high level of satisfaction among the young age group, lower education, better health status and high level of political trust. The study suggested that the importance of public opinion

on the overall health performance is huge and is an important indicator of government performance.

A study conducted during the reforms in Lithuania which had an extremely centralized healthcare system prior to the reforms, showed that the doctors at primary health care facilities were relatively less satisfied. Compensation, workload and social status appeared to be the key factors of their dissatisfaction. (Bluciuniene, Blazeviciene & Biudziute, 2005).

3.2 Satisfaction:

A study by (Maliha, Aysha, Babar, 2012), concluded that patient satisfaction is not given much importance in Pakistan. Essentially the major determinants were found to be patient experience and their expectations with health care services. Age, gender, social class and education were also found to be major predictors of consumer satisfaction. More precisely, lack of privacy, communication gap and poor hygiene mechanisms in hospitals leads to bad experience thereby decreasing satisfaction.

Ayat, Khalid and Mahmood (2009) have described the non-existence of legal standards, limited health care feedback and evaluation along with inhuman behavior of people who are responsible towards patients as some factors resulting in low health care. Moreover next to little public sector expenditure on health further adds to this issue. It has been seen that when necessitous families are not given health protection, they have likelihood to borrow or reallocate expenditures towards health from other important consumption items. Major dimensions used in this study are general satisfaction, technical quality, interpersonal aspects, communication, financial aspects, access and availability and time with doctors. Patients without any educational background

expressed more satisfaction with delivery and quality of services than those who were educated. Females were found out to be more satisfied with services than males.

Khan and Khan (2014) have discussed the impact of service quality on patient's trust revealing that major explanations for dissatisfaction from public health-care facilities includes low participation and absence of committed staff, lack of dedicated staff and medical equipment and inappropriate supply of vital medicine. Improvements in diagnosing system of the disease, treatment process, guidance to the patient, competency in curing the disease, appearance of the doctors and nurses also affect the patient's trust on the hospital. Results further show dissatisfaction from public health-care facilities increased the usage of private facilities among all income levels (Shaikh et.al.2008). Equipment in the hospital, nursing caring, hospital cleanness, consultation fee, lab fee and accommodation also affect the patient's trust.

According to a study carried out by WHO, there are only 320 psychiatrists in Pakistan and only five hospitals have mental health facilities. Yet one study found that the tertiary hospitals with mental health services give relatively better services in Pakistan. Naveed and Khalid (2011) found most patients with mental health issues quite satisfied. Age played a crucial role while there was a little or no association of consumer satisfaction with gender and economic status. The younger people were more satisfied with the psychiatric services provided than the old aged patients.

The healthcare perceived quality is associated with patient's loyalty and patient's satisfaction also plays a significant role in this relationship. There is a significant difference between public and private hospitals perceived healthcare service quality (Asma, Shahab, Shujah, 2016). The study showed the private health care facility to be more satisfactory among patients as compared

to public health care facility. It is found to be necessary for the hospital managers to have substantial knowledge of patient's satisfaction to introduce in any reform in the healthcare system.

3.3 Policies and reforms:

Policies are crucial in determining the tone of reforms. Important dynamics such as amount of decentralization, institutional framework, decision making system, resource allocation are associated with policies. Political context and socioeconomic and cultural factors play an important role and impact the policies and their outcomes. In Pakistan the debate over health policies is triggered by factors like, the need for health policy reforms, emphasis on better health conditions and process of decentralization. The debate is about whether the contemporary health policies are relevant, effective or responsive enough to achieve better health conditions for the population. In his book *Pakistan's National Health Policy: Quest for a Vision*, Dr. Talib Lashari discusses the evolution of Pakistan health policy which includes formation of many new programs, different health surveys, efforts to improve and formulate national health policies in 1975 to 2000, introduction of social action programs, MDGs and Devolution Plan in 2001. Despite all these efforts in health policy of Pakistan for around more than a half century, the desired health conditions have not been met. This is mainly due to the inconsistent and incoherent health policy process. Frequent changes in government do not let the completion of health policies which mostly targeted around 10 years. (Lashari, 2004) The process has many flaws like lack of proper planning. The policy in 2001 was made in haste and it does not fall in the category of policy, program or project, according to a survey done by Department of Health in Sindh.

Lashari (2004) further describes the issues related to the health policy process in Pakistan. These include the informal approach to policy making and every day decision making. It is important to understand the relation of development and poverty with health policy. Stakeholders do not play their part due to different reasons. Important to note is that Pakistan spends a very little amount of GDP over health. Role of the local government is not defined one. The mechanism of evaluation and monitoring is ignored which creates lack of accountability. Also Pakistan health policy in Pakistan is curative which needs to be preventive.

The evidence in Lashari's study (2004) shows that health is not merely confined to healthcare. It has strong relations with other socioeconomic factors. Medical interventions are not enough to achieve success. Countries need to address social and economic elements in the policy formulation and implementation process.

Along with many other problems, public health sector in Pakistan is facing issues related to the institutional framework and decision making system. A well-managed institutional framework can add to the efficiency of the system. An extensive research carried out by Bossert and Mitchel (2010) focuses on health sector decentralization and local decision making with respect to the institutional capacities and accountability in Pakistan. Their research was based on the data and surveys from four provinces of Pakistan and its finding suggest that the decentralization policy in health sector should work on the interaction of different dimensions of decentralization to encourage institutional capacity and more accountability to elected officials at local level.

It is an ongoing debate for many years now that decentralization in public sector is not only about authority but also about capacity of institutions and their accountability. The concept of decentralization in public health system is as complicated as it is in other sectors. In such debates

many proponents and opponents of this idea have been providing data and theories to debate over the merits of decentralization in health sector. In a study similar to this, Bossort shares that many argue that it will improve the service delivery mechanism if it is combined with the right amount of authority and institutional capacities to make choices in use of funds and health need priorities and the actual power practiced.

Literature on accountability argues that active role of local government and civil society in decision-making will make service delivery more responsive to local health needs and reduce the risk of elite capture (Ribot, 2002; Yilmaz & Serrano-Berthet, 2008).

To bring improvement in health sector of Pakistan decentralization policies must include the capacities of local institutions along with the distribution of power. This study discovered differences in the exercise of authorities, strength of local institutional capacities and responsiveness to local elected officials. It also demonstrated relatively strong interactions between decision space and institutional capacities and, to a lesser extent, accountability to local elected officials.

Political context of a country is another important factor for an efficient health policy. Contextual factors impact health policies therefore it is important to understand and study the political context of a country.

Tabak and Eyler (2015) argue that in order to improve any nation's population health promotion and execution of policy changes should take place. However these policy changes are the product of a complex policy process. The policymakers must consider a number of factors including public opinion, personal interests of the policy makers, evidence of practicability and acceptability, health impact, socio-economic factors and advocacy groups. The author believes

that advocates play a vital role in conveying evidence to the policy makers. Different groups can act as advocates out of which some are special interest organizations, professional associations, unions and foundations. According to this study, advocates have revealed many characteristics that make research information more beneficial to the policy makers. The information they have provided is unbiased, pertinent and comprehensibly written making the evidence useful. Hence, the author suggests that the advocates should be provided with evidence-based resources in order to achieve more authentic research information for efficient policy making which will eventually lead to betterment of health sector (R.G. Tabak, A.A. Eyer a, E.A. Dodson a, R.C. Brownson, 2015)

Khan and Heuvel (2006) in their research *The Impact of Political Context upon Health Policy process in Pakistan* conclude that political context of Pakistan has had a negative impact over health policies of Pakistan (*The impact of political context upon the health*, 2006).

The health policy context comprises cultural, socio-political, economic and demographic dynamics of a country. Contextual factors like political conflicts, civil war, wealth distribution, income, employment, literacy rate, over population, industrialization, urbanization may highly impact the health policy process and health itself. Therefore, it is important to pay attention to the contextual factors while formulating health policy.

Political context means power relationship between different stakeholders and sectors. This influences policy making and implementation. Political instability results in recurrent changes in the government. Low resource allocation for the health sector, centralized decision making and lack of accountability also influence the health policy process.

A review of 139 articles in developing countries by known writers suggest that in developing countries contextual factors are ignored while studying health policies. Likewise, while making and analyzing health policies impact of political context upon health system and health is ignored.

Pakistan's fractured political history marked with instability has negatively impacted its health policies. Frequent changes in government did not provide enough time to health policies to be implemented. For example in 1997, the government introduced its new National Health Policy by replacing the National Health Policy of 1990 which was again replaced in 2001. Surveys show that these health policies do not differ in essence as attention was not given to the preventive health policies in any of them. Frequent changes of government have marred the political energy needed for implementation of policies and resulted in waste of resources. For example during the Zia regime, the population plane was badly affected. Also as a result of weak judiciary, health system is effected by corruption. Health officers do not feel accountable for their work and allegations of selling public equipment from hospitals exist. (The impact of political context upon the health, 2006)

A study by (Nishtar et al, 2013) on Pakistan's health system performance and prospects after 18th constitutional amendment concluded that key health indicators lag behind in relation to international targets. Drug regulatory authority was created. Furthermore National Health Policy 2010 was modelled. There was no as such evident progress made in health sector although attention to malpractices in health increased due to active role of media. They suggested that electronic public health expenditure tracking, procurement, inventory and wage systems can improve health governance. Moreover government should enact legislation, define proper

standards and establish systems to look into workings of institutions. Institutions providing resources for transformation and incentives should be made more transparent and effective.

The main reason for inefficient health system of Pakistan can be attributed to underfunded, incompetent public sector, expensive, highly under regulated workings of the private sector and lastly expenditure in health sectors being regressive than progressive in general. (Muhammad Akram, 2007)

The geographical distribution of the health facilities in Pakistan is inconsistent. Callen and Gulzar (2012) argue that there is unjust and uneven distribution of the health facilities compared to their respective population area. Not only the health services but the administrative workforce is also unevenly distributed amongst different cities and districts. Their results suggest that reallocation and redistribution of the health services needs to take place in order to ensure efficient health service delivery.

Like all the other developing countries Pakistan is also trying hard to achieve MDGS which also include health sector development. The health sector of Pakistan has been improving for last few years and the development it has achieved cannot be ignored. Like health care policy making, introducing programs public private partnership programs, improvement in HR in basic health unit and participating in MDGs. Kurji (2006) in her review article about analysis of the health care system in Pakistan maintains that the strongest reforms in health sector is to participate in MDGs which will further lead to the introduction of many programs. For example government

started implementing many preventive programs vertically like maternal and child health projects. (Zohra Kurji, 2016)

However, all these programs have a limited scope and due to such reasons health sector of Pakistan is still in dire need of improvement. There are many reasons like lack of monitoring in health policies, unequal distribution and lack of resources and corruption in health sector. Poor governance is one of the main reasons behind inefficiency of health sector. In addition to this people with bureaucratic power also influence the policy making because of which equal access to health services is not available to the people.

In another analysis of Pakistan health care system, Nizar and Chagani (2016) consider weak policy making and lack of management the main reasons behind the failure of health reforms in Pakistan. The same reasons along with lack of resources have led to the failure of the program “Health for All” 2000. (Hina Nizar, 2016)

Maternal and child health problems are prevalent in the developing world mainly due to low quality care services, illiteracy, poverty, and most importantly harmful traditional practices that are embedded in cultural beliefs, which people find difficult to challenge, such as child marriage, where women enter into marriage earlier than eighteen year with immature reproductive organs often leading to health complication. In Ethiopia (Henok & Bali, 2015), low number of antenatal visits were found to be majorly associated with the health problem for both mother and child, primarily because of clients low educational background and generally the absence of medical services. Lack of family planning, non-immunization and malnourishment exacerbate the

situation. So the maternal and child health is dependent upon antenatal care, accessibility to standard quality services, and overall awareness about the issues of pregnancy.

India despite making economic progress, is unable to control the neonatal mortality, though an improvement yet unsatisfactory decrease in child mortality is being witnessed as compared to 1990s, mainly due to immunization and improvement in nutrition (Awofeso & Rammohan, 2012) and 25% of the world maternal mortality occurs in India mostly in rural areas (Dawoodani, 2013). The multi ethnic and cultural society in India show different pattern of maternal and child health complication based on different factors such as poverty, backwardness, and medical facilities. Culture also plays a huge role. Male children are given preference over female, abortion rate is also huge as well as the females generally suffer from malnutrition because the male members of the family are given the food in the first priority. Infant mortality is caused mainly due to diarrhea, pneumonia and other infections (Awofeso & Rammohan, 2012). Early pregnancy appeared to be the major cause of maternal mortality because fifty percent of Indian girls are married below the par of legal age. Also high fertility rate in India leads to additional complications (Dawoodani, 2013).

CHAPTER 4

THEORETICAL FRAMEWORK

The most important concern of the health sector reforms is to ensure the provision of best medical services that are available to people irrespective of one's ability to afford such that, the claims that health services should be provided as a merit good cannot be disregarded.

The health care system of Pakistan is faced with numerous issues such as inefficiency, unsustainability, lack of funds, lack of accessibility and maximum utilization of resources. The tremendously deteriorating economy of Pakistan along with other structural shortcomings has resulted in the propagation of healthcare crisis in Pakistan. The consequences of this apathy on part of the successive government's lack of interest include deteriorating health indicators such that the infant mortality rate in Pakistan is 66 per 1000 births compared to eight in Sri Lanka and 38 in India. Same is the case with maternal mortality rate which is 170 per 100,000 births in contrast to 20 in Thailand and 30 in Sri Lanka.

Therefore there's a need for conscious introduction of reforms which ensures that the rectifications made or the reforms undertaken must be sustainable, resolute and should not be based on unrealistic assumptions or goals thus they should be compliant with the constraints and well suited to the conditions of the country.

There's a growing importance for the proper understanding of the health behaviors and the domain in which they occur therefore the most effective health provisions and programs are based upon an understanding of the theories of concern. The science of using health behavior

includes the combination of various methods, techniques and strategies from health and social sciences. This broad range is referred to as social and behavioral science theory.

Various theoretical models of health behavior replicate the same basic ideas and attached connotations but they vary considerably in the context in which they're developed and applied.

Numerous models and relevant theories have been used but very few have been replicated and repeatedly used in multiple applications. The main theoretical models of health include:

1. The Health Belief Model(HBM)
2. The Trans theoretical Model/Stages of Change (TTM)
3. Social Cognitive Theory (SCT)
4. The Social Ecological Model

4.1 The Health Belief Model:

The Health Belief Model focuses on understanding why people opt or do not opt for preventive services that were offered by health authorities in 1950's. It suggests that people's perceptions regarding the knowledge whether they're at risk or not for a health issue and their belief regarding seeking treatment, influences their ability to take action. The core concepts of HBM include perceived susceptibility and perceived severity, perceived benefits and perceived barriers, cues to action and self-efficacy.

HBM has most effectively been utilized for health issues that are primarily prevention related such as hypertension screening and early cancer detection. Below are the core constructs of the Health Belief Model.

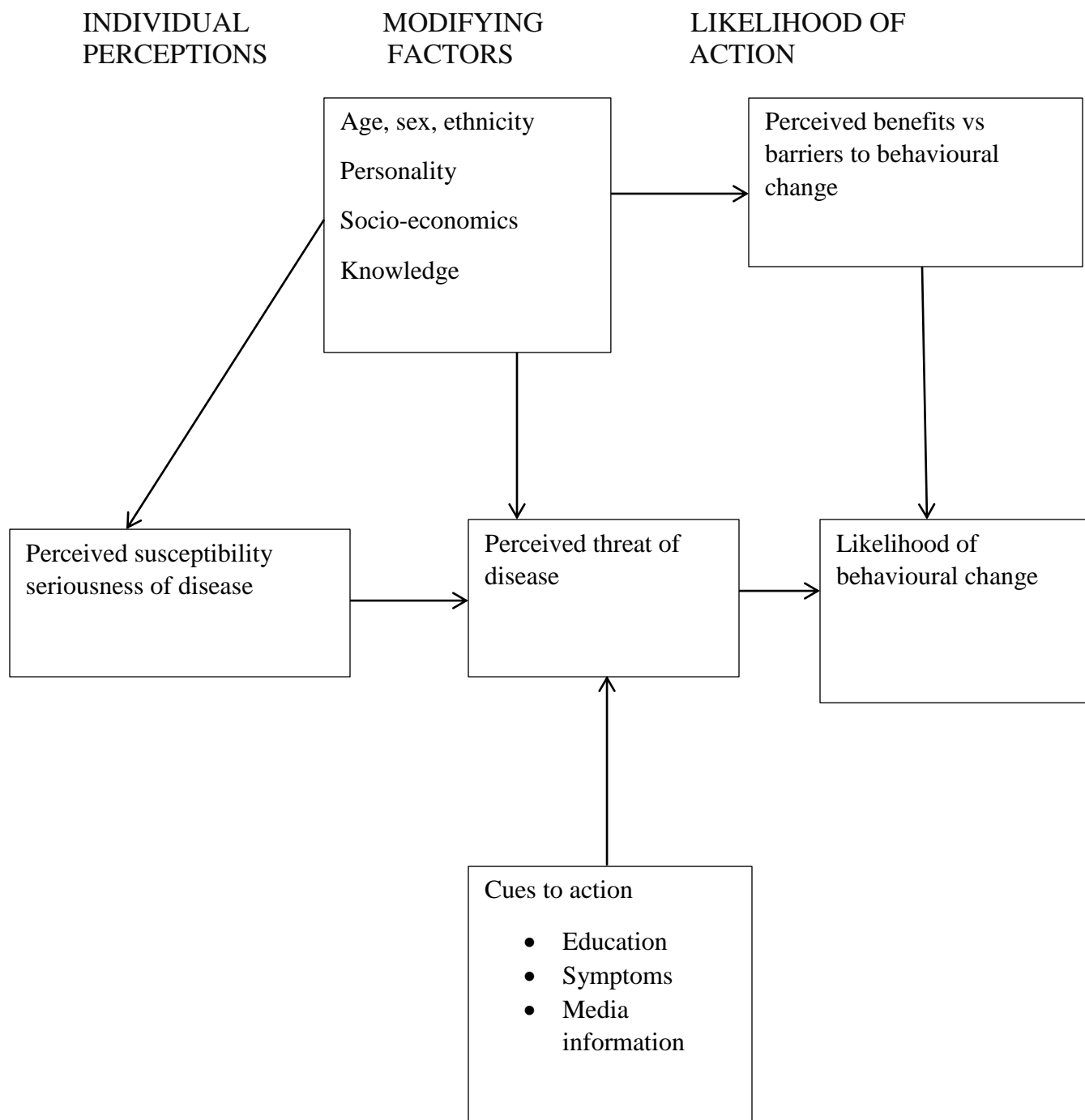
This theory is very much relevant to our topic since it provides insights as to why people are more willing to accept some reforms and not others. It also aims to determine the extent to which medical advancements or the reforms undertaken can be planned to promote their efficiency, sustainability and acceptability.

Table from "Theory at a Glance: A Guide for Health Promotion Practice" (1997)

Concept	Definition	Application
Perceived Susceptibility	One's judgment of chances of getting a condition	Define inhabitants(s) at risk, risk levels; personalize risk based on a person's features or behavior; intensify perceived vulnerability if too low.
Perceived Severity	One's judgment of how serious a circumstance and its consequences are	Stipulate cost of the risk and the condition
Perceived Benefits	One's opinion about the efficacy of the advised action to reduce risk or seriousness of impact	Define action to take; how, where, when; clarify the positive effects to be anticipated.
Perceived Barriers	One's judgment of the tangible and psychological costs of the advised action	Identify and reduce barriers through encouragement, incentives, support.
Cues to Action	Strategies to activate "readiness"	Provide how-to information, promote alertness, reminders.

Self-Efficacy	Assurance in one's capability to take action	Provide training in performing action.
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Figure 1. Health Belief Model



4.2 Trans-theoretical Model:

In order to bring changes that are long term there's a conscious need of multiple actions to be undertaken over time. Some people are not willing to make changes whereas other already make changes in their diets, smoking and drinking habits. The notion of stage of change is an important element of trans-theoretical model and enunciates that people are at different stages of adopting healthful behaviors.

Stages of change in heuristic model include pre contemplation, contemplation, preparation, Action and maintenance.

The stages of trans-theoretical model are open and stable to change, these theories construct why people at higher risk are not willing to make behavioral changes which have a direct impact upon the provision of reforms.

This theory also hold immense significance for our topic since it navigates as to what actions individuals take that lead to that enables authorities and society collectively to promote healthy behaviors in individuals.

4.3 Social Cognitive Theory:

Social cognitive theory which emphasizes on the cognitive formulation of social learning theory has been best devised by Bandura, and attributes personality environmental, personal and behavioral interactions. It amalgamates concepts from cognitive, emotional and behavioural models of change and can be easily applied for counseling interventions and disease prevention.

The basic assumption of SCT is people are able to not only learn from their own experiences but also from the experiences of others and the results that can be derived from those actions.

Key constructs that are vital to the health change behavior interventions include

- Observational learning
- Reinforcement
- Self-control
- Self-efficacy

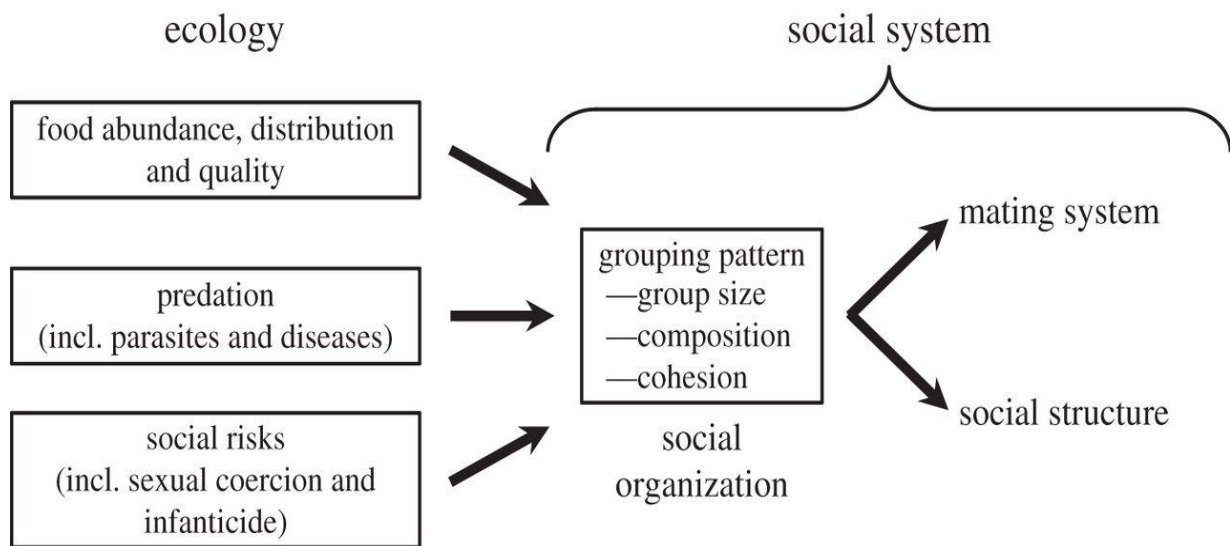
Self-efficacy is one of the major construct of social cognitive theory and is a person's confidence to take action and be persistent in pursuing it irrespective of the challenges involved and is highly effective in deciding what reforms would be sustainable. Reciprocal determinism in social cognitive theory suggests that a person can both be an agent for change and also a responder to change.

4.4 Social Ecological Model:

Social Ecological Model aims at determining factors that affect behavior and provide basis for developing programs that are successful through social environments. This model emphasizes multiple level of influence that can be interpersonal, organizational, public policy and propagates that behaviors shape the environment and are in turn shaped by the environment as well. The underlying principles and the basic constructs of the social ecological model are same which suggest that it's important to create an environment that makes it easier to adopt behaviors and changes that are healthier.

This theory yields some important responses to our topic of study since it provides with basic premises on which the developing programs must be based. It aims to determine the factors which enable a program to be more efficient and sustainable. Using this model we can determine what drawbacks are faced by the health reforms undertaken in Pakistan and what initiatives could be undertaken to make improvements.

Figure 2. Social Ecological Model



CHAPTER 5

RESEARCH METHODOLOGY

This research aims to study the overall success of Maternal and Child Health Integrated Program (MCHIP) in terms of its efficiency in provision of services, satisfaction among the users and accessibility for the people from the lower strata of the society living in far-flung areas. This research work will be an authentic and impartial reevaluation of this program. This program was one of its own kind, based on sound international practices and in line with the Millennium Development Goals set by the government of Pakistan. Since the program was launched a decade ago, already an official assessment report has been documented but there is a dearth of other research, on the part of academia and individuals from the civil society. Therefore, this paper intends to produce an impartial third-party assessment report and tries to fill the research gap and tends to measure the performance in terms of the three indicators. This program will hold significant information, proving to be helpful for future individuals and academicians, aiming to study the status of health provisions for Child and Mother's health in Pakistan. It will give one an opportunity to peek into public health sector of Pakistan in general and mother and child health care provision in specific. The study will also prove to be highly helpful for the policy makers and health professionals to identify gaps in program formulation and successful implementation

5.1 Research problem:

Lack of maternal and child health care facilities is one of the biggest health sector issue in Pakistan which has a severe impact on the health status owing to the very high maternal and child mortality and morbidity in Pakistan. Health of a mother and new born child is a matter of serious concern. Pakistan According to recent report published in Dawn editorial, experts in health sectors have observed rise in Pakistan's maternal mortality rate, 178 deaths per 100000 live births (Dawn, 8th may). Pakistan Demographic and Health survey 2012-13 states that 50 percent of women give birth at home with the help of unskilled attendant under unhygienic conditions. 30,000 women die each year from pregnancy related complication (Pakistan medical association report, 2013). Similarly the recent statistics about infant mortality and morbidity rate do not show positive signs. 74 infants die each year out of 1000 live births signifying that 1 in every 14 new born child dies before reaching the age of 1 (PDHS 2012-13). Over 25% of the new born have protein deficiency (PMA Health Report-2013). Pakistan spends only 2.61% on health sector as of 2014 (WB, 2014).

As a result, Pakistan has a very bad image in the world when it comes to provision of efficient, effective, satisfactory and accessible health care service. With discouragingly high statistics of maternal and child morbidity and mortality and the meagre amount of money allocated for the health sector as compared to even the rest of the south Asian countries is often discussed on different forums. But limited study of programs like MCHCP on the part of a civil society being uninterested out of general apathy in the health sector is not encouraging especially when such a program is sponsored by a donor agency. The study of such a program is necessary to learn lessons to improve other units of health sector and offers policy makers and health sector

researcher key takeaways. Therefore this study intends to point out the performance of the program by specifically targeting through the usage of three performance indicators..

5.2 Research Objective:

This research aims to establish a relationship between provisions of the services in the Maternal and Child Health Integrated Program (MCHIP) and the subsequent performance through quantitative analysis. The study tends to examine the statistical relationship of each of the subcomponents of performance of services in the program. The research will determine whether programs such as MCHIP improve the efficiency, accessibility and satisfaction of the health services provided. In addition, it will also enable us to examine the state of maternal and child health in Pakistan. The research will also offer an insight into the workings of the health system in Pakistan and highlight the shortcomings and flaws in the system.

The conclusion of the research will allow us to form a relationship between the provision of services through this program and the subsequent performance in terms of efficiency, satisfaction and accessibility of the services which will contribute to the existing literature as well as help all the stakeholders, specifically public sector.

5.3 Research Questions

Thus, for the purpose of this study, the research will answer the following research questions:-

- What are the factors that can affect the health sector reform vis a vis MCHIP?
- How accessibility of quality health services can increase the satisfaction of citizens?
- How community involvement for health services can affect planning, accountability and implementation of health services?
- How programs like MCHIP affect the overall health condition for the population they are aimed for?

5.4 Hypothesis

For the purpose of this study, research adopts the following hypothesis:

H₁: There is a statistically positive relationship between effective provision of health services and the performance measured in terms of efficiency, accessibility and satisfaction.

H₀: There is no statistical relationship between effective provision of health services and the performance.

5.5 Dependent and Independent Variables

The independent variable for the purpose of this study is effective services. The dependent variable in this study is performance. The three indicators of performance include **efficiency**, **accessibility** and **satisfaction** which are measured through sub indicators like malnutrition, Maternal mortality ratio, Under-five child mortality, with the proportion of newborn deaths,

Children under five who are stunted, Proportion of demand for family planning satisfied (met need for contraception), population growth rate, family planning..

5.6 Variable Measurement

For research study we took four variables in which independent variable is effective service while the dependent variable is performance, there are three indicators of performance which are efficiency, satisfaction and accessibility.

Efficiency means that less resources are used to provide maximum benefits to the people. It means that how resources are being used by both doctors and patients in providing services and utilizing them respectively.

Satisfaction involves both patients and doctors that how much satisfied they are with the health services and system in place.

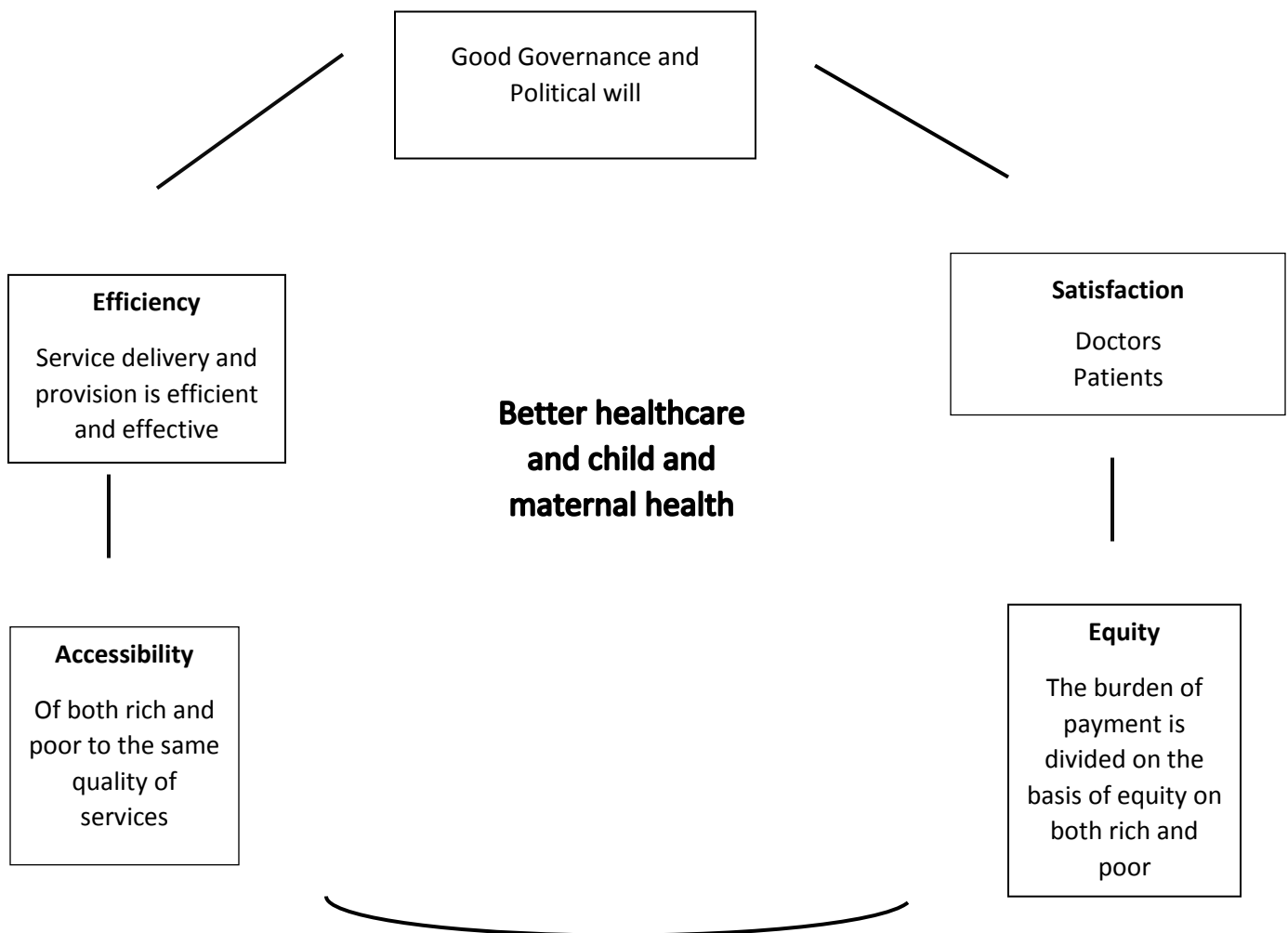
Accessibility means that are the services easily accessible to all the different sections of population and not only to privileged few.

We prepared survey questionnaires keeping in view the dependent and independent variables that are under study. There is direct relation between the level of effectiveness of services and the three indicators of performance. Efficiency, satisfaction and accessibility directly relates to the effectiveness of services. Effectiveness in service leads to the higher level of satisfaction and increased level of efficiency and easy accessibility of services to all the different sections of population.

The level of first-hand experience of the patient , her overall experience related to the treatment, amount of time the doctor spend with the patient, whether the patient was attended by the skilled staff or not, whether the complications during pregnancy were properly observed and taken care of or not, whether the doctor kept the track of patient's health after she was discharged post-delivery or not and whether the prescription and over the counter medications that the patient used was safe or not are measured under the variable of satisfaction. The knowledge about medical history of the patient by the doctor came under the variable of efficiency. Whether the patient received medical care after delivery or not, whether the patient was referred to any secondary hospital for treatment or not, whether the patient payed more for medical care than she could afford or not, also the quality of healthcare provider's service which included well trained and level of competency of doctors and the quality of services availed by the patients after delivery are measured under the variable of efficiency. Amount of time the patient waited to see the medical staff, mode of transportation used by the patient to reach to the hospital, types of services provided for the patient by the hospital, for how long the patient is using the current healthcare provider, amount of time the patient visited the hospital during pregnancy are measured under the variable of accessibility.

5.7 Conceptual Framework:

Source: Author's Compilation



As it can be seen, these four important factors of efficiency, accessibility, satisfaction and equity lead to better health care and services. The presence of these factors depends on political will and good governance. It also depends on how much stable the political situation is. Best healthcare system can be described as the system that contains all the above factors. The countries that have the best healthcare system work on providing efficient healthcare services. Every country develops healthcare system according to its need and the amount of resources it has. Efficiency means using less resources and providing maximum output. Efficiency in healthcare is basically working with fewer resources to provide maximum benefit to the citizens. Satisfaction involves both patients and doctors that how much satisfied they are with the health services and system in place. Satisfaction level of doctors in terms of machinery and technology they are provided with to treat patients. On the other hand satisfaction level of patients in terms of the type of treatment they undergo and delivery of service are important to consider. Accessibility means that easy accessibility of services to all the different sections of population and not only limited to the privileged few. It is every citizen's right to have access to the best healthcare system. Equity is another important factor to be considered here as it calls for fair and impartial services provided to people; it doesn't matter from which segment or gender he/she belongs to. The burden of payment is divided on the basis of equity on both rich and poor. Efficiency means that how resources are being used by both doctors and patients in providing services and utilizing them respectively.

5.8 Data Collection:

This research is a quantitative study which uses only primary sources of data in order to establish a relationship between our two variables of services and performance. The tools we have employed for primary data collection are questionnaires and interviews.

5.8.1 Selection of Respondents:

Since the focus of our research is on public sector health reforms and specifically on maternal and child health, we chose two public hospitals in Lahore and two in Islamabad for our data collection. In Lahore, Ganga Ram Hospital and Jinnah Hospital were taken and in Islamabad, Poly Clinic and PIMS were chosen.

The two basic parts of our primary data collection included close ended questionnaires and structured interviews. The respondents of the questionnaires included mothers and expectant women based in the gynecology ward of mentioned government hospitals of Lahore and Islamabad. Whereas the respondents of the interviews were doctors based in the government hospitals.

5.8.2 Questionnaires:

The questionnaires put forth before the expectant women and mothers consisted of close ended questions which had a set of limited options. The respondents had to choose from the set of those

questions. About 120 respondents answered the questions from all the hospitals, of which 70 were from Lahore while 50 were from Islamabad. The sample was derived from the population of expectant women and mothers in the public hospitals of Islamabad and Lahore. The questions dealt with the condition of respondents, their experience in the hospital and the doctors, the level of their satisfaction and the ease of their accessibility to the health services.

5.8.3 Interviews:

Structured interviews were formulated to record the input of the doctors. A total of 8 interviews were taken from doctors in the public hospitals, 5 from Lahore and 3 from Islamabad. The questions focused on the problems faced by the patients and the efforts needed to address those issues as well as the training and development available to the staff.

5.9 Research Design

This study makes use of correlational method of research, in order to evaluate the relationship between different variables. Correlational Research allows us to carry out quantitative statistical analysis to determine a pre-existing relationship between variables. The two variables for the purpose of this research are effective services and is performance where effective services is an independent variable while performance is a dependent variable. The relationship between the two variables can be positive, negative or the two might not be related.

Thus, the correlational method of research will enable us to examine the relationship between Effective Services and Performance and enable estimate of outcomes on the basis of interaction between the variables.

We have carried out this study through empirical analysis, by employing empirical evidence (in the form of surveys and questionnaires) drafted by us and taking input directly from the consumers and doctors. So our empirical evidence is in the form of primary data. Empirical analysis is carried out by using quantitative techniques.

5.10 Research Method:

The techniques used in this study under the Correlational Method are Regression Analysis, Chi square and Anova.

5.10.1 Chi square:

It is basically a way to compare variation in a collected data if the variation in your data is just by chance or it's due to a change in one of the variables that you are actually testing. This test is used where in the sample distribution of the tested stats is a chi square distribution when the null hypothesis is true. It is often used as short for Pearson's chi-square test. This test is often constructed from a sum of squared errors, or through the sample variance. This test can be used to attempt rejection of the null hypothesis about the data that is independent.

5.10.2 Anova:

Anova is the statistical method used to compare the means of two or more groups. With the Anova software we can compare 2 or more groups. In Anova you have factors and you have

levels. Factors are just variables like, in one case, gender can be a factor and male and female are the levels. There are three main types of Anova.

One-way Anova:

This is an Anova that has one factor with at least two levels and the levels are independent.

Repeated measures Anova: This is one factor with at least two levels but the levels are dependent

Factorial Anova: Two or more factors (each with at least two levels), level can be either independent dependent or mixed.

Anova has a few assumptions. The first assumption is normality of sampling distribution of means. The distribution of sample means is normally distributed. We pretty much always assume that this is always true and it's usually not a problem. The second is independence of errors that error between cases are independent of the other. The third is absence of outliers, the outlying score have been removed from the data set. And the last is homogeneity of variance.

5.10.3 Descriptive Analysis:

The descriptive analysis is the phenomena of transforming raw data into easily interpretable and understandable form. The step for which can include; rearranging the raw data, ordering them into proper pattern and finally manipulating them e.g: using different variable and analyzing the established relationship between them, thereby generating descriptive information which is easily interpretable and understandable. Thus we analyze something using the science of descriptive analysis in this way. In public policy, anecdotal evidence is also used in descriptive

analysis to study as well as predict the effects, consequences, influence and success of policy decision made by the organizations.

5.10.4 Empirical Analysis:

Empirical analysis is a way of gaining knowledge by means of indirect and direct experience or observations. Empiricism values such research more than other kinds. The collected empirical evidences can be analyzed qualitatively and quantitatively. Many researchers combine qualitative and quantitative forms of analysis to better answer questions which cannot be studied in laboratory settings, particularly in the social sciences and in education. Depending on the outcomes of the experiment, the theory on which the hypotheses and predictions were based will be supported or not,^[1] or may need to be modified and then subjected to further testing.

5.10.5 Descriptive Statistics:

Descriptive statistics are brief descriptive coefficients which summarize the given data set, which are either a representation of the total population or a sample. Descriptive statistics can be broken down into measures of measures of variability, central tendency and, or spread. Measures of central tendency include the mean, mode and median, while measures of variability include the standard deviation or variance, the minimum and maximum variables, and the kurtosis and skewness.

Descriptive statistics help understand the features of a specific data, by giving short summaries about the sample. The most recognized types of descriptive statistics are the mean, median and mode, which are used at almost all levels of math and statistics. However, there are less-common types of descriptive statistics that are still very important.

People use descriptive statistics to repurpose hard-to-understand quantitative insights across a large data set into bite-sized descriptions. A student's grade point average (GPA), for example, provides a good understanding of descriptive statistics. The idea of a GPA is that it takes data points from a wide range of exams, classes and grades, and averages them together to provide a general understanding of a student's overall academic abilities. A student's personal GPA reflects his mean academic performance.

5.10.6 Analysis of Variance:

Analysis of Variance (ANOVA) is a statistical method used to test differences between two or more means. Regression Analysis *is a statistical method for estimating the relationship between two variables*. The Chi Square statistic tests relationships between categorical variables. It is a measurement of how expectations compare to results

To assess *the relationship between the Effective Services and Performance, multiple regression tests have been carried to check the impact of each indicator on*

5.11 Research Limitations

Certain limitations were encountered during this study. While collecting data from the patients and doctors, time was a limitation as we had to complete the study within the limited time and there were a lot of surveys which took a lot of time. Accessing the patients and doctors in the hospitals was an issue as special permissions and grants were required in certain hospitals. This limited the scope of our study as limited number of patients could be accessed. There was a limitation on the number of expectant women and mothers in the hospitals as it was hard to find enough expectant women. We also had limited amount of literature on many variables when doing the literature review.

5.12 Ethical Considerations

The research is carried out being aware of the ethical concerns that ensure that this study does not manipulate the work of any author. The work of the original authors has been respected and given due credit. There has been no fabrication or alteration of information. Regarding the collection of primary data through surveys, all ethical considerations were kept in mind. No one was harmed in the process and the due permission and consent of the patients and doctors was sought for the surveys. The autonomy, decision-making and dignity of participants was respected in the process.

CHAPTER 6

FINDINGS AND DATA ANALYSIS

6.1 Descriptive Analysis (Surveys)

This section of the study basically provides an analysis to the data collected. Different values have been calculated to provide a detailed overview of the data collected. These values involve:

- **N:** This is the number of valid observations for the variable. The total number of observations is the sum of N and the number of missing values, which are categorized as invalid observations.
- **Minimum:** This is the minimum or the smallest value of the variable thus, the lowest occurring value becomes the minimum.
- **Maximum:** This is the maximum or the largest value of the variable hence; the highest occurring value becomes the maximum.
- **Mean:** This is the arithmetic mean across the observations. It is the most widely used measure of central tendency, also called the average. The mean is sensitive to extremely large or small values; if the distance between observations is abnormal the mean calculations are prone to be erroneous.
- **Std.:** Standard deviation is the square root of the variance. It measures the spread of a set of observations. The larger the standard deviation is, the more spread out the observations

are. Larger standard deviation portrays good research sampling and promises quality of the collected observations.

- **Variance:** The variance is a measure of variability. It is the sum of the squared distances of data value from the mean divided by the variance divisor. The Corrected SS is the sum of squared distances of data value from the mean. Therefore, the variance is the corrected SS divided by $N-1$. We don't generally use variance as an index of spread because it is in squared units. Instead, we use standard deviation. However, variance is an essential measure of data analyses in some cases.
- **Skewness:** Skewness measures the degree and direction of asymmetry. A symmetric distribution such as a normal distribution has a skewness of 0, and a distribution that is skewed to the left, e.g. when the mean is less than the median, has a negative skewness.
 - If the skewness is between -0.5 and 0.5 the observations are fairly symmetrical.
 - If the skewness is between -1 and -0.5 or between 0.5 and 1, the observations are moderately skewed.
 - If the skewness is less than -1 or greater than 1, the observations are highly skewed.
- **Kurtosis:** Kurtosis is a measure of tail extremity reflecting either the presence of outliers in a distribution or a distribution's propensity for producing outliers. If the kurtosis is close to 0, then a normal distribution is often assumed, called mesokurtic distributions. If the kurtosis is less than zero, then the distribution is light tails and is called a platykurtic

distribution. If the kurtosis is greater than zero, then the distribution has heavier tails and is called a leptokurtic distribution.

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		119	100.0	100.0	100.0

N	Minimum	Maximum	Mean		Std. Deviation
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
119	2	2	2.00	.000	.000

Interpretation: The population sample of our research consists of the females. The sample consisted of 119 females. The minimum and the maximum value of this variable is 2 along with null standard deviation.

Were the complications properly observed and taken care of?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	24	20.2	20.2	20.2
2	61	51.3	51.3	71.4
3	34	28.6	28.6	100.0
Total	119	100.0	100.0	

N			Mean		Std. Deviation	Skewness		Kurtosis	
	Min Statistic	Max Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	3	2.08	.064	.696	-.115	.222	-.909	.440

Interpretation: The sample was divided into 3 categories of age groups. The minimum value is one where as the maximum value of this variable is 3. The average is 2 along with the standard deviation of 0. The data is fairly symmetrical since the skewness id -0.115. The kurtosis of this data is -0.909 which means that the data is light tail and also known as platykurtic.

Are doctors skilled and competent?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	28	23.5	23.5	23.5
2	63	52.9	52.9	76.5
3	28	23.5	23.5	100.0
Total	119	100.0	100.0	

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	3	2.00	.063	.689	.000	.222	-.861	.440

Interpretation: the monthly income was subdivided into 3 parts. The frequency of the samples were 28, 63 and 28 with the percentages of 23.5, 52.9 & 23.5, which implies that most of the people lie in between the second category. The minimum value of the variable is one where as the maximum value is 3. The average value is 2 with the standard deviation of 0.689. The data is fairly symmetrical. The kurtosis is platykurtic as the value is less than zero.

What is your monthly income?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	3	2.5	2.5	2.5
1	81	68.1	68.1	70.6
2	35	29.4	29.4	100.0
Total	119	100.0	100.0	

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	0	2	1.27	.046	.499	.414	.222	-.463	.440

Interpretation: The number of children were divided into 3 portions, which included 0-2, 3-5 and 6 or more. The frequency of each category is 3, 81 and 35 which indicates that the majority had 3 to 5 children. The minimum value for the variable is 0 and the maximum value is 2. The

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	62	52.1	52.1	52.1
	2	28	23.5	23.5	75.6
	3	29	24.4	24.4	100.0
	Total	119	100.0	100.0	

N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
c	c	Statistic	c	Error	Statistic	c	Error	c	Error

Interpretation: This question was divided into 3 major categories based on the satisfaction level of the patients. Frequency of each option is 62, 28, and 29. The minimum value is 1 whereas the maximum value is 3. The mean value of the data is 1.72 with the standard deviation of 0.833. The skewness value is 0.22 which implies that the data is fairly symmetric. The kurtosis is negative hence it is light tailed.

During your most recent visit, did your healthcare provider listen carefully to you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	102	85.7	85.7	85.7
	2	5	4.2	4.2	89.9
	3	12	10.1	10.1	100.0
	Total	119	100.0	100.0	

N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error

Interpretation: This question consisted of 3 options. Frequency of each option was 102, 5 and 12. The minimum value is 1 whereas the maximum value is 3. The average of the data is 1.24 with the standard deviation of 0.624. The skewness value is 2.332 which implies that the data is highly skewed. The kurtosis is positive hence it is leptokurtic and has a heavy tail.

Overall, how satisfied are you with your healthcare provider?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	4	3.4	3.4	3.4
1	62	52.1	52.1	55.5
2	47	39.5	39.5	95.0
3	6	5.0	5.0	100.0
Total	119	100.0	100.0	

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error

Interpretation: This question consisted of 4 options. Frequency of each option was 4, 62, 47 and 6. The minimum value is 0 whereas the maximum value is 3. The average of the data is 1.46 with the standard deviation of 0.648. The skewness value is 0.332 which implies that the data is fairly symmetric. The kurtosis is positive hence it is leptokurtic and has a heavy tail.

How would you rate the quality of your healthcare providers' services?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	4	3.4	3.4	3.4
1	61	51.3	51.3	54.6
2	54	45.4	45.4	100.0
Total	119	100.0	100.0	

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
			Statistic	Std. Error		Statistic	Std. Error	Statistic	Std. Error
119	0	2	1.42	.051	.560	-.268	.222	-.875	.440

Interpretation: This question consisted of 3 options. Frequency distribution is 4, 61 and 54. The minimum value is 0 whereas the maximum value is 2. The average of the data is 1.42 with the standard deviation of 0.560. The skewness value is -0.26 which implies that the data is fairly symmetric. The kurtosis is negative hence it has a light tail.

How long have you been using your current healthcare provider?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	22	18.5	18.5	18.5
	2	25	21.0	21.0	39.5
	3	20	16.8	16.8	56.3
	4	18	15.1	15.1	71.4
	5	29	24.4	24.4	95.8
	6	2	1.7	1.7	97.5
	7	3	2.5	2.5	100.0
	Total	119	100.0	100.0	

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	7	3.21	.148	1.615	.205	.222	-.950	.440

Interpretation: This question is based on the satisfaction level of the patients. It involves rating of the services provided by the hospital. Frequency of each option is 22, 25, 20, 18, 29, 2 and 3. The minimum value is 1 whereas the maximum value is 7. The average of the data is 3.21 with the standard deviation of 0.148. The skewness value is 0.205 which implies that the data is fairly symmetric. The kurtosis value is negative hence it is platykurtic and has a light tail.

During your most recent visit, how would you rate your satisfaction with the amount of time that your healthcare provider spent with you?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	4	3.4	3.4	3.4
1	76	63.9	63.9	67.2
2	39	32.8	32.8	100.0
Total	119	100.0	100.0	

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	0	2	1.29	.048	.526	.184	.222	-.586	.440

Interpretation: This question consists of 3 options. Frequency distribution is 4, 76 and 39. The minimum value is 0 whereas the maximum value is 2. The average of the data is 1.29 with the standard deviation of 0.526. The skewness value is 0.184 which implies that the data is fairly symmetric. The kurtosis is negative hence it is platykurtic and has a light tail.

How many times did you visit during the hospital during pregnancy?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	3	2.5	2.5	2.5
1	17	14.3	14.3	16.8
2	99	83.2	83.2	100.0
Total	119	100.0	100.0	

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
			Statistic	Std. Error		Statistic	Std. Error	Statistic	Std. Error
119	0	2	1.81	.042	.456	-2.352	.222	5.016	.440

Interpretation: This question consists of 3 options. Frequency distribution is 3, 17 and 99. The minimum value is 0 whereas the maximum value is 2. The average of the data is 1.81 with the standard deviation of 0.456. The skewness value is -2.352 which implies that the data is highly skewed. The kurtosis is positive hence it is leptokurtic and has a heavy tail.

What health services did you avail?

		Frequenc y	Percent	Valid Percent	Cumulative Percent
Valid	3	30	25.2	51.7	51.7
	5	28	23.5	48.3	100.0
	Total	58	48.7	100.0	
Missing	System	61	51.3		
	Total	119	100.0		

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	7	2.08	.104	1.132	2.686	.222	8.625	.440

Interpretation: This question consists of 2 options. Frequency distribution is 30 and 28. The minimum value is 1 whereas the maximum value is 7. The average of the data is 2.08 with the standard deviation of 1.132. The skewness value is 2.686 which implies that the data is highly skewed. The kurtosis is positive hence it is leptokurtic and has a heavy tail.

Were you referred to any secondary hospital for treatment?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	23	19.3	19.3	19.3
2	96	80.7	80.7	100.0
Total	119	100.0	100.0	

N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	2	1.81	.036	.397	-1.573	.222	.484	.440

Interpretation: This question consists of 2 options. Frequency distribution is 23 and 96. The minimum value is 1 whereas the maximum value is 2. The average of the data is 1.81 with the standard deviation of 0.397. The skewness value is -1.573 which implies that the data is highly skewed. The kurtosis is positive hence it is leptokurtic and has a heavy tail.

During delivery were you attended by skilled staff?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	90	75.6	75.6	75.6
2	29	24.4	24.4	100.0
Total	119	100.0	100.0	

N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	2	1.24	.040	.431	1.209	.222	-.547	.440

Interpretation: This question consists of 2 options. Frequency distribution is 90 and 29. The minimum value is 1 whereas the maximum value is 2. The average of the data is 1.24 along with the standard deviation of 0.431. The skewness value is 1.209 which implies that the data is highly skewed. The kurtosis is negative hence it is platykurtic and has a light tail.

During delivery were you attended by skilled staff?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	72	60.5	60.5	60.5
2	47	39.5	39.5	100.0
Total	119	100.0	100.0	

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	2	1.39	.045	.491	.435	.222	-1.842	.440

Interpretation: This question consists of 2 options. Frequency distribution is 72 and 47. The minimum value is 1 whereas the maximum value is 2. The average of the data is 1.39 with the standard deviation of 0.491. The skewness value is 0.435 which implies that the data is fairly symmetric. The kurtosis is negative hence it is platykurtic and has a light tail.

What health services did you receive post your delivery?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	6	5.0	5.0	5.0
	1	40	33.6	33.6	38.7
	2	13	10.9	10.9	49.6
	3	7	5.9	5.9	55.5
	4	15	12.6	12.6	68.1
	5	9	7.6	7.6	75.6
	6	3	2.5	2.5	78.2
	7	26	21.8	21.8	100.0
	Total	119	100.0	100.0	

N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	0	7	3.29	.225	2.454	.412	.222	-1.358	.440

Interpretation: This question consists of several options. Frequency distribution is 6, 40, 13, 7, 15, 9, 3 and 26. The minimum value is 0 whereas the maximum value is 7. The average of the data is 3.29 with the standard deviation of 2.454. The skewness value is 0.412 which implies that the data is fairly symmetric. The kurtosis value that is -1.358, is negative hence it is platykurtic and has a light tail.

In total, how much did you household spend for the maternal health services during your last pregnancy?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	80	67.2	67.2	67.2
2	12	10.1	10.1	77.3
3	4	3.4	3.4	80.7
4	23	19.3	19.3	100.0
Total	119	100.0	100.0	

N	Min	Max	Mean	Std. Deviation	Skewness	Kurtosis			
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	4	1.75	.110	1.195	1.199	.222	-.336	.440

Interpretation: This question consists of 4 options. Frequency distribution is 80, 12, 4 and 23. The minimum value is 1 whereas the maximum value is 4. The average of the data is 1.110 with the standard deviation of 1.195. The skewness value is 1.195 which implies that the data is highly skewed. The kurtosis is negative hence it is platykurtic and has a light tail.

How likely is it that you would recommend your healthcare provider to a friend, family member or colleague?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	21	17.6	17.6	17.6
2	14	11.8	11.8	29.4
3	7	5.9	5.9	35.3
4	14	11.8	11.8	47.1
5	3	2.5	2.5	49.6
6	17	14.3	14.3	63.9
7	5	4.2	4.2	68.1
8	2	1.7	1.7	69.7
9	2	1.7	1.7	71.4
10	34	28.6	28.6	100.0
Total	119	100.0	100.0	

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	10	5.48	.317	3.461	.136	.222	-1.496	.440

Interpretation: This question consists of 10 options. The minimum value is 1 whereas the maximum value is 10. The average of the data is 5.48 with the standard deviation of 3.461. The skewness value is 0.136 which implies that the data is fairly symmetric. The kurtosis is negative hence it is platykurtic and has a light tail.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	74	62.2	62.2	62.2
2	45	37.8	37.8	100.0
Total	119	100.0	100.0	

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
			Statistic	Std. Error		Statistic	Std. Error	Statistic	Std. Error
119	1	2	1.38	.045	.487	.509	.222	-1.771	.440

Interpretation: This question consists of 2 options. Frequency distribution is 74 and 45. The minimum value is 1 whereas the maximum value is 2. The average of the data is 1.38 with the standard deviation of 0.487. The skewness value is 0.509 which implies that the data is moderately. The kurtosis is negative hence it is platykurtic and has a light tail.

Did the hospital staff listen to all your concerns?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	99	83.2	83.2	83.2
2	20	16.8	16.8	100.0
Total	119	100.0	100.0	

N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	2	1.17	.034	.376	1.798	.222	1.254	.440

Interpretation: This question consists of 2 options. Frequency distribution is 99 and 20. The minimum value is 1 whereas the maximum value is 2. The average of the data is 1.17 with the standard deviation of 0.376. The skewness value is 1.798 which implies that the data is highly skewed. The kurtosis is positive hence it is leptokurtic and has a light tail.

What was the average amount of time you waited to see medical staff when you visited the clinic?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	20	16.8	16.8	16.8
2	15	12.6	12.6	29.4
3	84	70.6	70.6	100.0
Total	119	100.0	100.0	

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
			Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	3	2.54	.070	.768	-1.271	.222	-.079	.440

Interpretation: This question consists of 3 options. Frequency distribution is 20, 15 and 84. The minimum value is 1 whereas the maximum value is 2. The average of the data is 2.54 with the standard deviation of 0.768. The skewness value is -1.271 which implies that the data is highly skewed. The kurtosis is negative hence it is platykurtic and has a light tail.

Which mode of transportation did you use to reach the hospital?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	4	3.4	3.4	3.4
2	51	42.9	42.9	46.2
3	5	4.2	4.2	50.4
4	59	49.6	49.6	100.0
Total	119	100.0	100.0	

N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	4	3.00	.095	1.033	-.187	.222	-1.717	.440

Interpretation: This question consists of 4 options. Frequency distribution is 4, 51, 5 and 59. The minimum value is 1 whereas the maximum value is 4. The average of the data is 1.29 with the standard deviation of 0.526. The skewness value is -0.187 which implies that the data is fairly symmetric. The kurtosis is negative hence it is platykurtic and has a light tail.

Do you have to pay more for medical care than you can afford?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	46	38.7	38.7	38.7
2	73	61.3	61.3	100.0
Total	119	100.0	100.0	

N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis			
				Std. Error		Std. Error			
Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic			
119	1	2	1.61	.045	.489	-.472	.222	-1.808	.440

Interpretation: This question consists of 2 options. Frequency distribution is 46 and 73. The minimum value is 10 whereas the maximum value is 2. The average of the data is 1.61 with the standard deviation of 0.489. The skewness value is -0.472 which implies that the data is fairly symmetric. The kurtosis is negative hence it is platykurtic and has a light tail.

Do you get medical treatment whenever you need?

	Frequenc y	Percent	Valid Percent	Cumulative Percent
Valid 1	96	80.7	80.7	80.7
2	23	19.3	19.3	100.0
Total	119	100.0	100.0	

N	Min	Max	Mean		Std. Deviation	Skewness		Kurtosis	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
119	1	2	1.19	.036	.397	1.573	.222	.484	.440

Interpretation: This question consists of 2 options. Frequency distribution is 96 and 23. The minimum value is 1 whereas the maximum value is 2. The average of the data is 1.19 with the standard deviation of 0.036. The skewness value is 1.573 which implies that the data is highly skewed. The kurtosis is positive hence it is leptokurtic and has a heavy tail.

Chi-square Test and Analysis of Variance:

Chi-Square Test:

Q: How was your first-hand experience? How would you rate the quality of your healthcare provider service?

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.944 ^a	6	.014
Likelihood Ratio	19.867	6	.003
Linear-by-Linear Association	1.310	1	.252
N of Valid Cases	119		

Independent variable: Efficiency

Dependent variable: Satisfaction

P Value: .014

This tells us that there is highly significant association between efficiency and satisfaction level that is satisfaction depends entirely on efficiency level.

Q. During your most recent visit did your healthcare provider listen to you carefully? How long have you been using your current healthcare provider?

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	39.123 ^a	12	.000
Likelihood Ratio	40.173	12	.000
Linear-by-Linear Association	.127	1	.721
N of Valid Cases	119		

Independent variable: Accessibility

Dependent variable: Satisfaction

P Value: .000

This tells us that there is highly significant association between accessibility and satisfaction level that is satisfaction level depends on accessibility.

Q. During your most recent visit how would you rate your satisfaction with the amount of time your healthcare provider spent with you? How many times did you visit this hospital during your pregnancy?

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.855 ^a	4	.426
Likelihood Ratio	5.304	4	.257
Linear-by-Linear Association	.224	1	.636
N of Valid Cases	119		

Independent variable: Accessibility

Dependent variable: Satisfaction

P Value: .426

This tells us that there is highly insignificant association between accessibility and satisfaction level that is satisfaction level does not depend on accessibility.

Q: How was your first-hand experience? How long have you been using your current healthcare provider?

	Value	df	Asymp. Sig. (2-sided)
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Pearson Chi-Square	59.830 ^a	18	.000
Likelihood Ratio	56.014	18	.000
Linear-by-Linear Association	10.090	1	.001
N of Valid Cases	119		

Dependent: Satisfaction

Independent: Accessibility

P Value: .000

This tells us that there is highly significant association between accessibility and satisfaction level that is satisfaction level depends on accessibility.

Q. Overall how much are you satisfied with your current healthcare provider? What services did you avail?

	Value	df	Asymp. Sig. (2-sided)

Pearson Chi-Square	37.092 ^a	12	.000
Likelihood Ratio	37.620	12	.000
Linear-by-Linear Association	.180	1	.672
N of Valid Cases	119		

Dependent: Satisfaction

Independent: Accessibility

P Value: .000

This tells us that there is highly significant association between accessibility and satisfaction level that is satisfaction level depends on accessibility.

Q. Were you referred to any secondary hospital during your treatment? What mode of transportation did you use to reach the hospital?

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.074 ^a	3	.254
Likelihood Ratio	5.586	3	.134

Linear-by-Linear Association	2.953	1	.086
N of Valid Cases	22		

Dependent: Efficiency

Independent: Accessibility

P Value: .254

This tells us that there is highly insignificant association between accessibility and efficiency level that is efficiency level does not depend on accessibility.

Q. Overall how much are you satisfied with your current healthcare provider? How would you rate the quality of your healthcare providers' services?

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	225.893 ^a	6	.000
Likelihood Ratio	166.655	6	.000
Linear-by-Linear Association	97.312	1	.000

N of Valid Cases	119		
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Dependent: Satisfaction

Independent: Efficiency

P Value: .000

This tells us that there is highly significant association between efficiency and satisfaction level that is satisfaction level depends on efficiency.

ANOVA:

During your most recent visit, did your healthcare provider seem to know the important information about your medical history?

		Sum of Squares	Df	Mean Square	F	Sig.	
Between Groups	(Combined)	2.253	2	1.127	1.642	.198	
	Linear Term	Unweighted	2.253	1	2.253	3.283	.073
		Weighted	.930	1	.930	1.355	.247
		Deviation	1.323	1	1.323	1.928	.168
Within Groups		79.596	116	.686			
Total		81.849	118				

Dependent variable: Satisfaction

Independent Variable: Efficiency

P Value: .198

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is .198 (i.e., $p = .198$), which is above 0.10. and, therefore mean differences between satisfaction and efficiency is statistically insignificant

Overall, how satisfied are you with your healthcare provider?

		Sum of Squares	Df	Mean Square	F	Sig.	
Between Groups	(Combined)	40.893	2	20.446	273.015	.000	
	Linear Term	Unweighted	16.020	1	16.020	213.918	.000
		Weighted	40.887	1	40.887	545.962	.000
		Deviation	.005	1	.005	.068	.795
Within Groups		8.687	116	.075			
Total		49.580	118				

Dependent variable: Satisfaction

Independent Variable: Efficiency

P Value: .000

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is .000 (i.e., $p = .000$), therefore mean differences between efficiency and satisfaction is highly significant.

During your most recent visit, did your healthcare provider listen carefully to you?

		Sum of Squares	Df	Mean Square	F	Sig.

Between Groups	(Combined)		8.807	6	1.468	4.428	.000
	Linear Term	Unweighted	.139	1	.139	.418	.519
		Weighted	.050	1	.050	.150	.700
		Deviation	8.758	5	1.752	5.284	.000
Within Groups			37.126	112	.331		
Total			45.933	118			

Dependent Variable: Satisfaction

Independent Variable: Accessibility

P Value: .000

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is .000 (i.e., $p = .000$), therefore mean differences between accessibility and satisfaction is highly significant.

Overall, how satisfied are you with your healthcare provider?

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		15.013	6	2.502	8.107	.000
	Linear Term	Unweighted	.004	1	.004	.014	.905
		Weighted	.232	1	.232	.751	.388
	Within Groups						
Total							

		Deviation	14.781	5	2.956	9.578	.000
Within Groups			34.567	112	.309		
Total			49.580	118			

Dependent variable: Satisfaction

Independent variable: Accessibility

P Value: .000

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is .000 (i.e., $p = .000$), therefore mean differences between accessibility and satisfaction is highly significant.

During your most recent visit, how would you rate your satisfaction with the amount of time that your healthcare provider spent with you?

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		6.823	6	1.137	4.921	.000
	Linear Term	Unweighted	.235	1	.235	1.016	.316
		Weighted	.023	1	.023	.099	.754
		Deviation	6.800	5	1.360	5.885	.000
Within Groups			25.883	112	.231		
Total			32.706	118			

Dependent variable: Satisfaction

Independent Variable: Accessibility

P Value: .000

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is .000 (i.e., $p = .000$), therefore mean differences between accessibility and satisfaction is highly significant.

Overall, how satisfied are you with your healthcare provider?

		Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	(Combined)	.900	2	.450	1.072	.346	
	Linear Term	Unweighted	.899	1	.899	2.142	.146
		Weighted	.462	1	.462	1.102	.296
		Deviation	.438	1	.438	1.043	.309
Within Groups		48.680	116	.420			
Total		49.580	118				

Dependent variable: Satisfaction

Independent Variable: Accessibility

P Value: .346

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is .346 (i.e., $p = .346$), therefore mean differences between accessibility and satisfaction is highly insignificant.

Do you have to pay more for medical care than you can afford?

		Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	(Combined)	3.160	2	1.580	7.313	.001	
	Linear Term	Unweighted	.324	1	.324	1.498	.224
		Weighted	.688	1	.688	3.183	.077
		Deviation	2.472	1	2.472	11.443	.001
Within Groups		25.059	116	.216			
Total		28.218	118				

Dependent variable: Efficiency

Independent Variable: Accessibility

P Value: .001

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is .001

(i.e., $p = .001$), therefore mean differences between accessibility and satisfaction is highly significant.

What health services did you receive post your delivery?

		Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	(Combined)	39.656	1	39.656	6.914	.010	
	Linear Term	Unweighted	39.656	1	39.656	6.914	.010
		Weighted	39.656	1	39.656	6.914	.010
Within Groups		671.050	117	5.735			
Total		710.706	118				

Dependent variable: Efficiency

Independent Variable: Satisfaction

P Value: .010

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is .010 (i.e., $p = .010$), therefore mean differences between efficiency and satisfaction is highly significant.

Did the hospital staff listened to all your concerns?

		Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	(Combined)	7.556	1	7.556	97.336	.000	
	Linear Term	Unweighted	7.556	1	7.556	97.336	.000
		Weighted	7.556	1	7.556	97.336	.000
Within Groups		9.083	117	.078			
Total		16.639	118				

Dependent variable: Satisfaction

Independent Variable: Efficiency

P Value: .000

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is .000 (i.e., $p = .000$), therefore mean differences between efficiency and satisfaction is highly significant.

How likely is it that you would recommend your healthcare provider to a friend, family member or colleague?

		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	78.354	1	78.354	6.865	.010

	Linear Term	Unweighted	78.354	1	78.354	6.865	.010
		Weighted	78.354	1	78.354	6.865	.010
Within Groups			1335.343	117	11.413		
Total			1413.697	118			

Dependent variable: Satisfaction

Independent Variable: Efficiency

P Value: .010

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is .010 (i.e., $p = .010$, therefore mean differences between efficiency and satisfaction is highly significant.

Were you referred to any secondary hospital for treatment?

		Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	(Combined)	.467	1	.467	3.018	.085	
	Linear Term	Unweighted	.467	1	.467	3.018	.085
		Weighted	.467	1	.467	3.018	.085
Within Groups		18.088	117	.155			
Total		18.555	118				

Dependent variable: Efficiency

Independent Variable: Accessibility

P Value: .085

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is .085 (i.e., $p = .085$, therefore mean differences between efficiency and accessibility is slightly significant.

Do you get medical treatment whenever you need?

		Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	(Combined)	1.497	2	.748	5.089	.008	
	Linear Term	Unweighted	.369	1	.369	2.510	.116
		Weighted	1.455	1	1.455	9.894	.002
		Deviation	.042	1	.042	.284	.595
Within Groups		17.058	116	.147			
Total		18.555	118				

Dependent variable: Satisfaction

Independent Variable: Efficiency

P Value: .008

This is the table that shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance value is .008 (i.e., $p = .008$, therefore mean differences between efficiency and satisfaction is highly significant.

6.2 Interview Analysis

Ganga Ram Hospital

The research team conducted interview of doctors of Ganga Ram hospital Lahore. The brief interview of these doctors brought to light some facts related to the condition of Mother and child health care provisions in Ganga Ram hospital Lahore. The pregnant women who pay visit to the hospital often observe non-serious yet common problems like nausea, vomiting and hypertension. The doctors' prescription to patients facing such problems is generally intensive counselling, making them avoid certain diets and anti-hypertension medication. The doctors and other medical staff in sir Ganga Ram Hospital are absolutely not satisfied with the remuneration packages offered by the government. While training program at micro level is held from time to time but the hospital seemingly does not possess the facility to provide substantive training about the newest developments in medical sciences especially related to gynecology department. But one disturbing note is that lately there has been no effort on the part of the government to improve the health provisions in the hospital. Government's general apathy towards the health sector continues till date, taking no care of already debilitated public health sector highlights an alarming situation. As far as security of the patients is concerned the hospital administration has

not formulated any comprehensive policy to ensure the security of the patients besides the hiring of few security personnel in the wake of recent attacks in Lahore. In order to provide the patients with better facilities and ensuring health security of the customers of the hospital, the doctors call for increased health budget, handsome remuneration for the medical staff, state-of-the-art machineries and infrastructure for the hospitals and increased number of staff owing to the growing influx of patients. The basic understanding which one can come up with after having substantial information of Ganga Ram hospital is the strong trade-off between efficiency and effectiveness. In order to cater the huge influx of patients each day, the hospital administration with its meagre resources tries to cater maximum number of patients thereby efficiently addressing the issues of the patients.

Jinnah hospital Lahore:

The respondent who also happens to be the medical officer of Jinnah Hospital Lahore underscored some facts and information related to one of the busiest hospital of Lahore. The most common issues witnessed by the doctors of Jinnah hospital, among the pregnant women was hyper-tension. The medical facility provided by the doctors is counselling and anti-hypertension medication. The staff members at Jinnah hospital Lahore strongly ask for a raise in wages. There is a lack of cooperation from the government in solving the issues of the hospital and lack of oversight of the policies and problems of the hospital from the provincial government has rendered the public health sector very ineffective. Jinnah hospital has acute shortage of qualified medical staff, therefore the government has ramp up its efforts to induct more qualified medical staff immediately to cater the ever-growing number of patients. The present condition of the hospital calls for a complete overhaul of administrative structure so that effectiveness and efficiency could be maintained to a certain level. Again in Jinnah hospital Lahore shares the

same story as Sir Ganga Ram hospital, government needs to build health infrastructure in the rural areas as well equip the primary and secondary hospital with better facilities so that minor problems could be addressed at the very basic level and only patients with acute and serious problems could approach the tertiary hospitals. This is the only way, the tertiary hospitals could maintain effectiveness. As the issues associated with pregnancy revealed by the doctors underline the fact that pregnancy related minor complications could easily be addressed at the primary and secondary levels therefore effective can only be achieved when primary, secondary and tertiary hospitals work in their domains.

Polyclinic and PIMS hospital Islamabad:

The condition of hospitals in the federal capital appears to be far better than the hospitals in Lahore. Anemia and pregnancy induced hypertension are the most common issues faced by pregnant women living in the federal capital. The doctors recommend antenatal check-up on regular basis to minimize the problem arising as a result of pregnancy. Unlike the medical staff working in Lahore, the medical staff working the public health sector of Islamabad are partially satisfied with the remuneration packages. Part of the reason appears to be the fact that the federal health facilities offer higher wages to the medical staffs than the provincial health department. The hospital administration every now and then provide training to doctors as well as non-medical staff of the hospitals. Infection control training, patient care training, and training on proper hospital waste management etc. to name a few, are the examples of the training and development given to staff to ensure smooth flow of services at the hospital and provisions in an efficient, effective and hygienic way. The hospitals in the federal capital are equipped with better health facilities and modernized equipment are being used in the hospitals. The government is providing almost all kind of medicinal facilities in the emergency departments of the hospitals

therefore there is substantial cooperation from the federal government with hospital administration to keep the hospital up to date. With the increased funding by the health department government of Punjab, this hospital has attained MICU (medical intensive care unit), liver center, nephrology which is up to reasonably accepted international standard but funds are still needed to improve the health care services in other domains. To ensure the security of the patients and hospital staff hospital security department works day and night with private Askari guards. Scanning equipment have been installed at all entry points. The respondents recommended that the hospital facilities need to be enlarged in size and number, providing more rooms (wards) and beds on account of the growing number of patients. Strengthening primary and secondary health care tiers has become necessity to lessen the loads to patients reporting at the tertiary health care facilities. The manual system of record keeping has become obsolete therefore it is important to have computerized record of each and every patient. Health care facilities in the federal capital are better than the provincial facilities. Cooperation of the government has ensured better provision of health care in the government capital. One can easily conclude that to ensure effectiveness the hospital has to be equipped with modern facilities, lower tiers of health care department must be made functional, the manual system must be computerized so that time, money as well other resources could be saved by keeping the history of each patient online where they could get access to information easily.

Owing to The health associated with pregnancy are common but less serious and these issues can be managed at the primary and secondary health care centers present in towns and cities. Unfortunately the primary and secondary hospitals in rural as well as urban areas appears to be useless owing to absence of equipment, qualified doctors and other human resource to address these minor issues at the very basic level. The result is there is a huge influx of patients with

pregnancy related complications in the tertiary hospitals. Owing to lack of funds and government's oversight and cooperation the tertiary hospitals in the different cities are although efficiently catering the health services to all the patients but effectiveness of the provision can always be questioned. Therefore we can see a strong trade-off between efficiency and effectiveness pertaining to the services catered by these government hospitals. Within these hospitals too, effectiveness could not be maintained because there is not enough infrastructure, rooms (wards), equipment and staff to accommodate all the patients approaching these tertiary hospitals, the low doctor to patient ratio significantly clamps down the effectiveness of the provision delivered by the hospitals. In case of Lahore, the unsatisfied medical staff with the remuneration packages could be another reason for the decreased effectiveness of the services delivered therefore it can be easily conjectured that the lack of satisfaction of doctors could be another reason behind the lack of effectiveness in these hospitals.

6.3 Overall Health Reform Analysis

In a broad sense healthcare refers to societal beliefs and practice, programs, policies, structure of organizations and institutions that are related to the production and provision of goods and services meant to promote health, treat illness and prevention of disease. Reforms mean to bring some change in order to improve something or make it better. Therefore, health sector reforms refer to changes brought to improve the health sector. The purpose behind health sector reforms may include improvement in efficiency of service provision, improve the quality of service provided, increase revenue production for health sector and promote equity.

Historical analysis:

Pakistan health sector is in progress for last few years. It has made some improvements and has brought many reforms. A systematic search of literature provided shows some strength in health care delivery system in Pakistan for example it has shown progress in areas like making health policies, participating in Millennium Development Goals program (MDGs), introducing health programs and Public Private Partnership. Moreover, there is a little development in human resource and infrastructure. One of the most important steps in the system is that it has committed to participate in MDG's and has re-structured national health policy in 2001 that included Primary Health Care (PHC) elements in the health policy. (Zohra Kurji, 2016) Such steps are a positive addition to the health sector of Pakistan. These changes also made a way towards the implementation of other preventive programs like Expanded Program of Immunization for mass population and establishment the Maternal and Child Health project by trainings of lady Health Visitors (LHV's) to improve overall health of the population. These kind of steps are responsible for improvement in health indicators like infant mortality is reduced from 220 per 1000 live births to 72 per 1000 live births, maternal mortality Rate declined from 800-1000 per 100,000 live births in late 40's to 276 per 100,000 live births. (Zohra Kurji, 2016)

At the time of independence Pakistan had started its journey with a very narrow focus on its health policy. But later government had brought many changes in health sector infrastructure which resulted in provision of PHCs to population. Government of Pakistan adopted health policy in 1990 in which all aspects of health like physical, social and mental health were addressed to improve quality of life. Pakistan also took initiative by taking part in MDGs by United Nations and Pakistan is fully dedicated to achieve these MDGs. In addition, Government started working on Term Development Framework (MTDF) 2005–10 and Vision 2030 which includes health and nutrition as a theme to poverty reduction. To achieve these MDGs Pakistan

also established national public private partnership programs. For example, the Primary Health Care Extension Program trained local health care workers. There were many successful programs implemented like National TB control program was implemented in 29 of the poorest rural districts. (national health program for family planning and primary health, 2010-2015) Pakistan also took steps to reduce maternal and child mortality rate with the help of different aids. Which resulted in introduction of vertical programs like Maternal and Child Health care, Immunization programs, Information Education and Communication (IEC) campaign for preventive steps and other related measures in case of diarrhea and National Maternal and Child Health (MCH) Program at all level of health care system. Extended Program of Immunization (EPI) was started in 1978 to reduce morbidity and mortality caused by preventable diseases of children. In Pakistan, EPI focused on many disease adding vaccination against Hepatitis B for infants to EPI with the assistance of Global Alliance for Vaccines & Immunization (GAVI). One of the successful programs of public health sector programs is lady health worker training programs in 1993 to 1994.

However, these all programs have a very limited scope and that is the reason that Pakistan's healthcare system is still not very efficient. There are many weaknesses that are common in all of these programs like poor governance, low quality Health Information Management System, no access to resources, unequal resource distribution, and corruption in health administration, lack of monitoring in health policy and health planning and lack of trained staff

In Pakistan ministry of health has the most important role in making health policies and strategies to cope with basic problems especially to people who are under served and are in rural areas. Constitutionally, Health is a provincial subject and it's the duty of provincial government to provide health service to the population. Figure 1 shows the organizational division of Public

health system. New health care policy was adopted in 2001 with its theme being health sector reforms. The policy was based on “health for all”. The Health Sector Vision under the MTRF 2005-2010 along with other objectives and targets, stated, budgetary allocations for the five-year period. MTRF emphasized preventive, maternal and child health, as well as primary health care for five years. Most of these objectives were output driven and they lacked meaningful priorities. The health policy of 2001 recognizes the need for equity in health sector The National Health Policy Unit (NHPU) was established with the pure aim of providing policy advice to the Federal Ministry of Health and to build capacity of the Ministry in policy analysis and reforms. Although the policy of 2001 was looked good and these reforms to the health policy, highlighted the importance of preventive health care model, but everything happened on papers only. This policy had certain flaws that can be the factors behind the failure of this policy. This policy can be called weak at planning level as it practically, it emphasized the need to increase hospitals and bring modern technology and equipment, drawing very less attention towards multidimensional health issues such as public health. The study of 2001 policy shows that the policies and instruments adopted in the document are in line with the same traditional Biomedical model which focuses only on treatment of the diseases rather than diseases prevention and covering other factors that cover modern paradigm. While formulating the policies insight was taken from developed countries without considering the political, social, economic and other factors of the Pakistan. According to Khan (2006) it also lacks proper strategies and instruments for the implementation of different programs. Health indicators also show that Pakistan was not able to achieve its targets. For example about 19% of the whole population and 30% of children less than five years are malnourished. (Failure analysis of health policy of Pakistan, 18 May 201).

Other important programs like family planning failed because it faced religious oppositions. This happened due to lack of proper awareness at grass root level. Moreover, the implementation of health policies and programs were responsibility of local government but the Federal Government kept directly interfering through its vertical program. There were numerous protective and promotional health interventions that included, the National Program for Family Planning and Primary Healthcare, The Expanded Program of Immunization, The National AIDs Control Program, Malaria Control Program, National Nutrition Program, Hepatitis Program and etc. That were implemented at the primary health care facilities, but are directly run by the Federal Government. This created disharmony among BHUs and local governments. Which in turn resulted in loss of resources etc. (Nishtar 2007). The programs and policies also lacked proper monitoring and evaluation mechanisms that is another gap in health policy. There was no regular and efficient system to monitor numerous health projects and the implementation of the programs at the local level. At the district level, the overall system suffered from different administrative and managerial flaws. The administration is on typical bureaucratic model with little flexibility in administration, which is not well-matched with the emerging needs. (Bjorkman 1986 and Hughes 2003)

In short, unfortunately, Pakistan has failed to attain target “the health for all” 2000. The reasons are numerous like lack of resources, weak policies, and mismanagement among authorities. In addition to this Pakistan is also not able to capture MDGs 2015 due to political and economic uncertainties.

Analysis of Current Health Care System:

The current health care system of Pakistan is full of problems at different levels. Pakistan is still striving to achieve quality health care by setting up goals and objectives. As discussed above Pakistan had failed to achieve the targets set by their national health policies due to lack of resources, corruption, mismanagement, lack of commitment ETC. currently, the nurse to population ratio is 1:3568 for registered nurses and 1: 54, 276 for LHVs.¹⁴ Moreover, there is also long-lasting shortage of senior Administrators. (Hina Nizar¹, 2016)

To improve health of the population especially poor people a lot of new innovation is required. For example, drugs, vaccines, new devices, managerial approaches, diagnostic machines and policies etc. However Pakistan is not developed in case of advance technology that fulfils the needs of advance and complex surgeries. In addition, health information management system is also not very well developed which creates complexities in records.

The service delivery mechanism in Public health sector of Pakistan is not very efficient. Health care in Pakistan is the responsibility of provinces which is further extended to districts except for few programs. But the capacity of local governments for the service delivery needs to be efficient.

One of the main weaknesses of Pakistan health care is the amount of budget it spends on health that is only 0.6-1.19% of GDP. Most of this budget is spent on curative purpose in secondary and tertiary health care and primary health care is ignored. This creates problems in public health. Scarcity of resources, corruption and poor administration boosts poor service delivery in Pakistan.

6.4 Analysis of MNHCPH:

Pakistan is a country of almost 200 million people, half of them are women and majority of these women are illiterate. The country has always shown bad statistics in matters related to maternal and child health. The strength of the country is its youth which comprises more than 60% of its population. A healthy, educated and rightly guided youth can help the country to progress exponentially but the irony is illiteracy coupled with major health issues among the youth is becoming troublesome for the country eventually becoming burden on economy. The bottom line is the country needs educated, healthy mother that could bring up a healthy posterity for Pakistan. Unfortunately since independence, the maternal and child health issues have remained in spotlight all over the world. For example: Pakistan is probably the only country in the world that has still unable to eradicate polio similarly, a recent report published in various newspaper showed that an alarming 44% children in Pakistan are stunted.

The maternal mortality rate (MMR) is the annual number of female deaths per 100,000 live births from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes). The MMR includes deaths during pregnancy, childbirth, or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, for a specified year.



Owing to high maternal and infant mortality ratios in Pakistan, the maternal and child health program was launched this program to reduce under five mortality ratio to less than 45/1000 live births, new born mortality rate to less than 40 per 1000 live births, maternal mortality rate to 140/1000 births, increase birth deliveries by professional attendants to 90%, increase contraceptive usage to 60% by 2015. The essential purpose of this program was to provide maternal and child health services at community level, to facilitate primary and mid-level health facilities and to equip secondary hospitals with adequate facilities to ensure aforementioned mentioned facts and figures.

According to Pakistan social and living standards measurement survey (PSLM), conducted during 2013-14, the ratio of fully immunized children was 77% during 2003-4 which increased during subsequent years but during 2014 it dropped down to 76%, the ratio of birth by skilled attendants was 48% in 2003-4 showing slight improvement to 58% in 2013-14 and finally the antenatal consultation ratio was 50% in 2003-4 which improved significantly to 72% and infant

mortality ratio was 69 per 1000 live birth in 2007-8 going down to 65 per 1000 live birth during 2013-14. Ironically despite the modern progress in information technology especially electronic and social media the contraceptive prevalence rate during 2007-8 was 27% and during 2013-14 it was up to 32%.

Maternal mortality rate was 178 in 2015 (World Bank, 2015) which is close to 140/1000 which was the set target but since then both the mother and infant mortality has fluctuated. But other than that the other statistic show that the program was unable to achieve its set targets.

Careful analysis of the program and the statistics show that program focused on two major outputs, i.e; emergency obstetric services and community based midwives. In both these realms the progress is noticeable by the statistics aforementioned. However the management structure of the program has not been strengthened as per policy and the program has failed in providing services related to family planning because statistics show that majority of Pakistani couples do not use contraceptive measures and it bears out the fact that contraception is still considered a stigma in Pakistani society.

Firstly, the training and development of community midwives needs to be effective, the training schools established must deliver highly skilled midwives. The grim statistics show that there was always lack of trust, absence of adequate transportation facilities and socio-cultural gap between the service providers and clients even in Punjab. The condition is very grim in other provinces like Balochistan where the progress in this regard is very anemic even today.

Secondly, the failure of family planning provision is alarming. Population is increasing rapidly and these factors are getting out of control. The reason appears to be lack of government cooperation since the government department like Department of population welfare has to work

hand in hand with the authorities of the program, absence of which has rendered this aspect of the MNCHP ineffective. Even at federal level, the government has failed to break the social taboo of using contraception, the manifestation of which came to witness when one TV channel aired a Condom ad, it was immediately banned by PEMRA however they soon realized their mistake and withdrew the ban.

Thirdly, the absence of mechanism for strategic communication appear to have barred this program from achieving its goals. Use of electronic and print media is necessary to achieve this goal however unavailability of funds for expensive ads affect the objective of disseminating information which take days to reach to the community.

Fourthly, absence of oversight mechanism clamped down the progress overtime. The program management was ineffective. The oversight, management, and coordination committees were functional in the beginning of the program but after the 18th amendment when the health sector was put in the provincial list, the program's ownership become vague.

Fifthly, the population of Pakistan is growing at an alarming rate of 2.1% (world bank, 2015) which is the highest in south Asia, the program seemingly was unable to keep up its pace with the increasing population. The growing population and lack of availability of funds for human development renders half of the population illiterate. Half of the population of Pakistan is comprised of women and most of them are illiterate and women illiteracy on the other hand is dangerous; they lack the basic understanding of complications related to pregnancy, also it is difficult for the health professionals to guide them and the result is high mortality rate especially in rural and far-flung areas.

Sixthly although Pakistan has a very integrated lady health worker program but even they are not able to control the ongoing trends in Pakistan. Part of the reason seems to be the low wages and contractual status of their job. Recently in May 2017, lady health workers staged a protest against the government of Punjab asking for regularization of 50,000 health worker in the province, the notification for which was already issued by government of Punjab in 2012. When the skilled workers are themselves are unsatisfied with their job then it will definitely produce a knock-on effect on their performances. The condition look even grimmer in other provinces where lady health workers are not allowed to work properly citing various reasons by their male dominated society.

Seventhly, the careful study of the program shows that the program had always a high dropout ratio among the staff on the account of delayed or non-payment of already meagre salary, the lack of health provision like medicines and other facilities impeded the progress of program. Gynecologists and anesthetists were unavailable owing to aforementioned reason and moving to areas with better perks and privileges.

6.5 Discussion on Descriptive and Empirical Analysis

Health being a fundamental human need and one of the key objective of millennial goals is the most compromised one when it comes to under developed and developing countries in particular and same is the case with the healthcare provision of Pakistan. In Pakistan millions of people are devoid of their right to access to standard or satisfactory health care services and thus they're caught in vicious cycle of poverty or poor healthcare facilities.

The analysis undertaken of the three hospitals clearly show that the standard of health services provided is extremely poor. Though government has shown a little improvement in providing a

budget increase and improving the quality or quantity of equipment available to hospitals but the initiative taken is not enough to bring radical change or boost up the change process for improving the health situation that the country faces. There has been a growing discontent with the available health services and a clear demand for better services from the doctors, patients and the general public as well.

According to WHO Expert committee of 1963 the working definition of hospital is "A hospital is a residential establishment which provides short-term and long-term medical care consisting of observational, diagnostic, therapeutic and rehabilitative services for persons suffering or suspected to be suffering from a disease or injury and for patients. It may or may not also provide services for ambulatory patients on an out-patient basis."

Considering this definition and the analysis of the hospital of Pakistan it can be fairly stated that the hospitals in Pakistan don't provide short term and long term medical care. The ability of hospitals to even provide short term care such as dealing with hypertension and providing operative counselling sessions is not available and long term medical care seems a bit too far sighted. The health reforms are not people oriented, the procedures and styles are highly complex and difficult to understand and comprehend especially by the general public of Pakistan who are extremely poor and can't understand the intricate procedures for the application process. Mostly people seeking out to government hospitals are the ones facing poor medical care as they're overcrowded, have insufficient funds to provide for medicines and up to date health supplies as well as being understaffed due to less funds available. Due to lack of oversight and less funds the staff isn't paid on time as a result they lack motivation and in most of the cases doctors, medical technicians, nurses and even physicians have been reported absent at time of need referred to as ghost workers and thus women arriving in emergency situations often face life threatening

situations due to the negligence of the doctors or even trivial cases such as blood pressure checkup due to inattention can become life threatening for the expecting mothers and the child in particular.

The main issues and problems arising with all of the hospitals indicate that its mainly the patients who are at loss since the hospitals almost always overcrowded, the conditions are unhygienic and the behavior of the staff is extremely rude. The results also indicate that the doctors, nurses and the paramedic staff is not content with the prevailing benefits offered to them for their hard work and consuming job as a result they resort to not giving their best as a result hampering the efficiency and sustainability of the health care provision which is envisioned for a developing country. Proper benefits and salary packages must be introduced to provide proper incentives which motivate the doctors to work at their highest potential.

This can also increase the risk of senior staff and hospital professionals indulging in private practice to achieve proper means of livelihood, many of the physicians lure the patients from the government hospitals to see them in their private clinics and as a result the whole purpose of providing health care at subsidized rates and available to all is lost due to tremendously low pay scales for the physicians and medical staff. This in turn undermines the sustainability and efficiency of the health care services offered to the nation as a whole.

Moreover, the problems emerge also due to the illiteracy and poverty of patients whereby patients don't usually follow doctors' advice or observe follow up which can also be traced back to overcrowding in hospitals and rudeness of the medical staff. So measures must also be taken in order to increase awareness of the need for follow ups and doctors' advice especially during the period of pre-natal care.

In terms of infant and neo natal mortality Pakistan ranks towards the bottom. Very less importance is given to the healthcare services in the country by the respective governments and there's almost no hue given to child and maternal care in Pakistan. However, the reasons can be attributed to level of nutrition, education of the parents and access to health services thereby requiring comprehensive strategies on part of the government to cater to this issue.

Therefore, it can be stated that with pushing health on top of the political agenda and taking radical changes which involve increased influx of capital, cross sector linkages and professional training to medical staff can the reforms or health services in Pakistan improve considerably to be pragmatic or improve its stature on the health measurement scales.

As we have carried out different statistical tests on our available data by using Chisquare and Anova, we got results which gave some valuable insights.

The results on Chisquare have revealed that there is a significant relationship between efficiency and satisfaction levels and between accessibility and satisfaction. Most of the results have come to the similar conclusion. Hence our results have been consistent in this respect.

Satisfaction depends on our two variables i.e. efficiency and accessibility. Higher the efficiency, higher will be the satisfaction level. More accessibility leads to more satisfaction.

This can be seen in real terms that if the overall health system is efficient then the satisfaction level among the consumers would be high. And if it is not efficient then the satisfaction would be low. If the overall working, the procedure of dealing with patients, the availability of staff and equipment is efficient and up to the mark, then the level of satisfaction among the consumers would be high.

The same can be said about the accessibility and satisfaction. If the health facilities are readily and easily accessible, the hospitals are within reach of consumers, both physical and financial and if the patient can afford to access all kinds of health facilities, no matter what their financial status then the level of accessibility would be high. High level of accessibility leads to high level of satisfaction and vice versa.

The results from Anova have shown similar results. Here we have seen that there is a significant relationship between efficiency and satisfaction levels and between accessibility and satisfaction. Most of the results come to this conclusion. Hence we have consistency in our results here too.

Here too the majority of the results have proved that there is a positive relationship between satisfaction and efficiency and between satisfaction and accessibility.

Both the results from Chisquare and Anova have shown similar results. Hence we can conclude that the results from our empirical analysis have been consistent.

CHAPTER 7

CONCLUSION

The results have proved to be reliable. We have analyzed the data through different ways and methods. We have carried out empirical analysis, descriptive analysis of the interviews and analysis of the content already available. The results from all the three methods have shown consistent results. Hence our research is reliable as it has shown consistency in results. This also proves that the research is robust. The consistency and reliability of results has shown that the research has passed the robustness check.

Hence our Hypothesis has been proved. And the null hypothesis has been negated. Our hypothesis that there is a statistically positive relationship between effective provision of health services and the performance measured in terms of efficiency, accessibility and satisfaction has been validated by our research. The results have proved that the hypothesis is valid and the null hypothesis is invalid.

CHAPTER 8

POLICY RECOMMENDATIONS

7.1 ICT in hospitals:

The modern method to boost both effectiveness and efficiency in any sphere of life is integrating it to the information communication and technology. Being cost effective and requiring less human resource, ICT boosts the work speed manifold. Unfortunately in case of Pakistan, the small chunk of budget allocated to the health sector is not enough to equip hospital with ICT. For example, from the tickets to final reports, every process is carried out manually both increasing the rush of patients in the hospital and becoming very expensive for the hospital administration. The tertiary hospitals in Pakistan appears to be in dire need of ICT because of the ever growing population and unavailability of funds.

7.2 Primary and secondary hospitals:

In rural areas, either primary/secondary hospitals are absent or qualified doctors are absent. Pakistan's population is increasing at an alarming speed especially in rural areas. According to World Bank, the growth rate of Pakistan is 2.1% which is greater than other countries of South Asia. 61.2% of the population live in rural areas (Pakistan Demographic survey, 2016) where there are virtually no health provision. Therefore it is imperative to provide essential health care facilities, maternal and child health care because it's a sort of issues every mother has to go through. For that matter primary and secondary hospitals have to be made efficient in both rural and urban areas.

7.3 Providing state of the art facilities:

Another mean to improve efficiency and effectiveness is providing the health sector particularly the third tier with state of the art infrastructure and equipment. In Islamabad's case, the hospitals have been equipped with state of the art machineries matching the international standards which improve the performance exponentially. The doctors are able to do their job effectively and the customer satisfaction with the health provisions have ramped up. More patients can be catered thereby increasing both efficiency and effectiveness.

7.4 Raising the wages of doctors:

It is of profound importance that doctors are satisfied with their remuneration package. Raising the wages of doctor is necessary to curtail private practice of the doctor. Irony in Pakistan is that the doctors pay more attention towards their private practice than in public hospital because private practice earn them more. Doctors' satisfaction with their job significantly impacts the job performance therefore they must be given high wage to ramp up their job satisfaction level.

7.5 Adequate number of staff:

Lack of available fund create another profound problem, hospital administration are not able to hire adequate number of staff. The low doctor to patient ratio hamper the doctors from catering services to all the patients and giving them adequate time. For example: according to very recent report public in Dawn newspaper there are only are around 400 psychiatrists in Pakistan which is an eye opening revelation. Similar Lady health workers are also less in number especially highly trained one are only available in urban areas and in rural areas the pregnant women are handled either by amateurs or by low skilled health worker. The result is most women are not familiar with the methods of birth control, population is increasing at alarming rate of 2.1%(World Bank)

and women mortality ratio is one of the highest 178/100000(Dawn Reports). Therefore it's imperative to provide hospitals with adequate number of staff in both rural and urban areas to ramp up efficiency, effectiveness, consumer satisfaction.

7.6 Raising health budget:

In a nutshell one direct method to improve effectiveness and efficiency of health care provisions is to raise health budget at both federal and provincial level. Pakistan spends only 0.9% of the budget (World Bank report, 2014) which is absolutely not enough to provide all facilities. Therefore it is very important that health budget be increased to improve the overall performances of the hospitals, doctors and administration.

CHAPTER 9

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APPENDIX – A



Disclaimer: This survey is being conducted by a group of students of the National University of Science and Technology, as part of their undergraduate thesis titled, _____ . The data collected through this survey will be used purely for academic purposes and will not be used against any institution or individual for personal gains. It is, thus requested that the survey be filled with complete honesty as the responses are crucial for the success of the research. Your help and cooperation in filling this survey will be highly valuable and appreciated.

Q1. Gender?

- Male
- Female

Q2. What is your age?

- 17-25
- 25-30
- 30 above

Q3. What is your monthly income?

- Less than Rs.10,000
- Rs. 10,000 to 20,000
- More than Rs. 20,000

Q4. How many children do you have?

- 0-2
- 3-5
- 6 or more

Q5. How was your first-hand experience?

- Service not satisfactory
- Long waiting period
- Doctors were not available
- Treatment is costly

Q6. During your most recent visit, did your healthcare provider seem to know the important information about your medical history?

- Yes, definitely
- Yes, somewhat
- No

Q7. During your most recent visit, did your healthcare provider listen carefully to you?

- Yes, definitely
- Yes, somewhat
- No

Q8. Overall, how satisfied are you with your healthcare provider?

- Extremely satisfied
- Moderately satisfied
- Dissatisfied

Q9. How would you rate the quality of your healthcare providers' services?

- Extremely good
- Neither good nor bad
- Extremely bad

Q10. How long have you been using your current healthcare provider?

- I just became a patient this past month
- Less than 6 months
- 6 months to 1 year
- 1-2 years
- 3 or more years

Q11. During your most recent visit, how would you rate your satisfaction with the amount of time that your healthcare provider spent with you?

- Extremely satisfied
- Neither satisfied nor dissatisfied
- Extremely dissatisfied

Q12. How many times did you visit during the hospital during pregnancy?

- 1 to 3 visits
- More than 3 visits

Q13. What health services did you avail?

- Physical examination
- Gynecological examination
- Ultrasound
- HIV/STD testing
- Blood tests
- Tetanus vaccine

Q14. Were you referred to any secondary hospital for treatment?

- Yes
- No

Q15. During delivery were you attended by skilled staff?

- Yes
- No

Q16. Did you receive medical care after delivery?

- Yes
- No

Q17. What health services did you receive post your delivery?

- Physical examination
- Counselling on breastfeeding
- Contraceptives
- Blood test for anemia
- Nutritional supplements
- Information on warning signs of problems

Q18. Were there any complications in your pregnancy?

- Yes
- No

Q19. Were the complications properly observed and taken care of?

- Yes
- No

Q20. In total, how much did you household spend for the maternal health services during your last pregnancy?

- Less than Rs.10,000
- Rs. 10,000 to 20,000
- More than Rs. 20,000

Q21. How likely is it that you would recommend your healthcare provider to a friend, family member or colleague?

- Not at all likely
- 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10
- Extremely likely

Q22. Use of prescription and over-the-counter medications during pregnancy are:

- always safe
- usually safe but should be checked by a doctor or pharmacist
- always dangerous

Q23. Before you were discharged after the child was born, did any health care provider check on your health?

- Yes
- No

Q24. Did the hospital staff listened to all your concerns?

- Yes
- No

Q25. What was the average amount of time you waited to see medical staff when you visited the clinic?

- Less than 30 minutes
- 30 min to 2 hours
- More than two hours

Q26. Which mode of transportation did you use to reach the hospital?

- Walking
- Public transportation
- Ambulance

Q27. Do you have to pay more for medical care than you can afford?

- Yes
- No

Q28. Do you get medical treatment whenever you need?

- Yes
- No

Q29. Are doctors well trained and competent?

- Yes
- No

Q.30 What benefits do you hope to see as a result of health care reform? (Please select top 3)

- Portability
- Decrease in healthcare spending nationally
- More job availability
- Increase in patients
- Standardized formulary
- Better access for children
- Increased payments
- Healthier population
- Administrative simplification
- No pre-existing conditions exclusions
- Stable business

APPENDEX - B

INTERVIEW QUESTIONS FOR DOCTORS/STAFF

Q1. What is the most common problem observed in the patients during their pregnancy?

Q2. Referring to the question above, what is the strategy to deal with the problem?

Q3. How satisfied are the staff members by their wages?

Q4. What are the different kinds of trainings you conduct for the learning of the staff?

Q5. What are the steps currently taken to improve patient care in the hospital?

Q6. How cooperative is the government's health department towards the needs of the hospital?

Q7. In the light of some recent events, what are your policies regarding the security of the patients?

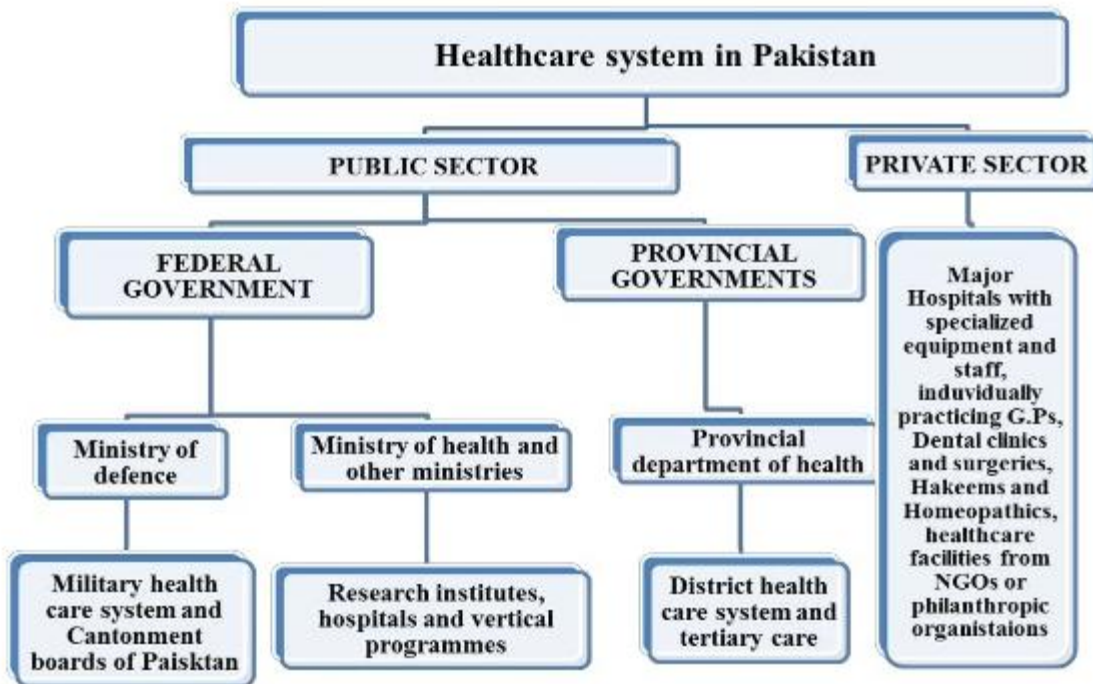
Q8. What further reforms are needed to be made?

APPENDIX - C



Source: Pakistan Demographic and Health Survey 2012-2013

HEALTHCARE SYSTEM: DELIVERY



Source: Pakistan Demographic and Health Survey 2012-2013

Factors affecting population Dynamics

Mortality Rates

Maternal Mortality Ratio (per 100 000 live births)

In a certain Country in Year 2000,

number of deaths due to maternal causes: 51,

Number of live births: 325,000

Calculate Maternal mortality ratio

Maternal mortality ratio = $51/325,000 \times 100,000$

= 15.7maternal deaths per 100,000 live births per year

Source: Pakistan Demographic and Health Survey 2012-2013

Percent distribution of currently married women age 15-49 by number of co-wives, according to background characteristics, Pakistan 2012-13

Background characteristic	Number of co-wives					Total	Number of women
	0	1	2+	Don't know	Missing		
Age							
15-19	98.4	1.6	0.0	0.0	0.0	100.0	594
20-24	97.1	2.5	0.1	0.1	0.2	100.0	2,053
25-29	97.5	2.4	0.1	0.0	0.1	100.0	2,663
30-34	95.4	4.4	0.0	0.0	0.2	100.0	2,454
35-39	94.8	4.6	0.4	0.2	0.1	100.0	2,137
40-44	95.1	4.3	0.5	0.0	0.1	100.0	1,617
45-49	95.6	3.7	0.4	0.2	0.2	100.0	1,419
Residence							
Urban	96.3	3.1	0.2	0.1	0.2	100.0	4,304
Rural	96.0	3.7	0.2	0.0	0.1	100.0	8,633
Region							
Punjab	96.5	3.1	0.2	0.1	0.1	100.0	7,374
Sindh	95.6	4.1	0.3	0.0	0.0	100.0	3,002
Khyber Pakhtunkhwa	96.6	3.1	0.0	0.0	0.3	100.0	1,855
Balochistan	91.9	6.8	0.7	0.0	0.6	100.0	553
ICT Islamabad	96.3	3.4	0.0	0.0	0.3	100.0	62
Gilgit Baltistan	96.8	2.9	0.1	0.0	0.1	100.0	91
Education							
No education	95.5	4.2	0.2	0.1	0.1	100.0	7,347
Primary	96.1	3.4	0.3	0.1	0.0	100.0	2,057
Middle	98.1	1.7	0.1	0.0	0.0	100.0	958
Secondary	96.9	2.5	0.1	0.1	0.4	100.0	1,351
Higher	97.5	2.1	0.4	0.0	0.1	100.0	1,225
Wealth quintile							
Lowest	95.1	4.5	0.2	0.1	0.1	100.0	2,501
Second	96.0	3.6	0.1	0.1	0.2	100.0	2,533
Middle	95.9	4.0	0.0	0.1	0.0	100.0	2,550
Fourth	96.1	3.3	0.3	0.0	0.2	100.0	2,677
Highest	97.3	2.1	0.3	0.0	0.2	100.0	2,676
Total	96.1	3.5	0.2	0.1	0.1	100.0	12,937

Source: Pakistan Demographic and Health Survey 2012-2013

Total fertility rates for the 1990-91, 2006-07, and 2012-13 PDHS surveys and percent change from the 1990-91 PDHS to the 2012-13 PDHS, by background characteristics

Background characteristic	1990-91 PDHS	2006-07 PDHS	2012-13 PDHS	Percent change during 1990-91 to 2012-13
	1985-90	2004-06	2010-12	
Residence				
Urban	4.9	3.3	3.2	-34.7
Rural	5.6	4.5	4.2	-25.0
Province				
Punjab ¹	5.4	3.9	3.8	-29.6
Sindh	5.1	4.3	3.9	-23.5
Khyber Pakhtunkhwa	5.5	4.3	3.9	-29.1
Balochistan	5.8	4.1	4.2	-27.6
Education				
No education	5.7	4.8	4.4	-22.8
Primary	4.9	4.0	4.0	-18.4
Middle	4.5	3.2	3.2	-28.9
Secondary or higher	3.6	2.7	2.2	-38.9
Total	5.4	4.1	3.8	-29.6

Note: Total fertility rate is per woman. The rates are calculated for the 6 years before the 1990-91 PDHS and for the 3 years before the 2006-07 PDHS and the 2012-13 PDHS.

¹ In the 1990-91 PDHS and 2006-07 PDHS, ICT Islamabad was included in Punjab.

Source: Pakistan Demographic and Health Survey 2012-2013

Percent distribution of women and men age 15-49 by current marital status, according to age, Pakistan 2012-13

Age	Marital status					Total	Number of respondents
	Never married	Married	Divorced	Separated	Widowed		
WOMEN							
15-19	85.8	13.9	0.0	0.1	0.1	100.0	4,269
20-24	49.7	49.1	0.7	0.4	0.2	100.0	4,183
25-29	20.4	77.8	0.8	0.5	0.5	100.0	3,421
30-34	7.2	90.1	0.9	0.6	1.2	100.0	2,725
35-39	3.0	93.1	0.8	0.7	2.3	100.0	2,296
40-44	2.1	89.6	0.8	0.9	6.5	100.0	1,804
45-49	1.3	87.4	0.8	0.7	9.8	100.0	1,623
Total	33.3	63.7	0.6	0.5	1.9	100.0	20,321
MEN							
15-19	97.6	2.4	0.0	0.0	0.0	100.0	1,473
20-24	78.1	20.9	0.0	0.7	0.3	100.0	1,000
25-29	45.5	54.0	0.1	0.2	0.2	100.0	956
30-34	17.2	81.4	0.8	0.4	0.1	100.0	781
35-39	6.2	92.3	0.6	0.2	0.6	100.0	627
40-44	2.6	94.8	0.6	0.4	1.6	100.0	545
45-49	1.3	96.4	0.0	0.0	2.3	100.0	602
Total	47.6	51.3	0.2	0.3	0.5	100.0	5,982

Source: Pakistan Demographic and Health Survey 2012-2013

Percentage of currently married women age 15-49 who want no more children, by number of living children, according to background characteristics, Pakistan 2012-13

Background characteristic	Number of living children ¹							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	3.7	7.2	35.1	65.5	83.2	93.2	93.4	54.7
Rural	0.8	4.8	22.1	49.9	76.1	81.2	90.8	49.4
Region								
Punjab	2.3	5.7	27.5	62.1	85.8	90.7	95.4	54.0
Sindh	0.7	5.7	28.3	49.5	69.1	77.7	89.0	46.8
Khyber Pakhtunkhwa	0.9	6.4	26.5	46.9	75.1	87.8	94.9	53.4
Balochistan	0.9	0.9	10.1	21.8	34.1	39.4	59.8	28.9
ICT Islamabad	1.3	7.5	37.3	81.8	90.6	92.1	93.2	60.3
Gilgit Baltistan	2.2	3.6	18.2	43.3	65.9	70.5	86.3	50.8
Education								
No education	1.4	6.7	21.7	49.1	73.1	82.1	90.7	55.0
Primary	3.7	3.3	23.8	57.9	85.6	91.2	94.6	50.1
Middle	1.1	3.5	26.5	65.2	80.7	84.5	95.0	46.0
Secondary	2.2	6.0	32.5	60.8	90.2	95.2	95.2	45.0
Higher	0.0	5.8	41.2	69.8	86.1	96.0	(98.2)	41.1
Wealth quintile								
Lowest	0.0	4.7	13.4	32.4	60.4	69.2	85.2	43.8
Second	0.9	4.9	22.6	47.4	75.6	76.0	90.0	49.5
Middle	0.8	4.9	21.4	60.2	78.9	95.3	94.4	55.2
Fourth	2.6	7.3	32.4	60.2	83.6	90.1	95.6	52.4
Highest	3.9	5.7	37.5	69.7	91.3	93.4	97.8	54.8
Total	1.7	5.6	27.0	55.7	78.6	85.0	91.5	51.2

Source: Pakistan Demographic and Health Survey 2012-2013

Percentage of pill and condom users age 15-49 using a social marketing brand, by background characteristics, Pakistan 2012-13

Background characteristic	Among pill users		Among condom users ¹	
	Percentage using Nova, Famila 28, or Lo Feminal	Number of women using the pill	Percentage using Sathi or Touch	Number of women using condoms
Residence				
Urban	76.6	56	93.4	532
Rural	87.0	117	94.1	427
Region				
Punjab	(76.7)	63	93.9	622
Sindh	85.8	50	95.3	192
Khyber Pakhtunkhwa	86.8	44	90.3	114
Balochistan	96.8	13	98.8	17
ICT Islamabad	*	1	85.4	12
Gilgit Baltistan	(87.9)	2	(81.7)	2
Total	83.6	173	93.7	959

Note: Table excludes 31 pill users and 170 condom users who do not know the brand name. Condom use is based on women's reports. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

¹ Among condom users not also using the pill

Source: Pakistan Demographic and Health Survey 2012-2013

Percent distribution of currently married, non-sterilized women by whether they think their husbands want the same number of children as they want, according to woman's ideal number of children, Pakistan 2012-13

Ideal number of children	Husband's desire for children				Total	Number
	Both want same	Husband wants more	Husband wants fewer	Don't know/missing		
0	30.3	26.9	1.1	41.7	100.0	73
1	48.0	37.6	2.6	11.8	100.0	81
2	59.8	27.9	2.9	9.5	100.0	1,705
3	66.7	19.9	4.2	9.3	100.0	1,897
4	64.3	21.6	4.5	9.5	100.0	4,616
5	48.0	33.6	5.3	13.0	100.0	1,095
6+	44.3	36.6	6.1	13.0	100.0	1,850
Non-numeric responses	30.6	33.7	5.8	30.0	100.0	469
Total	57.7	26.3	4.6	11.4	100.0	11,785

Source: Pakistan Demographic and Health Survey 2012-2013

