MATERNAL SATISFACTION IN PRIVATE HOSPITALS IN KHYBER PAKHTUNKHWA, PAKISTAN

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FACULTY OF ECONOMICS AND ADMINISTRATION
UNIVERSITI MALAYA
KUALA LUMPUR

2018

MATERNAL SATISFACTION IN PRIVATE HOSPITALS IN KHYBER PAKHTUNKHWA, PAKISTAN

UM-E-LAILA

DISSERTATION SUBMITTED IN PARTIAL

FULFILMENT OF THE REQUIREMENTS FOR

THE DEGREE OF MASTER OF DEVELOPMENT STUDIES

FACULTY OF ECONOMICS AND ADMINISTRATION

UNIVERSITY OF MALAYA

KUALA LUMPUR

2018

UNIVERSITY OF MALAYA
ORIGINAL LITERARY WORK DECLARATION

Name of Candidate: UM-E-LAILA

Matric No: EGF150007

Name of Degree: MASTER OF DEVELOPMENT STUDIES

Title of Project Paper/Research Report/Dissertation/Thesis ("this Work"): MATERNAL SATISFACTION IN PRIVATE HOSPITALS IN KHYBER PAKHTUNKHWA, PAKISTAN

Field of Study: SOCIO-ECONOMIC DEVELOPMENT

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MATERNAL SATISFACTION IN PRIVATE HOSPITALS IN KHYBER PAKHTUNKHWA, PAKISTAN

ABSTRACT

Maternal mortality remains unacceptably high in the developing world. Building a health care facility does not necessarily solve the problem, therefore the "quality of care" and "patient satisfaction" should be taken into consideration. While many factors can play a role, one important concern is whether the quality of service that is being offered to those who are using it meets their satisfaction level or not. This study was conducted to assess the satisfaction level of mothers with private health services in Khyber Pakhtunkhwa, and depicts the factors with which mothers are satisfied and dissatisfied. It identifies those factors which influences maternal satisfaction. It is a descriptive study with cross-sectional survey of 220 mothers who utilized private tertiary care health services in their current pregnancy. This study adopted a quantitative research approach, however to get a deeper insight, it also included the responses from mothers for the reasons of their reported level of satisfaction or dissatisfaction. The study was conducted at private sector hospitals in Peshawar, which is the capital city of Khyber Pakhtunkhwa. The sampling frame included mothers between the reproductive age of 18-49 years, who utilized the health services at the study setting in the month of November and December 2017. Non-probability, convenience sampling technique was used to select the private hospitals operating in Peshawar as the study setting. The subjects, having met the inclusion criteria, were selected from the mothers utilizing health services in private hospitals of Peshawar by convenience accessible sampling. This study used standardized PSQ-18 questionnaire to assess mother satisfaction with healthcare; which has been proven to have good reliability and internal consistency.

Mothers satisfaction with health services in private hospitals was assessed based on seven factors of financial aspect, accessibility, convenience, technical quality, interpersonal manner, communication, and time spent with doctor**.** The results suggest that 39.5% of mothers were satisfied with the general or overall satisfaction while 55.9% were dissatisfied with the services of the private hospitals. Mothers were highly satisfied with the factors of interpersonal manner and convenience. Whereas, mothers were highly dissatisfied with the factors of communication and accessibility. Multiple regression analysis was performed to determine the main drivers of maternal satisfaction in Khyber Pakhtunkhwa. All seven factors emerged as statistically significant predictors of mother‟s satisfaction level in the current study, with technical quality as the most important predictor, followed by accessibility and interpersonal manner. The inclusion of all seven predictor variables in the final regression model yields 55.7% of variation in maternal overall satisfaction, which shows the model in substantial in nature. Educational level of mothers is entered in the regression model as a dummy variable, which also showed a significant yet inverse association with maternal satisfaction. This study showed that both process and structure attributes influences maternal satisfaction. The medical factor such as technical quality of care, provider‟s conduct; interpersonal manner, communication and time spent, and the non-medical factors; accessibility, convenience, and cost of care, all emerged as significant predictors of maternal satisfaction in Khyber Pakhtunkhwa, Pakistan.

Keywords: maternal satisfaction, quality of health care, Khyber Pakhtunkhwa, private urban tertiary care hospitals, dimensions of health care.

ABSTRAK

Kadar kematian yang tinggi terhadap ibu bersalin masih berada pada kadar yang membimbangkan di negara-negara membangun. Penyediaan pelbagai kemudahan penjagaan kesihatan semata-mata tidak mampu menyelesaikan isu tersebut. Oleh itu, aspek "kualiti penjagaan" dan "kepuasan pesakit" harus titikberatkan. Walaupun banyak faktor perkhidmatan yang diketengahkan, kebimbangan utama yang timbul adalah sama ada kualiti perkhidmatan yang ditawarkan mampu memenuhi tahap kepuasan para ibu atau tidak. Kajian ini dijalankan untuk menilai tahap kepuasan para ibu mengandung terhadap perkhidmatan kesihatan swasta di Khyber Pakhtunkhwa, dan mengenalpasti faktor-faktor perkhidmatan yang memuaskan dan tidak memuaskan. Ia dapat mengenalpasti faktor-faktor utama yang mampu mempengaruhi kepuasan ibu mengandung. Kajian ini merupakan kajian deskriptif dan kaji selidik telah dijalankan terhadap 220 ibu yang menggunakan perkhidmatan kesihatan tertiari swasta dalam tempoh kehamilan mereka. Kajian ini mengamalkan pendekatan penyelidikan kuantitatif, namun untuk mendapatkan pandangan yang mendalam, ia juga merangkumi pengalaman peribadi para ibu terhadap tahap kepuasan atau ketidakpuasan yang mereka alami. Kajian ini telah dijalankan di hospital swasta di Peshawar, yang merupakan ibu kota Khyber Pakhtunkhwa. Rangka pensampelan kajian ini termasuklah para ibu yang tempoh reproduktifnya adalah antara usia 18-49 tahun, yang menggunakan perkhidmatan kesihatan di tempat kajian pada bulan November dan Disember 2017. Teknik pensampelan kebarangkalian telah digunakan untuk memilih hospital swasta yang beroperasi di Peshawar sebagai lokasi kajian. Setelah memenuhi kriteria inklusif, subjek pula telah dipilih daripada kalangan para ibu yang menggunakan perkhidmatan kesihatan di hospital swasta Peshawar sebagai pensampelan yang mudah diakses. Kajian ini menggunakan soal selidik PSQ-18 untuk menilai kepuasan para ibu

terhadap penjagaan kesihatan; yang telah terbukti mempunyai kebolehpercayaan yang tinggi dan konsisten. Kepuasan ibu dengan perkhidmatan kesihatan di hospital swasta ini dinilai berdasarkan tujuh faktor iaitu kewangan, kemudahan, keselesaan, kualiti teknikal, adab interpersonal, komunikasi, dan tempoh masa yang diluangkan bersama doktor. Keputusan menunjukkan bahawa 39.5% ibu berpuas hati secara keseluruhan manakala 55.9% tidak berpuas hati dengan perkhidmatan hospital swasta ini. Para ibu sangat berpuas hati dengan faktor perkhidmatan adab interpersonal dan keselesaan, manakala mereka sangat tidak berpuas dengan faktor komunikasi dan kemudahan yang dipamerkan. Analisis regresi berganda dilakukan untuk menentukan faktor utama tahap kepuasan ibu di Khyber Pakhtunkhwa. Kesemua tujuh faktor muncul sebagai pemboleh ubah tahap kepuasan ibu dalam kajian semasa, dengan kualiti teknikal sebagai faktor yang paling penting, diikuti oleh kebolehcapaian dan adab interpersonal. Penyertaan kesemua tujuh pemboleh ubah dalam model regresi akhir menghasilkan 55.7% variasi dalam kepuasan keseluruhan para ibu, yang menunjukkan model yang bersifat substansial. Tahap pendidikan ibu-ibu dimasukkan ke dalam model regresi sebagai pemboleh ubah, juga menunjukkan hubungan yang signifikan namun tidak selari dengan tahap kepuasan ibu. Kajian ini menunjukkan bahawa kedua-dua proses dan ciri struktur perkhidmatan mempengaruhi kepuasan ibu. Faktor perubatan seperti kualiti penjagaan teknikal, tingkah laku staf, adab interpersonal, komunikasi dan tempoh masa yang diluangkan, serta faktor bukan perubatan iaitu kemudahan, keselesaan dan kos penjagaan; semuanya muncul sebagai faktor penting yang menyumbang kepada tahap kepuasan ibu di Khyber Pakhtunkhwa, Pakistan.

Kata kunci: kepuasan ibu, kualiti penjagaan kesihatan, Khyber Pakhtunkhwa, hospital penjagaan teritari bandar swasta, program penjagaan kesihatan.

ACKNOWLEDGEMENTS

All praise and glory to Almighty Allah who gave me knowledge, courage and patience to carry out this research. I would like to express my sincere gratitude and regards to my honorable supervisor Assoc. Prof. Dr. VGR Chandran Govindaraju for his full support, valuable comments, expert guidance, understanding, consistent encouragement, intensive teaching and dynamic supervision throughout my study.

I received a great deal of help from many people in conducting this study who always encouraged and helped me. Most importantly, none of this would have been possible without the love and patience of my family. I am greatly indebted to my affectionate parents and my aunt „Shahkoko" who always pray for my success and bright future. I would like to express my faithful gratitude to my siblings; Um-E-Rubab, Abbas-Ul-Hassan, Muhammad Taqi and Muhammad Naqi for their unconditional love, support and encouragement.

Lastly, I also offer my heart felt gratefulness to all my sincere friends. I am also very thankful and owe highest regards to all the mothers and the hospitals" administration for their cooperation during my research

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LIST OF ABBREVIATIONS

AC	Accessibility
C	Communication
CON	Convenience
DF	Degree of Freedom
EFA	Exploratory Factor Analysis
Edu	Education
F.A	Financial Aspects
G.S	General Satisfaction
I.M	Interpersonal Manner
KMO	Kaiser-Meyer-Olkin
P	Significance Level
S.E	Standard Error
Sig	Significance
Std.	Standard
Sec	Secondary
T.Q	Technical Quality
T.S	Time Spent with Doctor

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

The eight Millennium Development Goals (MDGs) adopted by the international community in the year 2000 was improving maternal health. Under MDG (Target 5A), countries committed to reduce maternal mortality ratio by three quarters between 1990 and 2015. Since 1990, the maternal mortality ratio has declined by nearly half worldwide. Despite this, globally there were approximately 830 mothers dying each day during pregnancy or either from childbirth complications, which account for 303,000 deaths in 2015 (UN MDGS, 2015). Providing good health care to mothers during pregnancy and at the time of childbirth is crucial for saving mother‟s life and the life of her child. Reaching a health care facility does not, however, guarantee the mortality or morbidity of the mother or the child if the service and its quality is ineffectual. Several measures have been adopted to prevent maternal deaths in the world, but the emphasis has been laid upon the provision of the health services rather than on the quality of the services provided. Quality of care is defined "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (Chassin, 1996).

Globally, maternal mortality remains unacceptably high. To enhance the situation, building health care facility does not necessarily solve the problem, but the quality of care should be taken into consideration. As maternal fatality take place even after accessing the health care services and the high rates of mother‟s mortality and morbidity are associated with low quality of care, the quality of care becomes more significant (D'Ambruoso et al., 2005). A strong correlation between the patterns of utilization and the quality of those services

offered by the hospital also make the quality of care provided a significant factor (Hulton et al., 2000)

For this reason, mother‟s perception vis-à-vis the quality of care is paramount since they are the sole consumers of this service (Brown, 2007). Therefore, what constitutes the quality of care is determined by the patients‟ perceptions (Proctor, 1998; Teijlingen et al., 2003). Patients‟ health outcomes are highly influenced by their viewpoints regarding the quality of care which is deemed important (Becker & Tsui, 2008). Also, mothers‟ satisfaction level is widely recognized as a significant component of the quality of care (Salomon et al., 1999), in particular satisfaction with the care provided by health care services is a crucial factor (Rudman et al., 2007). The concept of "patient satisfaction" is defined as "multiple evaluations of distinct aspects of health care which are determined by the individuals‟ perceptions, attitude and comparison processes" (Rudman et al., 2007). Most of the studies have emphasized on delivery of health services, whereas the quality of care for mothers have received less attention. Therefore, there is a need to study the quality of care as it has profound influence upon women, which impact their well-being, acceptability and uptake of the services (Hulton et al., 2000).

The World Health Organization promotes births attended by skilled health personnel to decrease the rate of maternal mortality and suggests that mother‟s satisfaction level be assessed to enhance the efficiency and quality of health care (WHO, 2004). Patient satisfaction is regarded as a subjective and dynamic perception of the extent to which the expected health care is received (Larrabee & Bolden, 2001). In the early 20th century the industrialized nations have successfully halved the maternal mortality rate by making the specialized care at delivery accessible and providing efficient and safe technology at the hospital, this matter needs to be focused in the context of Asia (Hundley et al, 1997).

Although the maternal mortality rates are 14 times higher in developing regions when compared to developed ones, still just half of pregnant mothers receive the minimum standard for prenatal care (UN, 2015).

1.2 Pakistan Health Care Delivery System

Pakistan health care delivery system encompasses the private sector and public sector which comprises of federal Ministry of National Health Services and Regulations and provincial department of health. Policy-establishment, organization, research, technical assistance, seeking foreign support and training are some of the core responsibilities of federal government. While administration and provision of health services are the responsibilities of provincial and district health departments. The private health sector comes beneath the governing bodies of federal and provincial ministers and departments of health. In Pakistan, health care provision to the consumers is systematized through four modes of preventive, promotive, curative, and rehabilitative services.

"The public health delivery system is a three-tiered system consisting of; outreach services (Expanded program of Immunization EPI, Maternal & Child Health, malaria program) along with Primary Health Care PHC units (comprising both the Basic Health Units, BHU and the Rural Health Centers RHC), Secondary care units (Tehsil or Taluka Headquarters Hospital), and Tertiary Care facilities (District Hospitals and large teaching hospitals)" (Nafees & Nayani, 2011, p. 797). The private health sector encompasses formal and informal sectors which are predominantly fee for service system. The formal sector includes allopathic or mainstream modern scientific practitioners and homeopaths, while informal sector comprises of traditional therapists. Private hospitals operating in Pakistan provide services to majority of the population, with only 21% utilizing health services

provided by public sector, and the remaining larger share of 79% utilizes private health services, which also includes informal services (Zaidi & Nishtar, 2011). Globally, Pakistan has an all encompassing massive public health provision systems but for the most part it remained underutilized (Nishtar, 2006). However, in recent years government of Pakistan has emphasized on decentralizing the health system, which is aimed towards developing district level health systems (Mumtaz et al., 2014).

The provincial and district health departments, para-statal organizations, social security institutions, non-governmental organizations (NGOs) and private sector finance and provide services mostly through vertically managed disease-specific mechanisms. The country‟s health sector is also marked by urban-rural disparities in healthcare delivery and an imbalance in the health workforce, with insufficient health managers, nurses, paramedics and skilled birth attendants in the peripheral and rural areas (WHO, 2012). In Pakistan, the affordability of health services is particularly important since 91.2% of private health expenditure is out-of-pocket, compared with a global average of 44.5% (World Health Organization, 2014b). Despite extensive interventions, the lack of emphasis to target widespread inequities leads to low coverage rates for delivery of important services and unchecked standards of quality of care, along with huge urban-rural disparities in Pakistan (Bhutta et al., 2013).

1.3 Problem Statement

In the context of a developing country like Pakistan, the matter regarding mother‟s satisfaction with the quality of care needs deliberate study because women ethnic and racial backgrounds influence the viewpoints about care provided to them (Becker & Tsui, 2008). It appears that in Pakistan limited studies have been conducted regarding mothers‟

satisfaction. Sensing a gap in the existing literature, this study will assess the satisfaction of mothers as the consumers of health services in Khyber Pakhtunkhwa with the quality of the services offered to them. This research will be an attempt at comprehending consumers who are mothers‟ professional views of health care, as limited studies have attempted to do this. This study will provide an answer to the need of developing consumer-orientation in health services, as these clients are women (Teijlingen et al., 2003). This cross-sectional study will determine if those mothers who are utilizing the health care services are satisfied with the quality of care by evaluating the level of satisfaction with the prevailing facilities. In addition, it will also propose approaches to improve the quality of health care in a country like Pakistan. It is expected that this study will be beneficial for the mothers since it will motivate them to pursue health related assistance, compliance with the treatment provided and adhere to the same health practitioner, which eventually will result in better and improved health outcomes (Pope et al., 2002; Johnson et al., 2002).

Pakistan is the fifth most populous country in the world with a rapid population growth rate. A majority (64%) of the population resides in rural areas. The life expectancy rate for men and women are 66.5 and 64.5 years respectively and the overall literacy rate in the 15–45-year age group is 49% (Demographic, 2013). Corresponding gains in the country‟s health indicators, especially across maternal, new born, and child health (MNCH) and nutrition, have fallen behind other low- and middle-income countries with comparable economies. The maternal mortality ratio (MMR) has dropped from 521 in 1990 to 332 in 2012 (WHO, 2014), with the current rate of 178 per 100,000 live births. However, the complications arising during pregnancy and childbirth is the main cause of mortality for mothers aged 15-45 years (WHO, 2014). Among all South Asian countries of the world except Afghanistan, Pakistan has been ranked highest in terms of “lifetime risk of maternal

death" (WHO, 2014). The six countries which account for nearly 50% of maternal mortality worldwide includes Pakistan as well (WHO, 2014). It accounts for about 20% of the 8000 annual fatalities among mothers of child bearing age. There exist huge variations in maternal mortality rate not only between provinces but also urban and rural parts of the country. The mortality rate in rural areas is twice as compared to urban parts. Apart from medical causes, certain other factors which includes lack of education and health and transport services and dearth of health care providers, are among the major reasons for high mortality rates (Choudhry, 2005). The under-5 mortality rate is 81 per 1000 live births, which is still high when compared to other countries. Almost three quarter, about 73% of mothers receive antenatal care in some form from a skilled provider (Demographic, 2013), however neither the availability of services indicate that it will be used by them, nor does the utilization guarantee best outcomes for mothers. Research evidence shows that 80% of population use private or informal health facilities. 52% of this group utilizes services of private hospitals (Demographic, 2013).

Khyber-Pakhtunkhwa, has a population of 30.51 million (Pakistan Census 2017). Across regions, the proportion of mothers reporting that they received antenatal care from a skilled health provider varies markedly, ranging from 94 percent in ICT Islamabad, ANC coverage is 61 percent in Khyber Pakhtunkhwa and 78 percent in Punjab and Sindh (PDHS 2012-2013). Khyber Pakhtunkhwa (KP) confronts a high incidence of preventable deaths among mothers, infants, and young children. Maternal deaths account for 27 percent of mortality among women of reproductive age (PDHS 2006-2007). In 2012, the maternal mortality ratio (MMR) was estimated at 206 per 100,000 births (Sathar et al.,2014). These ratios currently translate into an annual death toll of nearly 1,700 women, primarily due to conditions that could easily be prevented with basic healthcare. Khyber Pakhtunkhwa‟

share of out-of-pocket expenditure for healthcare (76.6%) is the highest of all provinces (Lorenz & Khalid, 2009). Elevated levels of out of pocket expenditure for health services are a barrier to accessing care when needed. An analysis in 2002 showed that over 90% of expenditure on drugs and medicines in the province was private and that nearly 60% of expenditure on health was paid by households (DOH, KPK 2016-2017). The referral system is still weak in KPK. This poor referral system leads to underutilization of primary healthcare and enormous burden on tertiary care facilities. This situation leads to higher unit costs, adversely affecting the quality of care. Quality health care cannot be achieved without sound professional education, although recruitment of doctors, dentists, nurses and paramedics has been made in KPK, WHO standard is yet to be achieved (DOH, KPK 2016-2017). Conservative social behavior inhibits access of mothers to health facilities and decision making regarding birth spacing and desired number of children. Thus, many mothers fall an easy prey to avoidable mortality. In the context of a developing country like Pakistan, the matter regarding women satisfaction with the quality of care needs deliberate study because women ethnic and racial backgrounds influence the viewpoints about care provided to them (Becker et al. 2008). This study will be an attempt at comprehending consumer and that is mothers‟ professional views of health care, as limited studies have attempted to do this in Khyber Pakhtunkhwa.

This cross-sectional study assesses the satisfaction of mothers with health care services, and identify factors with which mothers are satisfied and dissatisfied using data from Khyber Pakhtunkhwa, Pakistan.

1.4 Research Questions

The study establishes three important questions that requires detail investigations particularly on the current level of maternal satisfaction and the factors driving those satisfactions. The specific research questions are:

1. What is the level of maternal satisfaction in private hospitals in Khyber Pakhtunkhwa?
2. Which dimensions of health care in Khyber Pakhtunkhwa are mothers satisfied with and those with which they are dissatisfied?
3. What factors drive the maternal satisfaction?

1.5 Research Objectives

The specific objectives of the study are as follows:

1. To examine the level of maternal satisfaction among mothers in private hospitals.
2. To identify the dimensions in which mothers are satisfied or dissatisfied.
3. To assess the main drivers of maternal satisfaction.

1.6 Scope of Study

This study aims to assess the quality of care i.e. patient satisfaction level in private hospital of Khyber Pakhtunkhwa from mother's perspective. Private health care system in its domain have unique ethics, characteristics and privileges. On this basis, it is interesting to study how this health care unit operates to provide best quality health services to the mothers. Tertiary level private hospitals are selected in Peshawar for the process of data collection to determine mother‟s perception about the care they received. Between November and December 2017, pregnant mothers seeking health services at private hospital in Peshawar were invited to participate in the study. Only mothers after the

prenatal care consultation involved and participated in the study. The convenience sampling technique is used to select the number of respondents, and data is collected using standardized questionnaire, the Patient Satisfaction Questionnaire PSQ-18 (Short Form).

1.6.1 Quality of Care

Quality of care has become an integral part of our lives (Andaleeb, 2003; Eiriz et al., 2005). Everyone is continuously seeking excellent quality of goods and services. Satisfactory quality of healthcare is a fundamental human right. Better quality of health care results in higher satisfaction level for the consumers (patients and society in general), personnel, providers and improved functioning of the organization (Hassan, 2005; Hudelson et al., 2008).

Quality, because of its subjective nature and intangible characteristics, is difficult to define. Healthcare service quality is even more difficult to define and measure than in other sectors (Tafreshi et al., 2007). Distinct healthcare industry characteristics such as intangibility, heterogeneity and simultaneity make it difficult to define and measure quality (Naveh & Stern, 2005). The complex nature of healthcare practices, the existence of many participants with different interests in the healthcare delivery and ethical considerations add to the difficulty (Eiriz et al., 2005).

Health care quality as defined by Donabedian (1980); “the application of medical science and technology in a manner that maximizes its benefit to health without correspondingly increasing the risk”. Øvretveit (1992) defined quality of care as the “provision of care that exceeds patient expectations and achieves the highest possible clinical outcomes with the resources available”.

1.6.1.1 Donabedian Model

According to the classical Donabedian framework dimensions of care are categorized into structure, process and outcome that has been utilized in numerous previous research evaluating patient viewpoint regarding the care provided to them (Baltussen et al., 2002). This study will also use the Donabedian model to determine mother‟s level of satisfaction on quality of health care provided in Khyber Pakhtunkhwa. Donabedian suggested that a good structure can increase the possibility of improved process, which subsequently increases the prospects of better outcome, such as patients‟ satisfaction (Donabedian, 1980). The Donabedian model will be adopted in this study since it has received significant empirical validation for its ability to produce evidence from which inferences can be drawn on quality of care (Donabedian, 1980). The impact of medical and health care services on the well-being of the patients is evaluated in the outcome domain of the model (Donabedian, 1988). This last element of quality of care is the desirable or undesirable modification in health care services, observable in the efficacy and quality of the care provided (Donabedian, 2005). Therefore, the most significant domain of quality is the outcome because the fundamental objective of health care services and the health conditions of patients are evaluated and observed in this part. This study therefore aims to determine mothers‟ level of satisfaction in urban private tertiary level health care facilities in Khyber Pakhtunkhwa.

1.7 Research Design

1.7.1 Population and Sample Frame

The population of the study consists of all mothers who utilized health services provided at private hospitals in Khyber Pakhtunkhwa. The sample framework is confined to the private

sector hospitals located in Peshawar. Peshawar is the capital and the largest city of Khyber Pakhtunkhwa.

1.7.2 Sample Size and Sampling Technique

The sample will be based on pregnant mothers between the reproductive age of 18-49 years who are utilizing private health care services at the study setting. Convenience sampling technique will be used to select the number of respondents and the private hospitals operating in the city of Peshawar.

1.7.3 Data Collection Instrument

Globally, the Patient Satisfaction surveys are used widely as indicators for assessing quality of care in health. This research will use a standardized structured questionnaire, known as the Patient Satisfaction Questionnaire, PSQ-18 (Short Form) for the process of primary data collection. The questionnaire will include two parts. Part A tapping demographic information of the respondents (mothers) and part B tapping patient satisfaction (mother‟s satisfaction). Mothers satisfaction (general satisfaction) with health services will be assessed based on seven subscale factors of technical quality, interpersonal manner, communication, financial aspects, time spent with doctor, and accessibility and convenience**.**

1.8 Significance of Study

The findings from this research will add knowledge to the literature by evaluating how Donabedian quality of care framework might describe mother‟s level of satisfaction on quality of care and provide suggestions for the improvement of quality of care in the context of Khyber Pakhtunkhwa., This in turn will help indicate the dimensions which

needs more deliberation in private health sector. This study will be beneficial in specifying those aspects of health care that needs intensive deliberation while evaluating the quality of health care or intervene for the purpose of improvement by comparing public and private sector facilities. This study will provide measures to obtain mothers perceptions on the services delivered to them and can assist the suppliers in health sector, hospital administrators and policy makers to thrive together for achieving maximum possible mother‟s satisfaction with healthcare services provided in both public and private sector.

1.9 Structure of the Study

It is useful to provide a brief outline on the organization of the chapters. A five-chapter thesis format was employed in this study. The current chapter provide the background and introduction of the study and the major theme to be investigated within the context under examination.

Chapter two discusses an intensive review of the literature relevant to maternal satisfaction, quality of care, patient satisfaction, and theoretical frameworks. It also provides the theoretical base for this thesis. Finally, a conceptual model that serves as the base of this thesis is presented.

Chapter three presents a comprehensive methodological procedure conducted to obtain the essential data for this research. Selection of research approach, method and instrument of data collection, sampling procedure and process of fieldwork survey are discussed in this chapter.

Chapter four presents the results from the analysis of the data which are interpreted statistically. The findings are explained by responding to each research questions developed in the preceding chapters.

Chapter five presents the discussion and conclusion of the study. It will also highlight the salient implications of this study. The limitations experienced by the researcher in conducting the study are discussed. Possible avenues for future research wrap up the thesis.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature related to the proposed model used in this research. Section 2.2 presents the concept of quality of care to provide a background for discussing the maternal satisfaction. Section 2.3 discusses the theoretical frameworks developed to study quality of care in healthcare sector. It further explains the Donabedian framework and its dimensions of care which are categorized into three; structure, process and outcome, which is utilized in this research. Section 2.4 describes the concept of patient satisfaction and literature regarding measurement of patient satisfaction. Section 2.5 explains the concept of maternal satisfaction and examine the determinants of maternal satisfaction. Section 2.6 presents the conceptual framework of the study which includes the constructs forming the proposed model. Section 2.7 provides the summary of the chapter.

2.2 Quality of Care

Quality of healthcare is a multi-dimensional concept. Goodlee (2009) defined quality care as "clinically effective, safe and a good experience for the patient". Hulton et al., (2000) defined quality as "the degree to which maternal health services for individuals and populations increase the likelihood of timely and appropriate treatment for the purpose of achieving desired outcomes that are both consistent with current professional knowledge and uphold basic reproductive rights". The Institute of Medicine (IOM) defined quality maternal and newborn care as "the care that is safe, effective, patient-centered, timely, efficient and equitable". This definition of quality of care is all inclusive since it involves three significant components which are medical, interpersonal manner and contextual.

Donabedian (1980) classified quality of healthcare into three components which are amenities, technical quality, and interpersonal quality. The amenities are the facilities and services provided by the health care organization. Technical quality refers to the efficient care provided which in turn produces feasible health gain. The fulfillment of patient preferences and needs relates to interpersonal quality. Donabedian later proposed another framework for evaluating quality of care which is the triad model of structures, processes and outcomes. The characteristics of the settings in which care is delivered refers to structure. It includes all the components such as equipment, staff and resources at the health facility. Process encompasses every aspect of providing health care and is associated with the communication within health practitioners and between patients and practitioners. Outcome emphasis on the consequences of the care provided in the health facility or the end result (Donabedian, 1980; Donabedian, 1988).

Grönroos (1984) classified service quality in two types; "technical and functional quality". Technical quality relates to what is offered and received that is the provision of the services or the outcome of the services. While functional quality refers to how the services are being offered and received, the provision process or the manner in which the services are received by the customers.

Maxwell (1984) distinguished six dimensions of quality of care; "effectiveness, acceptability, efficiency, access, equity and relevance". Zyzanski et al., (1974) employed three determinants in order to evaluate quality of healthcare; "personal relationship", "convenience" and "professional competence". Baker (1990) focused on "consultation time", "professional care" and "depth of relationship". Another eight dimensions identified by Tomes and Ng (1995) included "empathy", "understanding of illness", "mutual respect", "dignity", "food", "physical environment" and "religious needs".

Camilleri and O'Callaghan (1998) distinguished seven elements to assess the quality of hospital services; "professional and technical care", "service personalization", "price", "environment", "patient amenities", "accessibility" and "catering".

Andaleeb (1998) considered five attributes for quality evaluation in healthcare; "communication", "cost", "facility", "competence" and "demeanor". Hasin et al., (2001), identified another five dimensions which are "communication", "responsiveness", "courtesy", "cost" and "cleanliness".

Walters and Jones (2001) in their study used "security", "performance", "aesthetics", "convenience", "economy" and "reliability" for assessing service quality in hospitals. Jabnoun and Chaker (2003) considered ten determinants for assessing service quality of hospitals which includes; "tangibles", "accessibility", "understanding", "courtesy", "reliability", "security", "credibility", "responsiveness", "communication" and "competence".

2.3 Theoretical Frameworks

Ware et al., (1983) performed most of the initial theoretical work related to the concept of patient satisfaction and classified it into eight dimensions which includes; "interpersonal manner; technical quality of care; accessibility/convenience factors; finances; efficacy/outcomes; continuity of care; physical environment; and availability". This taxonomy has become the basis of much of the work later conducted on patient satisfaction. A meta-analysis of the satisfaction literature distinguished the certain additional dimensions such as "overall quality; amount of information; bureaucracy/organization; and attention to psychosocial problems" (Hall & Dornan, 1988).

Øvretveit (1992) proposed a system for the improvement in quality of care in health based on three distinct dimensions of "professional quality, client quality and management quality". Professional quality is related to professionals" perceptions of whether expertly evaluated client demands have been fulfilled by employing the appropriate methods and practices. Client quality is based on whether the direct recipients feel they have received what they desired from the services provided. Whereas, the management quality is to ensure that the amenities are supplied in a resourceful manner.

Joss and Kogan (1995) in their model of quality of care, distinguished the concept in terms of three dimensions; "technical, systemic and generic quality". Technical quality is related to the expert professional matter of work within a specified area. Systemic quality relates to that of processes and systems which functions across the boundaries between areas of work. Generic quality is concerned with the inter-personal manner and relationships aspects of quality.

The classical Donabedian framework which categorizes the dimensions of care into structure, process and outcome become the theoretical foundation in numerous research related to patient viewpoints which developed consumers" capability to assess quality of care in terms of elements of structure, process and outcome of care (Haddad et al.,1998; Andaleeb, 2001; Baltussen et al., 2002). Donabedian"s (2002) model not only emphasis on the role of the provider but it is more ecological since it focuses on several other factors which influence health. Donabedian (2002) includes "acceptability" as a significant aspect of care, which is defined as "conformity to the wishes, desires, and expectations of patients and their families". Acceptability constitutes of the following elements; "accessibility; patient-provider relationship; amenities of care; patient preferences in terms of effects, risks and cost of care; and what patients consider as fair and equitable" (Donabedian, 2002).

Donabedian (2002) views structure and process as affecting outcome. Donabedian (2002) defines outcome as “the changes in individuals that can be attributed to health care, including changes in health status, changes in knowledge, changes in behavior, and satisfaction with the care received”. Donabedian (2002) indicates that in order to make inferences about the three approaches in the framework, there must be a predetermined relationship among the structure, process, and outcome. Donabedian (2002) suggests the relationship between process and outcome is often imperfectly known since patients vary in their medical, social, and psychological characteristics, and these characteristics are proposed to influence outcomes either independently of process or by interacting with process.

Donabedian (2002) proposes that having the needed equipment and qualified personnel as part of the structure is related to process aspects, including expertly executing technical care with an empathetic, participatory, and patient-practitioner interaction, and is associated with patient satisfaction. Kiesler and Auerbach (2003), in a review of the literature, identify that physician communication during medical visits has been shown to consist of interwoven instrumental behaviors (that execute the physician‟s expertise in diagnosis and treatment) and affective/socio-emotional behaviors (that establish interpersonal relationships). As Donabedian (2002) asserts, it is the interpersonal relationship that is the vehicle by which technical care is implemented. In addition, Donabedian (2002) suggests that the patient-provider relationship is perhaps the most sensitive indicator of the persistence of differences adverse to the underprivileged in the organization and delivery of care. Donabedian‟s (2002) framework guides researchers to focus on the structural aspects of care and processes related to the quality of care, including the nature of patient-provider interpersonal relationship in assessing satisfaction. The consistency of Donabedian‟s (2002)

propositions with the evidence on patient satisfaction provides a solid foundation upon which to further develop knowledge on mother‟s satisfaction with health care.

A 20-items scale for evaluating patient perception of health care with elements of human resources, health services and healthcare provision in Guinea was developed by Haddad et al., 1998 (Haddad et al., 1998). This scale was further modified and examined in Burkina Faso and rural Vietnam (Baltussen et al., 2002, Duong et al., 2004). In a facility-based research carried out in Bangladesh, five elements of perceived quality of health care were reported by Andaleeb which includes; "responsiveness, assurance, communication, discipline and payment of bribes" (Andaleeb, 2001). A framework was specially formed by Hulton, Mathews and Stones for quality of maternity health care to ease the process of evaluation in institutional settings (Hulton et al., 2000). This framework perceives quality of care as the provision and experience of care. It comprises of six domains for provision of health care; "human and physical resources, referral system, MIS, appropriate technologies, internationally recognized good practice and management of emergencies". While the experience of health care comprises of domains such as: "human and physical resources, cognition, respect, dignity and equity and emotional support". This model was also utilized in evaluating the quality of care in maternal services in India (Hulton et al., 2007).

However, Donabedian‟s (2002) structure, process, and outcome framework was deemed to provide an appropriate framework to examine pregnant mother‟s satisfaction with health care.

2.3.1 Structure

This section identifies the structure, process and outcome attributes related to satisfaction identified in the literature. Donabedian (2002) proposes that structural aspects of care, such

as a properly functioning appointment system, and pleasant and comfortable surroundings are associated with satisfaction. Continuity of care and accessibility have also been identified as important to patient satisfaction. Patients who received a high proportion of their care from their primary care physician, particularly those who had long-term relationships with their physicians, were more likely to be satisfied with their care (Donahue et al., 2005; Rodriguez et al., 2007; Saultz & Albedaiwi, 2004). Anderson, Camacho, and Balkrishnan (2007) examined the relationship between wait time and patient satisfaction in primary care, and found that longer wait times were associated with lower patient satisfaction. Patient dissatisfaction associated with longer wait times was, however, substantially reduced by increased time spent with the physician. Likewise, Bikker and Thompson (2006) conducted a secondary analysis of data from a national telephone survey in Scotland, and found that time, physical facilities, and access were predictors of satisfaction in general practice. Physical facilities and access were predictors of satisfaction with outpatient services.

Many of the structural characteristics found in the general satisfaction literature were also found in the satisfaction with maternal care studies. These characteristics included waiting time in the setting (Erci & Ivanov, 2004; Handler et al., 2003); continuity of provider (Handler et al., 1996); time to get an appointment; number of providers seen during a course of care (Handler et al., 2003); number of prenatal visits (Villar et al., 2001); and the physical environment (Handler et al., 2003). Ivanov (2000) found that convenience of prenatal care services was significantly related to satisfaction.

2.3.2 Process

As identified by Donabedian (2002), the characteristics of health care processes provide discriminating and valid judgements about the quality of care. Technical care is described as including treatment, prevention, and patient education. Attributes associated with "technical quality" included skillful execution of tasks, knowledgeable explanation of procedures, and maintenance of practice standards (Ware et al., 1978). Sword et al. (2012), in their qualitative study on pregnant women"s and providers" perspectives of the quality of prenatal care, found pregnant women identified the value of screening and assessment, particularly tests and measurements, as part of quality prenatal care. Tests and measurements were seen as providing reassurance that the pregnancy and fetal development were progressing as they should. The availability of supplementary services was also associated with satisfaction (Handler et al., 2003).

Little et al. (2001), in a study on the relationship between perceptions of patient centeredness and satisfaction in general practice, found that the main independent predictors of satisfaction were the patient"s perception of communication (a sympathetic provider interested in the patient"s concerns and expectations) and a positive provider approach. The model predicted that satisfaction with the consultation explained most of the variance. Communication was the strongest predictor of satisfaction.

There is also evidence to suggest that empathetic patient-centered interactions with health care providers not only improves patient satisfaction (Haslam, 2007; Kim, Kaplowitz, & Johnston, 2004; Norfolk et al., 2007; Zachariae et al., 2003), but also enablement (Mercer et al., 2002), and it may improve health outcomes (Price et al., 2006; Bikker et al., 2005; Neumann et al., 2007).

Provider attributes have also been associated with satisfaction with maternal care. Ivanov (2000) reported that the physician‟s behavior was significantly related to satisfaction with prenatal care. Handler et al. (1998) found that the two most important variables affecting satisfaction with prenatal care were communication with the provider, and whether the provider explained procedures. Communication had explanatory power even though women were very satisfied (Handler et al., 1998). More specifically, the most important determinant was whether the provider explained procedures (Handler et al., 1998). Evidence has also been found for negative experiences with health care providers and decreased patient satisfaction with prenatal care (Ivanov, 2000).

2.3.3 Outcome

The impact of medical and health care services upon the health condition of the patients is evaluated in the outcome model (Donabedian, 1997; Donabedian, 2002). Outcome is the last element of quality of care model, which is the necessary and suitable or undesirable modifications in health services, that are displayed in the efficiency and attributes of the care delivered (Donabedian, 2005; Bowling, 2014). Since the foremost objective of health facilities and the wellbeing of the patients are evaluated in this domain, therefore it is regarded as the most significant element of quality of care (McDonald et al., 2007). In the outcome domain, the major emphasis is on constant examination of patient‟s health condition, satisfactory level and knowledge status. Outcome refers to the modifications because of health facilities, which are observed with enhancing the health condition and knowledge of the individuals, along with the satisfaction level with health services provided to them. The impact of health services on individuals‟ health condition and the manifestation of health supplied on patients‟ condition can be termed as outcome. In general, it shows the emotional and societal changes because of the health care supplied in

present and future health condition of the patient (Donabedian, 1997; Donabedian, 2005). Consequently, when best quality health services are offered, it will help in the reduction of signs related to patient‟s ailment, along with delay in health problems, which in return will improve patient‟s ability to deal with health issues, hence leading to greater satisfaction level for the patients and their families (Donabedian, 2002).

2.4 Patient Satisfaction

There is a lack of agreement which exist in the literature when it comes to define patient satisfaction concept in health care. Patient satisfaction is defined as per the quality measurement paradigm by Donabedian, as "patient-reported outcome measure while the structures and processes of care can be measured by patient-reported experiences" (Bjertnaes et al., 2012). Ahmed et al., (2012) and Jenkinson et al., (2002) indicated that patient satisfaction is a concept which emerges to signify approaches and opinions regarding care or attributes of health care. However, Mohan et al., (2011) represented patient satisfaction in the form of patients‟ outlooks, sentiments and feelings towards healthcare services offered to them. Patient satisfaction is also defined as a "degree of congruency between patient expectations of ideal care and their perceptions of real care received" (Ahmad et al., 2011). Patient satisfaction have long been considered as a significant component when measuring health outcome and quality of care (Zainab et al., 2017)

2.4.1 Measurement of Patient Satisfaction

Patients‟ assessment of health care is an accurate instrument to offer the prospect for development, supervise healthcare functioning of plans related to health, improve planned decision making, proposing a high standard for all health institutions, structure approaches

for efficient administration, fulfill the expectations of patients, and cut expenses (Bjertnaes et al., 2012; Ahmed et al., 2012; Castle et al., 2005). Moreover, because of the inclination of the health care system towards focusing on patient targeted health care, the phenomena of patient satisfaction consider the participation of patients in decision making and as stakeholders in enhancing the quality of care in health services (Ahmed et al., 2012; Clever et al., 2008). There exist a considerable association between assessing patient satisfaction and continuous utilization of the same care when the patients who are satisfied with the care are inclined to conform with the treatment offered and consult the same health suppliers (Mohan et al.,2011) Patient satisfaction signifies a fundamental indicator of interaction and behavior related to health (Schoenfelder et al., 2011).

The two basic approaches for assessing patient satisfaction includes quantitative and qualitative. However, the quantitative method offers more precise approaches for measuring patient satisfaction. According to the literature, generally the evaluation instrument utilized for patient satisfaction research includes standardized questionnaires, which are either researcher-administrated and on telephone or self-reported (Urden, 2002; Quintana et al., 2006).

There are numerous types of survey instruments for assessing patient satisfaction with care. These includes the questionnaires offered by private suppliers, although these are unpublished and the validity and reliability of those are unclear. A second type of survey tools which are readily available in substantial number are the standardized surveys which are widely used like consumer assessment health plans (CAHPS) and patient satisfaction questionnaires; PSQ-18. These survey instruments have the benefit of good internal validity and reliability (Dawn & Lee, 2003). The third kind encompasses those which are internally constructed by utilizing some questions from other standardized questionnaires or by

developing a completely new questionnaire (Dawn & Lee, 2003). The patient satisfaction assessment instruments should have a good reliability and validity for appropriate functioning and to accomplish the key purpose of measuring patient‟s viewpoint regarding health care (Urden, 2002). In the health care industry, the assessment of patient satisfaction has developed into an emerging practice, since researchers and professionals investigate the factors which influences patient‟s compliance, retainment and commitment to care (Ford, 2017).

2.5 Maternal Satisfaction

The theoretical models of patient satisfaction have usually been used to define the concept of maternal satisfaction (Donabedian, 2002; Andaleeb, 2001). However, it is regarded as a multidimensional concept, which is highly influenced by a wide range of determinants (Christiaens & Bracke, 2007). It is therefore also defined as "positive evaluation of distinct dimensions of childbirth" (Linder-Pelz, 1982). The concept of patient satisfaction has acquired a fundamental position in health institutions‟ administration plans and policies globally (Dzomeku, 2011). The factors influencing maternal satisfaction comprises of all the dimensions across structure, process and outcome of care.

2.5.1 Determinants of Maternal Satisfaction

A large number of factors which influences maternal satisfaction emerged from the literature.

2.5.1.1 Physical Attributes

Efficient administration and better physical attributes appeared to be important in mother‟s affirmative evaluation of the maternal services and the health care facility (Tetui et al.,

2012). As found in studies conducted in India and Nigeria, these attributes encompass improved hospital infrastructure with water and electric provision, beds, hygiene and cleanliness, good room size, sufficient waiting spaces and seating (George, 2002; Ugwu et al., 2007). The availability of the services such as good waiting space, less waiting time, clean lavatory and drinking water at the health facility was assessed as „good" by the mothers who were more satisfied as compared to those mothers who assessed the services provided as „bad" in Bangladesh (Hassan, 2007). It is also evident that effective administration improves access to facilities and streamlined patient experience and consultations (Hassan, 2007).

2.5.1.2 Cleanliness

Research conducted in Gambia, Thailand and Iran discovered that well maintained housekeeping, cleanliness and good sanitation upkeep were significant determinants of satisfaction (Cham et al, 2009; Jallow et al., 2012; Chunuan et al., 2003; Simbar et al., 2009). An important predictor of satisfaction in nursing based health facility in Thailand was well maintained housekeeping facility (Chunuan et al., 2003). In Gambia, the regular changing of beddings leads to greater satisfaction with health care (Cham et al., 2009).

2.5.1.3 Availability of Personnel

Studies conducted in India and China found that the availability of nurses, staff and doctors at all times, specifically emergencies, is a significant determinant of good health care (George, 2002; Lomoro et al., 2002). One of the core reason for dissatisfaction of mothers in Nigeria and Ghana was when the nurses were unavailable and staff was inadequate to attend them, specifically during labor pain (Fawole et al., 2008; D"Ambruoso et al., 2005)

2.5.1.4 Availability of Medications, Equipment and Facilities

The provision of medicines, basic supplies such as thermometers and blood pressure apparatus, emergency services such as blood transfusion, and laboratory facilities emerged as fundamental determinants of maternal satisfaction in research carried out in Nigeria, Uganda, and Oman (Butawa et al., 2010; Tetui et al., 2012; Ghobashi & Khandekar, 2008). In India and Nigeria, even when essential medication and drugs were unavailable occasionally, it leads to dissatisfaction with health services (Banerjee, 2003; Fawole et al., 2008). Moreover, in Gambia, when complications arise for arranging emergency supplies like blood transfusion facility and blood provision, it causes dissatisfaction with the health care among mothers (Cham et al., 2009).

2.5.1.5 Convenience

Timely attention provided to mothers emerged as an important predictor of maternal satisfaction (Changole et al., 2010; Liabsuetrakul et al., 2012). One of the factor that mothers‟ recall as scarcity of facilities is due to the extended waiting time in the health facility, which appears as a crucial predictor in studies conducted in Gambia, Argentina, Saudi Arabia, and Sri Lanka (Jallow et al., 2012; Nigenda et al., 2003; Moawed et al., 2009; Senarath et al., 2006). In Bangladesh and Nigeria, reduction in waiting duration appeared to be a fundamental factor for improvement in services (Das et al., 2010; Uzochukwu et al., 2004). In one of the research in Nigeria, a core reason for dissatisfaction with health services was absence of timely referral (Balogun, 2007). Excessive number of patients and inessential extended stay at the health facility results in diminishing maternal satisfaction (Changole et al., 2010). Long waiting time proved to be one of the aspect

consistently associated negatively with mother's satisfaction in a study conducted in Kenya and Namibia (Do et al., 2017).

2.5.1.6 Time Spent with Doctor

Studies conducted in Iran, Gambia and China discovered the duration of consultation as an important determinant of maternal satisfaction (Jafari et al., 2010; Jallow et al., 2012; Lomoro et al., 2002). However, time spent with doctor or increasing length of consultation appear to be less important than reduction in waiting duration in Bangladesh (Aldana et al., 2001). In Sri Lanka, mothers were more satisfied with care provided in lower health facility in comparison to higher level hospitals, likely because of the delivery of customized treatment and continuity in care (Senarath et al., 2006).

2.5.1.7 Interpersonal Manner

Interpersonal manner is reported as a significant determinant of maternal satisfaction in many researches. Important determinants of mothers‟ satisfaction in Thailand, Nairobi, Ghana and Vietnam was respect, decorum and politeness in treatment (Liabsuetrakul et al., 2012; Bazant et al., 2009; Avortri et al., 2011; Duong et al., 2004). Mothers satisfaction level with health care was highly influenced by factors such as caring attitude; being considerate to mothers demands and acknowledging them, curative interactions; friendliness, courtesy, happy and positive conduct, compassion, timely assistance during discomfort, heeding, and interpersonal capability and confidence of personnel (Jallow et al., 2012; Dzomeku, 2011). The behavior and attitude of maternal health care suppliers strongly influence health seeking and quality of care (Mannava et al., 2015). In addition, this aspect of care is reported to be more significant for mothers as compared to technical skills of the

health providers in Bangladesh (Aldana et al., 2001). The core reason for dissatisfaction and refraining from service utilization was negative approach, intolerance and impatient manner and employees impersonal and business-like attitude as reported in studies in Pakistan and Turkey (Kazmi, 1995; Turan et al., 2006).

2.5.1.8 Technical Quality of Care

Mothers appear to me much satisfied with the maternal health care services if they observe that technical aspect of care is effective and the practitioner is skilled and capable. The term "good care" as distinguished in India encompasses proper medications and prescription, effective guidance and inclusiveness of process and practice (George, 2002). Negligence in treatment such as mismanagement at times of labor, prolong waiting time to attend mothers, inaccuracies in test reports and disengagement of the mothers in care, have a huge negative impact on maternal satisfaction with services provided in Ghana and Nigeria (Dzomeku, 2011; Balogun, 2007). There exist a positive association between the private sector health facilities and the provider's experience with mother‟s satisfaction level (Do et al., 2017). In China, Cuba, Thailand and Kenya, the perceived capability is related to practitioner‟s prior practices and qualification, which emerged as an important determinant of maternal satisfaction (Lomoro et al., 2002; Nigenda et al., 2003; Bazant et al., 2009). In Iran when at a tertiary level health facility, a new delivery care model centered on mothers‟ perceived treatment was instituted, it resulted in substantial rise in maternal satisfaction (Aghlmand et al., 2008). It shows a constructive influence of reactive treatment on maternal satisfaction.

2.5.1.9 Communication

The interaction between mothers and physician is an important contributor to prenatal care satisfaction (Adeyinka et al., 2017). Sharing adequate information, openness and transparency while processing mothers‟ opinion, advising provided by practitioner, and conferring while taking treatment related decisions are significant factors (Nigenda et al., 2003; Avortri et al., 2011). In Iran a fundamental factor of mothers‟ satisfaction with group antenatal care carried out in a trial appeared to be the interaction and information imparted related to care throughout this phase (Jafari et al., 2010). Maternal satisfaction is equally associated with both the preciseness and the procedure for sharing information, like practitioner‟s dedication, dealing with language barrier and ease of access were all reported in a study in Oman (Ghobashi & Khandekar, 2008). In a research in Ghana, mothers who had sufficient knowledge at times of labor deemed to be part of the treatment which influenced their satisfaction level (Dzomeku, 2011).

2.5.1.10 Accessibility

Ease of access to the health care facility emerged as a significant predictor of maternal satisfaction in numerous developing countries (D‟Ambruoso et al., 2005; Aniebue et al., 2010). Accessibility encompassed the distance from home to the health facility, as well as connectivity; the ease of getting public transportation from home to the hospital. In a research conducted in private health care facilities in Nigeria on mothers‟ assessment on prenatal quality of care reported locality of the hospitals nearby to the home and flexible convenient hours lead to increased satisfaction level for the mothers who utilized the services for prenatal care (Balogun, 2007). In Pakistan, ease of access emerged as a main cause of satisfaction with home based delivery carried out by conventional birth assistants

since they reside in the neighboring areas (Kazmi, 1995). Mothers satisfaction with clinic accessibility and services emerged as important contributors to antenatal care satisfaction (Adeyinka et al., 2017).

2.5.1.11 Financial Aspects

Research conducted in Pakistan, Egypt and Zambia reported a substantial relation among financial cost and mother‟s satisfaction level and the consumption of treatment both in house based and institutional deliveries (Kazmi, 1995; El-Mohimen et al., 2006; MacKeith et al., 2003). It is also evident that an affordable health care is a fundamental predictor of maternal satisfaction with health care services in institutional and house based births in India, Kenya and Pakistan. (George, 2002; Bazant et al., 2009; Kazmi, 1995). Financial aspect of care along with aspect of convenience and accessibility are significant contributors to overall satisfaction levels of mothers (Ford, 2017).

In addition to the total cost of care, factors such as availability of funds for health expenditure, openness in financial matters and reasonably priced medications influence maternal satisfaction with health (Hung et al., 2010; Heidari et al., 2008; Nigenda et al., 2003). Free medications readily available in the health care facility influences mother‟s satisfaction to a greater extent in Gambia (Cham et al., 2009).

2.5.1.12 Maternal Characteristics

Maternal characteristics such as age, education, income, occupation also affected mother‟s perceived satisfaction related to health care provided. Educational level and age of mothers has a positive association with satisfaction, certainly due to maturity level and more experiences and familiarities (Jallow et al., 2012; Banerjee, 2003). Studies conducted in Sri

Lanka and Nigeria found that mothers having more than one child were more satisfied with health care in comparison to mothers who have one child (Oladapo et al., 2009; Senarath et al., 2006). A research in Kenya revealed if the pregnancy was planned or unplanned as an important determinant of maternal satisfaction (Bazant et al., 2009). However, a study reported that mothers‟ educational level was significantly but inversely associated with the satisfaction level with delivery services in Ethiopia (Asres, 2018).

2.5.1.13 Cultural and Socio-Economic Aspects

The cultural and socio-economic aspects such as religion appeared to be an influential factor in a research conducted in Nigeria, whereas ethnicity impacted mothers‟ satisfaction level in Kenya and Sri Lanka (Bazant et al., 2009; Senarath et al., 2006; Oladapo et al., 2009). The educational levels of mothers‟ have a negative influence on their satisfaction level with health care according to research in Nigeria, Ghana and India (Oladapo et al., 2009; Dzomeku, 2011; Das et al., 2010). Maternal expectation about gender of the baby has influenced mothers‟ satisfaction with health services as reported in Thailand and Saudi Arabia (Chunuan et al., 2003; Moawed et al., 2009). Positive influence of primary experience with health care have impact on perceived satisfaction with health care, since greater experience with a hospital results in declining satisfaction level with care in Nigeria (Oladapo et al., 2009).

2.6 Conceptual Framework

The above discussions provide significant insights on the formation of the conceptual framework for the study. The classical Donabedian framework has been employed in numerous prior research evaluating patient viewpoint regarding care categorizes the domains of health care into structure, process and outcome (Andaleeb, 2001; Baltussen et

al., 2002; Do et al., 2017). Donabedian (2002) structure, process, and outcome model guided the researcher in obtaining information that can be used to make improvements in care. Structure is meant to include the settings under which health care is delivered, including physical and personnel, along with organizational attributes (Donabedian, 2002). Process is defined as the conduct and behavior that a provider carries out, focused on interpersonal relationships, and includes contributions to care by patients themselves and their families. Outcome is defined as "changes in individuals that can be attributed to health care, including changes in health status, knowledge, behavior, and satisfaction with the care received and its outcomes" (Donabedian, 2002). This study employed the Donabedian model in organizing the fundamental themes of aspects of mothers‟ satisfaction within the three domains of structure, process and outcome. Across the broader domains, sub themes are arranged in the continuance of care approach during prenatal period.

Examination of overall satisfaction without the various dimensions of satisfaction was considered to be of limited utility in understanding how one might improve satisfaction with maternal care. In this study, it was considered important to examine mother‟s satisfaction as a multidimensional concept in order to yield information related to structure and process aspects of care for each of the dimensions of satisfaction.

In this study outcome is determined in the form of mother‟s satisfaction (general satisfaction or overall satisfaction with care). The mothers‟ satisfaction level is also determined by using the chosen dimensions of health care under the segregation of structure and process domain of the care.

This study examined the relationships between the independent variables derived from structure and process domain of quality of care: technical quality, interpersonal manner,

communication, financial aspects, time spent with doctor, accessibility and convenience with the outcome domain which is general or overall satisfaction level of mothers. The relationships between structure, process and outcome will not be studied. These aspects of Donabedian‟s framework were not tested in this study as the focus of this study was limited to maternal satisfaction as the outcome of structure and process. Figure 2.1 is the conceptual framework of the study.

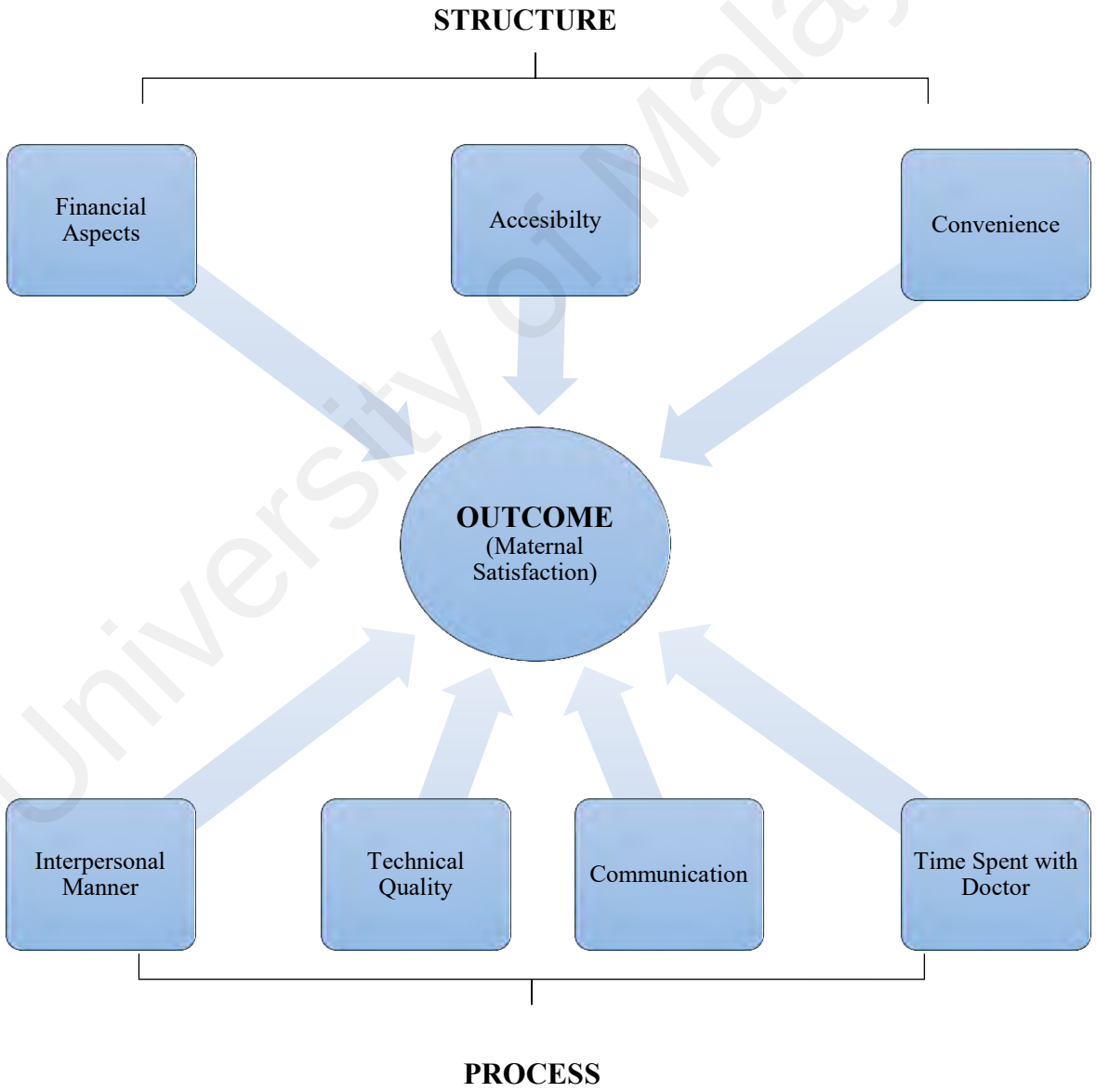

Figure 2.1: Conceptual Framework

2.7 Summary

This chapter provides an overview of the concepts, theoretical frameworks, and relevant studies conducted on maternal satisfaction. The concept of quality of care in health laid the foundation of this study. Various definitions and dimensions of quality of care are described which emerged from the literature. The theoretical frameworks for health care quality were explained in the second section. However, Donabedian quality of care framework was deemed appropriate for this research. The classical Donabedian framework categorizes quality of care into three domains; structure, process and outcome. The framework proposes the relationship of various determinants of satisfaction consistent with previous research on the concept of satisfaction. The concept of patient and maternal satisfaction emerged as multi-dimensional concept which is highly influenced by many factors. The assessment of patient satisfaction is significant in improving the quality of care in health services. Patient satisfaction questionnaire-Short Form PSQ-18; an instrument for measuring patient satisfaction appeared to have good internal validity and reliability, which is adopted in the current study. This questionnaire encompasses seven dimensions of health care; general satisfaction, financial aspect, technical quality, time spent with doctor, communication, interpersonal manner, accessibility and convenience. A large spectrum of determinants which influences maternal satisfaction appeared from the literature. Finally, the conceptual framework of the current study is presented which shows Donabedian framework in arranging the major themes of determinants of maternal satisfaction across the domains of structure and process which influences outcome (maternal satisfaction).

CHAPTER 3: METHODOLOGY

3.1 Introduction

The third chapter provides an outline of the methodology undertaken to answer the research questions and accomplish the research objectives established in the first two chapters respectively. This chapter overviews methods used for the purpose of data collection and analysis of the data which eventually leads to the results of the study. Section 3.2 describes the ethical considerations considered for conducting the study. Section 3.3 discusses the research design and the questionnaire used for collecting primary data, followed by unit of analysis involved in the study. Section 3.4 explains the sampling process which includes determining target population, sampling technique and sample size. Section 3.5 provide details about the methods used in analyzing the quantitative data. The last section 3.6 summarizes the chapter.

3.2 Ethical Considerations

The ethical aspects that are taken into considerations while conducting this study is outlined in this section. Ethical considerations are established based on three main commitments. Ethics is defined as "the matter of principled sensitivity to the rights of others" (Cohen & Manion, 1994). The first fundamental ethical commitment relates to receiving the consent of respondents and no disclosure of information in return of the information provided. For this study, the respondents were provided complete information about the character and nature of the study and their willingness to participate in the study was taken into consideration. Written consent was obtained from the respondents. Informed consent was obtained from the private hospitals which were used for the study setting, with a commitment of no disclosure of information about the hospitals.

The second important ethical commitment is to maintain the confidentiality and privacy of the respondents and their responses. The respondents are protected from any sort of exploitation and misrepresentation and the confidentiality is ensured (De Vaus, 2002) and the data which is collected is solely used for research purpose (Sekaran & Bougie, 1992).

The third ethical consideration is to be honest with the respondents involved in the study. Integrity and honesty are crucial for building rapport with respondents, which in turn is fundamental in developing amiability which characterizes efficient and effective responses (Cohen & Manion, 1994; Mason, 2017).

3.3 Research Design

The research design is the most important and fundamental step in designing the research methodology of this study. According to Nnabue (2016) research design provides the researcher with basic instruction to accomplish the research goals in a best feasible way. It develops the structure of investigation of research questions and organization of the study (Easterby-Smith et al., 2008). The types of research design mainly depend on the purpose of the study, data collection and researcher participation (Blumberg et al., 2008). However, the purpose of the study is considered as the main factor while selecting research design and it includes three types (Chisnall, 2001). The first one is exploratory design, which helps to discover the real nature of the problem. The second is the descriptive design which mainly concerned with describing specific phenomena. The third type is the causal design which explains causal relationships between variables (Chisnall, 2001; Saunders et al., 2012).

Researchers can use three research methodologies; quantitative, qualitative, and mixed methods. The current study will assess mother‟s satisfaction level with private health

services, therefore the research design comprises of quantitative method. A cross sectional, descriptive study is conducted.

3.3.1 Quantitative Study

"A quantitative study, consistent with the quantitative paradigm, is an inquiry into social or human problems, based on testing a theory composed of variables, measured with numbers and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true" (Creswell, 1994, p. 2). It operationalizes the concepts deduced from theory and literature and examines the relationships among the variables by using numeric data (Baker & Foy, 2008; Saunders et al., 2012).

Table 3.1 describes the summary of the research in the form of research questions, research objectives and the quantitative data analysis techniques that will be conducted to meet the objectives of the study.

Table 3.1: Research Summary

Sr No	Research Questions	Research Objectives	Quantitative Analysis
1.	What is the level of maternal satisfaction in private hospitals in Khyber Pakhtunkhwa?	To examine the level of maternal satisfaction among mothers in private hospitals.	Descriptive analysis -General Satisfaction Cross tabulations -General Satisfaction and Demographics
2.	Which dimensions of health care in Khyber Pakhtunkhwa are mothers satisfied with and those with which they are dissatisfied?	To identify the dimensions in which mothers are satisfied or dissatisfied.	Descriptive analysis -Financial Aspects -Communication -Interpersonal Manner -Accessibility and Convenience

			-Technical Quality -Time Spent with Doctor
3.	What factors drive the maternal satisfaction?	To assess the main drivers of maternal satisfaction.	Regression Analysis

Three fundamental methods to collect primary data are survey, experiment, and observation (Baker, 2000). Experiments are suitable for causal research (Keppel, 1991). The observation method is used to produce numerical data. Surveys are regarded as being inherently quantitative and have origins in positivistic tradition. Surveys are useful and better source of data collection in social sciences (Baker, 2000). Surveys can be descriptive and explanatory (Burns, 2000). The descriptive surveys estimate the nature of existing conditions, attributes or the parameters of the population. Whereas, the explanatory surveys establish cause and effect relationships but without experimental manipulation. The questionnaire is the common technique for surveys, as it is suitable for descriptive and analytical research (Saunders et al., 2012). The surveys provide information about people‟s physical condition, behavior, social and economic circumstances and their attitudes and opinions (McCrossan, 1991).

3.3.2 Framework of Analysis

Chapter 2 provides the theoretical justification for the formation of the conceptual framework of the study. The Donabedian model is employed in organizing the fundamental aspects of mothers‟ satisfaction across the three domains of structure, process and outcome. Within the broader domains, sub factors are arranged in the continuance of care approach. Mothers satisfaction level which is the overall or general satisfaction is assessed on seven

subscale determinants of health care; financial aspects, accessibility, convenience, technical quality, interpersonal manner, communication and time spent with doctor under the segregation of structure and process. However, in current study the relationship between structure, process and outcome was not studied, as the focus of this study was to assess maternal satisfaction as the outcome of structure and process.

3.3.3 Questionnaire and Variable Measurements

There are several types of questionnaires identified in the literature, which include personal interviews, telephone interviews and self-administrated questionnaires (Churchill, 1995). However, the personal and telephone interviews are expensive to conduct (Saunders et al., 2012). While, self-administrated questionnaires bear a lower cost (Blumberg et al., 2008).

Thus, this study uses standardized PSQ-18 questionnaire to assess mother satisfaction with healthcare. This abbreviated form of the longer PSQ-80 has been proven to have good reliability and internal consistency. The PSQ-18 investigates seven dimensions of satisfaction with health care: General Satisfaction, Technical Quality, Interpersonal Manner, Communication, Financial Aspect, Time Spent with Doctor, and Access and Convenience. Responses are graded on a 5-point Likert scale, with higher scores reflecting increased satisfaction (Marshall and Hays, 1994). This questionnaire is based on the dimensions of maternal satisfaction identified in the literature review and therefore it will be used to answer the research questions and meet the research objectives. The questionnaire was first translated into Urdu since majority of the mothers do not understand English. Structured standardized interviews were conducted for the process of data collection, because majority of the mothers do not understand Urdu as well. The only language they understand is the national language of Khyber Pakhtunkhwa which is Pashto.

In this study, mothers were specifically asked to assess their level of satisfaction with the health care they were receiving when completing the PSQ-18. The questionnaire consists of 18 items in total. Each dimension is assessed through various related questions, which is important when the aim is to distinguish a distinct area which needs improvement. The dimension of general satisfaction or overall satisfaction consist of two items. General satisfaction has a strong correlation with all the other domains and therefore it is crucial to improve in all (Thayaparan & Mahdi, 2013). The questionnaire also measures patient satisfaction with other 16 items which yields six domains that includes financial aspects (two items), accessibility and convenience (four items), technical quality (four items), interpersonal manner (two items), communication (two items) and time spent with doctor (two items). These items were examined in a manner which gives statement of opinions and each item accompanies five responses from strongly agree, agree, uncertain, disagree and strongly disagree. The PSQ-18 items were phrased in a manner that some items indicated satisfaction with health care, while others were phrased so that the agreement showed dissatisfaction with the health care. All the items in the questionnaire were recoded before the analysis. The questionnaire is attached in the appendix section, while Table 3.2 summarizes the items and measures.

Table 3.2: Questionnaire Items/Measures

Variables	Number of Items	Measurement Scale (Likert Scale)
General Satisfaction	2	1)Strongly Agree, 2) Agree, 3) Uncertain, 4) Disagree, 5) Strongly Disagree
Financial Aspects	2	1)Strongly Agree, 2) Agree, 3) Uncertain, 4) Disagree, 5) Strongly Disagree
Accessibility and Convenience	4	1)Strongly Agree, 2) Agree, 3) Uncertain, 4) Disagree, 5) Strongly Disagree
Technical Quality	4	1)Strongly Agree, 2) Agree, 3) Uncertain, 4)

		Disagree, 5) Strongly Disagree
Communication	2	1)Strongly Agree, 2) Agree, 3) Uncertain, 4) Disagree, 5) Strongly Disagree
Interpersonal Manner	2	1)Strongly Agree, 2) Agree, 3) Uncertain, 4) Disagree, 5) Strongly Disagree
Time Spent with Doctor	2	1)Strongly Agree, 2) Agree, 3) Uncertain, 4) Disagree, 5) Strongly Disagree

3.3.4 Unit of Analysis

The most important thing in a research study is unit of analysis. In this study, the unit of analysis are mothers from the city of Peshawar, Khyber Pakhtunkhwa, Pakistan. Pregnant mothers between the reproductive age of 18-49 years are included in this study.

3.4 Sampling Process

Sampling process represents a step by step approach that is used to select certain elements from the entire population. The purpose of selecting certain elements from the entire population is to save time, costs and other human resources (Forza, 2002). In this study, the sampling process is done in three steps which are (1) defining the target population, (2) sampling procedure, (3) determining the sample size.

3.4.1 Target Population

The first step in selecting the sample for this study was to identify the population from which the sample is to be selected. According to Fink "A sample is a portion or a subset of a larger group called a population. The population is the universe to be sampled. A good sample is a miniature version of the population- just like it, only smaller" (Fink, 1995, p. 1).

City of Peshawar is selected for sampling purpose from Khyber Pakhtunkhwa, Pakistan. The city is the most populous and comprises more than one eight of the province‟s population. Peshawar has a population of 1,970,042 according to the 2017 census, making it the largest city in Khyber Pakhtunkhwa and the sixth-largest in Pakistan (Pakistan Census 2017). Due to large population and diversity of people, Peshawar is used as the representative of Khyber Pakhtunkhwa in this study. The mothers of reproductive age 18 till 49 years were included in the study.

3.4.2 Sampling Technique

There are two main types of sampling techniques. The first one is probability sampling and second is non-probability sampling. In probability sampling, each element in population has an equal chance to be selected, while the non-probability sampling means that probability of selecting an element cannot be estimated (Churchill, 1995). The probability sample can be further divided into four types which are simple random sampling, systematic sampling, stratified random sampling and multistage cluster sampling. The non-probability sampling includes the convenience sampling, quota sampling and snowball sampling (Bryman and Bell, 2015).

Non-probability sampling technique was used in conducting the study. Convenience sampling technique was used to select the private hospitals operating in Peshawar as the setting for the study. The hospitals included in the study are the tertiary care private hospitals operating in the city of Peshawar. Tertiary care hospitals are selected, as primary and secondary care hospitals in Khyber Pakhtunkhwa are underutilized due to weak referral system (KPK, Health Department Yearbook, 2016-2017). The subjects, having met the inclusion criteria, were selected from the mothers utilizing health services in private

hospitals of Peshawar by convenience accessible sampling. The researcher visited the Obstetric/Gynecology ward OPD daily in the month of November and December 2017 to collect the primary data. Mothers who were visiting the obstetric ward were included in the study. Those mothers who were consulting for the prenatal checkup throughout their pregnancy to the same hospitals were included in the study.

3.4.3 Sample Size

The inclusion criteria were as follows: between the age of 18-49 years, seeking prenatal consultation between the month of November and December 2017 at the study setting. The mothers were invited to participate in the study after their prenatal checkup at the Obstetric/Gynecology ward OPD (Out Patient Department) of the private hospitals selected in Peshawar. Thus, the current study considered a sample size of 220 mothers. As the convenience sampling technique was used for the data collection due to time and resources constraint, the researcher could cover 220 mothers during this limited time duration.

3.5 Analyzing Quantitative Data

The data collected is analyzed using SPSS v.22. Exploratory factor analysis is done in SPSS. After preliminary analysis, descriptive statistics are performed to provide an overview about the sample demographics. To answer the research questions, descriptive analysis with cross tabulations and multiple regression analysis is conducted.

In both qualitative and quantitative methods, the reliability and validity of data is required to verify the trustworthiness of the results (Creswell, 1998). The next section discusses the construct validity and reliability test undertaken in the study. The results of the validity and reliability is reported in Chapter 4.

3.5.1 Exploratory Factor Analysis-Construct Validity

Exploratory factor analysis is used to reduce the data and classify variables into a set of factors by identifying the underlying structure among variables (Hair et al., 2010). The purpose to conduct EFA at preliminary stages of data analysis is to summarize the data and group the variables together into a set of factors. The EFA is conducted in three steps which are suitability of data, factor extraction and factor rotation.

The suitability of data is determined by the sample size and the strength of the relationships between items (Pallant, 2010). The factorability of data is measured by two statistical measures which are Bartlett"s test of sphericity and Kaiser-Meyer-Olkin (KMO) (Pallant, 2010).

The second step in EFA is the factor extraction. It is used to determine the number of factors that describe the structure of the variables in the analysis (Hair et al., 2010). There are two methods of factor extraction which are principal component analysis and common factor analysis. The principal component analysis "considers the total variance and derives factors that contain small proportions of unique variance and in some instances error variance" (Hair et al., 2010. p. 107). Whereas, the common analysis "assuming that both the unique and error variance are not interested in defining the structure of the variables" (Hair et al., 2010, p.107). The current study conducts the principal component analysis. It is most commonly used and appropriate for data reduction (Pallant, 2010). The number of extracted factors is determined by eigenvalue and scree test (Pallant, 2010).

The third step in conducting EFA is factor rotation. There are two main approaches in literature regarding factor rotation which are orthogonal and oblique rotation. Varimax

rotation is the commonly used approach of orthogonal rotation (Pallant, 2010; Hair et al., 2010). Therefore, the current study employs Varimax rotation.

3.5.2 Cronbach's Alpha-Reliability

Internal consistency of items such as individual questions in a questionnaire can be measured using statistical procedures such as Cronbach‟s alpha coefficient (Cronbach, 1951). The reliability of the questionnaire is assessed by measuring Cronbach‟s alpha in the study setting. Cronbach‟s alpha assesses the consistency of the whole scale (Hair et al., 2010). The value of Cronbach‟s alpha 0.7 or above is considered good (Hair et al., 2010). However, the value of alpha at 0.5 or 0.6 is also acceptable (Churchill, 1979).

3.5.3 Regression Analysis

Regression analysis is used to estimate the relationship between dependent and one or more independent variables. General satisfaction is used as the dependent variable and financial aspects, technical quality, communication, interpersonal manner, time spent with doctor, accessibility and convenience denote independent variables. In identifying the determinants of satisfaction, the conceptual framework discussed in section 3.3.2 and Chapter 2 is utilized.

The data analysis started with preliminary analysis to ensure that the assumptions of regression analysis is fulfilled namely the normality test. Normality refers to the extent of normal distribution of the data (Hair et al., 2010), which is the first step in conducting the analysis, which can be assessed either statistically or graphically (Pallant, 2010). Normality is defined as "the shape of normal distribution of the metric variable and its correspondence" (Hair et al., 2010). The normality of data can be measured by two components which are skewness and kurtosis. Skewness refers to the symmetry of

distribution and kurtosis refers to the peak of the distribution (Tabachnick & Fidell, 2007). A distribution can be a normal distribution if distribution has zero skewness and kurtosis. However, it is also acceptable within the range of -2.58 and +2.58.

Table 3.3 shows the results of Skewness and Kurtosis. As can be seen, all the values are within the acceptable range. Therefore, it can be concluded that the data are normally distributed. The other assumptions of the regression analysis namely linearity, homoscedasticity and no multicollinearity is checked and all the assumptions have also been fulfilled.

Table 3.3: Skewness and Kurtosis

	Mean	Std. Deviation	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
General Satisfaction	2.7773	1.22117	.334	.164	-1.176	.327
Financial Aspects	3.1114	1.21449	-.081	.164	-1.331	.327
Accessibility	2.8773	1.21949	.233	.164	-1.187	.327
Technical Quality	2.8682	.95247	.235	.164	-.682	.327
Communication	2.5886	1.18306	.463	.164	-.981	.327
Interpersonal Manner	3.0227	1.31011	-.047	.164	-1.461	.327
Time Spent	3.0523	1.11271	.005	.164	-1.202	.327
Convenience	3.1614	1.21355	-.183	.164	-1.279	.327

Source: Survey Data

3.6 Summary

This study employs cross sectional quantitative approach to assess the satisfaction level of mothers with health care, and identifies the domains of health care with which mothers are satisfied and dissatisfied. It addresses the research questions and objectives by employing primary survey data. Convenience sampling method was used and 220 pregnant mothers were surveyed from tertiary care private hospitals in Peshawar. Standardized structured questionnaire, PSQ-18 was used for conducting structured interviews. The data was

analyzed using SPSS software. Descriptive analysis, cross tabulations and regression analysis was performed to accomplish the research questions and objectives of the study.

CHAPTER 4: FINDINGS

4.1 Introduction

This chapter presents the analysis of maternal satisfaction in private hospitals in Khyber Pakhtunkhwa. In quantitative research method, mothers are selected from tertiary care private hospitals operating in Peshawar through convenience sampling technique. This section presents the quantitative data analysis which is performed in SPSS. It attempts to analyze if the objectives are accomplished by answering the research questions of the research. Section 4.2 describe the preliminary analysis which includes examining the construct validity and reliability via exploratory factor analysis and Cronbach‟s alpha. Section 4.3 provides details about the demographic characteristics of the respondents included in the study. Section 4.4 explain the results drawn from the descriptive analysis involving general satisfaction level and the cross tabulations between general satisfaction and demographics of the mothers. Section 4.5 involves in depth evaluation of the descriptive analysis and the seven dimensions of health care studied in the current research. Section 4.6 discusses the regression analysis to determine which of the dimension of health care drive the maternal satisfaction. The regression analysis also included education as a dummy variable to study the effect of education on maternal satisfaction. Section 4.7 summarizes the chapter and the findings.

4.2 Preliminary Analysis-Validity and Reliability Analysis

4.2.1 Exploratory Factor Analysis (EFA)

Exploratory factor analysis is a significant step which is important in determining the structure of the factors that are to be analyzed; the variables and dimensions are identified

in this technique. (Churchill, 1979). Exploratory factor analysis is primarily used to determine dimensionality and convergent validity of the correlation between constructs and items. It determines the inter-correlation among the measurement items and classify those together based on correlation (Hair et al., 2010). Exploratory factor analysis is conducted in this study for the purpose of summarizing the data and reduction of data. The measure of sampling adequacy (MSA) measures the inter-correlations among the variables which has value ranging from 0-1. The variables which have value equivalent or higher than 0.5 are good variables without error predicted by other variables, whereas the variables falling below the value of 0.5 are to be removed (Hair et al., 2010). Bartlett‟s test of sphericity and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy were two additional statistical tests which were used to evaluate the factorability of the data (Pallant, 2010). Bartlett‟s test of sphericity determines the significance of the correlation matrix. The significance level less than 0.5 shows sufficient correlation among the variables. KMO on the other hand is the ratio between the correlation matrix and the summation of correlation matrix and partial covariance matrix. The fitness of factor analysis requires a minimum value of 0.6 (Tabachnick & Fidell, 2007). The results of KMO and Bartlett‟s test are shown in Table 4.1, illustrating the significance level of Bartlett‟s test ($p<0.05$) and KMO value of 0.692 which is above the minimum value of 0.6, therefore indicating factorability of data.

Table 4.1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.692
Bartlett's Test of Sphericity	Approx. Chi-Square	1863.378
	Df	120
	Sig.	.000

The second step in the process of exploratory factor analysis is the factor extraction. Principle component analysis is the commonly used and suitable method for factor extraction (Hair et al., 2010). The factor extraction method is performed based on Kaiser‟s criterion or eigenvalue; in which the factors having eigenvalue equivalent to one or more should be included. The factors which are retained should account for at least 60% of the variance (Hair et al., 2010). In the present study, a total of eight factors were extracted each having eigenvalue of more than one accounting for 86% of the total variance, as represented in Table 4.2.

Table 4.2: Total Variance Explained

	Initial Eigenvalues			Rotation Sums of Squared Loadings		
Component	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	5.394	33.714	33.714	2.005	12.534	12.534
2	1.643	10.267	43.981	1.960	12.249	24.783
3	1.563	9.771	53.753	1.949	12.178	36.961
4	1.420	8.873	62.626	1.926	12.037	48.998
5	1.232	7.700	70.326	1.662	10.388	59.387
6	1.077	6.730	77.056	1.468	9.177	68.563
7	1.776	4.852	81.908	1.415	8.846	77.409
8	1.671	4.191	86.099	1.390	8.690	86.099

Extraction Method: Principal Component Analysis.
Source: Survey Data

The third step in exploratory factor analysis is factor rotation, which is usually conducted after factor extraction (Tabachnick & Fidell, 2007). The most commonly used method of factor rotation is the orthogonal method for the purpose of data reduction (Hair et al., 2010) which is also used in present study. The Varimax technique is recognized as a successful analytic method to achieve orthogonal rotation of factors (Hair et al., 2010). The communality should be above the value of 0.5. A variable which has communality less than 0.5 should be eliminated due to insufficient explanation (Hair et al., 2010). Therefore, those

items that have communality lower than 0.5 and the cross loadings items were omitted in this step. After the exclusion of those items, all the items included in the present study were with acceptable communality, which ranges from 0.62 to 0.90. The numbers of factors extracted were eight as illustrated in Table 4.3. The first factor consists of two items indicating the interpersonal manner loaded on component 1. The second factor which is general satisfaction 1 and 2 loaded on component 2. The third factor also included two items denoting the accessibility loaded on component 3. The fourth factor includes two items denoting financial aspects loaded on component 4. The factor five includes two items representing time spent with the doctor which loaded on component 5. The factor six consists of two items denoting technical quality which loaded on component 6. The factor seven comprises of two items which represents convenience loaded on component 7. The last factor comprises of two items which represents communication loaded on component 8. Table 4.3 shows the results of rotated component matrix.

Table 4.3: Rotated Component Matrix

	Component							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
IM10	.898							
IM11	.892							
GS17		.726						
GS3		.721						
AC8			.906					
AC9			.898					
FA7				.920				
FA5				.910				
TS12					.892			
TS15					.865			
TQ4						.859		
TQ2						.768		
CON16							.844	
CON18							.697	
C1								.911
C13								.621

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

4.2.2 Cronbach's Alpha-Reliability Analysis

After performing the exploratory factor analysis, in order to check the internal consistency, the reliability test was performed by using Cronbach‟s Alpha coefficient. The value of Cronbach‟s alpha above 0.70 is acceptable (Hair et al., 2010). Table 4.4 represented the results of Cronbach‟s Alpha for the present study, where all the values of Cronbach‟s Alpha are above cut off point of 0.70. The value for general satisfaction is .88, financial aspects is .90, accessibility is .89, technical quality is .70, communication is .71, interpersonal manner is .91, time spent with doctor is .74 and convenience is .77. Therefore, the results prove that all the factors included in the study have a good reliability and internal consistency of the items. Table 4.4 illustrates the reliability coefficient for the constructs in this study.

Table 4.4: Reliability Coefficient for the Constructs

Constructs	No of Items	Cronbach's Alpha
General Satisfaction	2	.88
Financial Aspects	2	.90
Accessibility	2	.89
Technical Quality	2	.70
Communication	2	.71
Interpersonal Manner	2	.91
Time Spent with Doctor	2	.74
Convenience	2	.77

Source: Survey Data

4.3 Demographics of Respondents

In this study, the mothers included were of different ages. They were categorized into four groups; the first group includes mothers who were aged between 18-25; representing 42.3% of the sample. The second group includes mothers aged from 26-33; representing 46.8% of the sample. The third group includes mothers between the age of 34-41; representing 7.7%

of the sample. While the fourth group includes mothers falling between the age of 42-49; representing 3.2% of the sample. The demographic details of the survey sample yields that most of the mothers belong to the age group of 26-33 years, followed by the age group of 18-25 years. Whereas the least number of mothers belong to the 42-49 age group at 3.2% only.

The level of education is divided into six groups according to Pakistan‟s educational system which is universal for the entire country. Level one represents no education at all which includes 44.1% of the sample. Level two includes primary education (class 1-5), 14.5% of the mothers fall in level two. Level three includes middle education (class 6-8), 8.2% of the respondents fall in level three. Level four represents secondary education (class 9-10), which includes 15% of the mothers. While level five includes higher secondary education, representing 11.4% of the sample. The last level includes higher education, 6.8% of the mothers fall in level six. The majority of the mothers have no education at all which accounts for 44.1% of the sample, followed by mothers having secondary education which is from class 9th and 10th according to Pakistan educational system.

For this research the occupational status of the mothers is categorized into four groups; housewife, working, unemployed and other (student or any other occupation). The occupational status shows that majority of the mothers at 89.5% were housewives. Out of the remaining 10.5% of the mothers, 10% were working women, and 0.5% were unemployed.

In terms of place of residence, two categories were employed for this study; urban and rural. The mothers from urban areas represent 63.2% of the sample and rural areas

represent 36.8% of the mothers. Most of the mothers belong to the urban vicinities of Peshawar.

Mothers willingness to reutilize the current services in future pregnancies represents 76.8% with the negative response of "No", and just about 23.2% responded with a "Yes". It shows that most of the mothers are unwilling to reutilize the services which they receive in current pregnancy for any future pregnancies. Table 4.5 shows the demographic details of the mothers in the study survey sample.

Table 4.5: Demographic Details of Respondents

Characteristics	Category	Frequency	Percentage
Age Groups	18-25	93	42.3
	26-33	103	46.8
	34-41	17	7.7
	42-49	7	3.2
Education Level	No education	97	44.1
	Primary (1-5)	32	14.5
	Middle (6-8)	18	8.2
	Secondary (9-10)	33	15.0
	Higher Secondary (11-12)	25	11.4
	Higher Education > 12	15	6.8
Occupational Status	Housewife	197	89.5
	Working	22	10.0
	Unemployed	1	0.5
	Other (student, or any other)	0	0
Place of Residence	Urban	139	63.2
	Rural	81	36.8
Reutilization of Current Services in Future	No	169	76.8
	Yes	51	23.2

Source: Survey Data

4.4 Descriptive Analysis

Descriptive analysis is performed in SPSS software to answer the first and second research questions developed in the study. The individual scores for each item was calculated and categorized into three, so that strongly agree and agree were sum up under satisfied, uncertain remain the same, and disagree and strongly disagree were sum up under dissatisfied. Variables were then calculated through summation of scores.

In addition, the researcher asked few unstructured questions from those mothers whose answers seem to vary for each item in the questionnaire. This was done in order to get a deeper insight of their reasons for selecting those responses. Those additional responses obtained from the mothers are also used in this study to justify the reasons for variation in their perception about the health care services delivered. Diverse reasons were given by the mothers for their stated satisfaction and dissatisfaction levels.

4.4.1 General Satisfaction

General satisfaction which is measured as the overall satisfaction level of mothers in the study setting is represented in Table 4.6. This dimension was measured with two items. It is related to the overall health care services which are offered to the mothers. Out of total 220 mothers, more than half, 55.9% of mothers weren‟t satisfied with the health care which they are receiving during their current pregnancy at the private hospital which they visited. Just about 39.5% of mothers were satisfied with the overall health care, whereas 4.5% of mothers were neutral about the general satisfaction level.

Table 4.6: General Satisfaction

	Frequency	Percentage
Satisfied	87	39.5
Neutral	10	4.5
Dissatisfied	123	55.9
Total	220	100

Source: Survey Data

4.4.2 Cross Tabulations

General satisfaction has been assessed across demographic profile of the mothers, which included age, education, occupational status, place of residence and reutilization of the current services in future.

4.4.2.1 General Satisfaction and Demographics

Table 4.7 shows the results of cross tabulation of general satisfaction with the age of the mothers. 17.7% of the mothers falling in the age groups of 18-25 and 26-33 were satisfied with the general satisfaction level. While 22.3% of the mothers in the age group of 18-25 were dissatisfied with the general satisfaction. Whereas the mothers between the age group of 26-33 shows the highest percentage of dissatisfaction which counted for 26.8%. Which indicates that maternal dissatisfaction is positively associated with age, possibly because of maturity. Most of the mothers in the sample belong to the age group of 26-33 years and this group has the highest percentage of dissatisfaction level with overall health care services.

Table 4.7: General Satisfaction-Age Crosstabulation

			Age				Total
			18-25	26-33	34-41	42-49	
G.S	Satisfied	Count	39	39	7	2	87
		% of Total	17.7%	17.7%	3.2%	0.9%	39.5%
	Neutral	Count	5	5	0	0	10
		% of Total	2.3%	2.3%	0.0%	0.0%	4.5%
	Dissatisfied	Count	49	59	10	5	123
		% of Total	22.3%	26.8%	4.5%	2.3%	55.9%
	Total	Count	93	103	17	7	220
		% of Total	42.3%	46.8%	7.7%	3.2%	100%

Source: Survey Data

Table 4.8 represents the results of cross tabulation of general satisfaction with the educational level of the mothers. 18.2% of the mothers who were satisfied with the general satisfaction have no education at all, followed by second highest satisfaction level of 7.3% for the mothers who have secondary education. The percentage of the mothers who were dissatisfied with the healthcare were mostly without any education which accounts for 23.2%. The educational level does not have much effect on general satisfaction level. But the trend across all levels of education shows that mothers were more dissatisfied with overall health care services rather than satisfied.

Table 4.8: General Satisfaction-Education Crosstabulation

			Education						Total
			No	P	M	S	HS	HE	
G.S	Satisfied	Count	40	10	4	16	11	6	87
		% of Total	18.2%	4.5%	1.8%	7.3%	5.0%	2.7%	39.5%
	Neutral	Count	6	0	0	1	1	2	10
		% of Total	2.7%	0.0%	0.0%	0.5%	0.5%	0.9%	4.5%

Dissatisfied	Count	51	22	14	16	13	7	123
	% of Total	23.2%	10.0%	6.4%	7.3%	5.9%	3.2%	55.9%
Total	Count	97	32	18	33	25	15	220
	% of Total	44.1%	14.5%	8.2%	15.0%	11.4%	6.8%	100%

Source: Survey Data

The cross tabulation of general satisfaction with occupational status of mothers yields the results shown in Table 4.9. 34.5% of the mothers who are housewives were satisfied with the healthcare which they are receiving in their current pregnancy. Whereas more than half, 50.9% of mothers who are housewives were dissatisfied with the general healthcare level. Working mothers who were satisfied and dissatisfied with the overall healthcare accounts for about 4.5% and 5% respectively. It shows that housewives were more dissatisfied with overall health care services. When asked from several of the mothers who were housewives that why are they dissatisfied, they gave unique reasons for the dissatisfaction. One of the mother said, "since I am a housewife so I have to depend on my spouse preference of hospital selection as I do not have the exposure to know which hospital to choose". Another mother was of the opinion for her dissatisfaction level stating that "my mother in law brought me to this hospital and I have no say in this as she is the one who makes all these decision in the household".

Table 4.9: General Satisfaction-Occupation Crosstabulation

			Occupation			Total
			HW	W	UE	
G.S	Satisfied	Count	76	10	1	87
		% of Total	34.5%	4.5%	0.5%	39.5%
	Neutral	Count	9	1	0	10
		% of Total	4.1%	0.5%	0.0%	4.5%
	Dissatisfied	Count	112	11	0	123

	% of Total	50.9%	5.0%	0.0%	55.9%
Total	Count	197	22	1	220
	% of Total	89.5%	10.0%	0.5%	100%

Source: Survey Data

24.5% of the mothers residing in urban areas were satisfied with the overall healthcare. While 15% of those who were satisfied resides in rural areas. The result shows that 21.4% of the mothers who resides in rural areas were dissatisfied with the healthcare. However, the highest percentage of the mothers dissatisfied with the overall healthcare is 34.5% residing in the urban areas. Mothers who were satisfied belonging to rural areas were less as compared to urban areas. Whereas, mothers from urban areas were more dissatisfied. The results are shown in Table 4.10.

Table 4.10 General Satisfaction-Residence Crosstabulation

			Residence		Total
			Urban	Rural	
G.S	Satisfied	Count	54	33	87
		% of Total	24.5%	15.0%	39.5%
	Neutral	Count	9	1	10
		% of Total	4.1%	0.5%	4.5%
	Dissatisfied	Count	76	47	123
		% of Total	34.5%	21.4%	55.9%
	Total	Count	139	81	220
		% of Total	63.2%	36.8%	100%

Source: Survey Data

The cross tabulation of general satisfaction and reutilization of current services in the future are shown in Table 4.11. 45% of the mothers were those who were dissatisfied and would not want to utilize the current services in the future, whereas only 10.9% of dissatisfied

mothers still wanted to utilize the same health services in future pregnancy. As for the satisfied mothers, 28.2% of those would still not want to utilize the same services in future, and just about 11.4% of satisfied mothers were willing to utilize the current services in future as well. More mothers who are satisfied would still not want to utilize the health services in future. It is also evident that more mothers who were dissatisfied do not want to use the services in future pregnancies.

Table 4.11: General Satisfaction-Reutilization Crosstabulation

			Reutilization		Total
			No	Yes	
G.S	Satisfied	Count	62	25	87
		% of Total	28.2%	11.4%	39.5%
	Neutral	Count	8	2	10
		% of Total	3.6%	0.9%	4.5%
	Dissatisfied	Count	99	24	123
		% of Total	45.0%	10.9%	55.9%
Total		Count	169	51	220
		% of Total	76.8%	23.2%	100%

Source: Survey Data

4.5 Descriptive Analysis and Dimensions of Health Care

Seven dimensions of health care were studied in the current research to determine which dimensions are mothers satisfied with and those with which they are dissatisfied. Descriptive analysis was performed on each dimension to find out mother‟s satisfaction level. Many mothers who were satisfied or dissatisfied with general or overall satisfaction level, expressed mixed responses for other aspects of care they received.

4.5.1 Financial Aspects

Financial aspects determine if mothers think the healthcare they are receiving is either expensive or affordable. This dimension measures mother‟s satisfaction level related to the cost of utilizing the health services during their pregnancy. This dimension is measured with two items.

The results are represented in Table 4.12 which shows that there isn‟t a huge variation between the satisfied and dissatisfied mothers in terms of financial aspects. 48.6% of mothers were satisfied with the financial aspects, whereas 43.2% of the mothers were dissatisfied. About 8.2% of mothers were neutral about how much they must pay to get the health care services at the private hospital in Peshawar. Some of the mothers were asked the reason for being satisfied with financial aspects as it was a private hospital. One of the mother responded by saying that “this hospital is better as compared to other tertiary care private hospital where I have been before and therefore I am satisfied with financial aspect”. Another mother said that “this hospital is comparatively affordable than other private hospitals and since I have to pay out of pocket, therefore I came to this hospital”. “I am satisfied with this aspect as the I am getting complete and good medical treatment with affordable medicines”, replied another mother when asked the reason for satisfaction with financial aspects.

Table 4.12: Financial Aspects

	Frequency	Percentage
Satisfied	107	48.6
Neutral	18	8.2
Dissatisfied	95	43.2
Total	220	100

4.5.2 Accessibility

Accessibility refers to if it is easy for mothers to access the healthcare and medical practitioner for the purpose of medical checkup during their pregnancy. It was measured with two items. Table 4.13 shows that more than half of the mothers, 53.2% were dissatisfied with this dimension of healthcare. 42.7% of mothers were satisfied, while 4.1% of mothers were neutral about how they feel about accessibility. One of the mother who resides in urban area showed dissatisfaction and when asked for the reason replied, “since I have to take public transport in this condition to access the hospital, therefore it gets very uncomfortable for me and my family”. Another mother who also came from urban vicinity was of the opinion “the location of the facility is not near my residence, and I have to face connectivity and distance issues, hence I am dissatisfied”.

Table 4.13: Accessibility

		Frequency	Percentage
	Satisfied	94	42.7
	Neutral	9	4.1
	Dissatisfied	117	53.2
	Total	220	100

Source: Survey Data

4.5.3 Technical Quality

This dimension of health care determines the capability of the doctors and availability of all those equipment necessary for efficient medical examination and was measured with two

items. The dimension of technical quality determines if mothers are satisfied with the ability, treatment and diagnosis by the medical practitioner. The result shows that 39.1% of mothers were satisfied with the dimension of technical quality, with 41.4% mothers dissatisfied. However, a huge percentage of mothers i-e 19.5% were neutral about the technical quality of care which they received during their current pregnancy. The results are shown in Table 4.14 as below.

Table 4.14: Technical Quality

		Frequency	Percentage
	Satisfied	86	39.1
	Neutral	43	19.5
	Dissatisfied	91	41.4
	Total	220	100

Source: Survey Data

4.5.4 Communication

This dimension describes the communication of medical practitioner with mothers which is measured by two items. It identifies if they can comprehend what the doctor explains and whether the doctor listen to the mothers when they need to understand certain things. Communication refers to if the medical practitioner shares adequate information with the mothers about their health condition which is comprehensible or they ignore what the mothers tell them during the medical checkup. 61.8% of the mothers were of the opinion that they weren"t satisfied with this dimension. Just about 30% of mothers were satisfied and 8.2% were neutral about communication between the doctors and mothers. The results are shown in Table 4.15.

Table 4.15: Communication

	Frequency	Percentage
Satisfied	66	30.0
Neutral	18	8.2
Dissatisfied	136	61.8
Total	220	100

Source: Survey Data

4.5.5 Interpersonal Manner

Interpersonal manner which is also measured by two items is associated with the attitude of the medical practitioner with the mothers. The dimension of interpersonal manner determines if the mothers feel they are treated in a friendly and courteous way or the doctors are impersonal and too business like. Table 4.16 shows that more than half of the mothers, 60.5% were satisfied with the interpersonal behavior of the medical practitioners. 37.7% were those who weren't satisfied, whereas 1.8% were neutral about this dimension of healthcare. One of the mother who was satisfied with the interpersonal manner was of the opinion that "the core reason I choose this hospital is because the doctors are very polite and treat me with dignity and caring behavior".

Table 4.16: Interpersonal Manner

	Frequency	Percentage
Satisfied	133	60.5
Neutral	4	1.8
Dissatisfied	83	37.7
Total	220	100

Source: Survey Data

4.5.6 Time Spent with Doctor

Time spent with the doctor is another important dimension of healthcare which indicate if the medical practitioner hurry too much while providing treatment or they spend plenty of time with mothers. The two items included in this dimension determines whether mothers are satisfied or dissatisfied with the time spent on them by the medical practitioner. The results are represented in Table 4.17, with the equal number of mothers i-e 44.5% both satisfied and dissatisfied with this dimension. The mothers with a neutral response account for 10.9%.

Table 4.17: Time Spent with Doctor

		Frequency	Percentage
	Satisfied	98	44.5
	Neutral	24	10.9
	Dissatisfied	98	44.5
	Total	220	100

Source: Survey Data

4.5.7 Convenience

Convenience determines if the mothers can get the medical care whenever they need it or it is hard for them to get medical care right away. This dimension is also measured by two items. The result shows that 53.2% of the mothers were satisfied, 41.8% were dissatisfied and 5% were neutral about the convenience of getting healthcare. One of the mother who was positive about the dimension of convenience was of the opinion that “I do not have to wait long for the medical checkup since this hospital is not overcrowded”. The results are represented in Table 4.18;

Table 4.18: Convenience

		Frequency	Percentage
	Satisfied	117	53.2
	Neutral	11	5.0
	Dissatisfied	92	41.8
	Total	220	100

Source: Survey Data

All the dimensions are compared to identify which of the dimensions are mothers satisfied with and those with which they are dissatisfied. Mothers were highly satisfied with interpersonal manner at 60.5% level of satisfaction, followed by convenience at 53.2%. Mothers were highly dissatisfied with the dimensions of communication at 61.8% of dissatisfaction, followed by accessibility at 53.2% of dissatisfaction. The result also shows a unique trend for the technical quality. Technical quality is the only dimension which received more neutral response from the mothers. Also, the level of satisfaction and dissatisfaction by the mothers for this dimension does not show much variance. When asked about the reason for being neutral about technical quality, one of the mother responded by saying that "due to no exposure I do not know if the treatment and diagnosis recommended by the doctors were right or not, since I do not have sufficient knowledge". Another mother was of the opinion that "since I am uneducated therefore at this point I do not know if the treatment is correct or not, and if it is satisfying or dissatisfying, until I deliver my baby and know about the health condition of me and my baby afterwards". "The reason I am neutral about this dimension is because the care I was expecting and the one I am receiving does not show correspondence", said by a mother who gave a neutral answer. The comparison between the satisfaction, neutral and dissatisfaction level across all seven dimensions are shown in Figure 4.1.

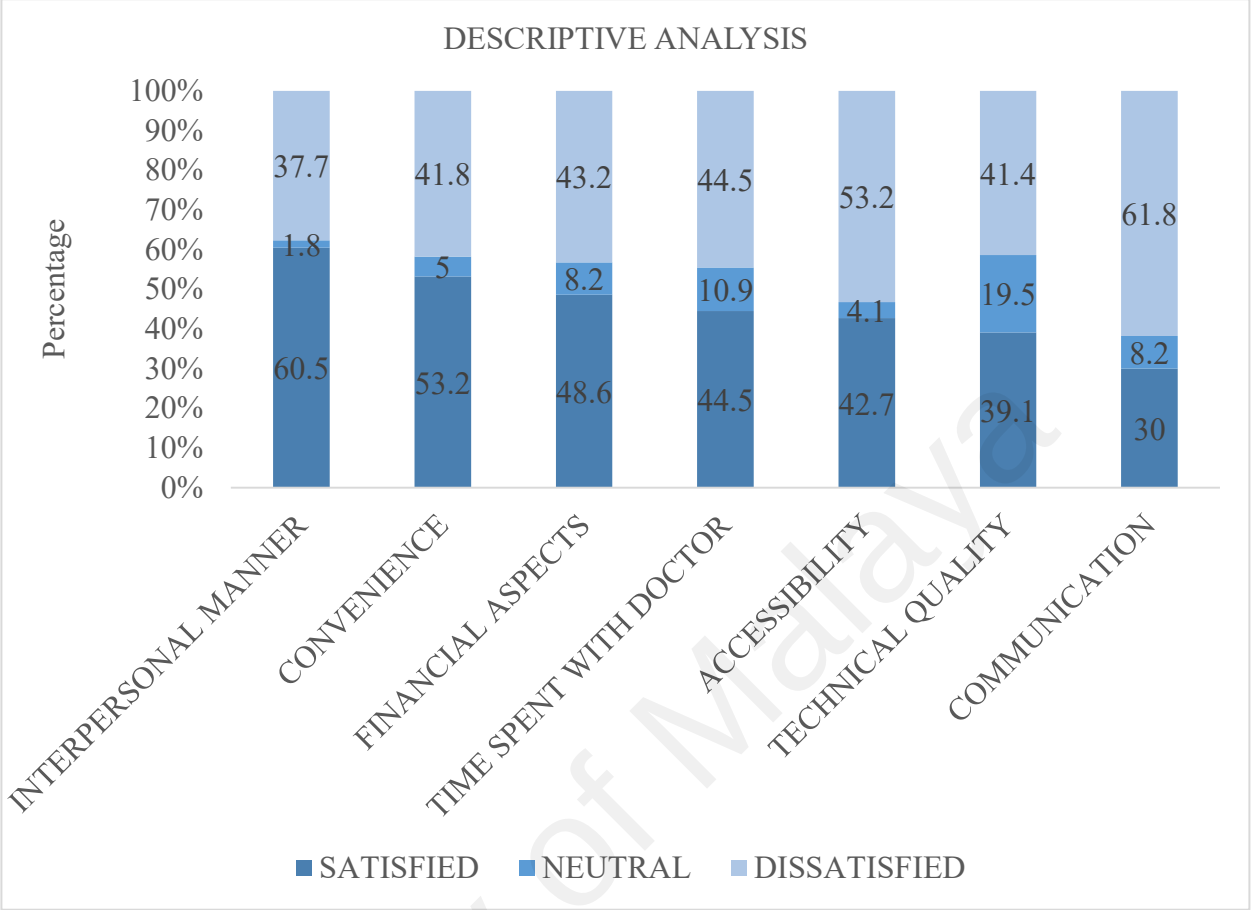

Figure 4.1: Descriptive Analysis Comparison

4.6 Regression Analysis

Regression analysis is performed to assess which factors drive the maternal satisfaction level in tertiary care private hospitals operating in Khyber Pakhtunkhwa. The multiple regression was conducted with General Satisfaction as dependent variable. It is used to develop a model for predicting the "General or Overall Satisfaction" of mothers from financial aspect, accessibility, convenience, technical quality, communication, interpersonal manner and time spent with doctor.

The first model which includes financial aspect yields the value of R^2 which is equal to 0.157. This reflects that 15.7% change in „general satisfaction or overall satisfaction" was explained by „financial aspect" in the model. The statistical significance of the model may also be judged by the *F*-test. The *F*-calculated value is 40.608 which is significant at less than one percent level of significance. This also suggests that the model is highly significant. The results indicate that the predictor variable such as „Financial Aspect" strongly emerged as the correlates with „General Satisfaction" as outcome variable. The regression coefficient of financial aspect (.398) with regression is significant at the 1% level of significance.

The value of the R^2 in the second model is 0.311. This reflects that the 31.1% percent change in „general satisfaction" was explained by the two variables; „financial aspect" and „accessibility" in the model. The *F*-calculated value is 49.043 which is significant at less than one percent level of significance. This also suggests that the model is highly significant. The regression coefficient of financial aspect (.279) and accessibility (.411) with regression is significant at the 1% level of significance respectively. The second model shows that „accessibility" account for 15.4% of the variance in General Satisfaction.

The multiple regression revealed that in the third model with an addition of another independent variable „convenience", it contributed significantly to the regression model and accounted for 40.6% of the variation in General Satisfaction. The model is also highly significant with the *F* value 49.274 which is significant at less than one percent. The regression coefficient of financial aspect (.140) with regression is significant at the 5% level of significance. As for the regression coefficient of accessibility (.320) and convenience (.362) with regression is significant at the 1% level of significance for both.

The third model depicts that „convenience" account for 9.5% of the variance in General Satisfaction level.

Introducing the „technical quality" variable in the fourth model explained 48.5% of the variance in the outcome variable. The *F*-test value is 50.556 which is significant at less than 1% level of significance. The regression coefficient of financial aspect (.124) with regression is significant at the 5% level of significance. The regression coefficient of accessibility (.317), convenience (.331) and technical quality (.363) with regression is significant at the 1% level of significance. Technical quality explained an additional 7.9% of variance in dependent variable.

Adding „interpersonal manner" to the fifth regression model explained 53.2% change in general satisfaction by the five variables which includes financial aspect, accessibility, convenience, technical quality and interpersonal manner. The statistical significance of the model is also depicted by the *F* value at 48.565 which is significant at less than one percent level of significance. The regression coefficient of interpersonal manner (.234) with regression is significant at the 1% level of significance. An additional 4.7% of the variation in general satisfaction is explained by interpersonal manner.

In the sixth model, „communication" is introduced in the regression model. This model was statistically significant with *F* ratio 43.724 which is significant at less than one percent and explained 54.6% of variance in general satisfaction. The regression coefficient of communication (.144) is highly significant at the one percent level of significance. Communication explained an additional 1.4% of variance in outcome variable.

Finally, the addition of the last independent variable „time spent with doctor" to the regression model represented the model as a whole explaining 55.7% of variance in general

or overall satisfaction. The *F* calculated value is 38.017 which is significant at less than one percent level of significance. The regression coefficient of time spent with doctor (.115), financial aspect (.121) and communication (.139) with regression is significant at the 5% level of significance. While the regression coefficient of accessibility (.241), convenience (.191), technical quality (.325) and interpersonal manner (.203) with regression is highly significant at the 1% level of significance.

When all seven independent variables were included in model, it showed that all the variables were significant predictors of General Satisfaction. The seven-predictor model could account for R^2 equal to 0.557. This reflects that the 55.7 percent change in „general satisfaction" was explained by the seven independent variables; namely financial aspect, accessibility, convenience, technical quality, communication, interpersonal manner and time spent with doctor in the model. This shows that the overall model is statistically significant.

The results indicate that the predictor variables such as financial aspect, accessibility, technical quality, communication, interpersonal manner, time spent with doctor and convenience strongly emerged as the correlates with „general satisfaction or overall satisfaction" as response variable. The regression coefficient of all seven variables with regression is significant at the 1% and 5% level of significance respectively. The final model shows that technical quality has emerged as the best predictor of general satisfaction level of mothers. It is followed by accessibility and interpersonal manner with slightly less impact, with the least impact of time spent with doctor and financial aspect.

Cohen (1988) suggested R^2 values for endogenous latent variables are assessed as follows: 0.26 and above (substantial), 0.13 to 0.25 (moderate), 0.12 and below (weak). The

value of R^2 is 0.557 which indicates that the predictor variables given in the model are responsible for the 55.7% variation in the general satisfaction or overall satisfaction, which shows that the model is substantial in nature.

The result of multiple regression is presented in Table 4.19 in the form of an unstandardized regression coefficient, standard error, significance level, *F*-test and R^2.

Table 4.19: Regression Analysis: Determinants of Maternal Satisfaction

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Constant	1.538*** (0.209)	.726*** (0.222)	.275** (.220)	-.609** (.257)	-.843*** (.251)	-.914*** (.249)	-1.153*** (.269)
F.A	.398*** (0.063)	.279*** (0.059)	.140** (.060)	.124** (.056)	.117** (.054)	.123** (.053)	.121** (.052)
AC		.411*** (0.059)	.320*** (.057)	.317*** (.053)	.258*** (.052)	.253*** (.052)	.241*** (.052)
CON			.362*** (.062)	.331*** (.058)	.241*** (.059)	.191*** (.061)	.191*** (.060)
T.Q				.363*** (.063)	.364*** (.061)	.334*** (.061)	.325*** (.061)
I.M					.234*** (.051)	.215*** (.050)	.203*** (.050)
C						.144*** (.055)	.139** (.054)
T.S							.115** (.052)
F-stat	40.608 (.000)	49.043 (.000)	49.274 (.000)	50.556 (.000)	48.565 (.000)	43.724 (.000)	38.017 (.000)
R^2	.157	.311	.406	.485	.532	.546	.557

Note: Figure in parenthesis is the standard error. *** significant at 1%, ** significant at 5% and * significant at 10% (*p< .1, **p < .05, ***p < .01)

Source: Survey Data

In model 8, „education" is entered as a dummy variable in the multiple regression model. Education has six ordinal variables which are; no education, primary, middle, secondary, higher secondary and higher education. „No education" is used as a reference variable and is not included in the model. Whereas other five ordinal variables are entered as dummy

variables along with seven independent variables which are; financial aspect, accessibility, convenience, technical quality, interpersonal manner, communication and time spend with doctor. The last model shows that „education" emerges as a significant predictor of general satisfaction and yields R^2 which is equivalent to .576. This reflects that 57.6% change in general satisfaction was explained by seven independent variables and educational level of mothers as dummy variables. However, all the educational levels show an inverse relationship, which means with the increase in educational attainment of mothers, their overall satisfaction level declines. The *F*-calculated value is 23.467 which is also significant at less than one percent level of significance. The regression coefficient of primary (-.340), middle (-.446) and secondary (-.112) education with regression is significant at 5% level of significance. While the regression coefficient of higher secondary (-.035) and higher education (-.055) with regression is significant at 10% level of significance. In addition, the last model shows that „education" account for 1.9% of variance in general satisfaction. The result of multiple regression with education as a dummy variable is presented in Table 4.20.

Table 4.20: Regression Analysis with Education Dummy Variable (continued)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Constant	1.538*** (0.209)	.726*** (0.222)	.275** (.220)	-.609** (.257)	-.843*** (.251)	-.914*** (.249)	-1.153*** (.269)	-1.055*** (2.75)
F.A	.398*** (0.063)	.279*** (0.059)	.140** (.060)	.124** (.056)	.117** (.054)	.123** (.053)	.121** (.052)	.125** (.053)
AC		.411*** (0.059)	.320*** (.057)	.317*** (.053)	.258*** (.052)	.253*** (.052)	.241*** (.052)	.236*** (.052)
CON			.362*** (.062)	.331*** (.058)	.241*** (.059)	.191** (.061)	.191*** (.060)	.213*** (.060)
T.Q				.363*** (.063)	.364*** (.061)	.334*** (.061)	.325*** (.061)	.320*** (.060)
I.M					.234*** (.051)	.215*** (.050)	.203*** (.050)	.188*** (.050)
C						.144*** (.055)	.139** (.054)	.116** (.055)
T.S							.115** (.052)	.122** (.051)
Edu Primary								-.340** (.170)
Middle								-.446** (.213)
Sec								-.112** (.168)
Higher Sec								-.035* (.185)

Higher Edu								-.055* (.229)
F-stat	40.608 (.000)	49.043 (.000)	49.274 (.000)	50.556 (.000)	48.565 (.000)	43.724 (.000)	38.017 (.000)	23.467 (.000)
R^2	.157	.311	.406	.485	.532	.546	.557	.576

Note: Figure in parenthesis is the standard error. *** significant at 1%, ** significant at 5% and * significant at 10% (*p< .1, **p < .05, ***p < .01)

Source: Survey Data

4.7 Summary

The objective of this study was to determine maternal satisfaction of mothers in private hospitals in Khyber Pakhtunkhwa. This study was conducted to study the dimensions of health care with which mothers are satisfied and dissatisfied. This research helps to determine and assessed the factors which drive the maternal satisfaction in tertiary care private hospitals operating in Peshawar. The data analysis was conducted by using primary survey data obtained from 220 mothers who visited the private hospitals included in the study setting for their prenatal checkup. The results show some unique trends in terms of mother‟s satisfaction level with the health care services provided to them.

Descriptive analysis for the general satisfaction level yields that more than half of the mothers were dissatisfied with the health care services offered to them as a whole. General satisfaction was also assessed across the demographic characteristics of the mothers involved in the study. These included age, education, occupation, place of residence and reutilization of current services in future. Maternal age had a positive effect on the general satisfaction level. As most of the mothers belong to the age group of 26-33, and this group reveals the highest percentage of mothers at 26.8% who were dissatisfied with overall

health care services provided to them. In this study, the educational level of the mothers does not have much effect on the general satisfaction level. Majority of the mothers in the sample have no formal education which comprises of 44.1% of the sample. However, it is interesting to observe that the trend across all six educational levels shows more mothers were dissatisfied as compared to satisfied with the overall health care services. As for the occupation of the mothers, 89.5% were housewives. Out of this 50.9% were dissatisfied with the general healthcare services. The place of residence of mothers yields a unique result when it comes to general satisfaction. The highest proportion of mothers who were dissatisfied resides in urban vicinities of Peshawar. Also, mothers belonging to rural areas were less satisfied when compared with those residing in urban areas. The cross tabulation of general satisfaction and reutilization of current services in future pregnancies shows that 76.8% of the mothers do not want to utilize the same services in future, out of which 45% were dissatisfied. Only 23.2% of the mothers want to utilize the services in future, out of which just about 11.4% were satisfied with the overall health care services offered to them.

Seven dimensions of health care which include financial aspects, accessibility, technical quality, communication, interpersonal manner, time spent with doctor and convenience were studied by conducting descriptive analysis. The results yield the dimensions with which mothers are satisfied and dissatisfied. Interpersonal manner emerged as the dimension with which most of the mothers were satisfied at 60.5%. Whereas, most mothers were dissatisfied with the communication aspect of the health care which they were receiving which account for 61.8%.

The regression analysis was conducted to answer the third research question and accomplish the third objective of the study. The results show that all seven dimensions of health care were significant predictor of general or overall Satisfaction level of mothers.

The result suggests that technical quality is the best predictor of general satisfaction. When education is introduced in the regression model as a dummy variable, it shows an inverse relationship with general satisfaction level of mothers.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter presents the discussion on findings of the maternal satisfaction level in private hospitals in Khyber Pakhtunkhwa. Section 5.2 is contributed to the discussion of results and implications of the current research. Section 5.3 explains the knowledge contributions of the study. Section 5.4 is devoted to the research limitations and constraints faced by the researcher while conducting the study. Section 5.5 describes the future research recommendations. While Section 5.6 concludes the chapter.

5.2 Discussion of Results and Implications of Study

This cross sectional descriptive study was conducted to determine the maternal satisfaction in tertiary care private hospital in Khyber Pakhtunkhwa. The first research objective of the study was to examine the level of maternal satisfaction among mothers in private hospitals operating in Khyber Pakhtunkhwa. This objective seeks to determine the overall or general satisfaction level of mothers in the tertiary care private hospitals in Peshawar. It determines if mothers were overall satisfied with the services offered to them in their current pregnancy at the study setting. The result shows that most mothers were dissatisfied with the overall health care services offered to them at the private hospital which they visited during their current pregnancy. The findings from this study is consistent with some of the previous studies conducted in Pakistan on mothers‟ satisfaction with health services (Nisar & Amjad, 2007), while it also contradicts some of the previous research in Pakistan where majority of the mothers were satisfied with the maternal care services (Ashraf et al., 2012). Apart from variation in the way services are delivered, differences in study populations and hence mothers‟ expectation could affect satisfaction level.

Prior research exploring maternal care satisfaction in other settings has found that socio-demographic characteristics such as race, ethnicity, occupation, educational attainment, and religion are significantly associated with satisfaction with care (Chemir et al., 2014; Jafari et al., 2010). There have been mixed findings regarding the level of education affecting satisfaction among mothers in health care services. The lower level of education was associated with dissatisfaction such as in Sweden (Hildingsson & Radestad, 2005), whereas tertiary and higher education were associated with high satisfaction levels as found in Nigeria (Esimai & Omoniyi-Esan, 2009) and Ethiopia (Yohannes et al., 2013). The logistic regression of the significant determinants of mothers‟ overall satisfaction of quality of health care services; which included mothers‟ occupation and educational status showed that none of the factors was a predictor of mothers‟ satisfaction (Ibrahim et al, 2017). However, in current research education emerged to be a significant predictor of maternal satisfaction but it has an inverse relationship. Education may enhance a mother‟s ability to make decisions regarding her health (Muchabaiwa et al. 2012). Therefore, it can possibly influence their decision if they want to utilize the current services in future pregnancies. Also in terms of occupational status, mothers in the current study were of the opinion; “since I am a housewife so I have to depend on my spouse preference of hospital selection as I do not have the exposure to know which hospital to choose”. Another mother reported her dissatisfaction level by stating “my mother in law brought me to this hospital and I have no say in this as she is the one who makes all these decision in the household”. Additionally, education has a positive impact on health awareness, and educated women are more likely to learn from the health information available to them and are more open to accepting latest information (Gage, 2007). Since majority of the mothers in the current study resides in urban vicinities, however they were more dissatisfied with the overall satisfaction level. This is observed in a prior research where mothers who live more than

just 20 minutes away from the health facility was associated with lower accessibility, practitioner interactions and overall satisfaction level (Adeyinka et al., 2017).

The second and third research objective was to identify dimensions of health care with which mothers were satisfied and dissatisfied, and to assess the main predictors of maternal satisfaction. Seven dimensions were included based on Donabedian framework which categorizes quality of care into structure, process and outcome domain. Structure encompassed financial aspects, accessibility and convenience dimensions of health care. While Process includes interpersonal manner, communication, technical quality and time spent with doctor. Outcome is determined in the form of general or overall maternal satisfaction with the health care. The dimensions of care segregated under structure and process domain; financial aspects, accessibility, convenience, technical quality, interpersonal manner, communication, and time spent with doctor were the independent variables of the study and the relationship was studied with the outcome domain which is general or overall maternal satisfaction with health care which is the dependent variable in the study. All dimensions of healthcare emerged to be significant in the current study, but depicting variation in the satisfaction and dissatisfaction level of mothers.

The financial aspect emerged as a significant predictor of maternal satisfaction. Mothers satisfaction and dissatisfaction level with financial aspect of care does not show much variation in this study. However, mothers were more satisfied in comparison to dissatisfied mothers. According to previous studies, the cost of health care has positive effects on satisfaction level (Lobo et al., 2014). In fact, most people seek to obtain reliable and affordable health care coverage that reduces or eliminates their out-of-pocket expenses. Studies indicate that patients are more satisfied with providers that assist them with accessing resources that will cover their medical expenses (Lobo et al., 2014; Mead at al.,

2014). However, sometimes patients still find themselves basing their health care decisions on the amount that their treatment will cost. As it pertains to vulnerable populations being able to afford quality, patient-centered care, a study conducted on focus groups to explore underserved patients‟ perspectives on patient-centered care found that affordable care meant more to the groups than just wanting lower out-of-pocket costs (Mead at al., 2014). It was also evident in the current research when the mothers were asked the reason for their satisfaction with the financial aspect; “this hospital is comparatively affordable than other private hospitals and since I have to pay out of pocket, therefore I came to this hospital”. “I am satisfied with this aspect as the I am getting complete and good medical treatment with affordable medicines”, replied another mother.

Accessibility emerged as the second best significant predictor of maternal satisfaction in the current research. Mothers in the current study were dissatisfied with this aspect of care and were of the opinion; “since I have to take public transport in this condition to access the hospital, therefore it gets very uncomfortable for me and my family”. Another mother said, “the location of the facility is not near my residence, and I have to face connectivity and distance issues, hence I am dissatisfied”. This is in consistent with the previous research where travailing far to the health facility has shown to diminish the satisfaction level in Ghana (Overbosch et al., 2004) and Vietnam (Tran et al. 2012). Indeed, the distance between a patient‟s home and their prenatal care provider has been consistently demonstrated to be a key factor in both satisfaction with prenatal care and prenatal care utilization in other settings (Simkhada et al., 2008).

Convenience of receiving care appeared as a significant predictor of maternal satisfaction. The second highest satisfaction level of mothers in Khyber Pakhtunkhwa was observed for convenience of care. One of the mother responded; “I do not have to wait long for the

medical checkup since this hospital is not overcrowded", for the reason of high satisfaction level. This is consistent with the study conducted in Sarawak, Malaysia where mothers were highly satisfied with the convenience aspects of maternal care (Rahman et al., 2016). Other studies of maternal satisfaction with health care have reported similar findings regarding convenience aspect of care. A study conducted in Ethiopia found that dissatisfaction with prenatal care was primarily due to long waiting times and overcrowding in the facility during the morning (Chemir et al., 2014).

The result shows that the structure domain of health care which encompasses non-medical aspects such as financial, accessibility and convenience are the significant predictors which influences maternal satisfaction level. These dimensions have also been identified in previous studies in Pakistan (Ashraf et al., 2012).

Technical quality emerged as the best predictor for maternal satisfaction in the current research. However, it also appeared to be the only dimension which shows the highest percentage of neutral response from the mothers. One of the mother responded by saying that "due to no exposure I do not know if the treatment and diagnosis recommended by the doctors were right or not, since I do not have sufficient knowledge". "The reason I am neutral about this dimension is because the care I was expecting and the one I am receiving does not show correspondence", replied by another mother who gave a neutral response. This is also observed in a previous study which reported that when there exists divergence in the provision which is expected and which is provided, it predicts mothers" satisfaction level (Dzomeku, 2011). One of the research also reported that technical quality may not be sufficient to ensure the quality of service delivery. Therefore, the health suppliers may need further supporting mechanisms to offer antenatal care that mothers consider as satisfactory (Do et al., 2017).

Interpersonal manner appeared as the third best predictor of maternal satisfaction in the current study. Mothers were highly satisfied with this dimension of care, which appeared to be the most widely reported determinant of maternal satisfaction. This was also evident in a study conducted on a tertiary care health facility in North Eastern Nigeria (Ibrahim et al, 2017). The largest body of evidence in the literature revolves around provider behavior in terms of courtesy and non-abuse. It shows the importance mothers attach to being treated with courtesy and empathy, irrespective of socio-cultural or economic context (Srivastava et al., 2015). It is also evident in current study when a mother who was highly satisfied with the interpersonal manner stated; "the core reason I choose this hospital is because the doctors are very polite and treat me with dignity and caring behavior". Across the world, mothers seek dignity and respect while undergoing maternal health care. Provider behavior and attitudes are therefore major determinants of utilization of skilled health care (Aldana et al., 2001).

However, communication which emerged as a significant predictor of maternal satisfaction, but it showed highest dissatisfaction level from mother"s perspective. Provision of cognitive support through effective communication by imparting sufficient information to mothers related to their health status and the treatment needed, appeared to be a crucial predictor of maternal care satisfaction as reported by studies in Malawi and Iran (Changole et al., 2010; Jafari et al., 2010), which is consistent with the current research as communication appeared a significant predictor of maternal satisfaction. However, the low level of maternal satisfaction could possibly be because majority of the mothers were uneducated and do not understand English or Urdu, hence these factors could affect their communication and understanding.

Time spent with doctor also appeared as a significant predictor of maternal satisfaction in the current study. However, the mothers were equally satisfied and dissatisfied with this dimension of health care. Studies has shown the less time spent with doctor as the major reason for dissatisfaction (Agarwal & Biswas, 2017). However, time spent with doctor appear to be less important than reduction in waiting time (Aldana et al., 2001), which could be the reason for mothers to be satisfied with this dimension of care, since the mothers were highly satisfied with the convenience aspect of care.

The results from the study reveal that both structure and process domains are significant in assessing maternal satisfaction level in hospitals. All dimensions of health care influences maternal satisfaction level in the study setting. There are some practical implications extracted from this study which are crucial for the health sector of Khyber Pakhtunkhwa when it comes to providing quality healthcare to pregnant mothers. Maternal health programs and policies in Khyber Pakhtunkhwa must consider mothers views and opinions on the health care they need and their feedback on the services they received. It is crucial for any such programs to have a robust system to obtain mothers‟ feedback and utilize the information received for the purpose of improving health care services. In the absence of proper referral system in Khyber Pakhtunkhwa, it is not possible to achieve the desired outcomes in health, despite increase in health budget and reforms in health care system. Due to poor referral system, primary healthcare remain underutilized and tertiary care facilities are under burden. This situation leads to higher unit costs, adversely affects quality of care being provided at tertiary care institutions. Therefore, for improving the referral system, primary health care system should be strengthened. This can have a huge positive impact on both process and structure domain of quality of care. In addition, human resource is the backbone of any organization. Quality health care cannot be achieved

without sound professional education. The qualification, competence, performance and continuous professional development of doctors is very crucial since technical quality emerged as the best predictor of maternal satisfaction in Khyber Pakhtunkhwa. Therefore, it is the need of time to synchronize curriculum with modern pedagogic techniques, international standards and local requirements. The demand for health care in Khyber Pakhtunkhwa is high. However due to inadequate resources, health care financing remains low, which affect the quality of health care delivered by health institutions, which effect mothers satisfaction level with health care. Therefore, it is also important to diversify health care financing such as community financing, social and private insurance schemes, donors driven projects and philanthropist activities. There is a need to increase the health budget for Khyber Pakhtunkhwa, which should be equally distributed to primary, secondary and tertiary health facilities. Health being a holistic concept is dependent on many other determinants. Some of these determinants include illiteracy, unemployment, gender inequality, social exclusion, rapid urbanization, inadequate resources and population explosion. These social determinants need to be addressed to promote health on equitable basis, which can influence maternal health and satisfaction level. Strategies should be targeted in particular towards those mothers who have no education and belong to poor households. It is also necessary to improve the health literacy and awareness of communities. Furthermore, to enhance mothers‟ satisfaction level, it is important to improve rural health sector, community involvement, behavior change communication, information exchange, women empowerment, accountability, and transparency in the health system, which eventually will boost the health status of women of Khyber Pakhtunkhwa. It is the dire need of time to adopt inter-sectoral approach in health, since health is a multi-sectoral subject. Government should strive to develop common vision and one framework and platform to work not only for health but also for education, health infrastructure,

women friendly public transportation, and health financing. Inadequate contact and lack of trust with the mother‟s lead to low satisfaction level and unwillingness to utilize the health services in future. Lack of coordination and community trust is mainly due to unprofessional behavior of medical practitioners, lack of quality care, poor medical practice and inconvenience while accessing the doctors. Therefore, community involvement and transparent feedback mechanism can enhance mothers interest in health system. Currently, all health departments work in isolation. These are overworked and understaffed. Capacity building initiatives are not up to the mark. It is the dire need of time to initiate joint ventures through public private partnership. Both public and private stakeholders in health sector need to initiate joint ventures to save time, effort and resources, which will enhance health facilities in Khyber Pakhtunkhwa.

5.3 Research Contributions

The findings from this research will add knowledge to the literature, as according to researcher‟s understanding, this study is the first attempt in using Donabedian quality of care framework to assess mother‟s satisfaction level in urban private tertiary care hospitals operating in Khyber Pakhtunkhwa. In addition, the study determines the predictors of mothers overall or general satisfaction in relation to structure and process domain of quality of care in private hospitals of Khyber Pakhtunkhwa. The use of Patient Satisfaction Questionnaire PSQ-18, in the context of urban private tertiary hospitals in Khyber Pakhtunkhwa also contributes to the current literature.

The study adopted quantitative and qualitative approach to assess the maternal satisfaction level. Qualitative approach is adopted by including the responses from the mothers about the reasons for their satisfaction or dissatisfaction level. By adopting both approaches, the

limitation of each method becomes moderate. This study used sample from Peshawar, which is the most populous and diverse city of Khyber Pakhtunkhwa; a better representative of the population.

The findings from this research will assist the hospital administrators to formulate effectual plans and approaches to assure high quality of health services to patients. The research will stimulate the administration of the hospital to provide further considerations related to quality of care in private health sector and enhancement of the unsatisfactory health care facilities. In addition, the research will demonstrate a comprehensible illustration of mother‟s perceptions about their satisfaction with the quality of health care facilities. Since technical aspect emerges as the best predictor of overall satisfaction with the health care services provided but the mothers were neutral about the satisfaction level with this dimension of health care. Therefore, there is a need to introduce health education as part of health care services provided both in private and public sector.

The identification of factors related to mother‟s satisfaction with health care will provide the much-needed information on the structure and process variables that can be used to improve mother‟s satisfaction with existing and future health care delivery models. The understanding of the factors and the relationship of those factors with structure, process, and outcome variables will be important for resource allocation, program planning, and policy development, particularly at a time in which new and innovative health care delivery models are being considered. As new health care delivery models are developed, the predictors of satisfaction can be considered in program planning, implementation and evaluation. Resources can then be allocated in a manner that facilitates the implementation of the structure and process elements that predict satisfaction.

5.4 Research Limitations

The study found some interesting results but there are some limitations. First, the sample for this study is obtained from two urban private tertiary hospitals operating in Peshawar. Due to time and resource constraints, more hospitals could not be included in the study, and a cross sectional descriptive study was conducted. However, a longitudinal study studying pregnant mothers across all three trimesters of pregnancy, will yield different results regarding mothers‟ satisfaction level. Also, mothers who were included in the study were visiting the health care facility for their prenatal checkup. Therefore, the satisfaction level was not assessed across the continuum of maternal care during prenatal, childbirth and postnatal period, which was possible in a longitudinal study.

Second, ethical considerations were also one of the reason for not including more hospitals in the study. Few of the hospitals being accessed by the researcher believed that some items included in the questionnaire were inappropriate on part of the hospital personnel.

Third, the study even though included both the quantitative data and the responses from mothers about the reasons for their reported satisfaction or dissatisfaction level, however the limitations relate to the analysis of the qualitative data. The responses of mothers were justified in accordance to the literature but no software was used for the qualitative analysis. The sampling technique and the research‟s dependence on one city has been justified, but has not prevented its constraints. The main limitation lies in the limited ability to generalize the results to the population. Also, the data was collected by interviewer-administrated questionnaire, due to mothers‟ inability to read English, Urdu and Pashto. Therefore, the researcher effect can also be counted as a possible constraint.

5.5 Future Research

In order to gather a further insight on maternal satisfaction throughout Pakistan, the geographical scope of this study can be extended encompassing all the provinces in Pakistan. It can include research on primary, secondary or tertiary health care facility in private sector to assess mother‟s satisfaction level throughout Pakistan. It can further include maternity care centers throughout Pakistan, to see if those are better in comparison to private health sector at primary, secondary and tertiary levels in delivering maternal care services. A further study can also include the health facilities providing maternal services which operate in rural vicinities of the country.

To further improve the research outcome, an amalgamation of quantitative and qualitative data on a larger scale should be used. More dimensions of maternal satisfaction should be included covering structure, process and outcome domain of quality of care such as physical attributes, availability of personnel, emotional support, privacy, cleanliness, and preference for female providers. Also, mothers‟ satisfaction level should be examined across the continuum of maternal care covering prenatal, delivery and postnatal period for more holistic measurement.

In addition, a comparative research on public and private sector can also be conducted to examine the maternal satisfaction in primary, secondary or tertiary health care facilities in Khyber Pakhtunkhwa. Furthermore, a case study on Khyber Pakhtunkhwa‟s largest maternity centers can be beneficial in determining which dimensions of quality of care needs deliberation in public and private sectors which provide health services to pregnant mothers. Finally, a study on a different culture for instance on a developed country, can

offer a cross-cultural valuable insight into the same issue and offer measures for improving quality of care in maternal health.

5.6 Summary

Maternal satisfaction is a multi-dimensional concept, which is influenced by numerous factors. The mothers included in the study were satisfied with the interpersonal manner, convenience, and financial aspect of the private hospitals which they visited. However, the private hospitals need to focus more on communication, technical quality and accessibility aspects of the care to increase the satisfaction level of mothers. Technical quality which appeared as a strong predictor in current study, when further improved by the health sector in Khyber Pakhtunkhwa, will eventually lead to overall good health and elevated satisfaction levels of mothers. The model proposed in the study provided a significant contribution to the literature, along with practical implications.

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