PATIENT SATISFACTION TOWARDS OUT PATIENT DEPARTMENT SERVICES IN PAKISTAN INSTITUTE OF MEDICAL SCIENCES, ISLAMABAD

ANJUM JAVED

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PRIMARY HEALTH CARE MANAGEMENT FACULTY OF GRADUATE STUDIES MAHIDOL UNIVERSITY 2005

ISBN 974-04-5687-1

Thesis
entitled

PATIENT SATISFACTION TOWARDS OUT PATIENT DEPARTMENT SERVICES IN PAKISTAN INSTITUTE OF MEDICAL SCIENCES, ISLAMABAD

.....
Mr. Anjum Javed
Candidate

.....
Asst.Prof.Veena Sirisook
Dr.P.H.
Major-Advisor

.....
Prof. Santhat Sermsri
Ph.D.
Co-Advisor

.....
Assoc.Prof.Chanya Sethaput
Ph.D.
Co-Advisor

.....
Assoc.Prof.Rassmidara Hoonsawat
Ph.D.
Dean
Faculty of Graduate Studies

.....
Assoc.Prof.Sirikul Isaranurug
M.D., Dip.Thai Board of Paediatrics
Chair
Master of Primary Health Care Management
ASEAN Institute for Health Development

Thesis
entitled

PATIENT SATISFACTION TOWARDS OUT PATIENT DEPARTMENT SERVICES IN PAKISTAN INSTITUTE OF MEDICAL SCIENCES, ISLAMABAD

was submitted to the Faculty of Graduate Studies, Mahidol University
for the degree of Master of Primary Health Care Management

on
March 21, 2005

.....
Mr. Anjum Javed
Candidate

Veena Sirisook
.....
Asst.Prof.Veena Sirisook
Dr.P.H.
Chair

.....
Prof. Santhat Sermsri
Ph.D.
Member

Prakairat Sukumalchart
.....
Asst. Prof. Prakairat Sukumalchart
M.S.
Member

Chanya Sithaput
.....
Assoc.Prof.Chanya Sethaput
Ph.D.
Member

.....
Assoc.Prof.Rassmidara Hoonsawat
Ph.D.
Dean
Faculty of Graduate Studies
Mahidol University

.....
Assoc.Prof.Sirikul Isaranurug
M.D., Dip.Thai Board of Paediatrics
Director
ASEAN Institute for Health Development
Mahidol University

ACKNOWLEDGEMENT

I wish to convey my deepest gratitude to ASEAN Institute for Health Development, Mahidol University, Thailand and Pakistan Institute of Medical Sciences, Ministry of Health, Pakistan, for providing opportunity to attend MPHM program.

This thesis would not have been completed without the help and guidance of many people. I would like to express my sincere thanks to my thesis committee that is my advisers Professor Santhat Sermsri and Asst. Professor Veena Sirisook for their precious support, guidance, valuable suggestions and encouragement. I am grateful to Assoc. Professor Chanya Sethaput, my co-advisor for her special attention to accomplish my study.

I wish to extend my thanks to AIHD staff for providing enabling environment for my studies. I would like to thank Ms. Sirilak Lyeskul for her consistent help in MPHM office and Mr. Lerpong Wongsuthichoti for his kind support in ASEAN House.

I express my sincere gratitude to all my friends and colleagues in MPHM 19th Batch, especially Dr. Somchai Teetipsatit for his always- available support.

Last but not least, my special gratitude goes to my wife, children and other family members for their affection, continuous emotional support and encouragement that inspired me throughout my study in MPHM course.

Anjum Javed

PATIENT SATISFACTION TOWARDS OUT PATIENT DEPARTMENT SERVICES IN PAKISTAN INSTITUTE OF MEDICAL SCIENCES, ISLAMABAD.

ANJUM JAVED 4737959 ADPM/M

M.P.H.M. (PRIMARY HEALTH CARE MANAGEMENT)

THESIS ADVISORS: VEENA SIRISOOK, Dr.P.H.,
SANTHAT SERMSRI, Ph.D., CHANYA SETHAPUT, Ph.D.

ABSTRACT

This study was conducted to describe patient satisfaction towards out patient health care services in Pakistan Institute of Medical Sciences (PIMS), Islamabad, Pakistan. The study population was aged over 15 yrs, sample size was 200, and data was collected by self-administered questionnaire from 5th to 15th January 2005. The main factors were socio-demography, accessibility, past experience and patient satisfaction. Chi-square test was performed to analyze the association (p-value = 0.05.)

The overall satisfaction was 54%, scored by using Likert's scaling as 5=strongly agree, 4=agree, 3=not agree, 2=disagree and 1=strongly disagree. Regarding service procedure, a prominent variation in response of patients was observed. Patients were highly satisfied towards the medical expenses (81%), registration service (77.5%) and nurses' service (76.5%) and relatively less satisfied with the pharmacy service (65%), medical equipment (65%), doctor's service (61.5%) and physical facilities (53%). With regards to the socio-demographic factors, a statistically significant association was found for age, marital status, education, occupation, and family income with patient satisfaction showing p-value < 0.05. The past experience showed no association with the satisfaction (p-value=0.062). Accessibility was established as associated with living distance, out patient department timings and patient satisfaction. (P-value < 0.001).

Based on the results of the study, an improvement in physical facilities, the doctor's service, pharmacy service and medical equipment area is suggested. The ways and means may also be considered to reduce the total OPD waiting time for the patient. Follow up studies are recommended for comparison of PIMS with other similar hospitals. Community based studies may also be performed. Periodical assessment of the level of patient satisfaction should be adopted as a permanent feature.

KEY WORDS: OUT PATIENT DEPARTMENT / SATISFACTION
ACCESSIBILITY / EXPERIENCE

74 P. ISBN 974-04-5687-1

CONTENTS

CONTENTS (cont.)

LIST OF TABLES

LIST OF ABBREVIATIONS

PIMS : Pakistan Institute of Medical Sciences.

MOH : Ministry of Health

WHO : World Health Organization

Rs : Rupees.

OPD : Out Patient Department.

HBM : Health Belief Model

JACHO : Joint Commission on Accreditation of Healthcare Organizations

CHAPTER 1
INTRODUCTION

1.1 Rationale and justification of the study

Pakistan Institute of Medical Sciences (PIMS) is a tertiary care hospital located in Islamabad. It has three clinical and four training components. The clinical components are, Islamabad Hospital, Children Hospital, and Mother - Child Health Center. The out patient departments of the hospitals cater the need of about three thousand patients per day while inpatient bed capacity is approximately one thousand.

The hospital was built with the aim of providing health services to the residents of twin cities of Islamabad and Rawalpindi. However, presently it is receiving all kinds of referred and non-referred patients from Northern areas, Azad Jammu and Kashmir, North Western Frontier Province and Punjab; due to which the hospital is over burdened and facing difficulty in meeting the demands of the large number of patients. Naturally all patients coming from distant areas expect best medical care in a hospital located in capital city of Pakistan. The Hospital management and hospital staff including doctors and nurses do their best to provide quality care to satisfy the patients but limited resources in terms of men, money and material make it difficult. Doctors including post graduate trainees of PIMS attend patients in out-patient-department (OPD) for six hours and six days a week in the morning hours but despite their best efforts they are unable to satisfy all the cases coming to the hospital. Patients have to give long appointments. Overwork also affects the quality of service and creates stress for working staff.

The following map shows the above mentioned patient referral areas of Pakistan Institute Of Medical Sciences. As already mentioned Azad Kashmir, Northern Areas, North West Frontier Province and upper part of Punjab are the main Catchments areas of PIMS.

We are living in world of information and technology. Patients are well aware of their needs and rights. They are educated and well informed. They know health facilities are established to provide satisfactory and quality health service to the patients. If the hospitals fail to do so, they are considered unsuccessful in performing assigned duty. Hospital performance can be best assessed by measuring patient's satisfaction level. A completely satisfied patient believes that the organization has potential in understanding patient's personal needs, and demands related to **health care**.

Health care has seen many changes over the time. When it is looked back to know the history of evolution of health care, and it comes to know that objectives of health care changed with requirement of society and availability of resources and technology. The 19th century (1850) was an era which was "symptom- centered". Health was being referred to the elements of empirical perception/local understanding without any scientific examination. Early 20th century (1900) was basic science or disease centered era. Health was being referred to scientific reasoning and experimenting disease. It included diagnosis and treatment of diseases. Mid of the 20th century (1950) experienced clinical science or patient centered era. Health was

centered mainly in hospitals and clinics and diagnosis and treatment of individuals was preferred. Late of 20th century (1975) was public health science or community-centered era. Health had been focused on diagnosis and treatment of community. End of 21st century (2000) saw political health science or people-centered era. Health has become people's matter and need public participation, including proper allocation of resources responding to public needs. The WHO conference, supporting health for all, held in 1990 defined future development in health to be human centered. A lot of stress has been made on investment in health, patient care and patient's right to delivery of quality health care leading to patient satisfaction. (1, 2).

Considering the above historical facts, it is needed to establish the strategy that should lead to delivery of equitable, easily accessible and satisfactory medical care to all patients including patients attending the out patient department of Pakistan Institute of Medical Sciences (PIMS). Patient satisfaction is therefore of high value and it is useful to understand the need of users. By understanding the importance of satisfaction and determining its existing level, health care services can be made relevant to the requirements of people and patients. A Review of relevant literature supports that assessment of level of patient satisfaction is the tool to determine the level of health care delivery, analyze the existing situation and workout strategy to improve it. This is supported and emphasized by following references.

Fitz Patrick Ray, (1991) stated that patient satisfaction provides potentially a direct indicator of system performance and is a mean of choosing alternative strategies in health care provision. (3) Hence, assessing satisfaction is not a one-time action; instead of that it needs continuous monitoring and evaluation. By adopting this procedure, service providers would be able to learn about the deficiencies in the health delivery system and will be able to take timely appropriate alternative steps. Kareem et al, (1996) said that studies related to the patient satisfaction are important, but this topic has always been ignored by the service providers. Therefore, it is important that regular internal audit may be conducted to assess the patient behavior and satisfaction. (4) Establishing such system within the organization will keep a

permanent watch on organizational activities and help the providers knowing and resolving the deficiencies at its earliest.

Linder-Peltz, (1992) mentioned that client satisfaction with health care is getting increasing attention from administrators, practitioners, consumers and evaluators of health care.(5). Consequently patients as service users and physicians and administrators as service providers are conscious about the satisfactory health care delivery.

Patient satisfaction is essential due to multiple reasons. Any unsatisfied patient will not come back to the hospital, and it will lead to loss of money of patient, as well as wastage of government resources. High satisfaction level will indicate that hospital is working efficiently. On the other hand, poor satisfaction level helps the management of a hospital to improve on the health services.

After reaching to the conclusion that patient satisfaction is vital for hospitals and other health organizations, it would be appropriate to uncover the issue and determine the factors influencing the satisfaction. Satisfaction may be influenced by socio-economic factors, accessibility to the health care services and experience or perception of patients towards health services. Experience or knowledge of patients about health care service contributes in establishing expectation or perception of patients. This fact makes the experience or perception a very vital variable.

It is a common understanding that a patient can assess only general aspects of health care but he/she is not competent to assess its technical aspects. **General aspects** of treatment have many dimensions: for example, health providers including doctors and nurses should be courteous and caring to the patients. Health care providers should explain them treatment and post operative instructions. Meal served to patients should be properly cooked and hot etc. these should be considered by them are more important because it will convince that patient is well aware about their importance and they can judge their quality. On the other hand, it might be thought that those patients are not able to judge or perceive the **technical aspects** of treatment.

In fact, it is only partially true. Patients may not be able to judge and perceive whether the proper gauge needle is used for the injection, or whether 10 cc is proper dose or whether heparin is proper medication. Nevertheless, patient can perceive whether injection hurt more than his anticipation, whether a nurse was informative as well as friendly, or whether the doctor listened to him appropriately. Patients may not distinguish between the technical merit of full incision versus endoscopic surgery or hernia repair, but they can perceive and judge whether doctor explained options well. They can perceive whether staff was sensitive to their post operative pain. Meeting and fulfilling of these perceived demands, expectations or experiences determine degree of level of patient satisfaction.

Study area of this research is PIMS out-patient department. The annual budget of PIMS is about 400 million rupees per year. Average attendance of OPD of Islamabad Hospital is 1870, Children Hospital is 730, and maternal child health center is about 400 patients per day. PIMS provide medical cover in OPD in following specialties of adult patients (more than 15 years) and they are examined in the OPD of Islamabad hospital and maternal child health center. The Detail of medical, surgical and MCH services provided in hospital are as under

Medical and Allied: General Medicine, Nephrology, Pulmonology, Dermatology, psychiatry, Rheumatology, Gastroenterology, and Cardiology etc.

Surgical and allied: General Surgery, Orthopedic, Urology, ENT, Neurosurgery, Eye surgery and plastic surgery. etc.

Maternal child health care: Cases related to Obstetrics and gynecology

Presence of services in multiple specialties, attendance of OPD by a large number of patients and allocation of huge resources demand that quality of care provided by the hospital should be determined. The most reliable tool available for this purpose is finding the level of patient satisfaction. Only a satisfied patient confirms the high quality medical care provided by the OPD. Therefore, this research is important as the determination of level of patient satisfaction will lead to improved quality of health care, satisfied and happy users, more appropriate utilization of budget and highly reputable hospital.

In the past, patient satisfaction studies have tended to result in gathering of information that was probably not as meaningful or useful to managers as it could or should have been. Conclusions like: "in general patients are satisfied with the program" may be contributing to reinforce the status quo more than they were helping managers to pinpoint areas of patient satisfaction and discontent, or to find innovative solutions to improve program delivery. Good patient satisfaction studies did not end like this; they become means to improve service to the public. Knowledge of patients' expectations and of the extent to which these were met may prove really beneficial indeed to managers. Broadly speaking, this knowledge served two purposes: (a) identifying areas of improvement in the quality of the services offered; and (b) highlighting the need for corrective actions when patient's perception exceed what the organization could afford to offer or what a particular program was meant to provide. (6)

Research Questions

1. What is the level of patients' satisfaction towards OPD services at PIMS?
2. What is the accessibility of patients towards the OPD services at PIMS?
3. What is the experience (perception) of patients towards OPD health care facilities?
4. What is the relationship between socio-demographic characteristics, accessibility, experience and OPD patient's satisfaction?

1.2 Objectives:

1.2.1 General objectives:

To evaluate patient satisfaction towards health care services in the OPD of Pakistan Institute of Medical Sciences.(PIMS).

1.2.2 Specific Objectives:

1.2.2.1 To determine the level of patients satisfaction towards OPD services with reference to physical facilities, medical equipment, medical staff services and laboratory tests cost at PIMS.

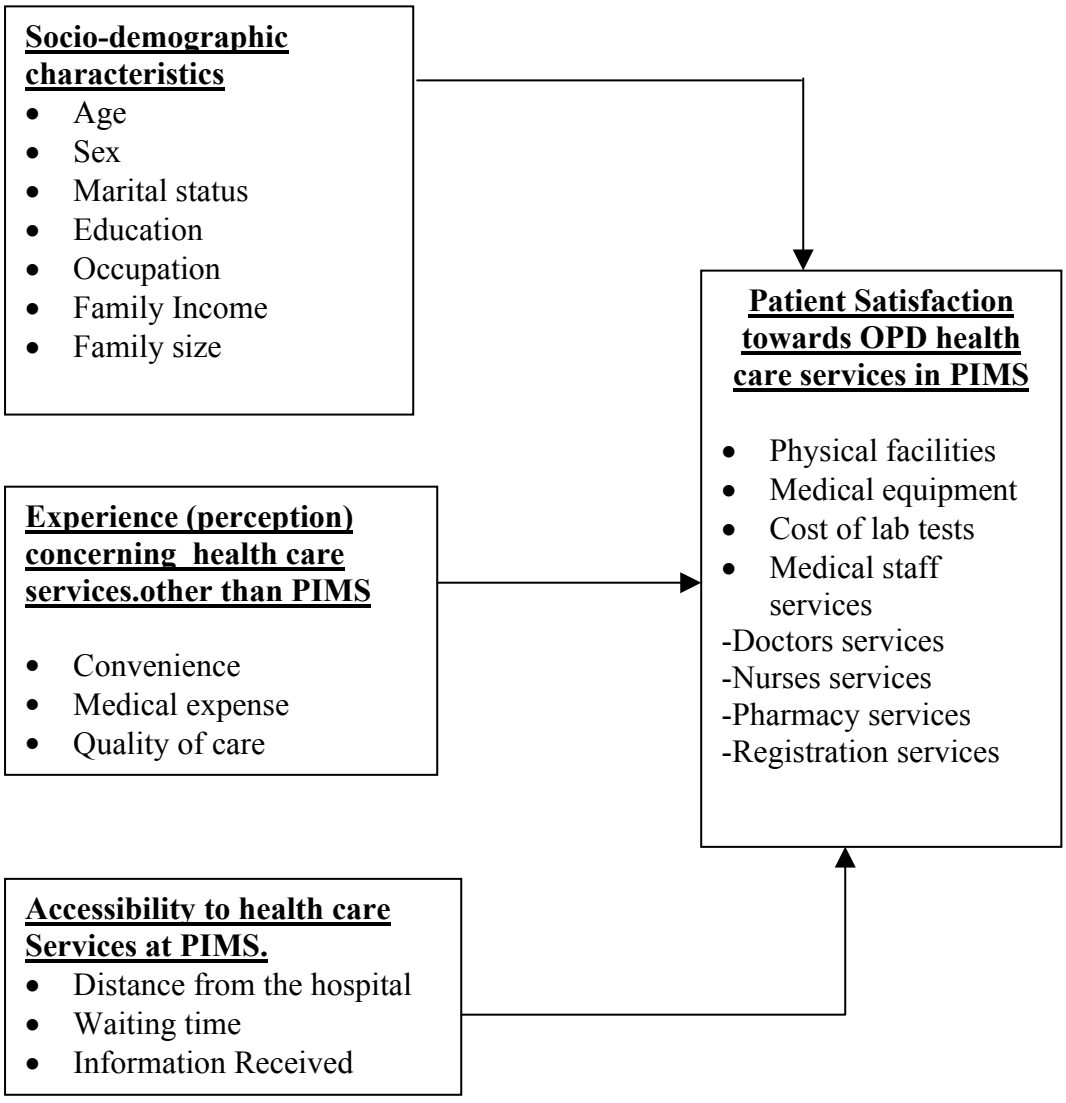
1.2.2.2 To describe accessibility of patients towards OPD services at PIMS.

1.2.2.3 To describe experience (perception) of patients in terms of convenience, medical expenses and quality of care towards OPD health care service towards all health care facilities other than PIMS.

1.2.2.4 To determine the association between socio-demographic characteristics, accessibility, experience and patient satisfaction concerning the OPD services at PIMS.

1.3 Conceptual framework :

Independent variable **Dependant variable**



1.4 Operational definitions:

1.4.1 Patient

It referred to the person who first attended the OPD at the time of filling the questionnaire form, for the treatment of himself / herself and had age more than fifteen years. It included only the patients visiting OPD of PIMS hospital for the first time.

1.4.2 Outpatient department

It referred to the hospital unit that a patient attended for treatment or consultation and did not stay over night in the hospital.

1.4.3 Socio-demographic Characteristics

They consisted of age, sex, marital status, occupation, education, family income and family size of the respondent.

Age. This referred to the age of the respondent counted in years on last birth day. Minimum age of respondent was more than 15 years in this case. Age had four groups as follow,

Sex. It referred to the gender of the respondent whether it was male or female

Marital Status. It referred whether the respondent was single, married, divorced, separated, widow/widower. In this research they have four groups as single, married, widow/widower and divorced/separated

Main Occupation. It indicated to the nature of job of the respondent. For example farmer, businessmen, employee etc. It had following groups,

Education. It referred to the academic or study qualification of the respondents.

Family income. It referred to the total income per month in rupees of all family members of respondent.

Family size It referred to the total members of the family living in house hold respondent.

1.4.4 Satisfaction.

It could be defined as individual feelings or perceptions towards out-patient department health care services and the extent to which these services met the need of users. The satisfaction was used as a composite variable and its level was determined by assessing satisfaction of patient for physical facilities, medical equipment, doctor service, nurse service, pharmacy service, registration service and expenses for laboratory tests.

Physical facilities It included service facilities such as general cleanliness, ventilation, light, noise, sitting facilities, clean toilets and sufficient examination room availability.

Medical equipments It included the availability and working order of diagnostic or therapeutic equipment in OPD. For example, blood pressure apparatus and thermometer.

Doctor's service It included the courtesy and respect of a doctor for a patient and time spent by the doctor in physical examination.

Nurse's service It included the respect given by a nurse and treatment explained by her.

Pharmacy service It included the courtesy given and use of medicine clearly explained by the pharmacist**.**

Registration staff services It included the courtesy paid by the registration staff and his/her good communication skills.

Expenses for laboratory tests It included the affordability of the amount of money spent for pathology and X-ray laboratory tests**.**

In order to determine level of satisfaction respondents were asked 19 questions and Likert's five points rating scaling was used for measuring satisfaction. The rating was done as follow:

5 = Strongly agree

4 = Agree

3 =Not agree

2 = Disagree

1 = Strongly disagree.

The satisfaction level was divided into two groups. The respondents securing a score of mean or more were considered as satisfied while those securing less than the mean score were labeled as not satisfied.

1.4.5 Accessibility to health care Services

It is comfort-ability to access the health care services in terms of distance from hospital, waiting time, and information received.

1.4.5.1 Distance from hospital included home distance from hospital, availability of public transport, traveling time to reach hospital and money spent on traveling.

1.4.5.2 Waiting time included waiting time for doctor and total time spent in the OPD.

1.4.5.3 Information received included adequacy of OPD timing, general information about the hospital and main source of introduction about the hospital.

1.4.6 Experience (perception) to health care services

Experience of patient to health services was an important variable because it made the expectation of patient which in turn were dependant on perceptive image. A common definition of perceived image is to become aware of something through ones senses - touch, taste, smell, hearing or sight. It is understood to be the common general knowledge, or knowledge acquired by self experience or other's experience of utilization of health care services. Experience to health care services was assessed

with reference to convenience of care, quality of care and expenses afforded for medical care.

1.4.6.1 Convenience

It referred to availability of care when needed such as convenient hospital hours and availability of health care in need. In this research it included waiting time for physical examination, waiting time for receiving medicines, convenience of medicine receiving place, adequacy of treatment receiving place, adequacy of OPD timing, and receiving medical services from one department to another department in OPD.

1.4.6.2 Quality of care

It referred to the provider's skill and ability in treatment and sufficiency of health facilities. In this research, it included treatment received from doctor, availability of prescribed medicines from hospital, skill of the nurse in using medical equipment, opportunity provided by the doctor for asking about the illness, and attention paid by the hospital officer in case of any problem.

1.4.6.3 Medical expenses

It referred to the total treatment cost paid out of the pocket of patient. In this particular research medical expenses included affordability of the cost of urine and blood and suitability of the cost of X-ray test.

The experience was assessed by asking fourteen questions from respondents. Questions were recorded as yes= 1, No = 0.

The experience level was divided into two groups. The respondents securing a score of mean or more were considered as having high experience/expectation (high level of good experience perceived). They were the respondents who experienced good quality services in the health institutions and had higher expectations while those securing less than the mean score were labeled as having low experience/expectation (low level of good experience perceived). They were the respondents who had poor experience at health institutions they visited in past.

1.5 Strength and Limitations

1.5.1 Strength

Patient satisfaction is an important indicator for analyzing the quality of care and in turn, hospital functioning. This research has provided detailed information related to the satisfaction and non satisfaction areas of hospital. Managers may utilize this data to understand the weak ad strong areas related to the hospital functioning and plan the corrective measures.

The systematic sampling in this study will enhance the reliability of the research by involving various patients of different strata. The results, thus achieved will be more reliable and authentic.

In normal life common people hesitate to give their opinion on different vital issues including the problems related to the hospital. The confidential and anonymous nature of the study had motivated the peoples of all quarters to put forward their view point.

1.5.2 Limitations.

This study was done only in the PIMS and was limited to adults more than the age of 15 years. Hence, results will show the picture of a peculiar setup that was only related to the PIMS. These results can not be generalized to apply to other institutions having no similarity with PIMS.

This study has to be completed in limited time duration and with meager men, money and material resources. Therefore, many important variable and questions could not be included. For example, ethnic and linguistic background is an important factor related to the accessibility and it could not be included in questionnaire.

Result and output of the study heavily depend upon data collection. Only fully trained, honest and skilled data collectors can maintain the sanctity of the data. Any biased data collector would be able to tamper the data and effect the out come of final results.

CHAPTER 2
LITERATURE REVIEW

2.1 Patient Satisfaction

Health services have always been an essential human requirement because all the human beings need them for curative, preventive and rehabilitative purpose. It is the good quality health service than can confer healing and only attainment of quality service or health can physically and psychologically satisfy the patient. Patient satisfaction is a person's feeling of pleasure or disappointment resulting for comparing a service's perceived performance or outcome in relation to his or her expectations. As this definition makes clear, satisfaction is a function of perceived performance and expectations. If the performance falls short of expectations, the customer is dissatisfied. If the performance matches the expectations, the customer is satisfied. If the performance exceeds expectations, the customer is highly satisfied or delighted. (7)

Patient satisfaction has remained most important and essential focus point for all health providers. Risser, (1991) defined patient satisfaction as the degree of congruency between a patient's expectations of ideal nursing care and his perception of the real nursing care that he receives (8). Oliver, (1993) said that word satisfaction is from Latin; satis=enough and faction= to do or make .Hence satisfaction is a fulfillment response. (9). Swan, (1985) suggested that patients satisfaction is a positive emotional response that is desired from a cognitive process in which patient compare their individual experience to a set of subjective standards(10).

It can be concluded that different scholars have defined the satisfaction with reference to the different parameters and aspects but none of them has denied its importance. Hence it is determined that patient's satisfaction happens when all his

needs are met according to his expectations. Studies about patient's satisfaction are important for smooth functioning of hospitals, and hospitals should have self working mechanism to address the changing needs of patients

Kareem et al, (1996) suggested that studies related to the patient satisfaction are important but this topic has always been ignored by the service provider. Therefore, it is important that regular internal audit may be conducted to assess the patient behavior and satisfaction.(5). Establishing a regular internal audit system will help in identifying the patient's problems timely and providers will be able to work out the strategy to resolve them.

In 1960 and 1970 many studies assessed the association of health care and patient satisfaction. In fact satisfaction is influenced by numerous factors and only continuous evaluation can identify the factors which can effect the satisfaction. (11) Donabedian, (1990) studied patients satisfaction with several aspects and determined that when patient gets medical assistance needed in sufficient amount and at appropriate cost, he becomes satisfied and consider the service as accessible. (12)

Lebow, (1983) reported that the satisfaction level has never been a fix and consistent score. It changes with circumstances and the quality and quantity of service provided. It has been reported by examining several studies that satisfaction rate was as high as 91-100% and as low as 51-60%. (13). Chetwynd,(1988) reported that most common complaints of his subjects were that hospital is under staffed and waiting list is long; hence, lowering the level of patient satisfaction (14). It has also been indicated by Rodney (1986) that patient shows satisfaction in terms of continuity, humanness, effectiveness of care and dissatisfaction in areas of cost and accessibility. (15). In a study about satisfaction in 30 hospitals , it was determined that areas of dissatisfaction were long waiting time, poor cleaning and hospital settings, and weak doctor patient relationship. (16) Mahon, (1996) said that satisfaction implies complete fulfillment of patient's desires, wishes and needs and patient satisfaction is influenced by the degree to which care fulfils expectation. (17)

The literature review revealed the following three important relationships. 1) Satisfaction was a function of expectations, perceived performance, and disconfirmation; 2) intention to repurchase was a function of patient/consumer satisfaction and 3) choice was a function of expectations and intention to repurchase. The higher the expectations that were met, the higher will be the patient satisfaction. (18)

In an other study by Giese. et at, (2000), it was determined that when examined satisfaction as a whole, three general components can be identified: 1) patient/consumer satisfaction is a response (emotional or cognitive); 2) the response pertains to a particular focus (expectations, product, consumption experience, etc.); and 3) the response occurs at a particular time (after consumption, after choice, based on accumulated experience, etc). (19)

Hence patient satisfaction is factor that may help in improving the hospital functioning, it can be a good tool for administrators to know the problems of patients. It can also help the physicians to know the response of their health care delivery. In the end it may a highly useful indicator for the future policy makers to set the direction of their strategy for providing efficient and equitable health care to the consumers.

2.2 Experience (perception) to health care services

Crow et al, (2003) in their review of literature identified that satisfaction was linked to prior experience with health care and granting patient's desires e.g. for tests. (23). The prior experience in this research was analyzed with reference to convenience of care, quality of care and medical expenses. Experience of patient creates expectations and perceptive image about quality of care. A common definition of perception is to become aware of something through one's senses - touch, taste, smell, hearing or sight. (24) Perception or expectations and experience as shown by many researches are influenced by many factors. Patient's cultural background, level of aspiration and worldview do exert some influence on the setting of experience. Patient's expectation is usually higher if there is a direct out-of-pocket expense.

Regularity of use is another key element in shaping patient's perceptive expectation and experience; people tend to have much more accurate perception and expectation for a service that they use regularly, than for one that they seldom use. Other factors contributing to shape patient perceived experience include, of course, the personal needs of patient, their past experience with similar services provided by other organizations, and what they hear from other users of the service. (25) As mentioned earlier, experience will be assessed in view of the following indicators.

2.2.1 Convenience.

Convenience is an important factor with reference to the patient's experience. In a study by Sriratanabul and pimpokovit (1973), of out patient department, patients feeling were interviewed and found out that one third cases met some problem of convenience of service. It effected their level of satisfaction.. Patients had to wait for many hours. (26) Likun, (1996) studied ways and means to reduce the waiting time and improve patient satisfaction. The association between waiting time, doctor, nurse and pharmacist services was computed with satisfaction and strong correlation was found between waiting time and nursing service with patient satisfaction. About 61% of patients reported that the waiting time was not reasonable. (27) In a study at Ramathibodi hospital, it was shown that the waiting time was the most important factor influencing the satisfaction. At registration counter it was noticed that patients with higher education and longer waiting time had lower satisfaction. At pharmacy unit same pattern was observed. (28)

2.2.2 Quality of Care

With improvement in technology, hospitals are emphasizing on enhanced quality of care. If some patient suffer a post operative hospital infection and become cured by subsequent follow up, it can be concluded that no quality problem has occurred. Hence, use of technology is introducing new dimensions in quality of care. Adaptation of modern quality science from manufacturing and other servicing industry has changed the scenario of quality care. Combination of conventional and

modern health care techniques have lead to the modern era of quality health care management. (29)

The American college of surgeon in 1913 established quality of hospital care as a basic principle and subsequently introduced it in 1917 as its Hospital Standardization program. (30) In 1951 American Medical Association, American College of physicians, The American hospital association and The Canadian hospital association joined to form the Joint commission on accreditation of hospital.(JACHO) In the late 1970 , it was determined that examination of individual patient acquiring hospital infection is not much important. But tracking hospital infection (nosocomial infection) in comparison with the statistical norms is more beneficial. Epidemiological methods employed for investigating and controlling potential cause is a better remedy. So JACHO evolved criteria based audit method. (31) In 1990 many related organizations reviewed the regulation to make it more users friendly and adopted participatory approach under slogan of " we are here to help you" instead of promulgating law/ rules regulations and compulsorily implementing and enforcing it (32)

2.2.3 Medical Expense.

In Sweden, in a study it was examined to which extent people may neglect getting PHC services due to the cost associating physical, social demographic and psychological factors. A questionnaire was distributed in four hundred thousand people out of whom 30% respondents replied that they do not take treatment due to the cost. Those who were socially and financially deprived were students, unemployed, and foreigner and single mothers. It was concluded that rapidly increasing patient charges particularly affect the weaker social group and thus hamper the idea of equitable service to all. (33)

2.3 Health Care Services and Satisfaction

2.3.1 Physical Facilities.

In a study in 1994 by Upreti, it was determined that 71.1% patients were satisfied and 29.8% patients were poorly satisfied and the areas of poor satisfaction were waiting time, inadequate cleaning, and setting of health center surroundings. (34). In an other study by Pasaribu (1996), it was found out that patient were not satisfied due to low quality of care and inadequate supply of medicine. (35)

2.3.2 Doctor services / Nurses Services.

A study at Switzerland revealed that in measuring patient satisfaction patient – doctor communication is most important factor. (36). Another study at Australia showed that tone of physician, his touch, interaction, and manners of speaking contribute to the patient satisfaction. (37) In the year 2001, a study at Irelandby Bary et al, showed that interpersonal communication between physician and patient is the corner stone for consumer satisfaction and improving quality of life. (38)

In a hospital study Dovkata (1992), found that patients had satisfactory views on nurse's behavior. The opinion of patients living outside municipalities was better than the other group. The patients in their sixties were more satisfied than the younger group. (39)

2.3.3 Pharmacy service / Registration service.

Pyunyathikum (1994), in a study on pharmacy requirement in OPD, examined number of prescription, number of pharmacist in-charge, waiting time in getting drug. Patient satisfaction was analyzed and it was determined that most patients were satisfied with the service. (40). Muller et al. in 1998 studied on patient satisfaction with ambulatory care pharmaceutical service. Patient's opinion was collected by questionnaire and it was determined that most patients were satisfied with service. (41)

2.4 Socio-demographic factors

It had been proposed that utilization of medical services is not only personal matter but the decision is taken within the family or with the assistance of friends. The use of medical services by people is the end result of the social group they live in. (42, 43)

Cultural similarity was found between the prospective patients and health care professionals as an important determinant of the extent to which help will be obtained from the doctors whenever needed .(44,45) It has also been determined that enabling factors like insurance coverage, family income, sex, education and occupation influences the use of health services.(46)

Various studies indicate that psychological distress affects both the frequency of symptoms initiated visits and the total number of visits. They are also correlated with sex. Females make more visits as compared to males. (47)

Sixty two studies were reviewed to examine the relation between socio-economic factors and reported satisfaction with healthcare. Some of their conclusions are as below.

Gender. Men were found more satisfied then women.(48) However, in many other studies women were more satisfied than men. (49,50)

Age. Studies about age confirmed the old wisdom and concluded that older respondents were more satisfied, probably they were more social and accepting than younger, or they had more respect and care from the providers. It was also assessed that they had lower expectations. (48) In another study by William et al.(1991), it was concluded that older respondents generally record higher satisfaction; possible explanations included lower expectations of health care and reluctance to articulate their dissatisfaction. (51)

Education. Education was not found having any significant effect. However, higher level of education was less satisfied with health care.(48). In another study by

Sumtraprapoot P. (1997) it was determined that lower education group (primary and less) is more satisfied than the high education group. (52)

Marital status. Tran Thi Nga (2002) concluded that there was no association in marital status and satisfaction.(53)

Family income. Higher income has been associated with greater satisfaction with doctor's interpersonal communication skill and people with lower income report more problems in hospital. (54,55). On the other side, study by Sumtraprapoot has concluded that low income group was more satisfied than higher income groups.

Family size. Tran Thi Luu. (2002) in her study found out that family size had no association with satisfaction.(54)

2.5 Accessibility to health care services

Patient always remains in need of health care facilities because demand to seek services of medical facilities may generate any time. Therefore, it is a natural desire of client that health care services should remain available at any time of day and night. There should be sufficient number of health providers who could meet his demand without delay and with minimum waiting time. However, convenience has a price to pay. It may not be fully true for public hospitals, but it is a fact in case of private sector hospital. This fact can be elaborated by following example.

Consider the experience of two patients with painful foot problems who choose to see two different podiatric physicians. Patient 1 waits three days for an appointment, spends a total of two hours in the reception and exam rooms before seeing the doctor, and is accorded little time by the doctor' for questions regarding his/her condition following treatment. Later, when this patient calls the doctor's office with a question, the call is not returned. Patient 2, on the other hand, is given the option of coming in immediately, is greeted warmly by staff upon arrival, waits only

ten minutes to see the doctor, and subsequent questions are answered patiently and thoroughly by the doctor and staff following treatment. Patient Two is provided with printed information the doctor's e-mail address to use for questions that may arise later. Both the services are different in quality and if the patient one intends to receive it, he will have to buy it.(56)

Considering the cost incurred on the treatment in terms of transportation expenditures and inconvenience caused by traveling long distance, it was determined by Chanawangse et al. in 1996 that patient satisfaction is influenced by distance of health facility and price of transportation. Most of the patients do not like to come back to hospital for even free-of-cost daily dressing due to transportation and other expenditures. (57)

Ross et. al. (1993) determined in a study that majority of the patients selected technical quality of care as first preference, interpersonal care as second preference and accessibility of care as third preference. Access to care included ‘convenience’ and ‘waiting time’. Moreover, the patients who considered access as first priority belonged to elderly group. They were from low education and low income group. (58). In conclusion patient desires to have a free access to medical service that should be free of location and language barriers. He wishes to consume it at minimal cost and desires to avail it at shortest waiting time.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Research design

A cross sectional descriptive study was done in a tertiary care hospital to determine patient satisfaction towards the out patients services. The main purpose of this research was to determine the association between the independent and dependent variables such as the socio-demographic characteristics, experience (perception) of patients towards the OPD health care services other than PIMS, accessibility to OPD health care services and patient satisfaction which was the dependent variable.

3.2 Study Area

Pakistan Institute of Medical Sciences (PIMS) was selected as the study health facility which caters to the population of Islamabad, Rawalpindi and the adjoining areas, as a tertiary care health facility. The study population was derived from the patients attending the Out Patients Department of the **Islamabad hospital**, available at the time of data collection. Patients of MCH center were not included because MCH is providing exclusive maternal child health care services.

3.3 Sampling technique and sample size

PIMS was purposively selected for the study. The sample was drawn by **systematic random sampling technique** from the patients present at the registration counter in the OPD of Islamabad hospital, PIMS. The sample size was estimated by the formula:

$$\mathbf{n = \frac{Z^2\, pq}{d^2}}$$

$$n = \frac{(1.96)^2\,(0.635)\,(0.365)}{0.07^2}$$

$$n = 181$$

Where:

n = estimated sample size

Z = fixed alpha at 0.05 level which is 1.96

p = proportion of patients satisfied with the health services = 0.635 - cited in a research by Ansari in Pakistan in 1998. (59)

q = proportion of patients who were not satisfied with the health services provided = 0.365

d = degree of accuracy required i.e., allowable error = 0.07

For the sake of removing any error, **200** respondents were interviewed instead of 181 determined by the formula.

3.4 Research Instrument

The research instrument was a structured, self-administered questionnaire which was designed by the researcher under the guidance of the advisors. The questionnaire was translated into Urdu language which is used locally in the area of the study. A pretest of 30 questionnaires was performed in the OPD for reliability and the results were sent / discussed with advisor on phone and e-mail. After the pretest the questionnaire was revised in consultation with the advisors. In pretest, value of Cronbach's alpha for satisfaction group was 0.875. While alpha value for experience was 0.5422 after revising items 2 and 14 of this part.

The questionnaire was divided into following sections:

1. Socio-demographic characteristics of respondent attending OPD of PIMS.

2. Experience (perception) of patient towards health care services other than PIMS. It included indicators of convenience, medical expenses and quality of care.
3. Accessibility to OPD health care services that included distance from hospital, waiting time and information received.
4. Patient satisfaction towards health care services of OPD of PIMS. It included physical facilities, medical equipment, medical staff services and expenses for laboratory test.

Part-A: Respondent's socio-demographic characteristics included Age, Sex, Marital status, Education, Occupation, Family income, and family size. The numbers of questions were **eight**.

Age. Only respondent having age more than 15 years were selected. Age had four groups with interval of ten years in between them. It was coded as below,

1 = 16-25yr

2 = 26-35yr

3 = 36-45yr

4 = 46 & more

Sex. Gender of respondent into male and female was coded as follow,

1= Male

2= Female

Marital Status. It was grouped and coded as follow,

1 =Single

2 = Married

3 = Widow/ widower

4 = Divorced/ separated

Main Occupation. The major source of income was categorized and coded as below,

1 = Not employed

2 = Government official

3 = Non- Government employee

Education. Education had following groups and coding,

0 = Never attended school

1 = Primary Education

2 = Secondary Education

3=Higher Education/Diploma

Family income. Based on mean and standard deviation, it was divided in following groups,

1=Rupees 3500&less

2= rupees 3501-26000

3=Rupees 26001&more

Family size It was grouped on the basis of mean and standard deviation. It was coded as follow,

1= 4& less family members

2= 5-7 family members

3 = 8 & more family members

Part-B: Experience (perception) to the health care services comprised of convenience, medical expense and quality of care. The total numbers of questions were **fourteen** divided in 3 groups. Questions were recorded as Yes= 1, No = 0.

The experience level was classified into two groups. The respondents securing a score of mean or more were considered as having high experience (Good perception) while those securing less than the mean score were labeled as having low experience (poor perception).

Part-C: Accessibility to the hospital services included distance, waiting time**,** and information received. This part consisted of three sections and **nine** questions.

Distance from hospital: In this section, those who lived less than 5 km from PIMS were considered to have easy access and others were classified as having difficult access. The second question in the section was about the availability of public

transport. Reply 'Yes' was considered as easy access and coded as 1 (one) while reply 'No' was considered as difficult access and coded as 0 (zero). For the question regarding time taken to reach the hospital, less than 30 minutes time was considered as easy access and more than that was taken as difficult access. If the money spent to reach hospital was less than ten rupees, it was considered as easy access while money spent more than that was considered as difficult access.

Waiting time: In this section, less than 30 minutes waiting time for examination by doctor was labeled as easy access and more than 30 minutes was difficult access. If total time spent in OPD was less than 60 minutes, it was an easy access while time more than that was difficult access.

Information received: In this section adequacy of timing of OPD and availability of adequate information in OPD were coded as yes = 1 and no= 0.The sources of learning about PIMS were coded from 1 to 7

Part-D: Satisfaction to the medical care services included physical facilities, medical equipments, medical staff services and expenses for laboratory tests The total number of questions were **19**. Likert five points rating scaling was used for measuring satisfaction.

The rating was done as follow:

5 = Strongly agree

4= Agree

3 =Not agree

2 = Disagree

1 = Strongly disagree.

The satisfaction level was classified into two groups. The respondents securing a score of mean or more were considered as satisfied while those securing less than the mean score were labeled as not satisfied.

3.5 Date collection

As the culture did not permit the open interaction of male and females, two data collector were used for collecting the information. They were not regular employees of PIMS and they did not wear hospital dress so that bias of influence could be avoided. Male collector collected data from the male patients and female collector collected data from the female patients. Both the data-collectors were trained by the researcher to have a professional and unbiased approach to the data collection process. Although data was collected by means of self- administered questionnaire, but for the respondents who did not know reading and writing, accompanying attendant or data collectors were allowed to assist in filling the questionnaire

All respondents were taken from the patients who visited the OPD of Islamabad hospital, PIMS for the **first time**. Repeat visitors were excluded from the interview to remove bias of the patients. **Every fifth patient** was requested to fill the questionnaire to get a wide cross section of the patient views employing the technique of systematic random sampling.

In existing procedure of the hospital, when patient arrives in OPD for treatment, he has to get registration from registration counters. After that, he is sent to his relevant OPD department where he has to wait for his turn for examination by the doctor. After being examined by the doctor, patient goes to laboratory for pathology and X-ray tests. In the end patient reaches in pharmacy for receiving the medicines. In this study patients were identified for data collection at registration counter. They were requested to fill in the questionnaire at pharmacy and return it to data collectors.

The data was checked on the spot, errors rectified and missing data incorporated in the forms. The researcher checked the data collection process himself and counter checked the entries at random to ensure quality of the data collection.
The collected data was entered in a statistical software package and statistical tests applied to it for analysis.

3.6 Data analysis

Recorded data from the respondents was handed over to the researcher at the end of each day. If there was any omission found, the questionnaire was discarded and fresh form was filled. To simplify the data entry and analysis, a code sheet was prepared. Data was entered into Minitab 13 program and analyzed. Descriptive statistics and chi square was used to obtain a relationship between the dependent and independent variable according to the objectives already listed.

CHAPTER 4
RESULTS

This descriptive study was conducted to ascertain the patient satisfaction in outpatient department of Pakistan Institute of Medical Sciences (PIMS). Total 200 patients were provided self-administered questionnaire in outpatient department in Islamabad Hospital, Pakistan Institute of Medical Sciences. Two trained persons were entrusted for data collection from 5th January to 15th January. The results are hereby presented in descriptive and tabular forms. These results are presented in following parts.

1. Socio demographic characteristics
2. Experience (perception) to health care services
3. Accessibility to health care services
4. Patient satisfaction to health care services
5. Relationship between independent and dependant factors

4.1 Socio-demographic characteristics of the respondents

For this study, the socio-demographic characteristics included age, sex, education, occupation, family income and family size of the respondents. The results in table-1 indicated that youngest patient was 16 years and eldest was 53 years old. Mean age was 32.94 years, and standard deviation was 11.339 years. The respondents were distributed in four age groups .Two groups with age ranges of 16-25 and 36-45 together made largest group with total of 65% while the remaining two groups together comprised of 35% of respondents.

The female respondents were more than half consisting of 54.5% of total while males were only 45.5%. Majority of them, 57% were single (not married, widow and divorced) while total percentage of married was 43.0%. Most of the

respondents had education of higher school/diploma (45%). After that, second biggest group (36%) of respondents had secondary school education.

Related to the occupation, respondents were divided into three groups, not employed, government employed, and non- government employed. The non-employed group was the biggest group (60.5%) The government employed group was second biggest category (23%).

As regard to the family income per month in rupees, respondents were distributed into three groups on the basis of SD. First group was equal and less than 3500 rupees, second group was 3501 to 26000 rupees and third group was equal & more than 26001 rupees. The biggest income group was the one earning between 3501 -26000 rupees per month, (71%). The Minimum income was 2100 rupees and maximum family income per month was 46000 rupees. Mean was 15243 rupees and standard deviation was 11670 rupees.

Family size was grouped on the basis of mean and SD. The first group comprised of four and less members in the family and second group comprised of five to seven family members. Last group had 8 and more members in family. The second group was the biggest (50.5%). Mean was 5.53 with standard deviation 2.157. The family size ranged from as low as 3 to as high as 11 members in a household.

Table 1 Socio-demographic characteristics of patients availing OPD health services at PIMS. N=200

Characteristics	Number N=200	Percent
Age		
16-25 years	69	34.5
26-35 years	41	20.5
36-45 years	61	30.5
46 and more years	29	14.5
Mean=32.94 **SD**= 11.339 **Median**= 33	**Minimum**=16	**Maximum**=53

Table 1 Socio demographic characteristics of patients availing OPD health services at PIMS (cont.) N=200

Characteristics	Number N=200	Percent
Sex		
Male	91	45.5
Female	109	54.5
Marital status		
Single (not married, widow & divorced)	114	57.0
Married	86	43.0
Education		
Not attended school	26	13.0
Primary school	12	6.0
Secondary school	72	36.0
Higher school /diploma	90	45.0
Main occupation		
Not employed	121	60.5
Government employee	46	23.0
Non- Government employee	33	16.5
Family income per month		
Rs. 3500 and less	25	12.5
Rs. 3501-26000	142	71.0
Rs. 26001 and more	33	16.5
Mean= 15243 **SD**= 11670 **Median**= 14000 **Minimum**= 2100 **Maximum**= 46000		
Family size		
4 and less	73	36.5
5-7	101	50.5
8 and more	26	13.0
Mean:5.53 **SD**: 2.157 **Minimum**:3 **Maximum** :11		

4.2 Experience concerning the OPD services of health care facilities other than PIMS.

Variable of experience was used to determine the level of perception of respondents towards health care services. This experience was related to the previous health service facilities other than PIMS.

The experience section consisted of 12 questions divided into three groups. The first group of '**convenience**' had five questions. The second group '**medical expenses**' had three questions. Third group '**quality of care**' had four questions.

As shown in table 2, majority of the patients (62%) admitted that they had experienced long waiting time for physical examination. In addition 53.5% of the patients conveyed that they had experience of long waiting for receiving the medicine in OPD pharmacy. Moreover 70.5% of the patients informed that medicine receiving place in OPD pharmacy was not inconvenient. More than half (58%) of the patients admitted that treatment receiving place in OPD was adequate. More than three fourth (78%) of the patients were agreed that OPD schedule was adequate. More than half (63%) of the respondents informed that receiving medical service from one OPD department to another OPD department was difficult.

Replying about the cost of urine test and blood test, 87% of the patients in both cases considered it affordable while 80% of the patients believed that cost for X-ray test was suitable.

Most patients (80%) felt that treatment received from doctor was good. More than half of the patients (61.5%) replied that they will not be able to receive the all medicine prescribed by the hospital. However, 74% of the respondents believed that nurses were skilled in using medical equipment. Most of the patients (79%) admitted that doctors gave them opportunity to ask about illness. Similarly most of the patients (56.5%) accepted that hospital officers listened to them in problem.

Table 2 Experience of the patients concerning OPD health care service other than PIMS

Experience to health care service	N=200	
	Yes	No.
Convenience		
Waiting time for physical examination was long	124 (62.0)	76 (38.0)
Waiting time for receiving medicine from OPD pharmacy was long	107 (53.5)	93 (46.5)
Place for receiving the medicine was inconvenient	59 (29.5)	141 (70.5)
Place for receiving the treatment was inadequate	84 (42.0)	116 (58.0)
OPD timing is adequate for your need	156 (78.0)	44 (22.0)
Receiving medical services from one department to another department in OPD was difficult	126 (63.0)	74 (37.0)
Medical Expense		
Cost of urine test was adequate	174 (87.0)	26 (13.0)
Cost for X-ray test was suitable	160 (80.0)	40 (20.0)
Cost of blood examination was affordable	174 (87.0)	26 (13.0)
Quality of Care		
Treatment you received from doctor was good	160 (80.0)	40 (20.0)
You will get all the medicine prescribed from the hospital	77 (38.5)	123 (61.5)
Nurse was skilled in using medical equipment	148 (74.0)	52 (26.0)
Doctor gave you an opportunity to ask about your illness	158 (79.0)	42 (21.0)
Hospital officers listened to your problems attentively	113 (56.5)	87 (43.5)

4.2.1 Total experience concerning OPD health care services

As shown in table 3 total experience of 200 patients was computed to determine their perception level towards health care services availed in the past from medical institutions other than PIMS. The mean of 'total experience' was 9.1, and standard deviation was 2.02. Experience was divided into two groups; high experience/ perception (high level of good experience perceived) and low experience/ perception (low level of good experience perceived). Those securing score equal and more than mean (≥ 9.1) were labeled as 'high experience'. They were the patients who had good past experience and expectation related to the health care services. Those achieving score less than mean (< 9) were labeled as 'low experience' and they were those respondents who had poor past experience and expectation towards the health services.

It was noticed that 56% (112) respondents had high experience/expectations and 44 % (88) patients had low experience/expectations. Those with high experience may be interpreted as the respondents who had good experience with health facilities mostly. On the other hand low experience group had poor experience mostly with the health facilities other than PIMS.

Table 3 Total experience concerning OPD health care services

Experience (perception)	Number N=200	Percent
High (good)experience (mean and above)	112	56.0
Low (poor)experience (less than mean)	88	44.0
Mean = 9.1 Median = 10.0 Std. Deviation = 2.02		

4.3 Accessibility of patients to OPD health care services at PIMS

Accessibility of the patients towards health care services was measured according to the criteria set in chapter three on methodology. The section related to

the accessibility had three components as; distance from hospital, waiting time and information received. The three components of accessibility consisted of nine questions. Table 4 showed the descriptive data related to the accessibility of the patients to the OPD services at PIMS.

The section on '**distance from hospital**' contained four questions. More than two third of the patients (71%) considered the hospital at easy accessible distance from their homes. Most of the respondents (97%) told that they would get public transport easily when they needed to reach the hospital. Replying to the question of time spent in traveling to reach the hospital, majority of the respondents (94%) declared that it was easily accessible (less than 30 minutes). When the patients were asked about money spent in traveling to reach the hospital, most of them (96.5%) informed that it was more than ten rupees (difficult access).

The section on "**waiting time**" comprised of two questions. The waiting time to be examined by the physician was less than 30 minutes in 62% of the cases indicating easy access. In terms of total time spent in OPD for getting treatment, 61.5% patients informed that it was less than 60 minutes i.e easy access.

The section on "**information received**" had three questions. Responding to the timing of OPD, 77.5% considered it adequate. More than half (60%) of the patients accepted that they had received adequate information about OPD. When they were asked how they came to know about PIMS, more than three fourth (75.5%) indicated their friends and health officer as sources of information.

Table 4 Accessibility of patients to the OPD health care services at PIMS

Characteristic	Number N=200	Percentage %
DISTANCE FROM HOSPITAL		
Living distance from hospital		
Easy access = 5 Kms and less	142	71.0
Difficult access =more than 5 Kms	58	29.0

Table 4 Accessibility of patients to the OPD health care services at PIMS (cont.)

Characteristic	Number N=200	Percentage %
DISTANCE FROM HOSPITAL		
Access to public transport to hospital		
Easy	194	97.0
Difficult	6	3.0
Time taken to reach the OPD		
Easy access =30 min and less	188	94.0
Difficult access= more than 30 min	12	6.0
Money spent to reach the OPD		
10 rupees and less	7	3.5
More than 10 rupees	193	96.5
WAITING TIME		
Waiting time for doctor's examination		
30 minutes and less	128	64.0
More than 30 minutes	72	36.0
Total time spent in OPD		
60 minutes and less	123	61.5
More than 60 minutes	77	38.5
INFORMATION RECEIVED		
Timing of OPD adequate		
Yes= easy access	155	77.5
No= Difficult access	45	22.5
Adequate information available for OPD		
Yes = easy access	120	60.0
No = difficult access	80	40.0
Where did you learn about PIMS		
TV and radio	49	24.5
Friends, health officer and others	151	75.5

4.4 Patient satisfaction towards OPD health care services, PIMS:

In order to measure level of the patient satisfaction; physical facilities, medical equipments, doctor's service, nurse's service, pharmacy service, registration service and medical expenses were used as indicators. The satisfaction part consisted of 19 questions. The level of patient satisfaction towards OPD services was measured by Likert's scale having five grades as 1=strongly disagree, 2=disagree, 3=not agreed, 4=agreed and 5=strongly agree. The mean score of total satisfaction was 71.53. The score equal and more than mean was considered as high satisfaction and the score less than mean was taken as low satisfaction.

4.4.1 Patient's satisfaction towards the OPD services:

As also given in table 5, the distribution and level of patient's satisfaction towards OPD health care services is described as below.

Physical facilities:

The section had seven questions asking about the general cleanliness, ventilation, light, noise, sitting facilities, clean toilets and sufficient examination rooms' availability. As shown in table 5, more than half (53.5%) of the respondents strongly agreed, and more than one third (37%) were agreed that "building of the hospital was clean". About "ventilation inside the hospital was good"; 40.5% agreed; 33.5% strongly agreed, and 13% each did not agree and disagree.

Replying to "enough light inside the building of the hospital", more than half of the (62.5%) patients agreed, and more than quarter (30.5%) were strongly agreed. Responding to "no noise around the hospital", no patient strongly agreed; 39% patients agreed, 26% strongly disagreed; 21% did not agree, and 1% disagreed.

When asked "waiting room has enough sitting chairs"; 42.5% agreed, but 23.5% did not agree and 17.5% disagreed. In terms of "availability of enough clean toilets", only 6.5% strongly agreed; 37.5% agreed; 23% and 23.5% did not agree and disagree. Answering to the "availability of enough physical examination rooms",

31.5% and 65% strongly agreed and agreed respectively. Only 3.5% belonged to the group which disagreed.

***Medical Equipment*:**

The section had two questions enquiring about the availability and working order of equipments. As shown in table 5, more than half (60.5%) of the patients agreed that "enough medical equipments for examination were available" while 14% strongly agreed and 25.5% did not agree. When asked about "good working order of medical equipments", 54% agreed; 26.5% strongly agreed; 16% and 3.5% did not agree and disagree respectively. No one was strongly disagreed.

***Doctor's Service*:**

The section comprised of two questions asking about courtesy and time spent by the doctor. Responding to the item that" hospital doctors do physical examination with respect", 40.5 and 50.5 percent patients strongly agreed and agreed. Only 3 and 6 percent did not agree and strongly disagree. About "doctor spending enough time with patient in examination", only 13% of the respondents strongly agreed; 44.5% agreed, and 35.5% did not agree.

***Nurse's Service*:**

Two questions of the section were asked about courtesy, and treatment explained by the nurses. Table 5 showed that 23.5 and 46 percent of the patients strongly agreed and agreed that "nurses treat the patients with respect", only 14% did not agree; 10.5% and 6% disagreed and strongly disagreed. Replying to the question that "nurse explain the treatment clearly",21 and 46 percent strongly agreed and agreed. However, 22.5% and 10.5 % did not agree and disagree. No one strongly disagreed.

***Pharmacy Service*:**

It comprised of two questions asking about courtesy and explaining the use of medicine by pharmacists. The table showed that 23.5and 45 percent strongly agreed and agreed that "pharmacist treat patient with respect"; 25.5 and 6.0 percent did not

agree and disagree. Majority of the patients did not agree (43%), disagree (10.5%) and strongly disagree(6%) that "pharmacist explains the use of medicine clearly". Only 3.5% and 37% strongly agreed and agreed with the question.

***Registration Service*:**

Two questions of the section asked about courtesy and communication skills of registration staff were enquired. Responding to the "respectable treat of registration staff with the patients", 20 and 44 percent users strongly agreed and agreed. Only 30% patients did not agree. About "good communication skills of registration staff", 24.5% strongly agreed; 39.5% agreed and 26.5% did not agree.

***Expenses for laboratory tests*:**

It had two questions asking about the affordability of the cost of laboratory and X-ray tests. As given in the table 5, replying to "medical expenses for laboratory test were affordable", 60% patients declared it agreed, 17.5% strongly agreed and 22.5% did not agree. Answering to the question that medical expenses for X-ray test were affordable, 67% agreed, and 17.5% strongly agreed. Only 15.5% did not agree.

Table 5 Patients' satisfaction towards OPD health care services at PIMS

Variables	Level of satisfaction N=200				
	5	**4**	**3**	**2**	**1**
Physical facilities					
Building of this hospital is clean.	107 (53.5)	74 (37.0)	12 (6.0)	0 (0.0)	7 3.50
Ventilation inside the hospital is good.	67 (33.5)	81 (40.5)	26 (13.0)	26 (13.0)	0 (0.0)
Enough light inside the building of hospital	61 (30.5)	125 (62.5)	14 (7.0)	0 (0.0)	0 (0.0)
No noise around the hospital.	0 (0.0)	79 (39.0)	42 (21.0)	28 (14.0)	52 (26.0)
Waiting room has enough sitting chairs.	14 (7.0)	85 (42.5)	47 (23.5)	35 (17.5)	19 (9.5)
Enough clean toilets are available.	13 (6.5)	75 (37.5)	46 (23.0)	47 (23.5)	19 (9.5)
Enough physical examination rooms are available.	63 (31.5)	130 (65.0)	0 (0.0)	7 (3.5)	0 (0.0)

Table 5 Patients' satisfaction towards OPD health care services at PIMS (cont.)

Variables	Level of satisfaction N=200				
	5	4	3	2	1
Medical Equipment					
Enough medical equipment for examination are available.	28 (14.0)	121 (60.5)	51 (25.5)	0 (0.0)	0 (0.0)
Medical equipments are in good working order.	53 (26.5)	108 (54.0)	62 (16.0)	7 (3.5)	0 (0.0)
Doctor Service					
Hospital doctors do physical examination with respect.	81 (40.5)	101 (50.5)	6 (3.0)	0 (0.0)	12 (6.0)
Doctors spent enough time with patient in examination.	26 (13.0)	89 (44.5)	71 (35.5)	14 (7.0)	0 (0.0)
Nurse's Service					
Hospital nurses treat the patient with respect.	47 (23.5)	92 (46.0)	28 (14.0)	21 (10.5)	12 (6.0)
Nurses explain the treatment clearly.	42 (21.0)	92 (46.0)	45 (22.5)	21 (10.5)	0 (0.0)
Pharmacy Service					
Hospital pharmacist treat patient with respect.	47 (23.5)	90 (45.0)	51 (25.5)	12 (6.0)	0 (0.0)
Pharmacist explains the use of medicine clearly.	7 (3.5)	74 (37.0)	86 (43.0)	21 (10.5)	12 (6.0)
Registration Service					
Registration staff treats the patient with respect.	40 (20.0)	88 (44.0)	60 (30.0)	0 (0.0)	12 (6.0)
Registration staff has good communication skills.	49 (24.5)	79 (39.5)	53 (26.5)	7 (3.5)	12 (6.0)
Expenses for laboratory tests					
Medical expenses for laboratory test affordable.	35 (17.5)	120 (60.0)	45 (22.5)	0 (0.0)	0 (0.0)
Medical Expenses for X-ray test affordable.	35 (17.5)	134 (67.0)	31 (15.5)	0 (0.0)	0 (0.0)

5=Strongly agree, 4=Agree, 3=Not agreed, 2=Disagree, 1=Strongly disagree

4.4.2 Item-wise means and SD for patients' satisfaction with OPD health care services at PIMS

As shown in table-6, satisfaction questions were computed individually to derive mean of each item. It was found out that six of them had mean of more than four. This lead to the conclusion that patients had relatively higher satisfaction for cleanliness of hospital building, lighting inside the hospital building, and availability of sufficient physical examination rooms. Their satisfaction level was also relatively

higher for working order of equipments, respectful physical examination by hospital doctors and affordable medical expenses for X-ray tests. The lowest mean was 2.73. It indicated that patients had lower satisfaction for the noise around the hospital.

Table 6 Item-wise mean and SD for patient satisfaction with OPD health care services at PIMS

Variables	N=200	
	Mean	**SD**
Physical facilities		
Building of this hospital is clean.	4.37	0.88
Ventilation inside the hospital is good.	3.94	0.99
Enough light inside the building of hospital	4.23	0.56
No noise around the hospital.	2.73	1.22
Waiting room has enough sitting chairs.	3.20	1.10
Enough clean toilets are available.	3.08	1.11
Enough physical examination rooms are available.	4.25	0.63
Medical Equipment		
Enough medical equipment for examination are available.	3.89	0.61
Medical equipments are in good working order.	4.04	0.75
Doctor Service		
Hospital doctors do physical examination with respect.	4.20	0.97
Doctors spent enough time with patient in examination.	3.63	0.79
Nurse's Service		
Hospital nurses treat the patient with respect.	3.70	1.12
Nurses explain the treatment clearly.	3.77	0.89
Pharmacy Service		
Hospital pharmacist treat patient with respect.	3.86	0.84

Table 6 Item-wise mean and SD for patient satisfaction with OPD health care services at PIMS (cont.)

Variables	N=200	
	Mean	SD
Pharmacist explains the use of medicine clearly.	3.21	0.90
Registration Service		
Registration staff treats the patient with respect.	3.72	0.98
Registration staff has good communication skills.	3.73	1.06
Expenses for laboratory tests		
Medical expenses for laboratory test affordable.	3.95	0.63
Medical Expenses for X-ray test affordable.	4.02	0.57

4.4.3 Level of total satisfaction with OPD health care services at PIMS

Total satisfaction, as given in table 7, was computed by dividing it into high satisfied and low satisfied groups. The respondents securing a score of mean or more were considered as high satisfied while those securing less than the mean score were labeled as low satisfied. According to the output shown in table 7, 108 (54%) of the respondents were high satisfied and, 92 (46%) were low satisfied with OPD health care services at PIMS.

Table 7 Level of total satisfaction with OPD health care services at PIMS

Satisfaction	Number N=200	Percent
High level of satisfaction (mean and above)	108	54.0
Low level of satisfaction (less than mean)	92	46.0
Total satisfaction.: Mean=71.53 Median= 74 SD= 9.48		

4.4.4 Number and percentage distribution of overall satisfaction by groups

Satisfaction groups were analyzed by dividing them into high satisfied and low satisfied groups. The respondents securing a score of mean or more were considered as high satisfied while those securing less than the mean score were labeled as low satisfied.

As shown in Table 8, in the high satisfied group, highest score (81%) was found for medical expenses. After that 77.5% and 76.5% respondents were satisfied from registration service and nurse service. Medical equipment and pharmacy service both acquired 65% satisfaction level. Only 61.5% patients considered that doctor service was satisfactory. Lowest level of satisfaction was found for physical facilities in which only 53% respondents were satisfied while 47% had low satisfaction.

Table 8 Number and percentage distribution of overall satisfaction by groups

Variables	Level of satisfaction N=200			
	High Satisfied		Low satisfied	
	Number	%	Number	%
Physical facilities	106	53.0	94	47.0
Medical Equipment	130	65.0	70	35.0
Doctor Service	123	61.5	77	38.5
Nurse's Service	153	76.5	47	23.5
Pharmacy Service	130	65.0	70	35.0
Registration Service	155	77.5	45	22.5
Expenses for laboratory tests	182	81.0	38	19.0

4.5 Association between independent and dependant factors

4.5.1 Socio-demographic factors and patient satisfaction

As shown in table -9, the association of socio-demographic characteristics with satisfaction was assessed in this section. The relationship of age with satisfaction was analyzed and it was concluded that age had strong and significant association

with satisfaction at p value = 0.000. It was found out from the results that respondents belonging to the age group of 16-25 years had highest proportion of low satisfaction (71%) and those from age group of 46 years and above had highest proportion of high satisfaction (75.9%). It can be determined that patients with higher age were more likely to have high satisfaction towards PIMS. This can be explained in view of the fact that hospital provided exclusive treatment services to elderly.

Regarding gender 50.5 percent male had low satisfaction, and 49.5 percent had high satisfaction. On the other hand, 42.2 percent females had low satisfaction, and 57.8 percent had high satisfaction. It was concluded that there is no association in gender and satisfaction and it has no significance in terms of statistics having p=0.238. With regards to the marital status, respondents were divided into two groups; married and single (not married, divorced and widow). In the group of single, 64 percent had low satisfaction. While in the group of married, 77.9 percent had high satisfaction. It was than indicated that married group had higher proportion of satisfaction (77.9 percent) than the single persons. The p-value found was 0.000 showing strong statistical association between marital status and satisfaction.

In context with the education, it was found from the results that group having highest proportion of satisfaction (53.8 percent) belonged to those who had education level of primary and lower. The group of respondents having education level of secondary school and higher had relatively lower proportion of satisfaction (50.6%). The p-value was 0.047 which confirmed the association of education with satisfaction. Therefore, ‘primary and lower’ education was strongly associated with the satisfaction. Concerning the occupation of the respondents, the results determined that a large proportion of ‘not employed’ persons are those who had higher proportion of lower satisfaction (60.3 percent). The government employees had also higher proportion of satisfaction (84.8 percent). There was strong association between occupation and satisfaction at significance p-value=0.000.

The group having income of less than mean (mean=15243 rupees) tended to have high satisfaction (58 percent). Higher income group had relatively lower level of high satisfaction. However, there was no association between family income and

satisfaction as p-value=0.116. The family size had two groups. By comparison, group having less than four family members had higher proportion (64.4 percent) of high satisfaction. The group with 5 and more family members had lower proportion (48 percent) of high satisfaction. The p-value = 0.025 indicated association in family size and satisfaction.

Table 9 Relationship between socio-demographic characteristics and patient satisfaction with OPD health care services at PIMS

Characteristics	Satisfaction level						
	N=200	Low Satisfaction		High Satisfaction		Chi square	p-value
		NO	%	NO	%		
Age						21.75 df=3	.00*
16-25yr	69	49	71	20	29		
26-35yr	41	12	29.3	27	70.7		
36-45yr	61	24	39.3	37	60.7		
46 & more	29	7	24.1	22	75.9		
Sex						1.39 df=1	0.23
Male	91	46	50.5	45	49.5		
Female	109	46	42.2	63	57.8		
Marital status						47.02 df=2	0.00*
Single	114	73	64	41	36		
Married	86	19	21.1	67	77.9		
Education						3.92 df=1	0.04
Primary and lower	38	12	31.6	26	68.4		
Secondary and higher	162	80	49.4	82	50.6		
Occupation						28.78 df=2	0.00*
Not employed	121	73	60.3	48	39.7		
Government employee	46	7	15.2	39	84.8		
Non-Government employee	33	12	36.4	21	63.6		

Table 9 Relationship between socio-demographic characteristics and patient satisfaction with OPD health care services at PIMS (cont.)

Characteristics	Satisfaction level						
	N=200	Low Satisfaction		High Satisfaction		Chi square	p-value
		NO	%	NO	%		
Family income per month in rupees						2.46 df=1	0.11
Less than mean (Mean=15243 rupees)	131	55	42	76	58		
Mean and more	69	37	53.6	32	46.4		
Family size						4.99 df=1	0.025
04 and less	73	26	35.6	47	64.4		
05and more	127	66	52	61	48		

Statistically significant level = 0.05

4.5.2 Accessibility and patient satisfaction.

As described in Table-10, the relationship between different factors of accessibility and patient satisfaction was determined by doing cross tabulation and using chi square score and p-value.

In case of living distance from hospital, easy access was less than 5 Km, and difficult was more than 5 Km. From Table 9, it can be seen that 64.1 percent patients with easy access had proportionately high satisfaction. Significant association was found with satisfaction having p-value=0.000**.** The waiting time for doctor's examination had two categories; less than 30 minutes and more than 30 minutes. However, no statistical association could be established in waiting time for doctor examination and satisfaction because p-value was 0.531.

Total time spent in OPD was analyzed with satisfaction and no statistical association could be established in them at p-value = 0.452. Adequacy of OPD timing was replied as yes and no. The 'yes' was considered as easy access. Approximately sixty one percent (61.9%) of the patients of easy access group had high satisfaction. The association of this group with satisfaction was significant as

p-value was 0.000. The availability of the information about OPD, was analyzed with satisfaction but no significant association was determined as p-value was 0.271.

Table 10 Relationship between accessibility and patient satisfaction towards OPD services at PIMS

Characteristics	Satisfaction level						
	N= 200	Low satisfaction		High satisfaction		Chi square χ^2	p-value
		NO	%	NO	%		
Distance from hospital in Km						20.04 df=1	0.00
5 and less Kms	142	51	35.9	91	64.1		
More than 5 kms	58	41	70.7	17	29.3		
Waiting time for Doctor examination						0.39 df=1	0.53
30 minutes and less	128	61	47.7	67	52.3		
More than 30 minutes	72	31	43.1	41	56.9		
Total time spent in OPD						0.56 df=1	0.45
60 minutes and less	123	54	43.9	69	56.1		
More than 60 minutes	77	38	49.4	39	50.6		
Timing of OPD adequate (8AM-2PM)						17.464 df=1	0.00
No=difficult access	45	33	73.3	12	26.7		
Yes=easy access	155	59	38.1	96	61.9		
Adequate information available for OPD						1.21 df=1	0.27
No	80	33	41.3	47	58.8		
Yes	120	59	49.2	61	50.8		

*Statistically significant level = 0.05
* Some statistically insignificant indicators are included in Appendix.

4.5.3 Relationship between experience concerning the OPD health care services and patient satisfaction.

As reflected in table 10, total experience of 200 patients was computed to determine their perception level towards health care services availed in the past from medical institutions other than PIMS. Experience was divided into two groups; high experience / expectations. Those securing score equal and more than mean (9.1 & >) were labeled as 'high experience/expectation' (high level of good experience perceived). They were the patients who had good experience related to the health care services. Those achieving score less than mean (9&<) were labeled as 'low experience/expectation'(low level of good experience perceived) and they were those respondents who had poor experience towards the health services.

The examination of experience and patient satisfaction revealed that patient with low experience (53.4 percent) had low satisfaction while 59.8 percent respondents with high experience tended to have high satisfaction. It can be interpreted that the respondents provided good quality services in the hospitals (other than PIMS), were positively expecting and experiencing highly satisfactory services from PIMS as well. However, no statistical association between two variables could be established as p-value = 0.062.

Table 11 Relationship between experience and patient satisfaction concerning OPD health services at PIMS

Characteristics	Satisfaction level						
	N=200	Low satisfaction		High satisfaction		Chi square χ^2	p-value
Experience		NO	%	NO	%		
Low(poor) experience	88	47	53.4	41	46.6	3.473 df=1	0.062
High(good) experience	112	45	40.2	67	59.8		

Statistically significant level = 0.05

CHAPTER 5
DISCUSSION

Pakistan Institute of Medical Sciences (PIMS) is a hospital located in Islamabad. It provides tertiary level health care and has clinical and training components. The clinical components are, Islamabad Hospital, Children Hospital, and Mother - Child Health Center. The out patient departments of the hospitals cater the need of about three thousand patients per day while inpatient bed capacity is approximately one thousand.

This descriptive study was conducted to ascertain the patient satisfaction in outpatient department of Pakistan Institute of Medical Sciences. Total 200 patients were provided self-administered questionnaire from 5th January to 15th January. All respondents were taken from the patients who visited the OPD of Islamabad hospital, PIMS for the **first time**. The repeat visitors were excluded to remove bias of the patients. **Every fifth patient**, by systematic random technique was requested to fill out the questionnaire to get a wider cross section of the patient views.

In this study the questionnaire comprised of **50** questions in total concerning socio-demographic factors, accessibility towards health care services, experience concerning health care services and patients' satisfaction. The former 03 factors were independent variables and last one i.e. patients' satisfaction was dependant variable. The results were presented in descriptive and tabular forms in chapter number IV. These results will be discussed in this chapter under following sections.

1. Patient satisfaction to health care services
2. Socio-demographic characteristics of respondents
3. Accessibility to the OPD health care services
4. Experience concerning health care services

5.1 Patients' Satisfaction

Patient satisfaction was assessed in terms of physical facilities, medical equipments, staff services and laboratory test expenses through a set of nineteen questions. The level of patient satisfaction was measured by using Likert's scale. All 19 questions were scored from 5 to 1 and individual score was summed up to determine the mean value (71.53) as cut point. In the end over all satisfaction was divided into two groups; mean and above as high satisfied and less than mean as low satisfied.

The results showed that slightly more than half (54%) patients had high satisfaction and 46% had low satisfaction. A research conducted by Sumtraprapoot (1997) in his study with title as " Patient Satisfaction Towards Health Center Services of BMA Health Center 24" found out that patient satisfaction was 63.5% in that particular center (52). A similar study was conducted in Bangkok on consumer satisfaction at health center 3 by Saurma Ida Pasaribu, (1996) which showed that 53% of the patients were satisfied (60). In another study by Orapin and Achana (1995) as " Satisfaction and Need of People Towards Health Centers and Community Hospitals under Bangkok Metropolitan Adminisrration" conducted in 1995, the patient satisfaction determined was 95% (61). It can be analyzed from this data that patient satisfaction varies in different heath facilities and circumstances. This variation may be due to difference in quality of service provided or difference in expectations of the patients.

When satisfaction was considered in terms of its different groupings i.e. physical facilities, medical equipment, doctor service, nurses service, pharmacy service, registration service and laboratory test expenditures, it was found out that level of high satisfaction varies between 53 to 81% (see table-8). The lowest percentage of high satisfaction was for physical facilities and highest percentage for high satisfaction was for laboratory test expenses. So the patients seem to be least satisfied with physical facilities provided by the hospital and most satisfied with the services provided by the pathology and X- ray laboratories. When item-mean was analyzed in table-6, it was concluded that patients are generally not satisfied with the noise situation (item mean = 2.73) and toilet cleanliness (item mean = 3.08) in the

hospital. Patients may be more satisfied with the laboratory test expenses due to their less cost as compared to private laboratories.

5.2 Socio-demographic characteristics

The mean age of the respondents was 32.94 with SD= 11.33. The minimum age was 16 years and maximum age was 53 years. The younger group had age range of 16-25 years having only 29% high satisfaction. The eldest group had age range of 46 years and more. This group had 75.9% high satisfaction. So elder group was more satisfied than younger group and association between the age and satisfaction was proved by statistical tests with p-value=0.000. The results were similar to the one determined by Al-Bashir M, et. Al (1991), in his study in which he concluded that old aged patients had high level of satisfaction as compared to younger age group (48). In case of the PIMS the elders are provided exclusively service which may be one of the reason of satisfaction.

With reference to the patients' sex, it was found out that females were more satisfied than the males but no association was proved statistically. This finding was consistent with the study conducted by Tran Thi Luu and Hussam Altibi.(49,50)

Married patients were found more satisfied than the single and association was significant at p- value=0.000. Married may need to utilize health facilities more due to their family and one can assume that more experienced patients have more satisfaction. However, result was opposite to the one determined by Tran Thi Nga (2002) which concluded that there was no association in marital status and satisfaction.(62)

It was determined that patients who belonged to 'primary and lower' education level, were more satisfied than the secondary and higher group and the association was significant at p-value=0.047. This result is consistent with study conducted by Sumtraprapoot in 1997. (52)

In the occupation category, government employed group was found more satisfied than the other groups. Statistical association was significant with p-

value=0.000 This result was inconsistent with the findings in study by Partha Pratim Roy (2002) which concluded that unemployed group was more satisfied. (63)

Income group, earning less than mean (rupees 15243) was more satisfied than the other group. However, no statistical association could be established as p-value=0.116.This result is opposite to the study conducted by Sumtraprapoot. (52)

Patients having family members four or less tended to have more satisfaction than the other group having five or more family members statistical association was significant at P-value= 0.025. This finding is not consistent with the study of Tran Thi Luu (49) who determined that family size of the respondent had no significant association with satisfaction and health service utilization.

It is concluded that no consistent pattern of association of socio-demographic factors and patient satisfaction has been established so far. It has a wide variation in different studies and Weiss (1988), mentioned that most difficult relationship is to pin down socio-demographic factors and level of satisfaction. This may be due to the fact that different studies had varied broadly in nature of particular sample studied and specific package of background characteristic examined. A particular scale used may also have affected perceived relationship. (64)

5.3 Accessibility to health care services

The relationship between accessibility and patient satisfaction level was assessed by using chi square. Main factors used for accessibility analysis were distance, waiting time, and information received. It was found out that 64.1% respondents living at a distance of equal or less than 5 Km had high satisfaction. Those who were living at a distance of more than 5 Km had only 29.3% high satisfaction. The association was significant statistically at p-value=0.000. It can be concluded that those who lived near to the hospital could reach the hospital to avail the facility when ever they needed and this convenience had enhanced their level of satisfaction. About 2/3 of the respondents living within the 5km range had easy access and relatively higher satisfaction than the other group.

Waiting time for doctor examination was considered as easy access if it was equal or less than 30 minutes. Among those who had easy access, 52.3% had high satisfaction while among those who had difficult access, 56.9% had high satisfaction. But no statistical association was established as p-value=0.531. However, it can be assessed that about half of the patients of both groups had low satisfaction. This low satisfaction can be explained by considering the fact that every body is short of time in today's fast life and intends to get hospital work finished as early as possible.

Another important factor related to accessibility was duration of total time spent in OPD. The total time spent in OPD less than 60 minutes was easy access and more than that was difficult access. No significant association was proved as p-value= 0.452. However, in both the groups only little more than 50% respondents were high satisfied and remaining were low satisfied. Stay in OPD needs waiting for registration, doctor examination, laboratory tests and medicine receiving from pharmacy. Administration may consider the ways to reduce the waiting time for all these steps. The adequacy of timing of OPD was also asked in questionnaire and respondents showed high satisfaction with p-value=0.000. It means that regular OPD timing from 8 AM to 2 PM were suitable for most of the patients.

Availability of adequate information in OPD was another factor concerning accessibility. Although no significant association was determined (p=0.271) but more than half of the respondents of both 'Yes' and 'No' groups were found high satisfied. It lead to the inference that an effective and appropriate system of information provision already exits in the hospital.

5.4 Experience concerning health care services

As already mentioned in chapter 4, total experience of 200 patients was computed to determine their perception level towards health care services availed in the past from medical institutions other than PIMS. Experience had two groups; high experience and low experience by using mean as cut pint. The patients with high experience were those who had good experience and perception related to the health care services while respondents with low experience had opposite feelings.

The computation of experience with satisfaction revealed that low experience group tends to have 46.6 percent high satisfaction. On the other hand, the high experience group tends to have 59.8 percent high satisfaction. Hence, by comparison, high experience group had higher proportion of high satisfaction than the other group. The statistical association between two variables had no significance as p-value = 0.062.

The experience of respondents was analyzed with reference to convenience, medical expense and quality of care. In the section of convenience, most of the patients informed that the waiting time for physical examination was long but on the other side, in case of the PIMS, most of the patients admitted that the waiting time was convenient with less than 30 minutes duration. Respondents also informed that they had to wait for long time in pharmacy for receiving medicines in the other hospitals. They were also found unsatisfied with the pharmacy service of PIMS as can be assessed from group-item-mean score in table 7. Patients also informed that receiving treatment from one department to another department in the OPD was difficult in other hospitals but in case of PIMS, it seems easy because most of them agreed that their total time spent in OPD was by and large less than 60 minutes.

As regard the medical expenses, patients in both the situation i.e. PIMS and other than PIMS, were found satisfied with the cost incurred on all kinds of routine laboratory tests. When asked in connection with the quality of care, respondents were found satisfied with doctors; that were identical to the PIMS. But majority of them showed their non-satisfaction about getting all the medicine from pharmacy prescribed by the doctor. Similar was the situation in case of the PIMS.

CHAPTER 6
CONCLUSION AND RECOMMENDATION

The objective of the research was to describe the satisfaction level of the patients attending the OPD of Pakistan Institute of Medical Sciences, Islamabad. The data from 200 respondents was collected from 5th January to 15th of January, 2005. All respondents were taken from the patients who visited the OPD of Islamabad hospital, PIMS for the **first time**. **Every fifth patient** was requested to fill the questionnaire to get a wider cross section of the patient views. The self administered questionnaire consisted of 50 questions with regards to the satisfaction, socio-demography, experience and accessibility.

6.1 Conclusion

It was found out that female were attending OPD more than male patients. Most of the patients were single and they had education level higher that primary school. The minimum age of the patient was 16 years and maximum age was 53 years. The average family income was 15243 rupees and average family size was 5.5.

With reference to the satisfaction, it was concluded that slightly more that half (54%) patients were satisfied. When distribution of percentage of overall satisfaction was analyzed by group as given in table 8, it could be assessed that low satisfaction was mainly attributed due to poor physical facilities (47%), lack of medical equipments (35%) and poor pharmacy services (35%) and inadequate doctor service (38.5%). Respondents were almost equally unhappy with these factors with relatively higher level of low satisfaction towards improper physical facilities provided by the hospital managers. When physical facilities were analyzed through assessment of item mean as given in table 6, it was concluded that patients were mostly un-satisfied due to noise around the hospital, lack of clean toilets and absence of sufficient number of

sitting chairs in the OPD. The providers can enhance the level of patient satisfaction by removing these shortcomings. The highest level of high satisfaction was found for expenses for laboratory test (81%) that may be due to the fact that test costs are much higher in private laboratories than the public hospitals.

Most of the socio-demographic factors showed association with satisfaction. Age, marital status, education, occupation and family size were found associated with the level of satisfaction having significant p-value (< 0.05). However, gender (p=0.238) and family income (p=0.116) could establish no association with satisfaction.

With reference to the accessibility, it was determined that living distance of patient had significant association with the satisfaction (p=0.000). The satisfaction was found inversely proportionate to the distance. More than three quarters of the patients (77.5%) were found satisfied with the OPD timings and strong association with satisfaction (p=0.000) was established. With regards to the waiting time for doctor and total time spent in OPD, although 64 percent and 61.5 percent respondents were respectively found satisfied but no statistical association was determined as p-value was > 0.05 in both the cases.

With regards to the experience of patients towards OPD services other than PIMS, it was found out that patients with high experience (56%) had higher proportion of high satisfaction (59.8%) probably because of their higher perception towards OPD services. However, no statistical association could be established between these two factors (p=0.062).

6.2 Recommendations

6.2.1 This study identified some of the areas which can be improved in order to improve the patient care and quality of care.

Low satisfaction was observed due to non availability of the enough clean toilets and noisy situation around the hospital. Lack of sufficient number of sitting

facilities were also a complaint point. The providers may consider appropriate measure to resolve the issues.

Although patients were relatively much satisfied with the doctor service but they wish doctors could spent more time with them during physical examination.
Pharmacy service was another important area and patients had desired that they could get all prescribed medicines. In addition to that they wanted the pharmacists to explain the use of medicine in detail and clearly.

Satisfaction as an 'over all' showed percentage of more than 54 but providers should consider ways and means to improve it to more higher level.
Although hospital may be under staffed and overworked but the administrators ought to work out some strategy to cater maximum patients in less time i.e. waiting time is required to be reduced as much as possible. Similarly total time spent in OPD can be reduced by expediting the patient work at registration counter, X-ray and pathology labs and medicine receiving counter.

6.2.2 Recommendations for future research.

Subsequent repeat study may be conducted to know the latest satisfaction level. Future studies should include other public hospitals of the area in order to compare the differences in services delivery imparted by the identical institutions. Moreover, services of public hospital can also be compared with hospitals working in private sector by using the important indicators of patient satisfaction.

Many findings of this study may be useful for future improvements. Patient satisfaction assessment should be a regular assignment of all hospitals that should be conducted at least twice a year. It will help knowing the problems of patients and improving the quality of care, ultimately earning good name and prestige for the institution. Another effective way of knowing the level of patient satisfaction may be community based survey. The results will have less bias and will provide wide spread opinion of the community regarding the quality of care and hospital functioning.

It was concluded from this study, that data collection needed utmost care at the time of collection. This was imperative for quality control of data. Data collectors and interviewer must have full expertise in their job and they should have sufficient comprehension in narrating the questionnaire particularly the open ended and negative questions. Questions should be in easily understandable wordings. Data must be cleaned before going out of the field.

REFERENCES

1. Chanawongse K . Understanding primary health care management: from theory to practical reality. Nakhon Phathom. ASEAN Institute for Health Development, Mahidol University; 1994.
2. World Health Organization. The world health report 1998: life in the 21st century: a vision for all. Geneva: The Organization. 1998.
3. Linder-Pelz S. Towards a theory of patient satisfaction. Social sciences and medicine 16: 592-577. 1982.
4. Ray FP. Survey of patient satisfaction: 1-important general considerations. Br Med J 1991; 302: 887-89.
5. Kareem, Aday LA, George M, Walker JR. Patient's satisfaction in government health facilities in the state of Qatar. J Community Health 1996; 5: 349-57.
6. Office of the Comptroller General Evaluation and Audit Branch. Developing and implementing good client satisfaction measurement and monitoring. [Online]. October 1991. Available from: http://www.tbs-sct.gc.ca/eval/pubs/pubs-to-1995/satis-satis_e.asp - 95k [Accessed 2005 Mar 9].
7. Medical director, Holy family hospital, Mumbai business publications Division, Indian Express newspapers (Bombay) Limited [On line]. 2001. Available from: http://www.A:\edit02.shtml [Accessed 2005 Jan 19].
8. Risser, Panchansky R, Thomas JW. The concept of access definition and relationship to consumer satisfaction. Med Care 1991; 19(2): 127-40.
9. Oliver, Richard L. (1993), "A Conceptual Model of Service Quality and Service Satisfaction: Compatible Goals, Different Concepts," in Teresa A. Swartz, David E. Bowen, and Stephen W. Brown (eds.), Advances in Services Marketing and Management: Research and Practice, Vol. 2, Greenwich, CT: JAI Press, 65-85.
10. Swan, et al. Deepening the understanding of hospital patient satisfaction fulfillment and quality effects. J Health Care Marketing 1985; 5(3): 7-8.

11. Mansour AA, al-Osimy MH. A study of patient satisfaction among primary health care patients in Saudi Arabia. J Community Health 1993; 18(3): 163-73.

12. Donabedian A. Exploration in quality assessment And monitoring: the definition of quality approaches to its assessment. Ann Arbor: Health Administration Press, 1980.

13. Lebow JL. Similarities and differences between mental health and health care evaluation studies assessing consumer satisfaction. Eval Plann J 1983;6() 03-4: 237-45.

14. Chetwynd J. Satisfaction and dissatisfaction with the public and private hospitals. Newzealand Medical Journal 1988;101: 563-69.

15. Rodney W. Quigly, C.Werblun et al. Satisfaction of Community Patients in a Family Medicine Residency : validation of measurement tool. Family Practice Research journal, 5: 167, 1986.

16. Kunarantnapruek S, Boonpadoong, D. The Study of client satisfaction towards curative services in general hospital , Bangkok: Vachirasan; 1989.

17. Young-Mahon P. An analysis of the concept patient satisfaction as it relates to contemporary nursing care. J Adv Nurs 1996; 24: 1241-48.

18. McQuitty S, Finn A, Wiley JB. Systematically varying consumer satisfaction and its implications for product choice. [Online]. Academy of Marketing Science Review 2000; (10): [1-18]. Available from: http://www.amsreview.org/articles/mcquitty10-2000.pdf [Accessed 2004 Dec 10].

19. Giese JL, Cote, JA. 2000. Defining consumer satisfaction. [Online]. Academy of Marketing Science Review 2000; [1-27] Available from: http://www.amsreview.org/articles/giese01-2000.pdf [Accessed 2004 Nov 5].

20. Kirsht John P.,Marshal, Eveland and Jane. Psychological an social factors as predictor of medical behavior. Med Care 1976; 14(5):.

21. Leavitt F. The health belief model and utilization of ambulatory care services. Soc Sci Med [Med Psychol Med Sociol] 1979 Jan;13A(1): 105-12.

22. Becker M. et al. Selected psychological models and correlates of individual health related behavior. Med Care 1977; 15:.

23. Crow R, Storey L, Page H. The measurement of patient satisfaction: Implications for health service delivery through a systematic review of the conceptual, methodological and empirical literature. Health Technol Assess 2003; 6 (32):

24. Thinking Space, 6 Warn Court, Old Mill Close. Exeter; United Kingdom. Available from: www.thinkingspace.com. [Accessed November 12, 2005].

25. Canada. Office of the comptroller general evaluation and audit branch. Measuring client satisfaction, developing and implementing good client satisfaction measurement and monitoring practices content. [Online]. 1991. Available from: www.tbssct.gc.ca /eval/ pubs/pubs-to-1995/satis-satis_e.asp - 95k – [Accessed 2004 Oct 4].

26. Sriratanabul U, Pimpokovit V. Service of outpatient department at Chulalongkorn hospital. Chulalongkorn Med J 1973; 18(1): 55-62.

27. Likun P. Strategic issues for reducing patient waiting time and improving satisfaction with services at the outpatient department of the first affiliated , Kunming Medical College, P.R.C.A. [M.S. Thesis in Health Development Program] Bangkok: Faculty of Graduate Studies, Chulalongkorn University; 1996.

28. Durongpisitkul V. Out patient satisfaction with services of Ramathibodi hospital [M.S. Thesis in Nursing] Bangkok : Faculty of graduate sciences , Mahidol University; 1992.

29. Berwick DM. Continuous improvement as an ideal in hospital care. N Engl J. Med 1989; 320(1): 53-6.

30. Roberts JS, Coale Redman RR. A history of the joint commission on accredition of hospitals. JAMA 1987; 258: 936-40.

31. Jacobs CM, et al. Measuring quality of patient care. Cambridge: Ballinger; 1976.

32. Garvin DA. Measuring quality: the strategic and competitive edge. New York: Free Press; 1990.

33. Elafsson S, et al. A hindrance to financially and psycho-socially disadvantage groups seeking care. Soc Sci Med 1998; 46(10): 1375-80.

34. Upreti SR. Consumer satisfaction towards health center services in Suphanburi province, Thailand [M.P.H.M.]. Nakhon Pathom: Faculty of Graduate Studies, Mahidol University; 1994.

35. Pasaribu SI. Consumer satisfaction towards health care services of health center in Bangkok Thailand [M.P.H.M.Thesis in Primary Health Care Management]. Bangkok: Faculty of Graduate Studies, Mahidol University; 1996.

36. Stter JF, Thomas V. Perneger, validating a satisfaction questionnaire using multiple approaches. Soc Sci Med 1997; 45(6): 879-85.

37. Doborah L. Consumerism reflexivity and the medical encounter. Soc Sci Med 1997; 45(3): 373-81.

38. Barry CA, et al. Giving voices to life world: more human and more effective medical care. Soc Sci Med 2001; 51(9): 487-505.

39. Dovkata SR. Consumer satisfaction towards health services provided by health center in Muang district, Loeit province, Thailand [M.P.H.M Thesis in Primary Health Care Management]. Nakhon Pathom: Faculty of Graduate Studies, Mahidol University; 1997.

40. Punyathikum K. Study on outpatient requirements on pharmacy service. Mahidol J pharma Sci 1994;21(2):58-67.

41. Muller RJ, Kleinberg ML, Barkes G. Patient satisfaction with ambulatory care pharmaceutical services in major cancer center. Am J Hosp Pharma 1998; 45: 1908-10.

42. Friedson E. Professor of medicine, New York: Dodd Mead; 1972.

43. Suchman EA. Social patterns of illness and medical care. J Health Hum Behav1976; 17(4): 353.

44. Hoppe SK, Heller PI. Alienation, familism, and the utilization of health services by Mexican Americans. J Health Soc Behav 1975;16(4): 304-14 .

45. Titkow A. Social differentiationof medical behavior among Warsaw inhabitants; 1976.

46.Cockerham, w.c. Medical Sociology :Second edition: Newjersey Pentice hall, Englewood cliff; 16-27, 1982.

47. Tessler R, MechanicD, Dimond M. The effects of psychological distress on physician utilization. a prospective Study. J Health Soc Behav 1976; 17 (4): 353-64.

48. Al-Bashir M, armstrong D. Preferences of healthy and ill patients for style of general practitioner care: implication for work load and financial incentives under the new contract. Br J Gen Pract 199; 41: 6-8.

49. Tra TL Health center – curative services utilization in a commune of Vinh Tuong district, Vinh Phuc province, Vietnam, [M.P.H. Thesis]. Faculty of Graduate Studies, Mahidol University 1999.

50. Aitibi Hussam. Factors affecting community hospital services utilization. [M.P.H.M Thesis]. Faculty of graduate studies. Mahidol University, 1989.

51. Williams SJ, Calnan M. Convergence and divergence: assessing criteria of consumer satisfaction across general practice, dental and hospital care settings. Soc Sci Med 1991; 33(6): 707-16.

52. Piyathida Sumtraprapoot. Patient Satisfaction towards health center services of BMA Health Center 24, [M.P.H.M. Thesis in Primary Health Management]. Nakhon Pathom: Faculty of Graduate Studies, Mahidol University 1997.

53. Tran TN. Utilization of health service at Commune Health Center (CHC) in Donganh District, Hanoi, Vietnam [M.P.H. Thesis in Health Promotion]. Faculty of Graduate Studies, Mahidol University; 2002.

54. Rouge L, Newman L, Cleary P. Variability inpatients experience at 15 New York city hospitals. Bull N Y Acad Med 1996; 73: 314-34.

55. Cleary P, Edgman-Levitan S, Roberts M, Moloney TW, Mcmullen W, Walker JD, et al. Patients evaluate their hospital care: a national survey. Health Aff (Millwood). 1991 Winter;10(4): 254-67.

56. Kane. Communications. [Online]. 2003 ; Available from: http://www.findarticles.com/p/articles/mi_m0LMB/is [Accessed 2005 Mar 5].

57. Channawanggse K, Chamreng B, Niyoyaht S. Common understanding rural development management principles, propositions and challenges. 3rd ed.

Nakhon Pathonm: Asean Institute for Health Development, Mahidol University; 1996.

58. Ross CK, Stert CA, Sincore JM. The importance of patient of preference in the measurement of health care satisfaction. Med Care 1993; 31(12): 1145-6.
59. Ansari SP. Client satisfaction towards health center services at urban Islamabad [M.P.H.M. Thesis in Primary Health Management]. Nakhon Pathom: Faculty of Graduate Studies, Mahidol University; 1998.
60. Saurma Ida Pasaribu., Consumer satisfaction at BMA Health Center 3, [M.P.H.M. Thesis in Primary Health Management]. Nakhon Pathom: Faculty of Graduate Studies, Mahidol University;1996
61. Bunnark O, Ence A. Satisfaction and Need of People Towards Health Centers and Community Hospitals under Bangkok Metropolitan Administration, Bangkok: Chulalongkorn University; 1995.
62. Tran TN. Utilization of health service at Commune Health Center (CHC) in Donganh District, Hanoi, Vietnam, [M.P.H. Thesis in Health Promotion]. Faculty of Graduate Studies, Mahidol University; 2002.
63. Roy PP. Client Satisfaction on Outpatient Medical Care Service in Sampran Community Hospital, Thailand. [M.P.H.M. Thesis in Primary Health Management]. Nakhon Pathom: Faculty of Graduate Studies, Mahidol University .2002.
64. Weiss G L. Patient satisfaction with primary medical care: an evaluation of socio-demographic and predisposition factors of medical care. 1988; 26(4):383-92.

APPENDIX

APPENDIX A
QUESTIONNAIRE

This questionnaire is prepared for assessing the satisfaction of patients towards ODP services in Pakistan Institute of Medical Sciences. The information provided will help in improving the services of health care. Your cooperation will be highly appreciated. Your reply will be kept confidential. Therefore, please feel free to answer the questions. Thanks.

ID: _____

Name of data collector _____

Date of data collection / / /

Time of Interview. Start. _____ End._____

Instructions

Please tick √ the appropriate answers in the boxes or fill in the blanks as required.

Part-A. Socio-economic characteristics:

Q.1. Sex For Code only

- □ Male
- □ Female

Q.2. Age

- □ _____(Years) □□

Q.3. Marital status □

- □ Single
- □ Married
- □ Widow/Widower /
- □ Divorced / Separated

For code only

Q.4. What level did you finish your education? □

- □ Never attended school.
- □ Primary
- □ Secondary
- □ Higher school / diploma
- □ Others_____(specify)

Q.5. Main occupation □

- □ Not employed
- □ Government employed
- □ Non-Govt employed
- □ Others _____(specify)

Q.6.Family income per month

- □ Rs. _____ □□□□□□

Q.7.Total members currently living in your family:

- □ _____ □□

Part-B. Experience concerning the health care services.

Please answer the following questions by ticking the sign (√) in box of your choice.

Note Questions of this part are related to the past experience (perception) to all health care facilities other than PIMS, ever visited by the respondent.

No.	Experience to health care service	Yes	No.
	Convenience		
1.	Do you from your past experience feel that "waiting time for physical examination was long"?		
2.	Do you from your past experience feel that the "waiting time for receiving medicine from OPD pharmacy was long"?		
3.	Do you from your past experience feel that "the place for receiving the medicine was inconvenient"?		
4.	Do you from your experience feel that "the place for receiving the treatment was inadequate"?		
5.	Do you from your past experience observe that "OPD timing is adequate for your need"?		
6.	Do you from your past experience feel that "receiving medical services from one department to another department in OPD was difficult"?		
	Medical Expense		
7.	Do you from your previous experience believe that "the cost of urine test was adequate"?		
8.	Do you from your previous experience believe that "the cost for X-ray test was suitable"?		
9.	Do you from your previous experience believe that "the cost of blood examination was affordable"?		
	Quality of Care		
10.	Do you from your previous experience feel that "the treatment you received from doctor was good"?		
11.	Do you from your previous experience expect that "you will get all the medicine prescribed from the hospital"?		
12.	Do you from your previous experience believe that "the nurse was skilled in using medical equipment"?		
13.	Do you from your previous experience believe that "the doctor gave you an opportunity to ask about your illness"?		
14.	Do you from your previous experience believe that "the hospital officers listened to your problems attentively"?		

Part-C. Accessibility to the health care services at PIMS

Distance from hospital

Q 1. How far do you live from the hospital? □□□
□_____Km.

Q 2. Is it easy to get public transport to the hospital from your home?
□Yes □No □

Q.3.How much time did you have to travel to the hospital?

□ ---------hr --------- min. □□□

Q.4. How much money did you spent in traveling to the hospital?

□_____ Rupees □□□

Waiting time

Q.5. How much time did you have to wait for examination by the doctor? □_____
hrs _____ min □□□

Q.6.What was the total time you spent in the OPD for getting complete health service?
□____hrs___ min. □□□

Information received

Q.7. Is the schedule (8AM to 2PM) of working hours of OPD adequate?

□Yes □No □

Q.8. Could you receive enough general information about this hospital?

□Yes □No □

Q.9. where did you come to know about this hospital?
(Please specify only the main source).

□ TV □
□ Radio
□ Friend
□ Public health officer
□ Politicians
□ Local Government agents
□ Others ---------- (specify)

Part- D. Satisfaction towards OPD services:

Please tick (√) the level of your satisfaction against the following statement in the relevant box.

Scale: 5 = Strongly agree, 4= Agree, 3 = Not agreed, 2 = Disagree, 1 = Strongly disagree

No	SATISFACTION TO THE MEDICAL CARE SERVICES	Satisfaction level				
		5= SA	4= A	3= N	2= DA	1= SDA
Physical facilities						
1.	Building of this hospital is clean .					
2.	Ventilation inside the hospital is good.					
3.	Enough light inside the building of hospital					
4.	No noise around the hospital.					
5.	Waiting room has enough sitting chairs.					
6.	Enough clean toilets are available.					
7.	Enough physical examination rooms are available.					
Medical Equipment						
8.	Enough medical equipment for examination is available.					
9.	Medical equipment is in good working order.					
Doctor Service						
10.	Hospital doctors do physical examination with respect.					
11.	Doctors spend enough time with patient in examination.					
Nurse's Service						
12.	Hospital nurses treat the patient with respect.					
13.	Nurses explain the treatment clearly.					
Pharmacy Service						
14.	Hospital pharmacist treat patients with respect.					
15.	Pharmacists explain the use of medicine clearly.					
Registration Service						
16.	Registration staff treats the patient with respect.					
17.	Registration staff has good communication skills.					
Expenses for laboratory tests						
18	Expenses for pathology laboratory test are affordable.					
19	Medical Expenses for X-ray laboratory tests are affordable.					

APPENDIX B

Relationship between accessibility and patient satisfaction towards OPD services at PIMS

Characteristics	Satisfaction level						
	N= 200	Low satisfaction		High satisfaction		Chi square χ^2	p-value
		NO	%	NO	%		
Distance from hospital in Km						20.04 df=1	0.000 *
Easy access 5 Kms and less	142	51	35.9	91	64.1		
Difficult access More than 5kms	58	41	70.7	17	29.3		
Access to public transport to hospital						5.26 df=1	0.02
No=Difficult access	6	0	0	6	100		
Yes=Easy access	194	92	47.4	102	52.6		
Time taken to reach the OPD						10.87 df = 1	0.001
Easy access 30 mins and less	188	92	48.9	96	51.5		
Difficult access More than 30 minutes	12	0	0	12	100		
Money spent to reach the OPD						6.17 df = 1	0.01
10 Rupees and less= easy access	7	0	0	7	100		
More than10 Rs= difficult access	193	92	47.7	101	52.3		
Waiting time for Doctor examination						0.39 df = 1	0.53
30 minutes and less=easy access	128	61	47.7	67	52.3		
More than 30 minutes=difficult access	72	31	43.1	41	56.9		
Total time spent in OPD						0.56 df = 1	0.45
60 minutes and less	123	54	43.9	69	56.1		
more than 60 minutes	77	38	49.4	39	50.6		
Timing of OPD adequate						17.46 df = 1	0.00*
No=difficult	45	33	73.3	12	26.7		
Yes=easy	155	59	38.1	96	61.9		

Relationship between accessibility and patient satisfaction towards OPD services at PIMS (cont.)

Characteristics	Satisfaction level						
	N= 200	Low satisfaction		High satisfaction		Chi square χ^2	p-value
		NO	%	NO	%		
Adequate information available for OPD						1.21 df = 1	0.271
No = difficult	80	33	41.3	47	58.8		
Yes = easy	120	59	49.2	61	50.8		
Where did you learn about PIMS						55.28 df=1	0.000 *
TV and radio	49	0	0	49	100		
friends, health officer and others	151	92	60.9	59	39.1		

Statistically significant level = 0.05

04 indicators had 0 number and %.

Group-wise means and SD for patient satisfaction with OPD services at PIMS

Variables	Total group Mean N=200	Standard Deviation	Group item mean N=200	Standard deviation
Physical facilities	25.80	4.17	3.68	0.59
Medical Equipment	7.92	1.05	3.96	0.52
Doctor Service	7.83	1.43	3.91	0.71
Nurse's Service	7.48	1.84	3.74	0.92
Pharmacy Service	7.07	1.47	3.53	0.73
Registration Service	7.45	1.83	3.72	0.91
Expenses for laboratory tests	7.97	1.12	3.98	0.56

BIOGRAPHY

NAME	Anjum Javed
DATE OF BIRTH	April 01, 1960
PLACE OF BIRTH	Pakistan
INSTITUTIONS ATTENDED	MBBS Sind University Jamshoro, Pakistan. DTM&H (Diploma in Tropical Medicine and Hygiene) London School of Hygiene and Tropical medicine. U.K
POSITION	Assistant Director Pakistan Institute of Medical Sciences Islamabad, Pakistan.