SATISFACTION FROM CAREGIVERS OF CHILDREN UNDER AGE OF FIVE FOR SURGERY DEPARTMENT OF NATIONAL PEDIATRIC HOSPITAL PHNOM PENH CAMBODIA

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ความพอใจของผู้ดูแลเด็กอายุต่ำกว่า 5 ปีที่เข้ารับการรักษาในภาควิชาศัลยกรรม ณ โรงพยาบาลเด็กแห่งชาติพนมเปญ ประเทศกัมพูชา

นางสาวทาว ดาวิน

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาสาธารณสุขศาสตรมหาบัณฑิต
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ทาว ดาวิน : ความพอใจของผู้ดูแลเด็กอายุต่ำกว่า 5 ปีที่เข้ารับการรักษาในภาควิชาศัลยกรรม ณ โรงพยาบาลเด็กแห่งชาติพนมเปญ ประเทศกัมพูชา. (SATISFACTION FROM CAREGIVERS OF CHILDREN UNDER AGE OF FIVE FOR SURGERY DEPARTMENT OF NATIONAL PEDIATRIC HOSPITAL PHNOM PENH CAMBODIA) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: ผศ.ดร. อุษณีย์ พึ่งปาน, 119 หน้า.

การศึกษาภาคตัดขวางนี้เพื่อต้องการที่จะประเมินระดับความพึงพอใจของผู้ดูแลเด็กอายุต่ำกว่า 5 ปีในกรณีที่เข้ารับการรักษาในภาควิชาศัลยกรรม โรงพยาบาลเด็กแห่งชาติพนมเปญ ประเทศกัมพูชา และเพื่อดูความสัมพันธ์ระหว่างระดับความพึงพอใจกับปัจจัยอื่นที่เกี่ยวข้อง พร้อมกับนำเสนอข้อเสนอแนะและความคิดเห็นของผู้ดูแลเด็ก

การสัมภาษณ์ด้วยแบบสอบถามได้จำนวนผู้ให้ข้อมูล 245 คนที่เข้ามารับบริการในภาควิชาศัลยกรรม โรงพยาบาลเด็กแห่งชาติ การศึกษาครั้งนี้ใช้สถิติเชิงพรรณนาในการอธิบายระดับความพึงพอใจ และดูความสัมพันธ์ด้วยการใช้ไคสแควร์ทดสอบ

จากค่าคะแนนเฉลี่ยแล้วพบว่า ระดับความพอใจของผู้ดูแลคนไข้นอก คือ 65.46 และคนไข้ใน 80.06 ในจำนวนนี้ร้อยละ 15.6 พอใจมากกับการบริการสุขภาพคนไข้นอก ในขณะที่ร้อยละ 24.2พอใจมากกับการบริการสุขภาพคนไข้ใน ผู้ดูแลคนไข้นอกพอใจมากในเรื่องมารยาทของผู้ให้บริการ (ร้อยละ 21.2) ความสะดวกในการรับบริการสุขภาพ (ร้อยละ 20.7) และคุณภาพของการให้บริการ (ร้อยละ 19.0) ในขณะที่ผู้ดูแลคนไข้ในพอใจมากในเรื่องมารยาทของผู้ให้บริการ (ร้อยละ 30.3) คุณภาพของการให้บริการ (ร้อยละ 27.3) และความสะดวกในการรับบริการสุขภาพ (ร้อยละ 24.2) ระดับการศึกษา รายได้ครอบครัว มีสถานที่ให้บริการสุขภาพ สถานะทางการเงิน และการยอมรับผู้ให้บริการมีความสัมพันธ์กับระดับความพึงพอใจ ส่วนใหญ่มีความคิดเห็นเกี่ยวกับค่าใช้จ่ายทางการแพทย์ ศูนย์ข้อมูล ความสะอาดของสถานที่ เวลาทำงานของแพทย์ และจำนวนแพทย์ที่ต้องการ โดยเฉพาะอย่างยิ่ง ศัลยแพทย์ตกแต่ง และกระดูก

จากการค้นพบนี้ จึงมีข้อแนะนำว่าภาควิชาศัลยกรรม โรงพยาบาลเด็กแห่งชาติควรจะพิจารณาค่าใช้จ่ายทางการแพทย์ ชั่วโมงทำงาน และรับแพทย์เฉพาะทางเพิ่มขึ้น รวมถึงการสื่อสารซึ่งกันและกันกับผู้รับบริการ ความพอใจของผู้ดูแลควรจะดำเนินการไปพร้อมๆ กับความพอใจในงานของผู้ให้บริการ มีความเข้าใจความกังวลที่ทำให้ผู้ดูแลไม่พอใจ และแก้ปัญหาให้สอดคล้องกัน

สาขาวิชา สาธารณสุขศาสตร์ ลายมือชื่อนิสิต .....

ปีการศึกษา 2556 ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์หลัก .....

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THOL DAWIN: SATISFACTION FROM CAREGIVERS OF CHILDREN UNDER AGE OF FIVE FOR SURGERY DEPARTMENT OF NATIONAL PEDIATRIC HOSPITAL PHNOM PENH CAMBODIA. ADVISOR: ASSISTANT PROFESSOR USANEYA PERNGPARN, PH.D., 119 pp.

This cross-sectional study was conducted to determine level of satisfaction from caregiver of children aging under five toward health care services at Surgery Department of National Pediatric Hospital, Phnom Penh, Cambodia, and to determine the association between satisfaction level and explanatory factors. Suggestions and comments from caregivers were also revealed in this study.

The structure questionnaire conducted by face-to-face interview was derived from 245 participants consuming health care services at Surgery Department. Descriptive statistics were used to describe satisfaction level and explanatory factors variables while the association between these factors was determined by Chi-square test.

The average score for Outpatient satisfaction was 65.46 and Inpatient satisfaction was 80.06. 15.6% of the respondents were highly satisfied with Outpatient health care services while 24.2% of the respondents were highly satisfied with Inpatient health care services. Caregivers of Outpatient were highly satisfied with courtesy of health provider (21.2%), convenience in getting to health care (20.7%), and quality of care (19.0%). While Inpatient, respondents were highly satisfied with courtesy of health provider (30.3%), quality of care (27.3%), and convenience in getting to health care (24.2%). Education, family income, availability of health care services, financial accessibility and acceptability to health care provider were significantly associated with satisfaction level. Majority of comments from respondents mostly concerned with medical expense, information center, cleanliness of places, working times of doctor and number of required doctor especially for Plastic Surgery and Traumato-Orthopedic (Osseous) health care services.

From this finding, it is recommended that improvement is needed in few items connected to medical expense, working hours and recruitment of more doctors, and two-way communication during the provision of service is also recommended. Caregivers' satisfaction should be done in parallel with job satisfaction of service providers to understand the concern that make respondents not satisfied and solve the problems accordingly.

Field of Study: Public Health Student's Signature .....

Academic Year: 2013 Advisor's Signature .....

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LIST OF ABREVIATIONS

AEC	ASEAN Economic Community
CPA	Complementary Package of Activity
CDHS	Cambodia Demographic Health Survey
HSSP	Health Sector Strategic Plan
IPD	Inpatient Department
MOH	Ministry of Health of Cambodia
MPA	Minimum Package of Activity
MDG	Millennium Development Goal
NGOs	Non-Government Organizations
NPH	National Pediatric Hospital
OPD	Outpatient Department
RGC	Royal Government of Cambodia
SD	Surgery Department
UN	United Nations
UNICEF	United Nations International Children's Fund
WHO	World Health Organization

CHAPTER I
INTRODUCTION

1.1 Background/Rational

Cambodia experienced a genocide regime the Khmer Rouge 1975-1979, when almost all educated people were killed, approximately 1.7 million of population, which brought the nation down to year zero. This bloody civil war not only tore the country apart, but it has been also the main reasons and causes of challenges and difficulties for the reconstruction, when the nation had to rebuild itself from empty hands. In fact, one of the main crises, Cambodian society is facing, as a result of the above described event, is the health problem of its population.

Since 1990s, when peace reborn in Cambodia, many national development policies and priorities started taking place, and one among which was the health care system. It has been nearly twenty years since Cambodian health care system has been resumed. While the health policy has already gone through many transitions, currently it is still in stage of reform. Health care problem in Cambodia could not be discussed, without mentioning the issues of poverty. In reality, when the matter of nation rebuilding is concerned, poverty has always been problematic for Cambodia. The reasons of the weak public health system is mainly linked to and reciprocated with poverty.

In the current situation, the Cambodian public health system is still affecting the majority of its people. Undisputedly, the problem of Cambodian health system is not far beyond the issues of access to health care services (1). Cambodia, just like other reemerged developing countries, has a large portion of children and adolescents. The majority of population accounted for 31.9% of the whole population ranges at the age from 0-14, and accounted for 21.9% ranges at the age from 15-24. While there are 37.5% of population ranges at the age from 25-54, only 4.9% of the population ranges at the age from 55-64, and respectively 3.8% ranges at 65 years and over (2).

Globally, there are number of 6.6 million children aging under five died in year 2012. It is account for nearly 18.000 deaths in every day with severity of diverse root causes (3). In recent years there has been an inclination toward performing increasing amounts of surgery on children. Those surgical interventions could be either day or night stay basis which depend on the nature of the diseases or the harsh condition of children their own.

Pediatric surgery diseases could be relatively link to obstructive problems such as Neonatal Intestinal Obstruction, Esophageal Atresia, Gastro-Duodenal anomalies, Malrotation and Volvulus, Intestinal Atresia, Meconium Ileus, Hirsphrung's disease, Imperforate Anus, and Appenditis. Besides, it could also connect to Hernias and abdominal wall defect which encompassed of Diaphragmatic Hernias, Processus Vaginalis remnants, Undescended Testis, and Umbilical Hernias. In addition to these, there are various kinds of tumor, injuries and other forms of malformation that also called for surgery intervention (4).

Since delivery of surgical care is still an issue strengthening life of children, without immediate intervention the life of those children could not be saved or event prolonged as it exactly could be. Some congenital abnormalities not only wipe out the life of young children at their early age of life, but those abnormalities roughly bring those children to the life with long disabilities that tormentedly impact the physical and emotional wellbeing of those children and that eventually keeping them away from reaching out their beautiful and high potential in their future life.

The World Health Organization (WHO) Global Initiative for Emergency and Essential Surgical Care was established in 2005 in response to this problem as well as to strengthen the delivery of surgical care mainly targeting in the low-income countries (5). Similarly, in the case of Cambodia, Children age under five make excellent candidates for cases of surgery as they are more substantial to expose to the possibilities of being attacked by various kind of systemic diseases in their vulnerable age group. Some children are usually healthy, and free from diseases and this partly shares the root cause that typically prepare them to get ready to require minor, intermediate or advance surgical procedures.

Besides, children are not only prone to the above unwelcome matter but also to health care seeking behavior of the parents or caregivers. High illiteracy and lack of knowledge of their caregiver leads to the failure of understanding about the danger signs and symptoms of the sick children. It also delays the proper health seeking care for children in a timely manner. For many of Cambodia people, especially those who are living in rural area, the tendency to get their children treated by home remedies, traditional healers or drug seller or by private unqualified care providers in their village is still popular. Many of them generally take their sick children to the nearest health care centers or national hospitals, only when the condition of their children is already severely deteriorated. As a result, there are approximately three times more of child mortality rate in rural area than that in urban area. For instance, there are 22 deaths per 1,000 live births versus 64 deaths per 1,000 live births (6).

Since health care problem for children under age of five is still an issue, the policy aiming toward the reduction of child mortality rate for that age has been included in the United Nations (UN) Millennium Development Goal (MDG) 4 since 1990. Around the globe, mortality rate for children under age of five has dropped significantly, from 90 of deaths per 1000 live birth in 1990 to 48 death per 1000, by 2012 (7). In Cambodian case, the endorsement and the quite effective implementation of the MDG 4 has proved a noticeable outcome, with a reduction of child mortality rate from 116 deaths per 1000 in 1990 to 54 death per 1000 in 2011 (8). Nonetheless, such reduction is still insufficient to achieve the objective and target of the MDG 4, in which the goal is to cut down two-third of the mortality rate by 2015.

Currently, the implementation of MDG 4 by Cambodia is reported to be facing difficulties in some places, due to the fact that Cambodia health care service is still under many constraints. Among those constraints is a lack of good management, monitoring and supervision that is making the quality of Cambodia health care provision poor. Plus, Cambodia is still in shortage of trained professional health, poor or absent of physical infrastructure, and power supply. Moreover, Cambodia health care service is still lacking of equipment, drugs supplies and health information

system data planning. Last, inadequate budget resulted in low salaries and poor motivation of staff (9). All of these factors of course do not allow caregivers to fully enjoy the local public health care service provided for their children.

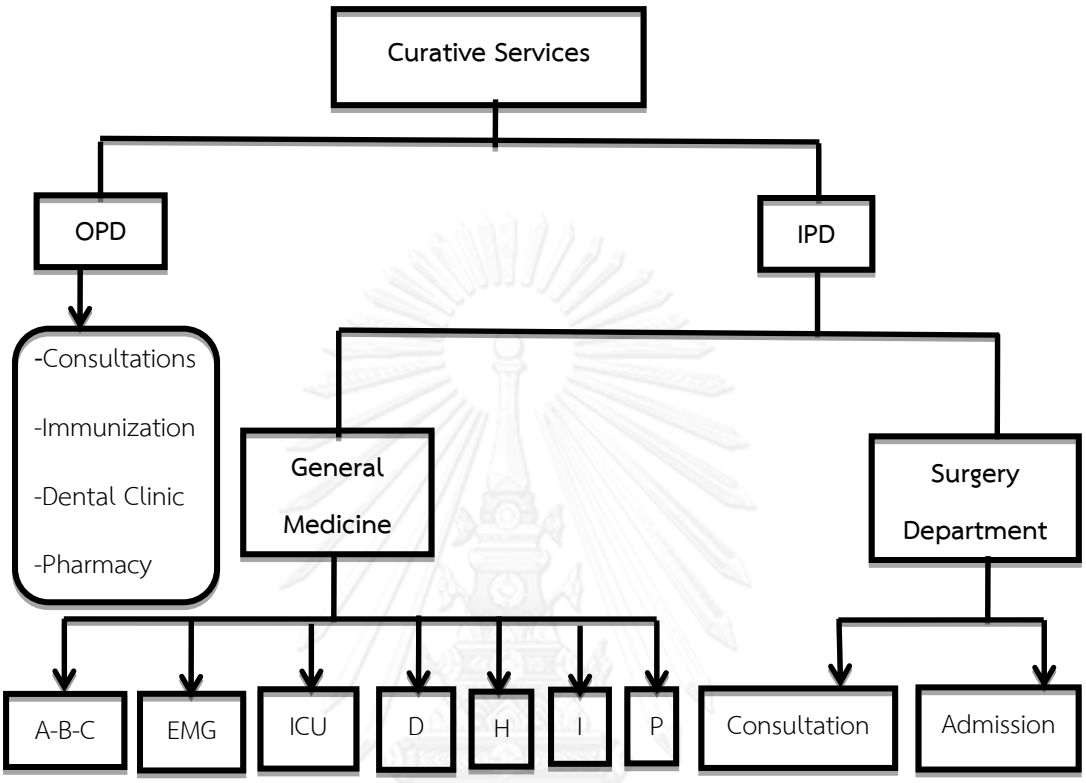
However, living in this world of technology and information people started to be aware of their children well-being and rights. They understood that health care is established to provide satisfactory and quality services for them, and if the hospital fails to do so, they are considered to be failing in implementing their assigned tasks. Health care services performance can be assessed by the patient satisfaction, and this satisfaction is an effective mirror that evaluates the quality of health care services and this quality of health care services eventually determines the welfare of the young citizen.

Moreover, during the past few decades, there has been a general recognition that health is a fundamental human right and a worldwide social goal. Together, health issue has been raised as an essential to the satisfaction of basic human need and improvement of the productivity of the nations. Yet, in reality it was recognized that both developed and developing countries have not achieved the standard of the public health as expected.

Similarly, Cambodia is the country adopted the United Nation Declaration of Human Rights. Base on the Constitution of the Kingdom of Cambodia, Article 31 mentioned that "*Cambodia respects human right as enshrined in the United Nations Universal Declaration of Human Right and all the treaties and conventions related to human rights, women's rights and children's rights*". Plus, Article 72, stated that, "*health care of all Cambodian people should be guaranteed. The State shall give full consideration to disease prevention and medical cares. Poor people shall receive free medical consultations in public hospitals, infirmaries and maternities*" (10).

The National Pediatric Hospital of Cambodia (NPH) is the first pediatric hospital established in 1974. It is the government-run pediatric hospital located in the capital city of Phnom Penh. This hospital is managed by the Ministry of Health of Cambodia (MOH). The institutional capability of this hospital includes curative service, supporting service, preventive service, training, and research (11).

Figure 1: Organizational Structure of Curative Service of National Pediatric Hospital



Source: Bureaucratic of National Pediatric Hospital

Figure 1 above presents the organizational structure in curative services of the National Pediatric Hospital, which divided into two parts Outpatient Department (OPD) and Inpatient Department (IPD). In OPD, the hospital admits sick children for consultation, immunization, dental clinic and pharmacy whereas in IPD the hospital divides the services into two parts. One part serves for the treatment of General Medicine which include services A: Neonatology, B: Pneumology, EMG: Emergency, ICU: Intensive Care Unit, C and D: Diarrhea, Protein Caloric Malnutrition (PCM), Neurology, Nephrology, H: HIV/AIDS and Tuberculosis, I and P: Infectious, and another part is a Pediatric Surgery Department.

In this patient satisfaction study research, the researcher wants to determine the level of caregivers' satisfaction from Surgery Department health care services of National Pediatric Hospital that admitted sick children.

With the Cambodia health plans being implemented to reduce number of children mortally rate and to provide sufficient access to health care for its people, Surgery Department plays crucial role as a national referral hospital center for pediatric patient from all corners of the country in delivering quality of services to save the life of children. National Pediatric hospital is also in the process of self-accreditation in stepping forward for ASEAN Economic Community (AEC) in which health sector has been included and has to be internationalized. In connection to this, there have been previously some studies and researches, conducted in this Surgery Department. Yet, there has been no study conducted by mainly focusing on the satisfaction from caregivers admitted for the Surgery Department health service from this hospital. For this reason, the study of satisfaction from caregivers received health services from the health care services in this hospital is inarguable indispensable.

1.2 Research Question

What is the level of satisfaction from caregivers of sick children aging under five for Surgery Department health care services provided by National Pediatric Hospital?

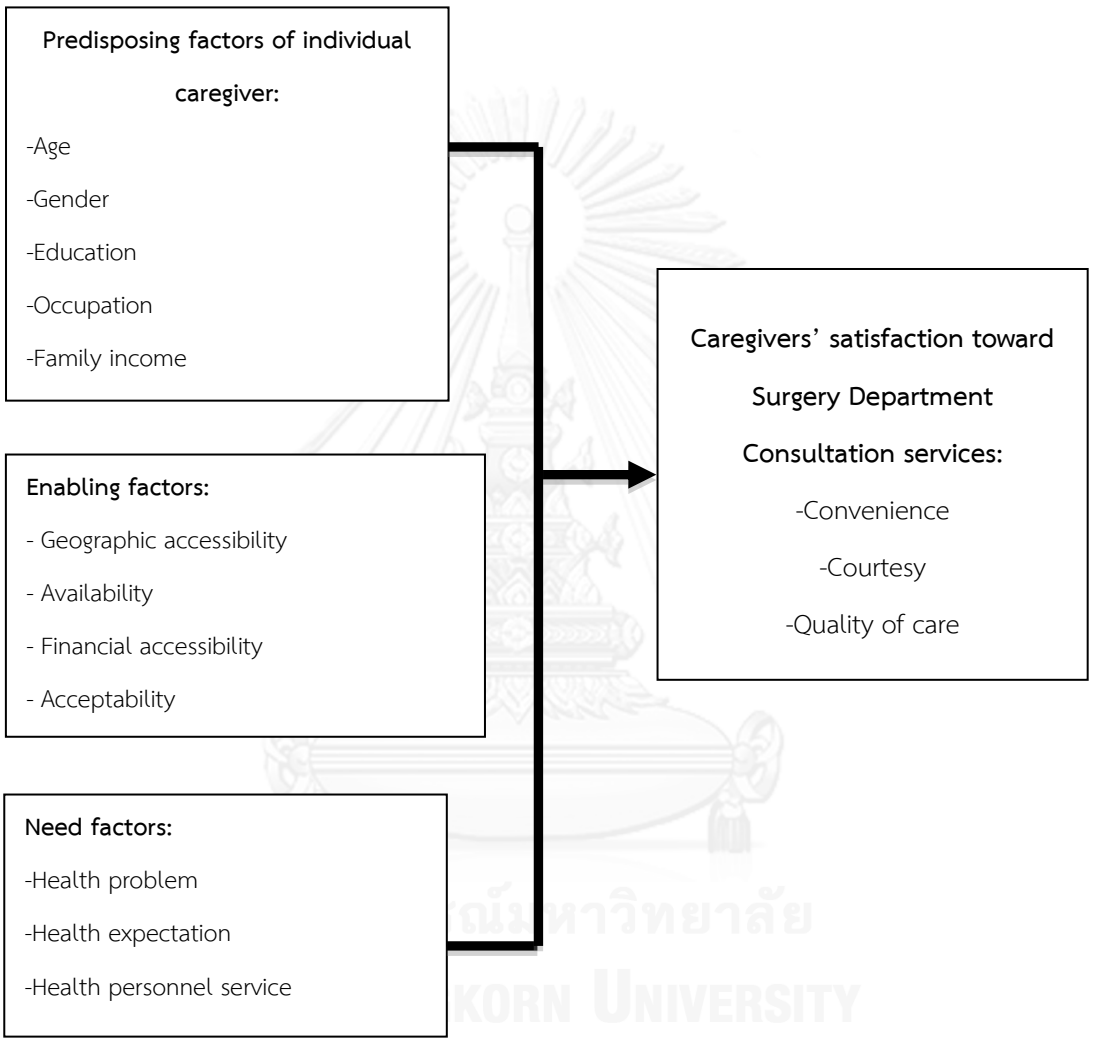
1.3 Research Objectives

1. To determine the level of satisfaction from caregivers toward Surgery Department health care services provided by National Pediatric Hospital.
2. To explore factors associated with caregivers' satisfaction in Surgery Department health care services provided by National Pediatric Hospital.
3. To describe caregivers' opinion on improving the health care services in Surgery Department of National Pediatric Hospital.

1.4 Conceptual Framework

For this study, the conceptual framework was derived from Lu Ann Aday and Ronald Andersen, a framework for the study of access to medical care. Definition and aspects of the concept of 'access' to medical care are viewed and integrated into the framework that viewed health policy as designed to affect the characteristics of the health care delivery system and of the population at risk in order to bring up the changes in the utilization of the health care services and in the satisfaction of consumer with those services. According to this study, the characteristics of population at risk are predisposing, enabling, and need factors that Andersen and Newman describe as individual determinants of utilization. These three components in characteristic of population at risk will be used to construct the independent variables and three elements of the concept of satisfaction in the study by Lu Ann Aday and Ronald Andersen will be applied to construct dependent variables in the conceptual framework of this research (12).

Figure 2: Conceptual Framework



<u>Remark</u>: This conceptual framework is adjusted from the concept of Aday and Anderson

1.5 Variables and Operational definitions

-Caregiver: an individual either male or female who brought sick children to Surgery Department for getting consultation or who was taking care of sick children during their period hospitalization.

Dependent variable

-Caregivers' satisfaction refers to feeling and contentment of caregivers with utilizing hospital services. The indicator for satisfaction in this study consists of convenience, courtesy and quality of care that adjusted from the concept of Aday and Anderson as mentioned above. Caregivers' satisfaction was measured by using ordinal scale.

*1. **Convenience** refers to less in-office waiting time, and availability of care when needed.*

*2. **Courtesy** refers to the friendliness of health care providers and the attention they pay to the client as important person.*

*3. **Quality of care** accorded with the quality of care through the hospital services, such as overall quality of health for patient.*

There are total three parts of questions on satisfaction which included courtesy, convenience, and quality of care with total numbers of 19 questions. The satisfaction was divided into high, medium and low by using mean score + and – one standard deviation as cut off point:

High (> mean score + one SD)

Medium (mean score – one SD to mean score + one SD)

Low (< mean score –one SD).

Independent variables

1. Predisposing factors of individual caregiver: age, gender, education, occupation and family income.

- Age: years of age completed by respondent on the interview date.

- Gender: the biological distinction between male and female.

- Education of caregiver: the highest level of education that the studied participant attained.

Education of caregiver was classified into five categories

1. Illiterate
2. Primary
3. Secondary
4. Bachelor degree
5. Others

- Occupation of caregiver: the job or work that the respondent does to generate their income to support their family.

- Family income: the monthly income of family earned to meet their need.

2. Enabling factors: It was measured by four components which included geographic accessibility, availability, financial accessibility, and acceptability. This study enabling factors adopted from the study by David H. PETERS et al. (2008), "the Poverty and Access to Health Care in Developing Countries", documents disparities in access to health services in Low and Middle Income Countries (LMICs) in which described as follows (13).

> *1. **Geographic accessibility** refers to the physical distance or traveling distance or traveling time from services delivery point to the user.*
>
> *2. **Availability** refers to the right type of care available for those who need it, such as hours of operation and waiting times that meet demands of those who would use care, as well as having the appropriate type of service providers and materials.*
>
> *3. **Financial accessibility** refers to the relationship between the price of services and the willingness and ability of users to pay for those services, as well as be protected from the economic consequences of health costs.*
>
> *4. **Acceptability** refers to the match between how responsive health service providers are to the social and cultural expectations of individual users and communities.*

3. Need factors: It included three components related to the health problem of children, health expectation and health personnel service.

- Health problem refers to the current illness brought children to the hospital and it was assigned by health personnel into different rooms for consultation. It included General Pediatric diseases with Abdomen and Urology, Tromatho-Orthopedic Osseous, Tromatho-Ortopedic Clubfoot, and Plastic Surgery.

- Health expectation refers to what caregiver look forward to get from the health care service provision regarding their child health problem before their actual hospitalization.

- Health personnel service refers to the services given by health personnel (office registrar, doctor, nurse, lab technician, pharmacist, kinesitherapist, supporting staff) and the respondent's view on how much respect, attention and privacy they get from the providers.

CHAPTER II
LITERATURE REVIEW

The aim of this study is to determine the level of satisfaction from caregivers of children aging under five who accessed their sick children to Surgery Department health services at National Pediatric Hospital, Phnom Penh, Cambodia. This chapter presents a review of the concept and information related to the topic as follows:

2.1 Global Health Status of Children under Five

2.1.1 Children Mortality Rate

The global number of death of children under five years age has dropped from approximately 12 million in 1990 to nearly 6.9 million in 2011. There are eight countdown countries such as Bangladesh, Brazil, China, Egypt, Lao People's Democratic Republic Liberia, Mexico and Peru have significantly achieved a reduction of two-thirds of children aging under five-mortality rate while for more than 50 others countdown countries, the decline of children mortality has also been continually decreased (14).

Even so, in some countdown countries like in Afghanistan and in sub-Saharan Africa, aging under five-child mortality rate are reported to be lagging behind. The mortality rate in these countries is still remaining high, which there are number 100 deaths per 1000 live birth. In addition to this, by the year 2050, it is projected that one third of the world children will be burn in sub- Saharan Africa. For this reason, it is important that the effort to reduce child mortality rate is not just continue but must be intensified (14).

2.1.2 Cause of Death of Children under Five

There are various types of diseases have roughly wiped out the life children aging under five. For instance, infectious diseases such as Malaria, Pneumonia, Diarrhea, Sepsis, Measles and AIDS are attributable to almost two-third of children deaths in around the globe. All of these diseases have caused unnecessary death

rate of the children though a matter of fact it is preventable through cost effective and available interventions (14).

More than this, infectious diseases in synergetic relationship with under nutrition have caused more than half of all children mortality rate. Poor nutrition has increased the children's susceptibility to infectious diseases such as Pneumonia, Diarrhea, and Measles. Despite of that, under nutrition alone could result in long lasting negative cognitive and physical consequences, which include intellectual impairment, high risk of adult onset of cardiovascular disease and diabetes (14).

In addition to the above mentioning points, chronic malnutrition namely stunting has also reflected higher exposure to infections especially for children in their first two years of life. Globally, the number of stunting among children has been declining; nonetheless, Africa is still the only major world region where the absolute numbers of stunted children are increased in this last decade. It is also reported that account for eighty percent of the world-stunted children is living in 14 countdown countries and approximately one third or more of all children stunted are living in 43 countdown countries. From all of the 57 countdown countries, the recent data shows that stunting level requires urgent remedial action (14).

Apart from the above, it has been estimated that 85% of children in low-income countries are likely to require treatment for a surgical condition by the age of less than 15 years. Many surgical conditions of childhood are amenable to simple surgical intervention, but if it is left untreated, complications, lifelong disability or death can be ensued (5). Pediatric surgical intervention could be encompassing with General Pediatric Surgery, Neurosurgical, Ear-Nose-Throat (ENT) or Faciomaxillary, Ophthalmological, Cardiothoracic, Vascular, Urological, Plastic Reconstructive, Burns, Orthopedic and others.

Uganda, a low-income country, faces considerable challenges in the provision of pediatric surgical care for the reason of its rapidly growing population of 31.7 million, in which 49% is under 15 years of age and 88% lives in rural areas (5). Uganda's population demographics, expenditure on health care and health-care outcomes are typical of low-income countries in sub-Saharan Africa. On the other hand, England is a high-income country with a national health service that provides

most of the health care for the population and where accurate data regarding surgical activity and workforce are collected. Comparisons were made between Uganda and England to gauge the magnitude of the differences in surgical activity and workforce between a high-income and a low-income country. The comparison highlights the vast under provision of pediatric surgery in Uganda. In this sense, under provision of surgical health care in developing countries demonstrate the cause of death as well as higher mortality rate among children in comparison to the developed countries.

2.2 Cambodia Demographic and Health situation

2.2.1 Demographic Situation

Cambodia is a country located in Southeast Asia, where economy is driven by agriculture. It shares boundaries with Thailand in the west, with Laos and Thailand in the north, while in southwest and in the east it neighbors with the Gulf of Thailand and respectively Vietnam. Cambodia has a total land area of 181,035 square kilometers. By 2011, its population was estimated around 14.3 million. Majority of Cambodian population (80.5%) are living in rural areas, practicing traditional wet rice cultivation and other forms of agriculture, as ways for living (15). From 2001 to 2010, with the exception of the 2007-2009 crises, the country annual average Growth Domestic Product (GDP) has grown at the rate of 7% and 8%, considered as one of the world top ten economic growth rates (16). Despite this skyrocketing jump of economy, poverty has always been problematic for Cambodia.

2.2.2 Cambodia Health Status of Children under Five

2.2.2.1 Infant and Child Mortality Rate

Currently, under five-child mortality rate has been decreased from 83 deaths per 1,000 live births to 54 deaths per 1,000 in 2010. This mortality rate has decreased remarkably with the mother's education and wealth. Child mortality rate is twice high among mother with no schooling in comparison to mother with secondary or

higher education. There is even stronger association in reduction of mortality rate among those mothers who is wealthy. For instance, mortality rate is much higher among children from the poorest household, which account for 77 deaths per 1,000 live births in comparison to only 23 deaths per 1,000 live births among infants from richest family. Moreover, children mortality is also different from province and city. The mortality rate is range from 13 deaths per 1,000 live births in the capital city, Phnom Penh and 78 deaths per 1,000 live births in provinces (6).

2.2.2.2 Cause of Death of Children under Five

According to the Cambodia demographic health survey 2010 (CDHS), there are 40 percent of children aging under five are found stunted. Stunting indicates chronic malnutrition. It is commonly appeared in rural area than in urban area, which account for 42 percent in rural and 28 percent in urban; however, stunting is least common among children with educated mother and wealthy families. Another type of malnutrition named wasting is a sign of acute malnutrition. It appears less common and shares 11 percent from the total number of under-five aged children. Besides, underweight also found among Cambodia children. It is more common and shares the portion of 28 percent of total number of Cambodia children aging less than five (6).

From the Cambodia health profile 2010 by the World Health Organization (WHO) showed that the death of children aging under five are distributed to some sort of diseases comprised of prematurity, pneumonia, birth asphyxia, diarrhea, injuries, congenital abnormalities, neonatal sepsis, malaria, HIV/AIDS, and measles (17).

In addition to the above mentioned diseases, Cambodia children aging under five also prone to some surgical diseases in which congenital abnormalities could be included. Congenital anomalies are known as birth defects, congenital disorders or congenital malformations. It can also be defined as structural or functional anomalies, including metabolic disorders, which presented at the time of birth (18) (19). Congenital anomalies share 6 percent of the total death of Cambodia children

under age of five in year 2010 (17). Congenital diseases can be included Nuero surgical, Thoracic surgical, Umbilical Hernia repair, Hirschsprung disease, Inguinal Hernia , knee and ankle surgery, other Plastic surgery and so on.

Injuries also share significant contribution to death of Cambodia children under age of five. As matter of fact, those children are in developmental stage, they start to progress their motor development and tend to maximize their motor ability as much as they can. By means of doing so, such a kind of healthy activities among them partly act as a predetermine factor predisposed them to various types of injuries either severely or lightly. As a consequence, injuries share 7 percent of the total death of children aging under five in year 2010 (17).

2.3 Cambodia Health Care System

The World Health Organization (WHO) plays an important role in giving support for health system reform. Cambodia has started health sector reform since 1991, when the Strengthening Health System Project was established. The process of reform consisted of three phases. Phase I covered the period from 1991 to 1994, while Phase II and III covered from 1995 to 1997 and 1998 to 2000 respectively. These phases are still in progress and under the title of Health Sector Reform (15).

Prior to the year 1995 of health sector reform, the government policy was intended to have a clinic in each commune, a hospital in each district capital and a provincial hospital in each province. Nevertheless, this system had not met the need of its citizens. Most of the clinic in commune did not exist. The staffs were poorly skill and unmotivated. The size of the population and the hospital was inappropriate. There was limited number of district hospitals. In addition, there was no clear complementary difference between first level of care and referral level of care (15).

The Ministry of Health (MOH) with the aim to provide sufficient care for citizens, approved a new health system that was intended to improve and extend primary health care through “District –Base Health System”, also known as operational district. This health system consists of three levels. The first level was the arrangement of operational district for serving approximately 100,000 to 200,000

of populations. It consisted of a referral hospital and a network of health center, in which each center covers the population of 8,000 to 12,000. The second level was the organized of provincial hospital and provincial health department. And, the third level consisted of Ministry of Health, national institutes, national hospitals, national programs and training institutions. By 2006, there were 8 national hospitals, 77 operational districts, 69 referral hospitals, and 972 health and 79 health posts (15).

Furthermore, from the Ministry of Health Strategic Plan (HSSP) 2008-2015, The Health's mission is *"to provide stewardship for all health sectors to ensure the supportive environment for increase demand and equitable access to quality health services in order that all the people of Cambodia are able to achieve the highest level of health and well- being"*. Further aims of the Ministry, stated in the Health Sector Strategic Plan (HSSP) 2008-2015, are "*to develop health services, allocate financial and human resources, and ensure that population health needs are met in an equitable way through coverage of the whole population"*. The health strategic plan focuses on three health program areas, which include reproductive, maternal, newborn, and child health, communicable diseases and non-communicable diseases (NCDs) (16).

2.3.1 Health Service Delivery Model

2.3.1.1 General Characteristics of the Health Care Delivery System

Health service delivery system refers specifically to the arrangement for the potentially rendering of care to customer. The system categorized by two main elements, which are resources and organization. Resources are the labor and capital devoted to health care. The recourses component includes both the volume and the distribution of medical resources in area which customer can access to it. Organization is health personnel, structure, education, equipment and materials that are used in providing health services (12).

2.3.1.2 Cambodia Health Service Delivery

Cambodia has a mixed service delivery system. Public health service delivery is organized through two levels of services, in which both are provided in all operational districts. One is the Minimum Package of Activity (MPA) provided at the health centers, and another one is the Complementary Package of Activity (CPA) provided at the referral hospitals. From this delivery system, the private sector does not deliver minimum or complementary packages. The private workplaces, international NGOs and practitioners deliver a limited range of services among those tertiary services that are provided by six national hospitals located in Phnom Penh city based and semi-autonomous (16).

2.3.2 Cambodia Health Network Providers

World Health organization (WHO) roles as neutral partner that helped fulfill an important need in collaboration among government, development partners, and civil society. This role has been a significant facilitator for both technical and administrative issues for global fund proposal development, implementation, and the national level functioning of the global fund through the Country Coordinating Committee (Cambodia's CCM) (19).

United Nations International Children's Fund (UNICEF) is an agency of the United Nations which works in Cambodia to promote and protect the rights of children. In partnership with government, civil society, NGOs and development partners, the current UNICEF country has initiated program for year 2011-2015. This program seeks to ensure that all children in Cambodia have a healthy, clean and protective environment in which to thrive and reach their full potential (20).

Non-Government Organizations (NGOs) play crucial role in delivering health promotion, disease prevention programs and activities through health centers. For instance, NGOs in partnership with the Royal Government of Cambodia (RGC) have made major strides with respect to improving the health status of the country's people in immunization coverage. A health survey conducted several years ago

revealed that immunization coverage among children increased from 39% in 2001 to 67% in 2005 (21).

Another provider network is referral hospitals, which divided into national, provincial and district referral hospitals. They are classified in to three levels based on the number of working staffs, beds, medicine, equipment and clinical activities in each hospital (16).

1. CPA-1 hospitals: have no large-scale surgery, no general anesthesia, no blood bank or blood deposit, but at least has a basic obstetric service. There were 33 hospitals at this level in 2011.

2. CPA-2 hospitals: CPA1 plus emergency care services and large-scale surgery with general anesthesia, including ICU, and other specialized services such blood transfusion, Ear, Nose, Throat (ENT), ophthalmology and orthodontics services. There were 31 hospitals at this level in 2011.

3. CPA-3 hospitals: have large-scale surgery with general anesthesia and more activities in terms of both numbers of patients and activities than a CPA-2, and also have various specialized services. In 2011, there were 26 hospitals at this level.

In sum, the referral hospitals are expected to provide primary care and to have recourses and expertise readily available for district health services. Among all eight national referral hospitals and 21 of 24 provincial referral hospitals provide CPA-3 level of services. And, provincial referral hospitals cover several operational districts.

Besides, health centers and health posts play an important role in providing minimum level of primary health care services mainly for rural populations. There are 1,049 facilities that cover around 10,000 to 20,000 people in each one of them. The services that the facilities provided are the initial consultation, primary diagnosis, emergency first aid, chronic disease care, and other maternal and childcare which include normal delivery, birth spacing advice, immunization, health education and referral. In 2005, the facilities provided only three main types of services, which were contraception, antenatal care and tetanus vaccination. In 2010, there were also only

43% of health centers provided the full minimum package of services, due to some constraints such as the absence of key personnel, the inadequacy of essential drugs support, and the absence of other operational guideline requirements (16).

2.3.3 National Pediatric Hospital

The National Pediatric Hospital of Cambodia (NPH) is the public pediatric hospital established in 1974. It functions as national referral hospital center for pediatric patient. It is a government-run pediatric hospital located in the capital city Phnom Penh. This hospital managed by the Ministry of Health of Cambodia (MOH).

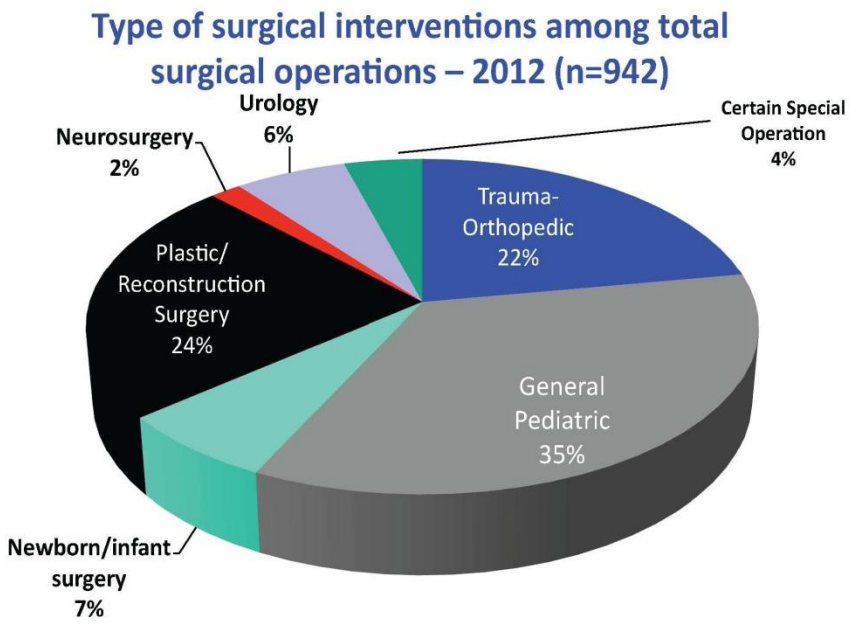
This hospital provides health care services 24 hours per day for Cambodia sick children age from 0-15 nationwide. The health services for children in this hospital have been included general consultation, specialized consultation, vaccination, laboratory, x-ray, ultrasound, and surgery. Besides, the hospital has also offered pharmacy, entomology, hematology, neurology, physiotherapy and private room for the health consumer. The institutional capability of this hospital includes curative service, supporting service, preventive service, training, and research.

2.3.3.1 Surgery Department of National Pediatric Hospital

Surgery Department is one of Inpatient Department health care services of National Pediatric Hospital. It acts as national referral hospital center for Pediatric patients, which provides all aspect of surgical services for Pediatric patients with 24 hours services. The services of this department include surgical consultations, admission for treatment, performing surgical intervention, providing pre-postoperative care and doing the follow up until the patient out of growth. In addition, it also involves in preventive measurement which focusing on the job education for parents and patients regarding nutrition, preventing accidents, safe sporting-traveling-playing and others.

This department provides treatment for patient by divided into area of specialization. For specialized clinical consultations, it is divided into Trauma-Orthopaedic Consultation, General Pediatric Surgery Consultation (Abdomen and Urology), Plastic Reconstructive Surgery or Maxillo-Facial Consultation. For specialized treatment, it comprises of General Pediatric Surgery, Traumatology-Orthopaedics, Plastic Reconstructive Surgery or Maxillo-Facial and Neuro-Surgery.

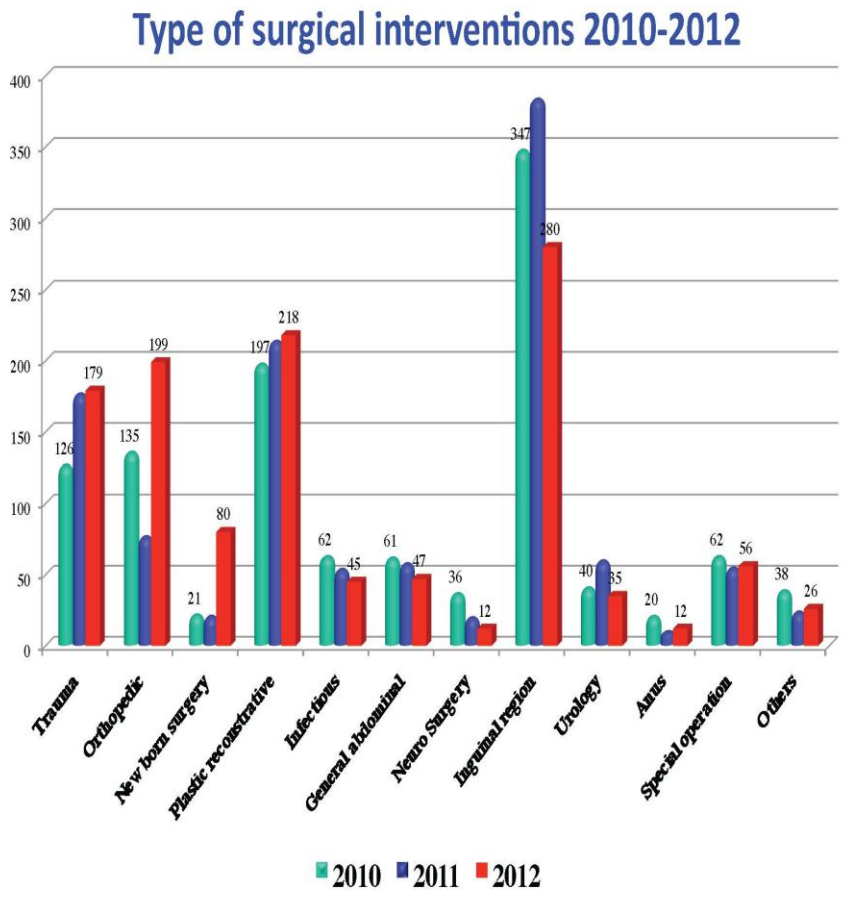
Figure 3 Type of Surgical Intervention in Surgery Department (SD) in 2012



Source: Bureaucratic of National Pediatric Hospital

The above chart figures out the overall percentage of types of surgical intervention at SD in year 2012. Among them, General Pediatric Surgery shared the largest portion, which made up of 35.0% and Plastic or Reconstructive Surgery shared 24.0% while Trauma-Orthopedic shared 22.0%. The rest were Newborn or Infant Surgery 7.0%, Urology 6.0%, and respectively Neurology 2.0%.

Figure 4: Type of Surgical Intervention in Surgery Department (SD), 2010-2012



Source: Bureaucratic of National Pediatric Hospital

Figure 4 presents type of surgical interventions in SD from 2010 to 2012. The diseases that encountered children for surgical intervention were Trauma, Orthopedic, New born Surgery, Plastic Reconstructive, Infectious, General Abdominal, Neuro-Surgery, Inguinal Region, Urology, Anus, Special Operation and other type of surgical diseases. This figure also indicates that majority of children came for surgical intervention mainly for Inguinal Region which had the highest frequency one. The rest came in order to Plastic Reconstructive, Orthopedic, Trauma, Infectious, General Abdominal, Special Operation, New born Surgery, Urology, other types of surgery, Neuro-Surgery and Anus respectively.

2.4 Satisfaction

2.4.1 The Meaning of Satisfaction

Satisfaction means the feeling of pleasure that you have when you have done or achieved what you wanted. The feeling of satisfaction tends to decrease if the need or purpose has not met with any response. Moreover, it is another mean of positive feeling for assessment service when they receive and succeed the purpose that they have set (22).

2.4.2 Components of Satisfaction

From an article by Siti Norsazlina Haron et al, "Towards Healthcare Service Quality", reviews literature on usability concept in health care design. Their study mentioned that satisfaction has to do with fulfillment of a desire or a need through the users' feelings and attitudes towards the service or product. The users' experiences associate with their emotions toward the services they used could reflect their satisfaction. This satisfaction also proofs the service outcome quality. Satisfaction is a part of measurement of the service quality, serviceability, and usability key factors of the services. Measuring user's satisfaction also helps to identify user's expectations. Expectations are considered as vital judgment for quality of services because users usually judge quality of care according to their internal standard that states quality. Their internal standard is based on their expectations and perceptions through the service they experienced (23).

Penchensky and Thomas studied the definition of access and relationship to consumer satisfaction, inserted the ideas that access is a general concept described the fit between patient and health care system. 'Access' has the specific dimensions namely: availability, accessibility, accommodation, affordability, and acceptability. Their study used data received from interviews with patients in order to determine their satisfaction. The finding showed that the differentiation does not exist among these five areas (24).

1. ***Availability*** *means the relationships between customer's need and service availability. There are adequate health workers and facilities such as hospital, clinic, and promotion health program with various services.*

2. ***Accessibility*** *means the relationships between hospital's location and people being able to use service within short distance and with cheaper transport.*

3. ***Accommodation*** *means the relationships between the availability of needed resources and comfortable use of services without complications of appointments and examinations. There are other facilities such as public telephone etc.*

4. ***Affordability*** *means the relationships between the cost of service available and the amount people can afford to pay for service. People's perception in service cost is related to all price of service.*

5. ***Acceptability*** *means relationships between attitude of customer and health worker.*

In sum, accessibility is a competence to get into the health service, including availability of health system and fulfillment of customer's need. Thus, whenever customer can have access to health service comfortably, that will make customer satisfied too.

Even so, there are variety ranges of definition of access to health care. As determined by the World Health Organization (WHO), the General Concept of Access to Health Service defines accessibility as the opportunity or ability to obtain health services people need and benefit from financial risk protection. The term 'Access' consists of three dimensions (25).

1. Physical accessibility *refers to the availability of good health services within a reasonable reach for those who need them which included opening hours, appointment system, other aspect of service organization and delivery that allow people to obtain the services they need.*

2. Financial affordability *refers to the measure of people ability to pay for services they need without financial risk hardship. This takes into account not*

only the cost of health care services but also an indirect cost and opportunity costs, which include the cost of transportation to and from health care facilities and time taking away from work. Affordability is influenced by wider health financing system and household income.

***3. Acceptability** refers to the capture of people's willingness in health seeking care services. Acceptability is low when patient perceived ineffective services or when social and cultural factors such as language, age sex ethnicity or religion of the provider discourages them from seeking care services.*

Another study from an article written by David H. PETERS et al. (2008), "the Poverty and Access to Health Care in Developing Countries", documents disparities in access to health services in Low and Middle Income Countries (LMICs), by using a framework incorporating quality, geographic accessibility, availability, financial accessibility and acceptability of services (13). Each of the components in the framework used detailed as follows:

*1. **Geographic accessibility** refers to the physical distance or traveling distance or traveling time from services delivery point to the user.*

*2. **Availability** refer to the right type of care available for those who need it, such as hours of operation and waiting times that meet demands of those who would use care, as well as having the appropriate type of service providers and materials.*

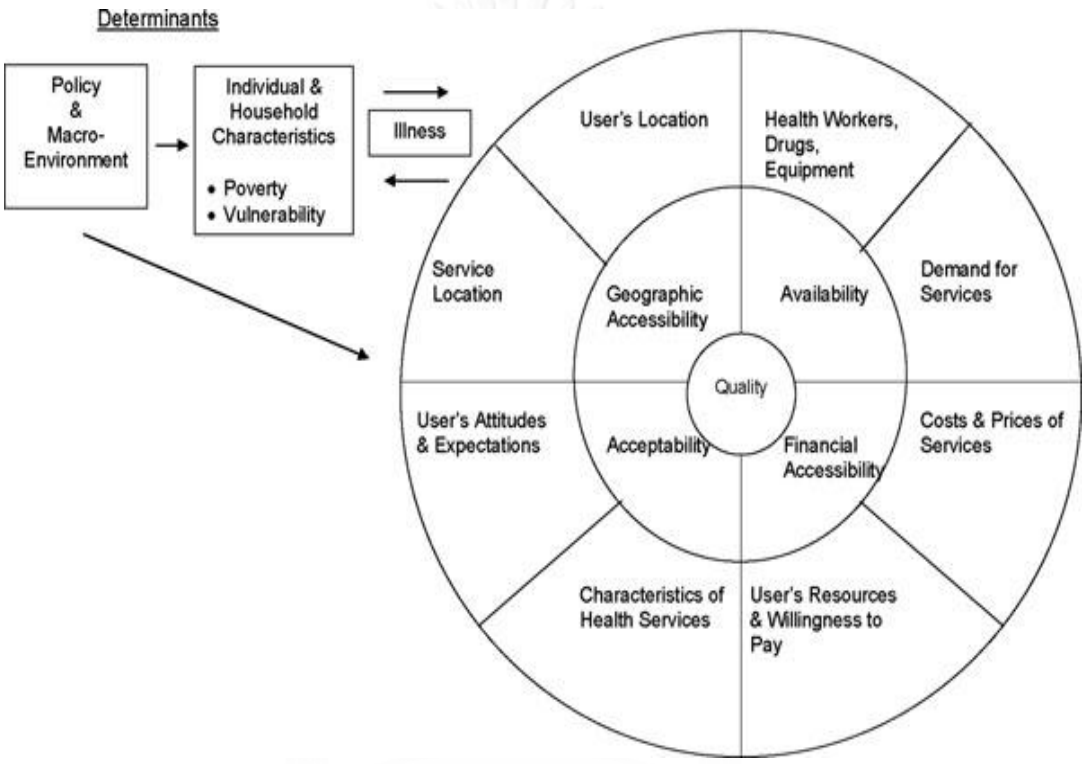
*3. **Financial accessibility** refers to the relationship between the price of services and the willingness and ability of users to pay for those services, as well as be protected from the economic consequences of health costs.*

*4. **Acceptability** refers to the match between how responsive health service providers are to the social and cultural expectations of individual users and communities.*

Figure 5 below indicates that quality of care is centered in the middle of all the four main components of 'access' to health care. It is an important component of each dimension and it ultimately relates to the technical ability of health services that affect people health. At the left side of the circle, this framework sets the

determinants of health service access, which included policy, macroenvironment level, individual and household level. Poverty could be examined as determinant of illness or health needs as well as disparities within the different dimension of health care access.

Figure 5: Conceptual Framework for Assessing Access to Health Services



Source: The Poverty and Access to Health Care in Developing Countries by *David H. PETERS et al. (2008), page 162*

This study pointed out that despite the improvement in providing access to health care in developing countries, substantial proportion of their population have limited access to health care. The poor in these countries suffer from a disproportionate burden of diseases, yet they usually have less access to health care whether measure by geographic accessibility, availability, financial accessibility, acceptability or quality of care.

Nevertheless, this study also inserted that the outcome of the above issue is not inevitable. Success partly depends on a local understanding of the dimensions and of the determinant of access to health services. Success also comes along with determined attempts to health services for the poor.

Aday and Anderson, “The Framework for the Study of Access to Medical Care”, studied about satisfaction of people toward health care delivery in United States during 1970-1975, mentioned that there are six factors related to patients’ satisfaction in medical care (12).

1. ***Convenience*** *refers to less in-office waiting time, and availability of care when needed.*

2. ***Co-ordination*** *refers to getting all needs met at one place, concern of doctors for overall health, and the physician’s follow-up care.*

3. ***Courtesy*** *refers to the friendliness of health care providers and the attention they pay to the client as important person.*

4. ***Medical information*** *refers to what was wrong with patient and information on the treatment.*

5. ***Quality of care*** *accorded with the quality of care through the hospital services, such as overall quality of health for patient.*

6. ***Out-of pocket cost*** *refers to the expenditure for health care services.*

This study, researcher would endorse the concept of satisfaction from Aday and Anderson, “The Framework for the Study of Access to Medical Care”, studied about satisfaction of people toward health care delivery in United States during 1970-1975.

2.4.3 Theoretical Model used for Construction of Conceptual Framework

Aday and Anderson (1974) mentioned that consumer satisfaction refers to the attitudes toward the medical care system of those who have experienced a contact with it. It is different from the medical beliefs component of the predisposing variables in that it measures users' satisfaction with the quantity or quality of care actually received. They proposed that consumer satisfaction is probably best evaluated in the context of a specific, recent, and identifiable episode of medical care seeking. Dimensions of satisfaction that seem relevant to consider in eliciting subjective perceptions of access are satisfaction with the convenience of care, its coordination and cost, the courtesy shown by providers, information given to the patient about dealing with his illness, and his judgment as to the quality of the care he received (12). In sum, Consumer satisfaction is an outcome indicator in the model theoretical used that indicate the use of the services.

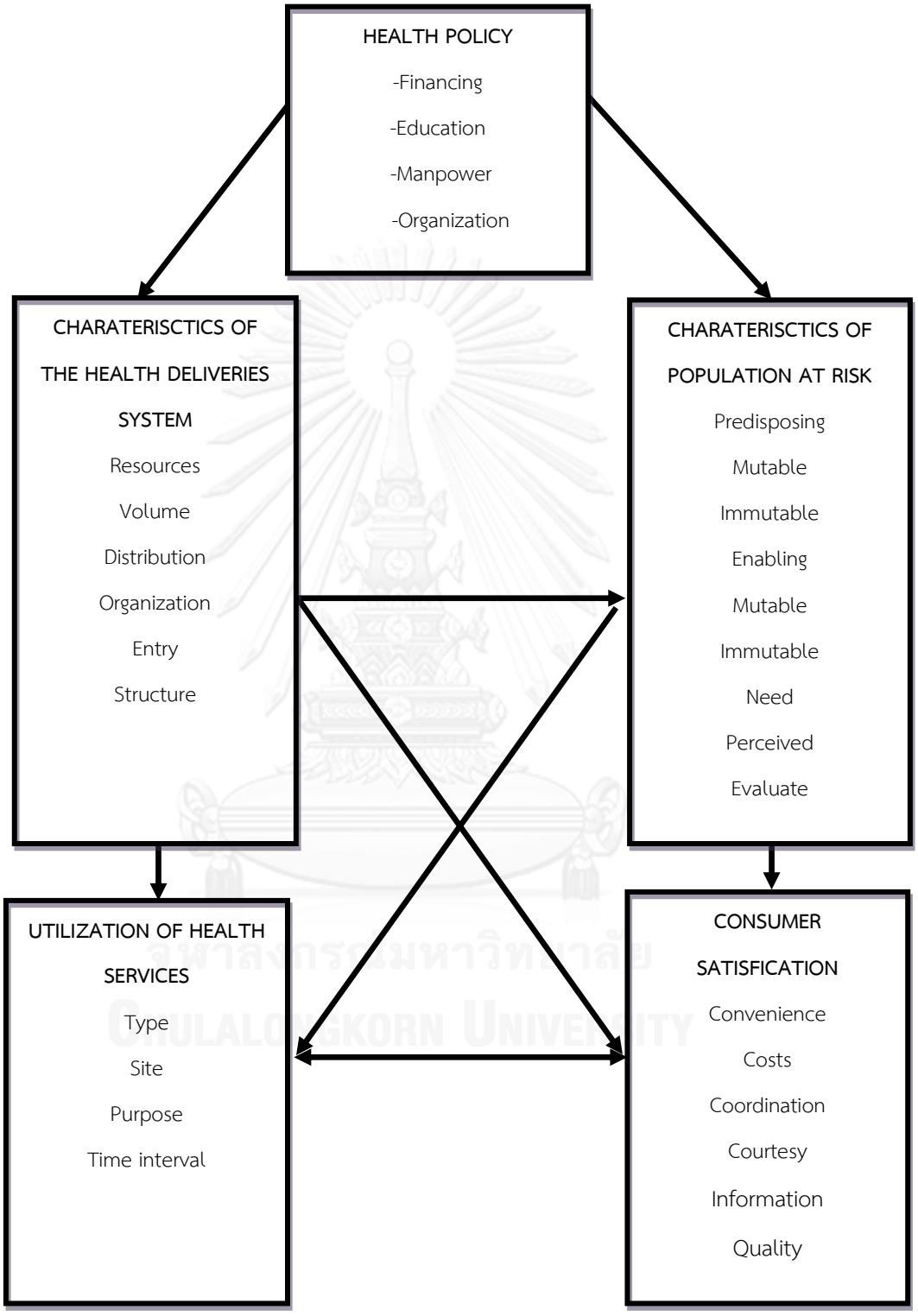
In addition, Andersen and Newman also describe the characteristics of the population at risk as the predisposing, enabling, and need components that act as individual determinants of utilization of health services. Each of the components describe as follows:

-***The predisposing component*** *includes those variables that describe the "propensity" of individuals to use services. These properties exist prior to the onset of illness episodes. They include such things as age, sex, race, religion, and values concerning health and illness.*

-The enabling component *describes the "means" individuals have available to them for the use of services. Both resources specific to the individual and his family and attributes of the community in which the individual lives, for example, rural-urban character region are included here.*

-The need component *refers to illness level, which is the most immediate cause of health service use. The need for care may be either that perceived by the individual or that evaluated by the delivery system.*

Figure 6: A Framework for the study of Access to Medical Care



Source: Aday and Anderson's (1974): Framework for the study of access to medical care, page 212

Aday and Anderson mentioned that there are six factors related to patients' satisfaction in medical care. Three among all the six fundamental factors of satisfaction are:

1. Satisfaction to convenience can be:

-Office waiting time

-Availability of care when needed

-Base of getting to care

2. Satisfaction to courtesy, which are friendliness of provider and care toward patients.

3. Satisfaction to quality of care, which is the quality of care in patient's opinion.

After reviewing of the research's results above, this survey study would follow three fundamental factors of satisfaction which include conveniences, courtesy, and quality of care as stated in the "Framework for the Study of Access to Medical Care" by Aday and Anderson (1974).

From the literature reviews mentioned in this chapter, the components that need to be included in the study concerned with following parts:

Part I: Predisposing factors of individual caregiver including age, gender, education, occupation, and family income.

Part II: Enabling factors that included geographical accessibility, availability, financial accessibility, acceptability.

Part III: Need factors comprised of health problem, health expectation, and health personnel service.

Part IV: Caregivers' satisfaction consisted of convenience, courtesy, and quality of care.

Part V: Caregivers' suggestions and comments.

2.5 Related Research

It is commonly believed that satisfaction with health care maybe dependent upon variables such as social class, economic status, gender, and age. Socio-demographic characteristics were concluded to be at best a minor predictor of satisfaction.

Doborah L conducted a research on health education at OPD and patient satisfaction in 1997. His study presented that women were found more satisfied with physician than those of men. This study further indicated that gender was found significantly associated with patient satisfaction with the value of ($p<0.001$). Yet, other variables such as age and education were not found significant associated with level of patient's satisfaction (26).

Another study from Devokata SR (1997), on patient satisfaction toward health services in Maung district, Loei province, Thailand, revealed that patient who had primary and low level of education were highly satisfied with health care services at 80.2% score of satisfaction in comparison to respondent who had secondary and above level of education. Education in his study was also found significantly associated with satisfaction level at (p-value- 0.001) (27).

However, from a study conducted by Amin Khan Mandokhail on patient satisfaction toward Outpatient Department (OPD) services of medicine, in Banphaeo autonomous hospital Samut Sakhon province, Thailand in 2007. His study found that education has no significant association with satisfaction level (p-value 0.65) (28).

Besides, Asma Ibrahim (2007) studied on patient satisfaction with health services at the Outpatient Department of Indira Gandhi Memorial hospital, Male' Maldives. His study concluded that predisposing characteristic of participant such as family income had significant association in distribution to satisfaction level (p-value 0.15) (29).

Kosint Intavises studied about the satisfaction of people toward the service of health station in Pachalui subdivision of Tachang District in Suratthani province in 1995. The research used questionnaires, selecting 236 consumers at the health station in Pachalui. The conclusion explained that consumers have satisfaction

toward the health station at the regular level. This research also illustrated that factors such as sex, age, family income and travel time from the patient's home to the health station, related to the satisfaction of service from health station. Nevertheless, the level of education has no connection with the satisfaction toward the service from health station with 95% of research data (30).

Kanya Asawasudsakorn (2002), studied on Consumer satisfaction with services of Primary Care unit under the 30 Bath policy in Maung District, Phatthalung province. This study had included some predisposing factors such as age, gender, educational and family income. Her study found that age and gender were found significant distribution to satisfaction level while other predisposing factor like family income had no association with satisfaction level (31).

Chanawangse carried out a research related to consumer satisfaction in 1996 found out that the distance of the heath facility and price of transportation is far much concern regarding to satisfaction. This research also pointed out that most patient after surgery in hospital do not prefer to come for daily dressing back to hospital because of the distance from home to hospital is far and the cost of transportation is high (32).

Saurma Ida Pasaribu (1996) studied on consumer' satisfaction toward health care services of health center in Bangkok, Thailand. The result of their study revealed that 53% of the patients were satisfied with the services provided by the hospital. However, their study also indicated that dissatisfaction among patient is found owning to low quality of care and inadequate supply of medicine from the health care services they got (33).

A study conducted by Upreti in 1994 on the services of health centers found that 71% of the total patients were satisfied and 29% were dissatisfied with the services. This study mainly focused on the accessibility factors which consisted of distance, waiting time, working hours, and cost of treatment. The total percentage of satisfaction on the accessibility was 64.07%. Further result of this research also showed that 56.82% of the patients were found satisfied with continuity of care such as helpfulness, referral and follow up. Moreover, 62.75% were found satisfied with humaneness of care, which included respect and attention. Last, account for 54.02%

was found satisfied with effectiveness including cleanliness and quality of medicine and equipment. The study also found that area such as waiting time, inadequate cleaning and setting of health center surrounding contributed to dissatisfaction of client (34).

Tichakorn Thahanthai (2003), studied on consumer satisfaction toward service at Kantang hospital, Trang province, Thailand. Her study also focused on accessibility factors such as availability, ability to access to service, convenient to contact to service and acceptability. This study revealed that most customers had access to service at 98.2%. Accessibility in this study found having positive relationship with satisfaction level (r= .336, .188, .245, .206, and $p<0.01$) (22).

The study conducted by Ny Net, patient satisfaction at OPD clinic of Wangnumyen Community Hospital Thailand, categorized the current health care that brought patient to the OPD clinic into three groups which included acute health problems, chronic health problems and others. This study revealed that patients visited the OPD clinic because of acute health problems 42.4%, chronic problems 38.5% and others 19.1% consecutively. This study further revealed that health problems were not found significantly associated with patient's satisfaction (35).

The survey conducted in April 2005 and 2006 by Wangnumyen Community Hospital found that the overall satisfaction level reported by patients who had utilized the Outpatient department (OPD) clinic were 75.68% and 81.7% respectively. It also found that the quality of care at the OPD clinic, doctors' manner, doctors' attention and respect paid to patients, nurses' manner, time spent with patients, and physical examination received satisfaction level at 78%, 80.4%, 80%, 78.4%, 71.6%, and 73.6% consecutively (36).

CHAPTER III
RESEARCH METHODOLOGY

3.1 Research Design

The objective of this study was to determine the level of satisfaction from caregivers of sick children aging under five from Surgery Department health services. The study employed quantitative by using questionnaire for data collection. The descriptive statistics was used to describe the predisposing factors of individual caregiver variables such as age, gender, education, occupation, and family income. It also described enabling factors variables including geographical accessibly, availability, financial accessibility, and acceptability. Besides, it also described need factors encompassing with health problem, health expectation and health personnel service. The association between predisposing factors, enabling factors, and need factors with caregivers' satisfaction was determined by chi-square test.

3.2 Study Area

The study was conducted in Out and In- patient Surgery Department health care services of National Pediatric Hospital, which located in Phnom Penh, Cambodia. The specialized clinical consultation was divided into four rooms that comprised of two Trauma-Orthopedic consultation rooms (Osseous and Clubfoot), one General Pediatric consultation with abdomen and urology consultation room, and Plastic Reconstructive Surgery or Maxillo-Facial consultation.

3.3 Study Period

The study was conducted in a period of one full month of March 2014 excluding Saturday and Sunday.

3.4 Study Population

The target population were caregivers both male and female who accessed sick children aged under five to the Surgery Department either for Outpatient consultation or Inpatient admission were selected as the study population.

3.5 Sample and Sample size

The study used systematic random sampling and the "subjects" refered to caregivers of children under age of five. The sample size was calculated by Cocrhan (1997) formula:

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

- n is the estimated sample size
- Z: z-score, z: 1.96 at 95% confidence interval
- P is the proportion in the population proccessing charecteristics of interest.

  P: 0.80 to gain maximum sample size
- Q:1-P (1-0.80): 0.20
- d: degree of accuracy desired setting at 0.05

  From the formula:

$$n = \frac{(1.96)^2 (0.80)(0.20)}{(0.05)^2} = \mathbf{245} \text{ subjects}$$

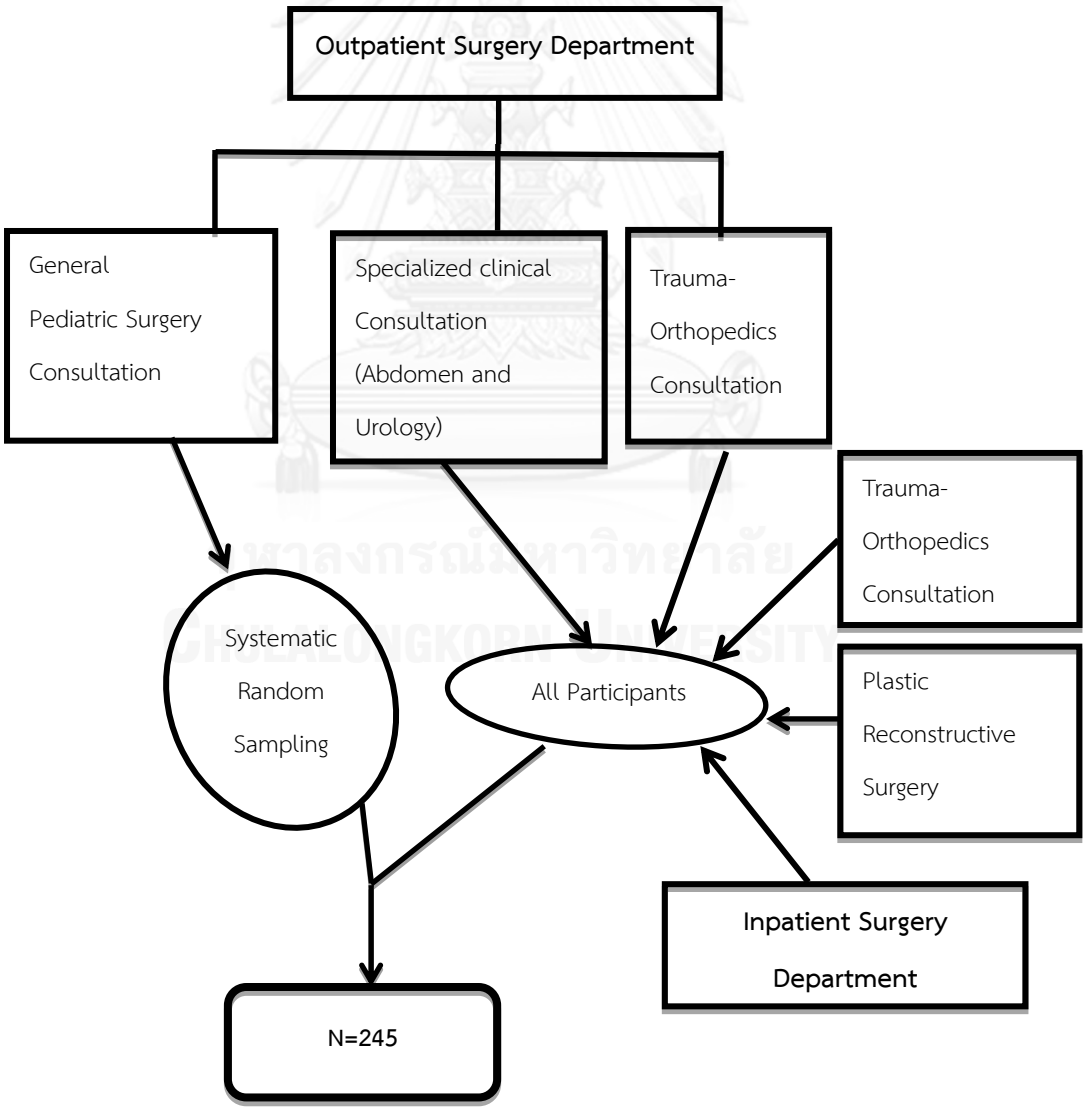
For the above P value, researcher did pilot study test and used the result of the study for the sample size culculation (P=80%).

Sampling technique

Researcher collected all caregivers of under aged five children from specialized clinical consultation which included two Traumato- Orthopedics Consultation, Plastic Reconstructive Surgery Consultation, Abdomen and Urology. Yet, researcher used systematic sampling for picking up the respondents from General Pediatric Surgery Consultation.

In practice, selected respondents number each day: 1, 4, 8, 12,.....etc.

Figure 7: Sampling Frame



Inclusion and exclusion criteria

The researcher determined inclusion criteria as caregivers both male and female of sick children aged under five who accessed their sick children into Surgery Department health care services within data collection period and willing to participate in the study.

An exclusion criteria were caregivers who unable to provide informed consent due to mental and physical illness, unable to communicate, and uncompleted questionnaire.

3.6 Data Collection

3.6.1 Data Collection Tool

Structure Questionnaire was done with face to face interview technique to caregivers who accessed their sick children aged under five to the Surgery Department health services during data collection period. The questionnaire consisted of five parts focusing on the following:

Part I: Predisposing factors of individual caregiver including age, gender, education, occupation, and family income.

Part II: Enabling factors included geographical accessibility, availability, financial accessibility, acceptability.

Part III: Need factors comprised of health problem, health expectation, and health personnel service.

Part IV: Caregivers' satisfaction consisted of convenience, courtesy, and quality of care.

Part V: Caregivers' suggestions and comments for improving Surgery Department health care services

3.6.2 Data Collection Procedure

The board of the hospital was contacted to ask permission for data collection. The detail information of Surgery Department health services and mapping of the hospital was asked. The structured questionnaire was done to caregivers who were in hospital during data collection period.

Researcher worked with four data collectors. The data collector was informed about the research to have clear understanding and the unbiased approach to the data collection process.

In the existing procedure of the hospital, when caregivers arrived at National Pediatric Hospital for his or her children surgical consultation, the health registrar at OPD registered them. Caregivers then referred to area for consultation by picking up one queue number and waiting for their turn receiving an examination by physician. After being examined by the physician caregivers may went home directly or referred to laboratory testing, or pharmacy unit based on their physician's demand. This study, caregivers were identified for data collection after their time receiving surgical consultation. After that, they were requested by the interviewers to provide their general and specific information according to the questionnaire. In the case of Inpatient, caregivers were asked to participate in the study after time operation of their children.

The data was checked on the spot, error rectified and missing data incorporated in the forms. The researcher observed the data collection process by herself and countered check the entries to ensure quality of data collection.

3.6.3 Data Management and Analysis

To make data entry easier, coding was done in the data collection tools. Collected questionnaire was verified in the hospital for completeness and consistency, and data was edited accordingly at every evening of collection. Before processing data, data was entered in SPSS V16.

Data collection from this study was analyzed for quantitative and descriptive statistics using Statistic Package for the Social Sciences SPSS for Windows.

Descriptive statistics was calculated to analyze data regarding predisposing factors of individual caregiver such as age, gender, education, occupation, and family income. It also described enabling factors of services variables including geographical accessibly, availability, financial accessibility, and acceptability. Plus, it described need factors encompassing with health problem, health expectation and health personnel service. Mean score and standard deviation were calculated for caregivers' satisfaction.

Chi- square analysis was performed to find out the association between age, gender, education, occupation, family income, geographical accessibility, availability, financial accessibility, acceptability, health problem, with caregivers' satisfaction level.

3.6.4 Measurement of Variables

Part I: Predisposing factors

Part I consisted of general information about respondents such as age, gender, education, occupation and family income. There were seven questions and their characteristics were multiple choice and fill in the blank.

1. Age was divided into five age groups with interval of ten years in between.
It was listed as following:

1= 15-24 years

2= 25-34years

3= 35-44 years

4= 45-54 years

5= 55 years and above

2. Gender of respondents broke into male and female. It was coded as follows,

1= male

2= Female

3. Education had the following group and coding,

0= Illiterate

1= Primary school

2= Secondary school

3= Bachelor degree

4= Others

4. Occupation grouped as following codes:

1= Daily labor

2= Housewife

3= Business

4= Employee

5= Service

6= Others

5. Family Income was divided into groups as follows,

1= 0 - 150.000 Real

2= 150.001- 300.000 Real

3= 300.001- 450.000 Real

4= 450.000-600.000 Real

5= 600.001 and above

6. Relationship with children was classified as

1= Mother

2= Father

3= Others

7. Number of child sibling was grouped as follows:

1= No sibling

2= 1-3

3= 4-6

Part II: Enabling factors

In part II**,** there were four sections concerning the enabling factors with total 17 questions. Each section was analyzed separately. The questions on geographical accessibility, availability, financial accessibility were ranged in nominal scale with the value 1= yes and 0= no. While the questions on acceptability were ranged with the value 2= yes, 1= not sure and 0= no. The questions were categorized as follows:

Question: 1-5 on geographical accessibility with the total score (0-5)

Question: 6-9 on availability with the total score (0-4)

Question: 10-11 on financial accessibility with the total score (0-2)

Question: 12-17 on acceptability with the total score (0-12)

The overall percentage of enabling factors was categorized as:

Geographical accessibility (5 items)

1= Low (0-1.66)

2= Moderate (1.67-3.32)

3= High (3.33-5.00)

Availability (4 items)

1= Low (0-1.33)

2= Moderate (1.34-2.66)

3= High (2.67-4.00)

Financial accessibility (2 items)

1= Low (0-0.66)

2= Moderate (0.67-1.33)

3= High (1.34-2.00)

Acceptability (6 items)

1= Low (0-4.00)

2= Moderate (4.01-8.00)

3= High (8.01-12.0)

Part III: Need factors

The current health problem brought the child to the hospital was divided into following related areas of specialties:

1= Thromato- Orthopedic Club Foot

2= Thromato- Orthopedic Osseous

3= Reconstructive Plastic Surgery

4= General Pediatric Surgery

5= Abdomen

There were 14 questions on the health personnel service which each question scored from 3-1. The question was described separately from one health provider to another by using frequency and percentage. The overall percentage of individual health provider was classified as following scoring:

Office registrar (3 items)

1= Not good (1-3)

2= Fair (4-6)

3= Good (7-9)

Doctor (6 items)

1= Not good (1-6)

2= Fair (7-12)

3= Good (13-18)

Nurse (3 items)

1= Not good (1-3)

2= Fair (4-6)

3= Good (7-9)

Pharmacist (2 items)

1= Not good (1-2)

2= Fair (3- 4)

3= Good (4-6)

Part IV: Caregivers' satisfaction

The fourth part included questions on courtesy, convenience, and quality of care. There were 19 questions in this part. Caregivers' satisfaction was measured by a set of questions. Caregivers were asked to rate their contentment level toward health care services. Likert's five points rating scale were applied as follows:

1= Very dissatisfied

2= Dissatisfied

3= Neutral

4= Satisfied

5= Very satisfied

The satisfaction was divided into three levels by using mean score + and – one standard deviation as cut off point:

High (> mean score + one SD)

Medium (mean score – one SD to mean score + one SD)

Low (< mean score –one SD).

Part V: Suggestions or comments for improvement of the services

The fifth part was about caregivers' comments or suggestions for the improvement of the services in the hospital. It was the only opened ended question. The questionnaire was piloted and necessary modification was made before introducing the questionnaire in the study area.

3.7 Reliability and Validity

The study proposal preparation and tools were developed after adequate literature review. The questionnaire was translated into Cambodia language which could use locally in the study area. A pilot test of 30 questionnaires was conducted on caregivers in the Outpatient Department at National Pediatric Hospital which had the same background of caregivers to that of the actual data collection for its reliability. Questionnaire was also tested for its content validity by three experts in such a research area (Dr. Auamikul Nantta, Dr. Ratana Somrongthong, Dr. Mam

Vithyarith) .The result of content validity test was 0.93 of the score range from (-1 to+1). In pilot test, the value of Cronbach's alpha coefficient for satisfaction part was 0.75. As the Cronbach's alpha coefficient for some questionnaire was not high, the questionnaire was modified specifically question number 1, 19 of the section in order to increase the level of reliability. As a result, the Cronbach's alpha coefficient of the questionnaire increased to 0.8.

3.8 Ethical Consideration

Approval letter was taken from The Ethics Review Committee for Research Involving Human Research Subjects, Human Science Group, Chulalongkorn University. In addition, permission was asked from National Pediatric Hospital. Data was collected only after the consent of respondent. Objective of the survey was clearly understood. The interview was completely confidential. The name of the respondent with answers and private questions were not asked to the respondent. Issues, which would provoke racial, sex or ethical discriminations, were not raised.

CHAPTER IV
RESULTS

This cross sectional study was conducted to ascertain the level of satisfaction with health services from Surgery Department of National Pediatric Hospital in Phnom Penh, Cambodia. Data collection was conducted for a period of one full month of March 2014 with the total 245 participants. The result of this study first described the Outpatient group and came after by the Inpatient group. It hereby presented in the following sections:

Part 1: Predisposing Characteristics

Part 2: Enabling factors

- Geographical accessibility
- Availability
- Financial accessibility
- Acceptability

Part 3: Need factors

- Health problem
- Health expectation
- Health personnel service

Part 4: Caregivers' satisfaction toward health services at Surgery Department

Part 5: Association between dependent and independent variables of OPD

Part 6: Suggestions or comments for improving health services at Surgery Department.

4.1 Caregivers Predisposing Characteristics

In this study, the predisposing factors including age, gender, education, occupation, and family income. Relationship with children, and number of child sibling were also revealed in this study. The study result described as follows:

Age

The result in table 1 below indicated age of caregivers from the youngest until the oldest group. Caregivers were distributed into five years aged groups listed as 1=15-24 years, 2=25-34 years, 3=35-44 years, 4=45-54 years, 5=55 years and above. The mean and standard deviation of Outpatient respondents were 30.87 and 7.35. Among these years aged groups, majority of the Outpatient respondents account for 65.6 % ranged from the age of 24 to 35 years and other 14.6% ranged from the age of 15 to 24 years. In addition to this, there were 13.7% of the respondents ranged from the age of 35 to 44 years while other 4.2% ranged from the age of 45 to 54 years and respectively only 1.9 % ranged at the oldest age group of 55 years and above. With respect to the inpatient group, the mean and standard deviation were 35 and 10.51. Majority of the respondents account for 33.3% also ranged from the age of 24 to 35 years. This aged group was followed by other groups of 34 to 45 and 15 to 24 years, which shared the portion of 24.2% and 21.2% from the total respondents. More than this, other 15.2 % of the respondents ranged from the age of 44 to 55 years while the oldest aged of 55 years and over also presented the least percentage from the total respondents, which made up of only 6.1 %.

Gender

Amidst the total population of Outpatient, more than eighty percent (86.3 %) was female and 13.7% was male. Similarly, in regard to number of caregivers from the Inpatient, the total respondents consisted of 90.9 % was female and only 9.1% was male.

Education

Educational level of the respondents was divided into the following five categories composed of illiterate, primary school, secondary school, bachelor, and higher education. For Outpatient respondents, secondary school was the largest group composed of 48.6% of the total respondents. The second biggest group came to primary school, which shared the portion of 35.8%. Among the total participants, there was only 9.9 % got bachelor degree, 3.8% was illiterate and merely 1.9% got higher degree. While for those from the Inpatient group, primary school had the largest number of 48.5% of the total respondents followed by other 42.4% from secondary school and 9.1% illiterate. There was no one among the whole respondents from Inpatient group got either bachelor degree or higher degree.

Occupation

Related to occupation, caregivers were divided into six groups encompassing with daily labor worker, farmer, housewife, business, civil servant, and service agent. At large of the total Outpatient respondents made up of 38.2% was housewife. Besides, 19.8% was farmer, 17.0% run business, and 12.7% was daily labor worker. There was only 6.6% among them was civil servant and 5.2% was service provider consecutively. However, different from the Outpatient, greater number of 42.2% of the total respondents from the Inpatient was farmer, while 24.2% was housewife, and 21.2% was labor worker. In addition, there was only 6.1% of the respondents run business and with the same percentage of 3.0% were civil servant and service provider.

Family income

Regarded to the average family monthly income, the regular basis of respondents was placed in Cambodia currency, Reil. The income was distributed into the following five categories: 1= 0 - 150.000, 2= 150.001- 300.000, 3= 300.001-450.000, 4= 450.001-600.000, and 5= 600.001 and above. The result of this study in

table 1 below revealed that larger part of the Outpatient respondents consisted of 34.4% got their monthly income from 600.001 Real and above (150$ and above). Plus, 25.9% of them got their monthly income from 450.001 to 600.000 Real (110-150$) while other 17.5% could merely got their monthly income just from 0 to 150.000 Real (0-35$). In addition, there was 12.7 % of the respondents in the income group of 300.001 to 450.000 Real (75-110$) and other 9.4% was in the income group of 150.001 to 300.000 Real (35-75$).

In regard to the Inpatient, majority of the respondents account for 48.5% was also in the income group of 600.001 Real and above (150$ and above) whereas other 27.3 % was in the income group of 0 to 150.000 Real (0-35$). Plus, there was 18.2% of the respondents in the income group of 150.001 to 300.000 Real (35-75$) and 6.1% of them was in the income group of 450.001 to 600.000 Real (110-150$).

Relationship with children

In connection to the relationship with children, Out of the total Outpatient respondents account for 77.4% was mother of the children, 12.2% was father and 10.4% was other people who brought those sick children for getting health care services. Similar to the Outpatient, mother had the largest portion of 75.8% among the relationship with children of the Inpatient while other 18.2% was other people and merely 6.1% was father who was taking care of those sick children.

Number of sibling

In regard to the number of sibling of sick children, their sibling was grouped as following: 0= no sibling, 1= 1-3, and 2= 4-6. Account for 72.2% of the total sick children of Outpatient, their sibling was at least from one to three. Quarter of them (25%) had no sibling and merely 2.8% of them had at least from four to six siblings. Identically, in the case of Inpatient, majority of the children consisted of 54.5% had at least from one to three siblings while other 33.3% had no sibling and 12.1% had at least from four to six siblings.

Table 1 Caregivers Predisposing Characteristics

Characteristics	Outpatient N(%)	Inpatient N(%)
Age		
15-24 years	31(14.6)	7(21.2)
25-34years	139(65.6)	11(33.3)
35-44 years	29(13.7)	8(24.2)
45-54 years	9(4.2)	5(15.2)
55 years and above	4(1.9)	2(6.1)
Total	**212 (100.0)**	**33 (100.0)**
	Min=17 Max=64	Min=21 Max=62
	Mean= 30.87 SD= 7.35	Mean= 35 SD= 10.51
Gender		
Male	29(13.7)	3(9.1)
Female	183(86.3)	30(90.9)
Total	**212 (100.0)**	**33 (100.0)**
Education		
Illiterate	8(3.8)	3(9.1)
Primary school	76(35.8)	16(48.5)
Secondary school	103(48.6)	14(42.4)
Bachelor degree	21(9.9)	0(0)
Others	4(1.9)	0(0)
Total	**212 (100.0)**	**33(00.0)**
Occupation		
Daily labor	27(12.7)	7(21.2)
Farmer	42(19.8)	14(42.4)
Housewife	81(38.2)	8(24.2)
Business	36(17.0)	2(6.1)
Employee	14(6.6)	1(3.0)
Service	12(5.7)	1(3.0)
Total	**212 (100.0)**	**33 (100.0)**

Family income		
0 - 150.000 Real	37(17.5)	9(27.3)
150.001- 300.000 Real	20(9.4)	0(0)
300.001- 450.000 Real	27(12.7)	6(18.2)
450.001- 600.000 Real	55(25.9)	2(6.1)
600.001 and above	73(34.4)	16(48.5)
Total	**212 (100.0)**	**33 (100.0)**
	Min=0 Max=100.000.00	Min=0 Max=800.000.0
	Mean=89.86 SD=128.28	Mean=117.12 SD=172.14
Relationship with children		
Mother	164(77.4)	25(75.8)
Father	26(12.2)	2(6.1)
Other	22(10.4)	6(18.2)
Total	**212 (100.0)**	**33 (100.0)**
Number of child sibling		
No sibling	53(25)	11(33)
1-3	153(72.2)	18(54.5)
4-6	6(2.8)	4(12.1)
Total	**212 (100.0)**	**33 (100.0)**

4.2 Enabling Factors

Enabling factors consisted of four sections including geographical accessibility, availability, financial accessibility, and acceptability. Each section in this part presented as below sequences:

Geographical accessibility

There were five questions concerning geographical accessibility section. Those questions related to how participants knew Surgery Department whether by themselves or by other people's suggestion, the traveling time spent for visiting Surgery Department, the mean of transportation for coming from home to health

care service and the time spent for traveling back and forth from home to health care service.

Table 2 Enabling Factors: Geographical accessibility

Geographical accessibility	Outpatient N(%)	Inpatient N(%)
How caregiver got to know Surgery Department		
By themselves	107(50.5)	18(54.5)
By other people' suggestion	105(49.5)	15(45.5)
Total	**212(100.0)**	**33(100.0)**
The traveling time spent for Surgery Department was acceptable		
Yes	188(88.7)	28(84.8)
No	24(11.3)	5(15.2)
Total	**212(100.0)**	**33(100.0)**
There was enough mean of transportation to get to Surgery Department		
Yes	199(93.9)	32(97.0)
No	13(6.1)	1(3.0)
Total	**212(100.0)**	**33(100.0)**
Caregiver could spend one-day time to get to Surgery Department, to get consultation and to go back home		
Yes	180(84.9)	Not applicable
No	32(15.1)	Not applicable
Total	**212(100.0)**	

The result in table 2 of this study showed that more than half of the total Outpatient respondents account for 50.5% knew the hospital by other people's suggestion while other 49.5% knew the hospital by themselves. In addition to this, 88.7 % of the respondents agreed that traveling time spent for reaching the hospital

was acceptable. And, almost the total of respondents (93.9%) said there were enough means of transportation to get to the hospital, and with other 84.9% of them mentioned that they could spend one-day time for traveling to the hospital and went back home.

Similarly, more than half of the Inpatient respondents account for 54.5% knew the hospital by themselves whereas 45.5% of them knew the hospital by other people's suggestion. The result of this study further revealed that 84.8% of the respondents mentioned that traveling time spent for reaching the hospital was acceptable and almost the whole respondents (97.0%) stated that they had no problems in finding the means of transportation to get to the hospital.

Availability

Four questions were included for the availability of health service. Those questions corresponded to the availability of examining rooms, plenty of seats in the examining room, sufficiency of health workers and medical equipment in Surgery Department. Table 3 of this study confirmed that from almost the whole Outpatient respondents more than ninety percent agreed that resources in the hospital were available for them. By looking at each point of availability as seen in table 3, account for 94.8% of the total participants mentioned that there were sufficient health workers and 94.3% sufficient of medical equipment and proper used for them. Besides these, 93.9% of the respondents admitted that there were adequate seats in the examining room and other 91.0% also stated that there were enough examining rooms and proper used.

With respect to the Inpatient, 97% of the total respondents also agreed that there were adequate examining rooms and proper used for them. Surprisingly, all of the respondents 100% accorded with adequacy of seats in the examining room, sufficiency of health workers and sufficiency of medical equipment that were proper used.

Table 3 Enabling Factors: Availability

Availability	Outpatient N(%)	Inpatient N(%)
There was adequate examining room and proper used		
Yes	193(91.0)	32(97.0)
No	19(9.0)	1(3.0)
Total	**212(100.0)**	**33(100.0)**
There was adequate seating in the examining room		
Yes	199(93.9)	33(100.0)
No	13(6.1)	0(0)
Total	**212(100.0)**	**33(100.0)**
There was adequate health worker		
Yes	201(94.8)	33(100.0)
No	11(5.2)	0(0)
Total	**212(100.0)**	**33(100.0)**
There was adequate medical equipment and proper used		
Yes	200(94.3)	33(100.0)
No	12(5.7)	0(0)
Total	**212(100.0)**	**33(100.0)**

Financial accessibility

Concerning financial accessibility part, there were two questions asking the respondents regarding their ability in afford to pay for the transportation cost, and cost of medical care for their sick children at Surgery Department.

Table 4 below illustrated that 87.3% of the total Outpatient respondents could pay for transportation cost of health care for their children while less than half

of them (37.7%) had to pay for cost of health care services more than they could afford.

In regard to the Inpatient, 72.7% of the respondents could pay for transportation cost of health care. However, more than half of the respondents composed of 63.6% had to pay for cost of health care services more than they could afford.

Table 4 Enabling Factors: Financial accessibility

Financial accessibility	Outpatient N(%)	Inpatient N(%)
Caregiver could afford to pay for transportation cost		
Yes	185(87.3)	24(72.7)
No	27(12.7)	9(27.3)
Total	**212(100.0)**	**33(100.0)**
Caregiver had to pay for health care expense more than they could afford		
Yes	80(37.7)	21(63.6)
No	132(62.3)	12(36.4)
Total	**212(100.0)**	**33(100.0)**

Acceptability

As showed in table 5, there were six questions in this section. Acceptability was raised to caregivers concerning their belief in the suggestion given by doctor, and nurse which relevant to health care condition of their children. More than this, the respondents were also inquired to reflex their thought in regard to the knowledge of doctor they met in the examining room, the feeling of confidant they had toward nurse in taking care of their children, and their overall acceptance toward the suggestion from doctor and nurse.

Table 5 Enabling Factors: Acceptability

Acceptability	Outpatient N(%)	Inpatient N(%)
Caregiver believed in doctor's suggestion		
Yes	200(94.3)	31(93.9)
Not sure	12(5.7)	2(6.1)
No	0(0)	0(0)
Total	**212(100.0)**	**33(100.0)**
Caregiver believed in nurse's suggestion		
Yes	178(84.0)	32(97.0)
Not sure	33(15.5)	1(3.0)
No	1(0.5)	0(0)
Total	**212(100.0)**	**33(100.0)**
The doctor seemed very knowledgeable		
Yes	174(82.1)	33(100.0)
Not sure	38(17.9)	0(0)
No	0(0)	0(0)
Total	**212(100.0)**	**33(100.0)**
Caregiver had confidant in nurse		
Yes	181(85.4)	32(97.0)
Not sure	29(13.7)	1(3.0)
No	2(0.9)	0(0)
Total	**212(100.0)**	**33(100.0)**
Caregiver accepted nurse's suggestion		
Yes	207(97.6)	33(100.0)
Not sure	5(2.4)	0(0)
No	0(0)	0(0)
Total	**212(100.0)**	**33(100.0)**
Caregiver accepted doctor's suggestion		
Yes	189(89.2)	33(100.0)
Not sure	23(10.8)	0(0)
No	0(0)	0(0)
Total	**212(100.0)**	**33(100.0)**

The result of this study proved that almost the whole of Outpatient respondents consisted of 97.6% had acceptance to nurse's suggestion. Plus, 94.3% of the respondents believed in doctor's suggestion and 89.2% of them had acceptance to doctor's suggestion. The result in table 5 also revealed that, 85.4% of respondents had confident in nurse in taking care of their children and 84.0% of them believed in the suggestion nurse advised. Concerning the opinion of participants toward doctor's knowledge, there were 82.1% of the respondents believed that doctor seemed very knowledgeable. This study result further indicated that there was no one from the total of Outpatient respondents did not accept doctor or nurse's suggestion.

With respect to the Inpatient, to the point of doctor's knowledge and skill, this study revealed that from the entire respondents account for 100% said the doctor seemed very knowledgeable. The result further indicated that the total 100% of the respondents had acceptance to doctor and nurse's suggestion. And, almost the entire respondents (97.0%) believed in nurse's suggestion and with the same percentage of (97.0%) said they had confidant in nurse in taking care of their children. Last, there were 93.9% of the respondents believed in the suggestion given by doctor.

The overall percentage of enabling factors

The overall percentages of enabling factors in table 6 below revealed that most of the Outpatient respondents had access to health care services at 99.0%. When consider by item, we could see that respondents had acceptance to health personnel at 97.2%, availability of health care service at 94.8%, ability for geographical access to hospital at 71.7% and ability to financially access to health care cost expense at 52.8% consecutively.

Considering the Inpatient group, out of the total respondents account for 93.2% had access to health care services. By focusing on each item, one also could see that from the whole respondents at 100% had acceptance to availability of health care services and health personnel while at 81.8% had geographically access

to health care and respectively at 36.4% had ability to financially afford for health care cost expense. Table 6 below showed the detail of enabling factors.

Table 6 The overall percentage of Enabling Factors

	Enabling factors N(%)			
	High	**Moderate**	**Low**	**Total**
Outpatient	**79.5**	**19.5**	**1.00**	**100.0**
Geographical accessibility (5 items)	152(71.7)	60(28.3)	0(0)	212(100.0)
Availability (4 items)	201(94.8)	5(2.4)	6(2.8)	212(100.0)
Financial accessibility (2 items)	114(52.8)	89(43.0)	9(4.2)	212(100.0)
Acceptability (6 items)	206(97.2)	6(2.08)	0(0)	212(100.0)
Inpatient	**79.5**	**13.7**	**6.8**	**100.0**
Geographical accessibility (5 items)	27(81.8)	6(18.2)	0(0)	33(100.0)
Availability (4 items)	33(100.0)	0(0)	0(0)	33(100.0)
Financial accessibility (2 items)	12(36.4)	12(36.4)	9(27.2)	33(100.0)
Acceptability (6 items)	33(100.0)	0(0)	0(0)	33(100.0)

4.3 Need Factors

Need factors in this study composed of three parts, which included health problem, health expectation, and health personnel. The detail of these parts described as follows:

4.3.1 Health Problem

In health problem part, four questions were deployed to caregivers in correspond to their previous time experience in visiting Surgery Department, the seriousness or condition of their children illness before they brought to the hospital, the underlying reason for their children serious condition, and the current health problem of their children.

Table 7 Health Problem

Health problems	Outpatient N(%)	Inpatient N(%)
Caregiver had previous experienced visiting Surgery Department		
Yes	104(49.1)	17(51.5)
No	108(50.9)	16(48.5)
Total	**212(100.0)**	**33(100.0)**
Health condition of sick children		
Serious	145(68.4)	24(72.7)
Not serious	67(31.6)	9(27.3)
Total	**212(100.0)**	**33(100.0)**
Reason for serious condition of sick children		
Fear of disability	49(32.1)	6(18.2)
Fear of death	23(10.8)	6(18.2)
Fear of sedation	10(4.7)	2(6.1)
Fear of starvation	2(0.9)	1(3.0)
Child crying none stop	18(8.5)	4(12.1)
Fear of unknown tumor	10(4.7)	0(0)
Fear for no reason	24(11.3)	3(9.1)
Others	9(4.2)	2(6.1)
Total	**145(68.2)**	**24(72.8)**
Current health problem related		
General Pediatric Surgery	154(72.8)	20(60.5)
Traumato-Orthopedic Osseous	26(12.3)	2(6.1)
Traumato-Orthopedic Club foot	8(3.8)	2(6.1)
Plastic Surgery	18(8.5)	9(27.3)
Abdomen	6(2.8)	0(0)
Total	**212(100.0)**	**33(100.0)**

Table 7 above indicated that more than half of the Outpatient respondents (50.9%) had never before experienced visiting Surgery Department while other 49.1% of them had previously visited Surgery Department. The result further revealed that more than half of the respondents (68.4%) thought the condition of their children was serious and 31.6% thought the condition was not serious.

In relevant to the underlying reasons for serious condition of sick children, account for 23.1% of the entire caregivers responded that health condition of the children was serious because they thought the condition could bring about life long disability that could appear to the children in their near future. More than this, 11.3% of the respondents expressed their fear for no reason and 10.8% of them expressed their fear of life loss of the children while other 8.5% expressed their fear for the children were crying none stop and they personally could not unveil what was going on to them. Besides, there were 4.7% of the respondents feared of side effect resulted from sedation in major surgical intervention that could negatively affect the children mentality. With the same percentage of 4.7%, respondents also feared of unknown tumor that could possibly expand into malignity. A part from that, 4.2% of the respondents expressed their fear for other reasons and merely 0.9% uttered their fear of starvation for the reason that the children could not breast-feed or consume any basic supplementary need.

Concerning the current health problems brought children to the hospital in Surgery Department, the diseases were categorized into following related groups including General Pediatric Surgery, specialized treatment related to Osseous, Club Foot, Abdomen and Plastic Surgery. From table 7 of this study, the result illustrated that respondents visited the hospital for General Pediatric Surgery, specialized treatment related to Osseous, Plastic Surgery, Club Foot, and Abdomen were 72.8%, 12.3%, 8.5%, 3.8%, and 2.8% consecutively.

Correspondingly, 51.5% of the total respondents of inpatient had their earlier times visiting Surgery Department, whereas 48.5% of them had never once visited Surgery Department. In addition, majority of the respondents made up of 72.7% stated that the condition of their children was serious while other 27.3% mentioned not really serious.

In connection to the reason for serious condition, majority of the respondents account for 18.2% feared of life loss of their children while other 18.2% feared of life long disability. Plus, 12.1% of the respondents also feared for unknown cause of disease made the children crying none stop. And apart from that, 9.1% of them feared for no reason, 6.1% feared of sedation, 6.1% feared for other reasons, and 3.0% feared of starvation.

Besides, the result of this study also unveiled that more than half of the Inpatient respondents (60.5%) admitted to the hospital for General Pediatric Surgery treatment, 27.3% for Plastic Surgery and followed by each of 6.1% for Osseous Specialized treatment, and Club Foot.

4.3.2 Health Expectation

In regard to health expectation, four questions were carried out to assess the expectation from caregivers toward Surgery Department health care service before their actual hospitalized. The questions were asked in connection to several issues such as an expectation of health care cost, an expectation of the support from health service providers, an expectation of technical equipment from the hospital, and an expectation of the supply of medicine. The total Outpatient respondents 100% expressed their expectation to all questions especially to the question concerning medical expense which respondents expected to be acceptable, to technical equipment used in the hospital that was expected to be excellent, and to the support from service providers that was expected to be acceptable. These three questions shared the largest portion of 47.6%, 47.6%, and 36.3% from the total respondents.

In the case of Inpatient majority of the respondents (87.9%) also showed their expectation to an excellent of the technical equipment, 72.7% to an excellent of the supply of medicine in hospital and other 39.4% to an excellent of the support from service providers.

Table 8 Outpatient Expectation

Health expectation	Outpatient N(%)	Inpatient N(%)
Expectation for cost of health care		
No expectation	67(31.6)	13(39.4)
Free of charge	25(11.8)	8(24.2)
Acceptable (reasonable)	101(47.6)	7(21.2)
High	19(9.0)	5(15.2)
Total	**212(100.0)**	**33(100.0)**
Expectation for support from service providers		
No expectation	49(23.1)	10(30)
Fair	23(10.8)	3(9.1)
Acceptable (reasonable)	77(36.3)	8(24.2)
Excellent	63(29.7)	12(36.4)
Total	**212(100.0)**	**33(100.0)**
Expectation for technical equipment from the hospital		
No expectation	46(21.7)	4(12.1)
Fair	18(8.5)	0(0)
Acceptable (reasonable)	47(22.2)	0(0)
Excellent	101(47.6)	29(87.9)
Total	**212(100.0)**	**33(100.0)**
Expectation for supply of medicine		
No expectation	81(38.2)	7(21.2)
Fair	18(8.5)	1(3.0)
Acceptable (reasonable)	41(19.3)	1(3.0)
Excellent	72(34.0)	24(72.7)
Total	**212(100.0)**	**33(100.0)**

4.3.3 Health Personnel

Physician's behavior

In this part, there were 4 questions asking caregivers about how health personnel (health registrar, doctor, nurse and pharmacist) greeted them during service delivery. Table 9 below illustrated that out of the total Outpatient respondents account for 92.5% mentioned nurse greeted them nicely and 5.7% very nicely. Similarly, 92.0% of respondents also mentioned that health registrar greeted them nicely and 2.8% very nicely. Plus, other 91.4% of respondents told that pharmacist greeted them nicely and 2.1% very nicely. Last but not least, 89.2% of the total respondents said doctor greeted them nicely and 9.9% very nicely.

As regard to the Inpatient, 100 % of the total respondents mentioned that health registrar greeted them nicely while other 90.9% of respondents said that doctor ,and nurse greeted them nicely and with the same percentage of 9.1% very nicely. Beside these, 60.9% of the total respondents mentioned pharmacist greeted them nicely and 30.4% very nicely.

Table 9 Health Personnel: Physician's behavior

Physician's behavior	Outpatient N(%)	Inpatient N(%)
Office Registrar		
Very nicely	6(2.8)	0(0)
Nicely	195(92.0)	30(100.0)
Not nicely	1(5.2)	0(0)
Missing data (n)	**0(0)**	**(3)**
Total	**212(100.0)**	**30 (100.0)**
Doctor		
Very nicely	21(9.9)	3(9.1)
Nicely	189(89.2)	30(90.9)
Not nicely	2(0.9)	0(0)
Total	**212(100.0)**	**33(100.0)**

Nurse		
Very nicely	12(5.7)	3(9.1)
Nicely	196(92.5)	30(90.9)
Not nicely	4(1.9)	0(0)
Total	**212(100.0)**	**33(100.0)**
Pharmacist		
Very nicely	3(2.1)	7(30.4)
Nicely	128(91.4)	14(60.9)
Not nicely	9(6.4)	2(8.7)
Missing data (n)	**(72)**	**(10)**
Total	**140(100.0)**	**23(100.0)**

Physician's attention

There were three questions were employed regarding the attentiveness of health personnel (health registrar, doctor, and nurse) toward caregivers in listening to their children problems during service delivery. Table 10 below showed that 84.9% of Outpatient respondents stated that doctor listened to their children problems attentively and 14.6% very attentively. In addition to this, concerning the attentiveness of nurse in listening to the children health problems, 84.9% of the respondents also stated that nurse listened to their children problems attentively, and 14.2% very attentively. By looking at the attentiveness of health registrar toward respondents, 79.2% of them mentioned that health registrar somewhat paid attention to their children problems and 15.1% paid much attention.

In the case of Inpatient, from the total respondents account for 93.3% told that they got somewhat attention from health registrar and 6.7% got much attention. Similar to this, other 87.9% of the respondents said nurse listened to their children problems attentively and 12.1% very attentively. Concerning the attentiveness of doctor in listening to the children problems, 81.8% of the total respondents mentioned that doctor listened to their children problems attentively and 18.2%

very attentively. Table 10 below also proofed that there was none of Inpatient respondents did not get any attention from health registrar, doctor, and nurse.

Table 10 Health Personnel: Physician's attention

Physician's attention	Outpatient N(%	Inpatient N(%)
Office registrar		
Very attentively	32(15.1)	2(6.7)
Attentively	168(79.2)	28(93.3)
Not attentively	12(5.7)	0(0)
Missing data (n)	**(0)**	**(3)**
Total	**212(100.0)**	**30(100.0)**
Doctor		
Very attentively	31(14.6)	6(18.2)
Attentively	180(84.9)	27(81.8)
Not attentively	1(0.5)	0(0)
Total	**212(100.0)**	**33(100.0)**
Nurse		
Very attentively	30(14.2)	4(12.1)
Attentively	180(84.9)	29(87.9)
Not attentively	2(0.9)	0(0)
Total	**212(100.0)**	**33(100.0)**

Physician's opportunity for caregiver to talk

There were two questions in this section which related to the opportunity given by doctor and nurse to caregivers to speak about their children problems. Table 11 below indicated that 76.4% of the Outpatient respondents mentioned that doctor had given them full opportunity to speak about their children problems while other 20.3% had partial opportunity to speak about their children problems. In regard to the opportunity given by nurse to caregivers, 65.6% of the respondents had

fully opportunity to speak about their children problems whereas other 31.6 % could partially have opportunity to speak about their children problems.

For Inpatient, table 11 also illustrated that 84.8% of the respondents got fully time from doctor to speak about their children problems, while 15.2% of them could partially have time to speak about their children problems. Relating to the opportunity given by nurse to caregivers, 72.7% of the respondents had full opportunity to speak about their children problems whereas 27.3% could have partial opportunity to speak about their children health problems. This study also found out that there was none of Inpatient respondents did not have any opportunity to speak about the child problem.

Table 11 Health Personnel: Physician's opportunity for Caregiver to talk

Health personnel	**Outpatient N(%)**	**Inpatient N(%)**
Doctor offered opportunity to caregiver to talk about their child problem		
Full opportunity	162(76.4)	28(84.8)
Partially	43(20.3)	5(15.2)
Not at all	7(3.3)	0(0)
Total	**212(100.0)**	**33(100.0)**
Nurse offered opportunity to caregiver to talk about their child problem		
Full opportunity	139(65.6)	24(72.7)
Partially	67(31.6)	9(27.3)
Not at all	6(2.8)	0(0)
Total	**212(100.0)**	**33(100.0)**

Physician's explanation to Caregivers

There were three questions in this section, which intended to ask caregivers' opinion toward the explanation they got from physician. It included the information for cost of health care from health registrar, the laboratory test explanation from doctor and the explanation about the use of medicine from pharmacist. As seen in table 12, majority of Outpatient respondents account for 87.2% got somewhat an explanation from pharmacist in regard to the use of medicine while other 12.8% got full explanation from pharmacist. In relevant to this point, 72 cases of respondents were missing due to the reason that this number of respondents did not need to take any medicine prescribed by doctor from pharmacy unit. For the explanation about the necessity of laboratory test, 55.1% of the total respondents got full explanation from doctor and 44.9% got partial explanation from doctor. Related to the information of health care cost from health registrar, 42.9% of the respondents had somewhat received the information regarding cost of health care from health registrar while other 22.2% received full information regarding cost of health care.

For Inpatient, out of the entire respondents account for 87.9% got full explanation from doctor about the necessity of laboratory test and 12.1% of them got partial explanation from doctor. Besides, majority of respondents account for 52.2% got somewhat an explanation about the use of medicine from pharmacist while 43.4% of them got full explanation about the use of medicine. There were 10 cases of missing data in this question for the reason that medicine was offered to Inpatient respondents directly at their places. Related to the information about the cost of health care from health registrar, 50.0% of the respondents got full information related to the cost of health care from health registrar whereas 43.3% of them got some information.

Table 12 Health Personnel: Physician's explanation to Caregivers

Health personnel	Outpatient N(%)	Inpatient N(%)
Office registrar told about the cost of health care		
Fully	47(22.2)	15(50.0)
Somewhat	91(42.9)	13(43.3)
Not at all	74(34.9)	2(6.7)
Missing data (n)	**0(0)**	**(3)**
Total	**212(100.0)**	**30(100.0)**
Doctor's explanation the necessity of laboratory test		
Fully	87(55.1)	29(87.9)
Somewhat	71(44.9)	4(12.1)
Not at all	0(0)	0(0)
Missing data (n)	**(54)**	**(0)**
Total	**158(100.0)**	**33(100.0)**
Pharmacist's explanation about the use of medicine		
Fully	18(12.8)	10(43.4)
Somewhat	122(87.2)	12(52.2)
Not at all	0(0)	1(4.4)
Missing data (n)	**(72)**	**(10)**
Total	**140(100.0)**	**23(100.0)**

Physician history talking

Concerning about the history talking of sick children from doctor to caregivers, 74.1% of the Outpatient respondents said that doctor fully asked them about the history of their children health condition while 22.6% of them partially got history talking from doctor. In the case of Inpatient, table 13 also revealed that 93.9% of respondents got full history talking from doctor while 6.1% of them got partial history talking from doctor.

Table 13 Health Personnel: Physician's history talking

Health personnel	Outpatient N(%)	Inpatient N(%)
Doctor's history talking toward sick children		
Yes	157(74.1)	31(93.9)
Somewhat	48(22.6)	2(6.1)
No	7(3.3)	0(0)
Total	**212(100.0)**	**33(100.0)**

Physician's physical examination

Regarding doctor's physical examination toward sick children, 67.5% of the total Outpatient respondents mentioned that their children fully got physical examination while 29.2% partially got the physical examination. Respecting to the Inpatient, 84.8% of the respondents fully got physical examination from the doctor and 15.2% partially got physical examination. The result further revealed that there was none of Inpatient respondent did not get any physical examination from doctor.

Table 14 Health Personnel: Physician's physical examination

Health personnel	Outpatient N(%)	Inpatient N(%)
Doctor's physical examination toward sick children		
Yes	143(67.5)	28(84.8)
Somewhat	62(29.2)	5(15.2)
No	7(3.3)	0(0)
Total	**212(100.0)**	**33(100.0)**

Overall percentage of services from health personnel

The overall percentage of health personnel service toward Surgery Department consisted of office registrar, doctor, nurse, and pharmacist. The result hereby presented as following sections.

Office registrar

Table 15 below showed that more than half of the Outpatient respondents (63.2%) got fair services from health registrar and 34.9% got good services. In the case of Inpatient, out of whole respondents account for 56.7% got good services from health registrar and 43.3% got fair services.

Table 15 Overall percentage of Health Personnel provider: Office registrar

Office registrar	Outpatient N(%)	Inpatient N(%)
Good (7-9)	74(34.9)	17(56.7)
Fair (4-6)	134(63.2)	13(43.3)
Not good (1-3)	4(1.9)	0(0)
Missing data (n)	**(0)**	**(3)**
Total	**212(100.0)**	**30(100.0)**

Doctor

With respect to doctor, table 16 below illustrated that out of the whole Outpatient respondents more than ninety percent (91.0%) got good services from doctor and only 9.0% of them got fair services. While Inpatient, the total 100% of the respondents got good services from doctor they met during service delivery. The result further revealed that there was no one from the entire respondents got poor services from doctor.

Table 16 Overall percentage of Health Personnel provider: Doctor

Doctor	Outpatient N(%)	Inpatient N(%)
Good (13-18)	193(91.0)	33(100.0)
Fair (7-12)	19(9.0)	0(0)
Not good (1-6)	0(0)	0(0)
Total	**212(100.0)**	**33(100.0)**

Nurse

In correspond to nurse, table 17 showed that majority of Outpatient respondents (68.4%) got good services from nurse while other 31.1% of them got fair services. As regard to Inpatient, majority of respondents (84.8%) got good services from nurse while 15.2% got fair services.

Table 17 Overall percentage of Health Personnel provider: Nurse

Nurse	Outpatient N(%)	Inpatient N(%)
Good (7-9)	23(68.4)	28(84.8)
Fair (4-6)	66(31.1)	5(15.2)
Not good (1-3)	1(0.5)	0(0)
Total	**212(100.0)**	**33(100.0)**

Pharmacist

With respect to pharmacist, table 18 below indicated that majority of Outpatient respondents account for 83.5% got fair services from pharmacist and 16.5% got good services. With respected to Inpatient, more than half of the

respondents (69.5%) got good services and 30.5% got fair services from pharmacist. The result also revealed that there was no one from the entire respondents got poor services from pharmacist.

Table 18 Overall percentage of Health Personnel provider: Pharmacist

Pharmacist	Outpatient N(%)	Inpatient N(%)
Good (4-6)	23(16.5)	16(69.5)
Fair (3-4)	117(83.5)	7(30.5)
Not good (1-2)	0(0)	0(0)
Missing data (n)	**(72)**	**(10)**
Total	**140(100.0)**	**23(100.0)**

4.4 Caregivers' Satisfaction

In order to measure the satisfaction level of caregivers, convenience, courtesy and quality of care were used as indicators. The satisfaction section consisted of 19 questions. The level of satisfaction of caregivers toward Surgery Department health care services at National Pediatric Hospital was measured by Likert's scale having five grade as 1= very dissatisfied, 2= dissatisfied, 3= neutral, 4= satisfied, 5= very satisfied. Caregiver's satisfaction was classified into three levels by using mean score + one and –one standard deviation. The score given by caregiver which was more than the mean score plus one standard deviation was taken as high satisfaction whereas the score less than the mean score minus one standard deviation was considered as low satisfaction. The score which was in between the mean score minus one and plus one standard deviation was taken as medium satisfaction. There were two questions number 5 and 14 of the Outpatient were excluded from the overall satisfaction apart for the reason of larger number missing data from these two questions.

The overall satisfaction of caregiver toward Surgery Department health care services of National Pediatric Hospital was computed by dividing into three levels, which is high satisfaction, medium satisfaction, and low satisfaction level. Mean and SD of Outpatient were 65.46 and 8.83 while Inpatient were 80.06 and 10.36. The mean plus one standard deviation considered high, and minus one standard deviation was low and the score between these two points was considered as medium satisfaction. As shown in Table 19 below, the distribution and the level of caregiver's satisfaction toward health services at Surgery Department of National Pediatric Hospital described as follows.

Table 19 Caregivers' Satisfaction

Overall satisfaction	**Outpatient N(%)**	**Inpatient N(%)**
High satisfaction **(>$\bar{x}$+SD)**	33(15.6)	8(24.2)
Medium satisfaction **($\bar{x}$±SD)**	146(70.2)	19(57.6)
Low satisfaction **(<$\bar{x}$-SD)**	30(14.2)	6(18.2)
Total	**212(100.0)**	**33(100.0)**
	Min=37 Max=85	Min=64 Max=95
	Mean=65.46 SD=8.83	Mean=80.06 SD=10.36

In this study, Overall percentage of high satisfaction in Outpatient Department was 15.6%, medium satisfaction was 70.2%, and low satisfaction was 14.2%. While in the case of Inpatient, their high satisfaction was 24.2%, medium satisfaction was 57.6% and low satisfaction was 18.2%. Details concerning individual questions of satisfaction level presented in table number 20 and 21 below.

Table 20 Outpatient Satisfaction of Surgery Department health care services

Statements	Satisfaction level of Outpatient N(%)					Total (%)
	1	2	3	4	5	
1. Convenience (n=245)						
1. The ease of finding the Surgery Department in hospital for you.	2 (0.9)	8 (3.8)	55 (25.9)	107 (50.5)	40 (18.9)	212 100.0
2. The appropriateness of arrangement for waiting area for you.	1 (0.5)	6 (2.8)	80 (37.7)	93 (43.9)	32 (15.1)	212 100.0
3. The availability of required doctor during the working hours.	3 (1.4)	5 (2.4)	58 (27.4)	109 (51.4)	37 (17.5)	212 100.0
4. The availability of required nurse during the working hours.	1 (0.5)	6 (2.8)	59 (27.8)	104 (49.1)	42 (19.8)	212 100.0
5. The a mount of availability of medicines prescribed by doctor from the pharmacy section.	2 (1.5)	7 (5.0)	63 (45.0)	42 (30.0)	26 (18.5)	140 100.0
6. The time waiting for the required services for you.	4 (1.9)	14 (6.6)	92 (43.4)	76 (35.8)	26 (12.3)	212 100.0
7. The cleanliness of the toilet for you.	4 (1.9)	11 (5.2)	106 (50.0)	62 (29.2)	29 (13.7)	212 100.0
8. There is a clear drawing picture demonstrating you to other health care services.	3 (1.4)	12 (5.7)	62 (29.2)	102 (48.1)	33 (15.6)	212 100.0
2. Courtesy (n=245)						
9. Introduction from doctors and nurses to you about themselves before taking history or examination.	1 (0.5)	10 (4.7)	62 (29.2)	107 (50.5)	32 (15.1)	212 100.0
10. The permission of doctors from you before examining your child.	0 (0)	12 (5.7)	54 (25.5)	104 (49.1)	42 (19.8)	212 100.0

11. Attentiveness from doctors and nurse while answering your questions.	0 (0)	6 (2.8)	41 (19.3)	115 (54.2)	50 (23.6)	212 100.0
12. The staff regards you without considered your socio economic status.	1 (0.5)	8 (3.8)	46 (21.7)	105 (49.5)	52 (24.5)	212 100.0
3. Quality (n=245)						
13. You understand about your child illness and treatment after seeing the doctor.	1 (0.5)	4 (1.9)	33 (15.6)	119 (56.1)	55 (25.9)	212 100.0
14. You understand the explanation of how to use medicine prescribed by doctor.	0 (0)	6 (4.3)	30 (21.5)	61 (43.5)	43 (30.7)	140 100.0
15. The willingness of doctors and nurses to treat your child.	0 (0)	5 (2.4)	40 (18.9)	119 (56.1)	48 (22.6)	212 100.0
16. The doctor and nurse examined your child in detail.	0 (0)	5 (2.4)	37 (17.5)	114 (53.8)	56 (26.4)	212 100.0
17. The skill and experience of doctors in Surgery Department who treat your child.	0 (0)	5 (2.4)	37 (17.5)	110 (51.9)	60 (28.3)	212 100.0
18. The skill of nurses in nursing care for you.	0 (0)	5 (2.4)	49 (23.1)	113 (53.3)	45 (21.2)	212 100.0
19. The doctor provides you choices of treatment for your child.	0 (0)	3 (1.4)	50 (23.6)	103 (48.6)	56 (26.4)	212 100.0

Table 21 Inpatient Satisfaction of Surgery Department health care services

Statements	Satisfaction level of Inpatient N(%)					Total (%)
	1	2	3	4	5	
1. Convenience (n=33)						
1. The ease of finding the Surgery Department in hospital for you.	0 (0)	0 (0)	11 (33.3)	13 (39.4)	9 (27.3)	33 100.0
2. The appropriateness of arrangement for waiting area for you.	0 (0)	0 (0)	10 (30.3)	15 (45.5)	8 (24.2)	33 100.0
3. The availability of required doctor during the working hours.	0 (0)	0 (0)	7 (21.2)	16 (48.5)	10 (30.3)	33 100.0
4. The availability of required nurse during the working hours.	0 (0)	0 (0)	2 (6.1)	19 (57.6)	12 (36.4)	33 100.0
5. The a mount of availability of medicines prescribed by doctor from the pharmacy section.	0 (0)	0 (0)	4 (12.1)	17 (51.5)	12 (36.4)	33 100.0
6. The time waiting for the required services for you.	0 (0)	0 (0)	11 (33.3)	13 (39.4)	9 (27.3)	33 100.0
7. The cleanliness of the toilet for you.	0 (0)	1 (3.0)	12 (36.4)	12 (36.4)	8 (24.2)	33 100.0
8. There is a clear drawing picture demonstrating you to other health care services.	0 (0)	0 (0)	6 (18.2)	14 (42.2)	13 (39.4)	33 100.0
2. Courtesy (n=33)						
9. Introduction from doctors and nurses to you about themselves before taking history or examination.	0 (0)	0 (0)	3 (9.1)	17 (51.5)	13 (39.4)	33 100.0
10. The permission of doctors from you before examining your child.	0 (0)	0 (0)	6 (18.2)	13 (39.4)	14 (42.4)	33 100.0

11. Attentiveness from doctors and nurse while answering your questions.	0 (0)	0 (0)	4 (12.1)	18 (54.5)	11 (33.3)	33 100.0
12. The staff regards you without considered your socio economic status.	0 (0)	0 (0)	7 (21.2)	12 (36.4)	14 (42.4)	33 100.0
3. Quality (n=33)						
13. You understand about your child illness and treatment after seeing the doctor.	0 (0)	0 (0)	3 (9.1)	14 (42.4)	16 (48.5)	33 100.0
14. You understand the explanation of how to use medicine prescribed by doctor.	0 (0)	0 (0)	3 (9.1)	15 (45.5)	15 (45.5)	33 100.0
15. The willingness of doctors and nurses to treat your child.	0 (0)	0 (0)	7 (21.2)	9 (27.3)	17 (51.5)	33 100.0
16. The doctor and nurse examined your child in detail.	0 (0)	0 (0)	2 (6.1)	15 (45.5)	16 (48.5)	33 100.0
17. The skill and experience of doctors in Surgery Department who treat your child.	0 (0)	0 (0)	3 (9.1)	10 (30.3)	20 (60.6)	33 100.0
18. The skill of nurses in nursing care for you.	0 (0)	0 (0)	5 (15.2)	15 (45.5)	13 (39.4)	33 100.0
19. The doctor provides you choices of treatment for your child.	0 (0)	0 (0)	4 (12.1)	11 (33.3)	18 (54.5)	33 100.0

Convenience

Regarding the convenience of health care services, eight questions were used to ask caregiver toward their satisfaction level on convenience section. Those questions concerned with the ease of finding the Surgery Department, the appropriateness of arrangement for waiting area, the availability of required doctor, and nurse during working hours, the amount of availability of medicines prescribed by doctor from the pharmacy unit, the time waiting for required services, the cleanliness of toilet, and the clear sign drawing to services in needed. In this part, question number 5 (the availability of medicine prescribed by doctor) was excluded from the overall part of convenience of the Outpatient for the reason of large number of missing data. The mean and SD of the Outpatient were 25.87 and 3.81. The overall satisfaction of convenience was 20.7% high satisfaction, 60.5% medium satisfaction, and 18.8% low satisfaction. While inpatient, the mean and SD were 32.48 and 4.66. The overall percentage of high satisfaction was 24.2%, medium satisfaction was 66.7%, and low satisfaction was 9.1%.

Table 22 Caregivers' Satisfaction towards Convenience in access to health care

Satisfaction	Outpatient N(%)	Inpatient N(%)
Convenience		
High satisfaction **(>$\bar{x}$+SD)**	44(20.7)	8(24.2)
Medium satisfaction **($\bar{x}$±SD)**	128(60.5)	22(66.7)
Low satisfaction **(<$\bar{x}$-SD)**	40(18.8)	3(9.1)
Total	**212(100.0)**	**33(100.0)**
	Min=10 Max= 35	Min= 24 Max=40
	Mean= 25.87 SD=3.81	Mean= 32.48 SD= 4.66

Courtesy

The component related to courtesy had four questions asking about the introduction from doctor and nurse to caregivers before examination, the permission from caregiver before doctor's physical examination, the attentiveness from doctor and nurse while answering caregivers' questions, and the way working staff regarded patient considering their socioeconomic status. Table 23 below showed the descriptive data related to courtesy of health service provider at Surgery Department. The mean and SD of Outpatient were 15.50 and 2.47. Respondents with high satisfaction, medium satisfaction and low satisfaction were 21.2%, 59.0%, and respectively 19.8%. In regard to inpatient, the mean and SD were 16.97 and 2.35. The overall satisfaction was 30.3% high satisfaction, 57.5% medium satisfaction and 12.2% low satisfaction.

Table 23 Caregivers' Satisfaction towards Courtesy of health service providers

Satisfaction	Outpatient N(%)	Inpatient N(%)
Courtesy		
High satisfaction **(>$\bar{x}$+SD)**	45(21.2)	10(30.3)
Medium satisfaction **($\bar{x}$±SD)**	125(59.0)	19(57.5)
Low satisfaction **(<$\bar{x}$-SD)**	42(19.8)	4(12.2)
Total	**212(100.0)**	**33(100.0)**
	Min=8 Max= 20	Min= 13 Max=20
	Mean= 15.50 SD=2.47	Mean= 16.97 SD= 2.35

Quality

With connection to quality of care from Surgery Department, seven questions were employed to assess caregiver's understanding about the child illness and treatment, the use of medicine prescribed by doctor, the willingness of doctor and nurse in treating the child, the detail examination on sick children from doctor, the

skill and experience of doctor who treated the child, the skill of nurse in nursing care, and the choice doctor provided for treatment. In this part, question number 19 (the understanding the use of medicine prescribed by doctor) was excluded for the reason of large number of missing data. As shown in table 24 below, for Outpatient, the mean was 24.08 and SD was 3.59. Respondent with high satisfaction was 19.0%, medium satisfaction was 65.5% and low satisfaction was 15.5%. For inpatient, the mean was 30.61 and SD was 4.01. The result of this study further revealed that 27.3% of the total respondents had high satisfaction, 60.6 % had medium, and 12.1% had low satisfaction consecutively.

Table 24 Caregivers' Satisfaction towards Quality of care

Satisfaction	**Outpatient N(%)**	**Inpatient N(%)**
Quality		
High satisfaction **(>$\bar{x}$+SD)**	40 (19.0)	9(27.3)
Medium satisfaction **($\bar{x}$±SD)**	139(65.5)	20(60.6)
Low satisfaction **(<$\bar{x}$-SD)**	33(15.5)	4(12.1)
Total	**212(100.0)**	**33(100.0)**
	Min=12 Max= 30	Min= 23 Max=35
	Mean= 24.08 SD=3.59	Mean= 30.61 SD= 4.01

In general, the Outpatient respondents seemed to be satisfied with all components, except the components related to cleanness of toilet (50.0%), availability of medicine in the hospital (45.0%), waiting time for getting health services (43.4%), and appropriateness of waiting seat arrangement (37.7%) which likely be neutral. Likewise in the case of Inpatient, majority of respondents also appeared to satisfy with all the elements except cleanliness of toilet (36.4%), waiting time for services (33.3%), the ease in finding Surgery Department (33.3%), and the appropriateness of arrangement for waiting area (30.3%) which also seemingly be neutral.

4.5 Association between Dependent and Independent variables of OPD

The association between the predisposing factors, enabling factors and need factors of caregivers and caregivers' satisfaction were determined by Chi- square test. Some of the variables including age, gender, education, occupation, geographical accessibility, availability, financial accessibility, and acceptability were regrouped in order to get enough frequency for statistical analysis. Particularly, in the case of Inpatient, this study was not determined the association between dependent variables and explanatory factors because the number of respondents in this group was few to get enough frequency for statistical analysis.

As shown in table 25 below, the association between education, family income, availability, financial accessibility, acceptability and level of satisfaction were found associated while other independent variables were found not associated with satisfaction level (table 25).

Table 25 Association between Independent and Dependent variables of OPD

Independent variables	Satisfaction level			p-value
	Low N(%)	Medium N(%)	High N(%)	Total
1. Age				**.245**
15-34	24(14.1)	123(72.4)	23(13.5)	170(100.0)
35 and above	6(14.3)	26(61.9)	10(23.8)	42(100.0)
2. Gender				**.258**
Male	3(10.3)	24(82.8)	2(6.9)	29(100.0)
Female	27(14.8)	125(68.3)	31(16.9)	183(100.0)
3. Education				**.012**
Illiterate- Primary school	5(6.0)	62(73.8)	17(20.2)	84(100.0)
Secondary school and higher	25(19.5)	87(68.0)	16(12.5)	128(100.0)
4. Occupation				**.718**
Worker and farmer	9(13.0)	47(68.1)	13(18.8)	69(100.0)
Housewife	10(12.3)	58(71.6)	13(16.0)	81(100.0)
Business, service agent and civil agent	11(17.7)	44(71.0)	7(11.3)	62(100.0)

5. Family income				**.002**
0-450.000	9(10.7)	53(63.1)	22(26.2)	84(100.0)
45.001-and above	21(16.4)	96(75.0)	11(8.6)	128(100.0)
6. **Geographical accessibility**				**.571**
High	22(14.5)	104(68.4)	26(17.1)	152(100.0)
Moderate and poor	8(13.3)	45(75.0)	7(11.7)	60(100.0)
7. Availability				**.000**
High	23(11.4)	146(72.6)	32(15.9)	201(100.0)
Moderate and poor	7(63.6)	3(27.3)	1(9.1)	11(100.0)
8. Financial accessibility				**.037**
High	17(14.9)	86(75.4)	11(9.6)	114(100.0)
Moderate and poor	13(13.3)	63(64.3)	22(22.4)	98(100.0)
9. Acceptability				**.031**
High	27(13.1)	146(70.9)	33(16.0)	206(100.0)
Moderate and poor	3(50.0)	3(50.0)	0(0)	6(100.0)
10. Health problem				**.546**
Serious	19(13.1)	101(69.7)	25(17.2)	145(100.0)
Not serious	11(16.4)	48(71.6)	8(11.9)	67(100.0)

Significant at p-value <0.05

Age was classified into two groups from 15 to 34 years and from 35 to above years. Respondents aging from 15 to 34 were found having low proportion of high satisfaction level (13.5%) in comparison to respondents aging from 35 years and above (23.8%). However, age was not found to have significant distribution to satisfaction level (p-value .245).

A comparison between gender in association with satisfaction level was also revealed in this study. Female had higher proportion of high satisfaction level (16.9%) than male (6.9%). Nonetheless, there was no significant different association between male and female with satisfaction level (p-value .258).

For determining an association between educational level with satisfaction level, education was classified into two groups. One group composed of illiterate and primary school while the other group made up of secondary school and higher education. The result of this study illustrated that secondary and higher education group had lower proportion of high satisfaction level (12.5%) in comparison to illiterate and primary education group in which their high satisfaction level was 20.2%. The result of this study proved that education had significant different association with satisfaction level (p-value .012).

Respondent's occupation was also compared to find out the association with satisfaction level. It was divided into three categories such as 1=farmer and daily labor worker, 2=housewife, and 3=business, service agent and civil servant. Respondents working as farmer, daily labor worker and housewife were found having higher proportion of high satisfaction level (18.8% and 16.0%) compared to those working as business, service agent and civil servant (11.3%). Yet, it was found no significant association between occupations with satisfaction level proven by statistical test (p-value. 718).

The result from table 25 further indicated that respondents from family monthly income of (450.0001 and above) had lower proportion of high satisfaction level (8.6%) comparing to (26.2%) of those with lower family monthly income (0-450.000) Real. The association between family income and level of satisfaction were found statistically significant (p-value .002).

The relationship between geographical accessibility and satisfaction level was also determined. This study result revealed that majority of respondents with high geographical accessibility had higher proportion of high satisfaction level (17.1%) in comparison to respondents with moderate and poor geographical accessibility (11.7%). Nevertheless, geographical accessibility was found no significant association with satisfaction level proved by statistical test (p-value. 571).

Availability was also included to find the association with satisfaction level in this study. The result pointed out that availability had significant difference association with satisfaction level confirmed by statistical test (p-value .000). Virtually, respondents answered the services in hospital were available for them had higher

proportion of medium and high satisfaction level of 72.6% and 15.9% compared to respondents could somewhat got access to the availability of hospital services (27.3% and 9.1%).

Another variable in this study, financial accessibility, was also found having significant difference with satisfaction level proven by statistical test (p-value. 037). Table 25 above revealed that respondents with high financial accessibility had lower proportion of high satisfaction level (9.6%) compared to respondents with moderate or poor financial affordability to cost of health care (22.4%).

Plus, an association between acceptability and satisfaction level of this study revealed that respondents had acceptance to health personnel had higher proportion of medium and high satisfaction level of 70.9% and 16.0% while respondents had no acceptance to health personnel had lower proportion of medium and high satisfaction level of 50.0% and 0.0%. Acceptability in this study was proved having significant association with satisfaction level by statistical test (p-value .031).

Besides these, an association between health problems of children and satisfaction level was also included in this study. It was found that respondents of the children with serious health condition problem had higher proportion of high satisfaction level (17.2%) than respondents of children with no serious health condition problem (11.9%). Even so, there was no significant difference association confirmed by statistical test between health problems and level of satisfaction (p-value .546).

4.6 Suggestions or Comments

Out of 245 respondents, 57.0% of them provided suggestion and comments for improving the health care services at Surgery Department while other 43.0% of the respondents did not contribute any comments or suggestions. Some of his/her suggestion focusing on more than one point of view.

Regarding the question concerning areas should be done to improve health care services, respondents gave suggestions and comments as in the table 26.

Table 26 Suggestions and comments for improving Surgery Department

Suggestions and comments	Frequency (N)	Percentage (%)
1. Possibility of having cost of health care reduction	60	42.8
2. Possibility of having information center	15	10.7
3. The cleanness of toilet; waiting area and spaces	12	8.6
4. The availability of safe drinking water	11	7.9
5. Interpersonal manner of health providers	8	5.7
6. The waiting time for seeing doctors	7	5.0
7. Commencement for working hours and days for doctors in area Plastic Surgery, Thraumato-Othopedic Osseous	7	5.0
8. Quantity of doctor specialist in area of Plastic Surgery Thraumato-Othopedic Osseous	7	5.0
9. Possibility of being equal treated from health providers	7	5.0
10. Possibility having more time for visiting from doctor	6	4.3
11. Possibility of having more explanation from doctor and nurse	6	4.3
12. Possibility of having clearer sign in front of the examining room	6	4.3
13. Possibility of having larger room for OPD and Thraumato-Othopedic Osseous	5	3.6
14. Possibility of having standard cost of care on billboard	5	3.6
15. Medical equipment	1	0.7
Total	**140**	**100.0**

In connection with respondents' suggestion and comment on what should be improved for better health care services from Surgery Department as showed in table 26, respondents also provided their idea about how to improve those things as well. Their ideas presented as follows:

The hospital should consider about health care cost reduction for patient especially for poor people because they need to spend money not only for health care cost but also for other means to get to the hospital. Being a government hospital, health care provision should be sufficiently covering all of their people whenever they are in need.

Number of specialist doctor and working days especially in area of Plastic Surgery and Thromato- Orthopedic Osseous should be increased. Doctor and nurse should be friendlier when interacting with patient. They should smile and speak with beautiful words and ask patients more about what's wrong with them, provide them more explanation and advise them more. Doctor should also visit patient as soon as possible especially after time operation.

Toilet and spaces should be clean more often. Sign in front of examining room should be bigger and well seen. Cost of health care should be post on bill board for the sake of transparency. Staff at information office should be available for customer during working hours so that customer could get clear information about the process in receiving services and avoid unnecessary confusion.

CHAPTER V
DISCUSSION

In this study, the questionnaire was comprised of total seventy-one main questions concerning predisposing factors, enabling factors, need factors, caregivers' satisfaction, suggestions and comments by the caregivers to improve health services at Surgery Department. Caregivers' satisfaction was the dependent variable of this study. Methodology and other important issues are discussed in this chapter as follows.

5.1 Methodological Concerns

This study was conducted in the hospital during working hours and after time receiving service delivery of caregivers. The questionnaire was designed for interviewing in order to minimize any confusion about question and missing data. Systematic random sampling had been carried out in General Pediatric Outpatient consultation to avoid selection bias. More than this, researcher observed the process of data collection by herself to enhance the quality of data. Other four interviewers dressing up in color also conducted the questionnaire.

5.2 Caregivers' Satisfaction toward Surgery Department

According to the result of the overall satisfaction in this study indicated that the percentage of high satisfaction in Outpatient was 15.6%, medium satisfaction was 70.2%, and low satisfaction was 14.2%. While in Inpatient, high satisfaction was 24.2%, medium satisfaction was 57.6% and low satisfaction was 18.2%.

In connection to the result, the proportion of Outpatient high satisfaction level (15.6%) was slightly lower than high satisfaction level of the Inpatient (24.3%). Satisfaction in this study was also lower than satisfaction level of the study conducted by Ny Net at OPD clinic of Wangnumyen Community Hospital Thailand (2007) with high satisfaction level of 23.3% (35). Besides these, it was also found less than almost half of high satisfaction level (54.0%) of the study conducted by Anjurn

J. on patient satisfaction towards Outpatient Department services in Pakistan Institute of Medical services, Islamabad (37). More than this, the result of this study also found lower than a study by Tangmankongworakoon on satisfaction level of the client toward services of Lad Yao Hospital which their satisfaction level was 52.0% (38). However, this study was found coincided with the study conducted by Asma Ibrahim, patient satisfaction with health services at the Outpatient Department of Indira Gandhi Memorial Hospital, Male Maldives (2008) with the level of high satisfaction was 10.36% (29).

As one can see, there are wide variations in the satisfaction level received by patient in different studies conducted in various times and places. Mentioning about variation of times and places, one also can see the different satisfaction level of this study where Inpatient satisfaction level is slightly higher than Outpatient satisfaction level. This variation may bring about the time and places Inpatient respondents being with healthcare providers. Children of Inpatient participants involved in either major or minor surgical intervention and their condition was desperately in need of care from health provider. Children needed to spend more time to rest in hospital to be taking care of and interested in from health providers before discharged while those from Outpatient did not. These reasons may partly generated the feeling of favor, believe and confident in health care provider once health provider could fulfill in the need acquired from caregivers in relevant to their child health condition and this of course leaded to higher satisfaction level. There are many other factors lead to the foreseen of satisfaction level such as variation in quality of services provided by health facilities, different in cultural setting both in service providers and service receivers, and different in classification of satisfaction level that applied to those studies. For instance, this study satisfaction divided satisfaction into three levels: low, medium and high satisfaction by using mean score+ and –one standard deviation whereas the other studies classified satisfaction into two levels: satisfied and less satisfied or high and low satisfaction level by using 80% of the total score as cut off point or using mean or median as cut off point. For these reasons, the above difference determination of satisfaction level maybe one of the leading factor causing wide variation of satisfaction level of those studies. Considering about this,

one can see that this study of satisfaction level using higher criteria 74.29 (87.4%) for Outpatient and 90.42 (95.1%) for Inpatient of the total score as cut off point to classify satisfaction level.

With regard to the level of satisfaction of the three components namely convenience, courtesy and quality, this study revealed that Outpatient respondents were highly satisfied with courtesy of health service providers at 21.2%, convenience of health care services at 20.7% and quality of health care at 19.0%. Nonetheless, courtesy had the highest proportion of low satisfaction level (19.8%), convenience (18.8%) and quality (15.5%) respectively. With respect to inpatient, courtesy of service providers also got the highest satisfaction level (30.3%) followed by quality of health care (27.3%) and convenience of health services at (24.2%) from the total respondents. However, courtesy (12.2%) had also proofed the highest proportion of low satisfaction level and followed by quality of health care (12.1%) and convenience of health care (9.1%). This result could reflect that respondents were mainly concern more with courtesy of health providers and followed by quality and convenience of health care services.

With respect to convenience component, eight questions were composed. Among these eight questions, majority of the Outpatient respondents more than half were satisfied with the ease in finding Surgery Department, the availability of required doctor in working hour, and the availability of nurse during working hour and the clear sign demonstrating to services in need . However, almost half of the total respondents seemingly be neutral on satisfaction level related to cleanness of toilet (50.0%), availability of medicine from pharmacy unit (45.0%), waiting time to require services (43.4%), and appropriateness of waiting area (37.7%). Similarly, in the case of Inpatient respondents, 36.4% of them also expressed their neutral level of satisfaction to the cleanness of toilet, 33.3% to waiting time for receiving health care services, 30.3% to the appropriateness of arrangement for waiting area. From this result, one could see that waiting time for receiving services, appropriateness of seat arrangement, availability of medicine, and cleanness of toilet are the important factors in keeping respondents to satisfy with health care services. The result of this study was coincided with Upreti (1994) which his study found that area such as

waiting time, inadequate cleaning and setting of health center surrounding, contributed to dissatisfaction of client (34).

In this study, courtesy of health provider possessed highest level of satisfaction. Majority of Outpatient respondents more than half were satisfied with all components of courtesy of health providers especially to the point of attentiveness from doctor and nurse in answering patient's question (54.2%) and introduction from physician before history talking or examination (50.5%). Likewise, more than half of Inpatient respondents were also satisfied with all components of courtesy, mainly at the point of attentiveness from doctor and nurse in answering patient's question (54.5%), and introduction from physician before history talking or examination (51.5%). However, courtesy also obtained high proportion of low satisfaction level in both Out and In- patient, particularly at the point of Introduction from doctor and nurse, permission from caregiver before examination, and staff regards patient without consider socioeconomic status where almost quarter of respondents still jotted down their satisfaction level on neutral. In this regards, the doctors may need to introduce themselves and get the permission before examination. This can reduce the anxiety of caregivers and will help them become more comfortable and able to explain about their difficulties more in detail. Moreover, if patient did not feel being equality treated from working staff they will not be able to complaint about their child problems and explain their child illness in detail. As a consequence, they cannot completely satisfy from the treatment. He or she may not follow the doctor instruction or change the treatment completely.

In quality part, more than two third of the Outpatient respondents were satisfied with all components while Inpatient almost the whole respondents were satisfied with all components. However, quality of care in Outpatient had lower proportion of high satisfaction level (19.0%) in comparison to others components, yet quality of care also had lower proportion of low satisfaction level (15.5%). This result was not compatible with the study done by Amin Khan Mandokhail on patient satisfaction toward Outpatient Department (OPD) services of medicine in Banphaeo Autonomous Hospital Samut Sakhon province, Thailand where 83.56% of respondents were highly satisfied with quality of health care services (28). Yet, this

study result was accorded with the study conducted by Ny Net at OPD clinic of Wangnumyen Community Hospital Thailand (2007). His study found that patients with high satisfaction level in quality part were 24.1% (35).

5.3 Predisposing characteristics, Enabling factors, and Need factors

The minimum age of Outpatient respondents was 17 years while the maximum age was 64 years. The mean of age was 30.87 and standard deviation was 7.35. The youngest aged group ranged from 15-24 years and the oldest aged group ranged from 55 years and above. The elderly aged group ranged from 35 and above had higher proportion of high satisfaction level (23.8%) than younger aged group of 15-34 years (13.5%). Yet, age was not found significant difference association with satisfaction level by statistical test. This result was compatible with the study conducted by Doborah L (1997) on health education at OPD and patient satisfaction. His research presented that age was not found significant associated with level of patient's satisfaction (26).

With reference to gender of respondents, it was found that female had higher proportion of high satisfaction level (16.9%) than those of male (6.9%); however, the association was not proofed significant by statistical test. This study resulted was consistent with the finding of a study by Amin Khan Mandokhail (2007) on patient satisfaction toward Outpatient Department (OPD) services of medicine in Banphaeo Autonomous Hospital, Samut Sakhon province, Thailand. The result of his study concluded that sex had no connection with satisfaction level (p-value .641) (28).

Regarding educational level, the result of this study found that respondents who belonged to illiterate and primary education group had higher proportion of medium (73.8%) and high (20.2%) satisfaction level than secondary and higher education group (68.0%) and (12.5%). The association was found significant different by the test. This study result was similar to a study done by Devokata SR (1997) on patient satisfaction toward health service in Maung district, Loei province, Thailand. His study found that patients who had primary and low level of education were highly satisfied with health care services at 80.2% score of satisfaction in comparison

to patients with secondary or higher education (p-value .001) (27). From this result, it could reflex that respondents with higher educational level may had higher expectation toward health care services than those of lower educational level.

Occupation was categorized into three groups. 1=daily labor worker and farmer, 2=housewife, and 3=business, service agent and civil servant. Farmer and labor worker had higher proportion of high satisfaction level (18.8%) than housewife (16.0%) while the group of business, service agent and civil servant shared the portion of high satisfaction level of only 11.3%. Nevertheless, occupation and its association with satisfaction level were not proofed by statistical test. This result was consistent with a study done by Ny Net (2007) on patient satisfaction toward health services at Outpatient Department clinic of Wangnumyen Community Hospital, Sakaeo province (p-value=.839) (35).

In regard to family monthly income, respondents who could earn between 0-450.000 Real (0-110$) had higher proportion of high satisfaction level (26.2%) than those in the group of family monthly income from 450.0001 and above (8.6%). Family income was proofed by statistical test as having significant association with satisfaction level. This result was not accordance with a study by Kanya Asawasudsakorn (2002), studied on consumer satisfaction with services of Primary Care Unit under the 30 Bath policy in Maung District, Phatthalung province (31) and Asma Ibrahim (2008) conducted a study on patient satisfaction with health services at the Outpatient Department of Indira Gandhi Memorial hospital, Male' Maldives (29). Their study concluded that family income had no significant difference distribution to satisfaction level. Nonetheless, this study result compatible with Kosint Intavises (1995) which found that family income had relation with satisfaction (30). From this result one could also reflex that higher social class of people may had higher demand for health care services in comparison to those of lower social class.

Enabling factors consisted of four parts: geographical accessibility, availability, financial accessibility, and acceptability. The result of this study revealed that availability, financial accessibility and acceptability were found significant association with satisfaction level (p-value .000, .037, .031). This study result was coincided with Tichakorn Thahanthai (2003) studied on consumer satisfaction toward service at

Kantang Hospital (22), Upreti (1994) studied on the services of health centers (34), and Penchensky and Thomas (1989) studied the definition of access and relationship to consumer satisfaction (24). These studies supported that accessibility to services had effect on consumer satisfaction. Considering about this, improving accessibility to caregivers would help the hospital to increase their patient's satisfaction level.

Regarding health problem part, it was found that respondents who thought the condition of their children was serious had higher proportion of high satisfaction level (17.2%) than respondents with children had no serious condition (11.9%). On the other hand, health problem was not found significantly associated with satisfaction level. This study paralleled with a study conducted by Ny Net (2007) which his study revealed that health problem had no relationship with satisfaction level (35).

The total Outpatient respondents 100% expressed their expectation to all questions especially to the question concerning medical expense which respondents expected to be acceptable and technical equipment used in the hospital that was expected to be excellent. These two questions shared the largest portion of 47.6% for each from the total respondents while other 36.3% of respondents showed their expectation to acceptance of support from service providers and 34.0% to an excellent for the supply of medicine. In the case of Inpatient, majority of the respondents (87.9%) also showed their expectation to the point of excellent technical equipment, 72.7% to an excellent for supply of medicine in the hospital, and other 36.4% to an excellent of support from service providers. From this study result, it could reflex that excellent of technical equipment, acceptable of medical expense, good services from health providers, and excellent use of medicine in the hospital are an important factors respondents are in need and looking forward to get from health care service in the hospital. Respondent's satisfaction level would be increased if they could meet what they expected.

In correspond to health personnel, majority of Outpatient respondents account for 91.0% had received good services from doctor, 83.5% received fair services from pharmacist, 68.4% received good services from nurse, and 63.2% received fair services from health registrar. While in the case of Inpatient, the total

100% of respondents got good services from doctor, 84.8% got good services from nurse, 69.5% got good services from pharmacist, and 60.6% got good services from health registrar. This result was relevant to the above expectation part where majority of respondents revealed their expectation to the need of good support from health providers. And, as an article by Siti Norsazlina Haron et al, “Towards Healthcare Service Quality”, reviewed literature on usability concept in health care design, their study mentioned that satisfaction has to do with fulfillment of a desire or a need through the users’ feelings and attitudes towards the service or product (23).

CHAPTER VI
CONCLUSION AND RECOMMENDATION

6.1 Conclusion

Surgery Department of National Pediatric Hospital is the only public hospital in the capital city of Phnom Penh, which provides services to for sick children nationwide. The main purpose of this study is to determine the level of satisfaction from caregivers toward Outpatient and Inpatient health care services provided by Surgery Department. Caregivers' satisfaction was the outcome variable, which was an important component for health program evaluation. Therefore, this study would be able to benefit health manager for improving effectiveness and efficiency of the hospital in the future as well as for further improving the state of wellbeing of children as a whole.

This study was designed to assess the level of satisfaction from caregiver toward Outpatient and Inpatient health services of Surgery Department and to find out the association between dependent and independent variables. The dependent variables of this study concerned with three components: convenience, courtesy and quality of care. Independent variables composed of predisposing factors such as age, gender, education, occupation, and family income; enabling factors consisted of geographical accessibility, availability, financial accessibility and acceptability; and need factors included health expectation, health problem, and health personnel.

A structure questionnaire was used in the study for data collection instrument. There are five sections in this questionnaire: the general information of individual caregiver, enabling factors, need factors, caregiver's satisfaction toward health services, and caregiver's suggestions or comments related to the improvement of health services at Surgery Department. Cronbach's alpha coefficient was applied for reliability testing of questionnaire and gave the result with 0.80 for satisfaction part. The number of required participants was calculated by the Cocrhan (1997) formula and systematic random sampling was employed to select the participants from General Pediatric Surgery consultation. There are four data

collectors for this study and the data collection was performed in the full month of March 2014. There were 245 respondents participated in this study. The data was analyzed by SPSS version 16. The result presented by using frequency, percentage, minima, maxima, mean, and standard deviation. Chi-square was also performed for determining the association between dependent and independent variables.

The result of this study revealed that the age of caregivers from Outpatient was between 17 to 64 years while Inpatient was between 21 to 62 years. The mean and SD for Outpatient were 30.87 and 7.35 while Inpatient were 35 and 10.51. Majority of Out and Inpatient respondents were at the age from 24 to 35 which account for 65.6% and 33.3%. More than eighty percent of the total respondents were female participated in this study which account for 86.3% from Outpatient and 90.9% from Inpatient. Majority of the Outpatient respondents account for 48.6% had completed education to secondary school while majority of Inpatient respondents account for 48.5% attained education to primary school. Related to occupation, larger part of the Outpatient respondents composed of 38.2% was housewife while Inpatient 42.4% was farmer. The average monthly income of caregivers was classified into five groups. Majority of respondents both from Out and In-patient (34.4%, 48.5%) could earn their family monthly income from 600.0001 and above (150$ and above). The relationship with sick children of Outpatient respondents account for 77.4% was mother. Likewise in the case of Inpatient, 75.8% of respondents were mother of the children. Plus, majority of sick children had at least from one to three siblings.

For enabling part, most of the total respondents of Outpatient had access to health care services at 99.0%. By looking at each item, 97.2% of Outpatient respondents had acceptance to health personnel, 94.8% to availability of health care service, 71.7% to ability to geographically access to hospital, and 52.8% to financially access to health care cost expense consecutively. In the case of Inpatient, out of the total respondents account for 93.2% had access to health care services. Plus, the whole respondents at 100% had acceptance to health personnel and availability of health care services while at 81.8% had geographically access to health care and respectively at 36.4% had ability to financially afford for health care expense.

In health problem part, almost half of the Outpatient respondents (49.1%) had previous time visiting Surgery Department while Inpatient 51.5% of them had visited Surgery Department. Majority of the respondents of Outpatient (68.4%) and Inpatient (72.7%) thought health condition of their children was serious. The main reason of seriousness for Outpatient respondents was the fear that disease could bring lifelong disability (23.1%) while for Inpatient were the fear lifelong disability and life loss of children (18.2%, 18.2%). In addition to this, greater part of Outpatient respondents visited Surgery Department for General Pediatric Surgery (72.8%), Traumato-Orthopedic Osseous (12.3%), Surgery Plastic (8.5%), Traumato-Orthopedic Clubfoot (3.8%) and Abdomen (2.8%). Likewise, more than half of respondents of Inpatient (60.5%) visited Surgery Department for diseases related to General Pediatric Surgery, 27.3% for Plastic Surgery, and each of 6.1% for Traumato-Orthopedic Osseous, and Traumato-Orthopedic Clubfoot.

The result of this study showed that the total respondents 100% expressed their expectation to all questions especially to the question concerning medical expense which 47.6% of respondents expected to be acceptable, the technical equipment used in the hospital which 47.6% expected to be excellent, and the support from service providers which 36.3% expected to be acceptable. In the case of Inpatient, majority of the respondents (87.9%) also revealed their expectation to the point of excellent technical equipment, 72.2% to the excellent of medicine supply in the hospital and other 36.4% to the expectation of an excellent for support from service providers.

In correspond to health personnel services, out of the whole respondents more than ninety percent (91.0%) got good services from doctor while other 83.5% got fair services from pharmacist, 68.4% got good services from nurse and 63.2% got fair services from health registrar. Whereas, from the total of Inpatient respondents, 100% of them got good services from doctor, 84.8% got good services from nurse, 69.5% got good services from pharmacist and 56.7% got good services from health registrar.

Overall percentage of high satisfaction of Outpatient was 15.6%, medium satisfaction was 70.2%, and low satisfaction was 14.2%. While Inpatient, high satisfaction was 24.2%, medium satisfaction was 57.6% and low satisfaction was 18.2%. The low proportion of high satisfaction level might have resulted among other reasons (the high criteria of 74.29 (87.4%) of Outpatient and 90.42 (95.2%) of Inpatient) for classification of satisfaction level.

Regarding the distribution of satisfaction level, it was found that caregivers of Outpatient were more satisfied with the courtesy of health providers (21.2%), convenience of health services (20.7%), and quality of medical care (19.0%) respectively. In the case of Inpatient, caregivers were also more satisfied with courtesy of health providers (30.3%), quality of medical care (27.3%) and convenience (24.2%).

The relationship between independent variables and satisfaction level was analyzed by Chi-square test. The result of this study found that there was significant difference association between educational level, family income, availability of services, financial accessibility and acceptability to health care providers while the other variables were not found having significant association with satisfaction level.

Caregivers provided suggestions and comments which were mostly concern with medical expense, information center, cleanliness of toilet and places, interpersonal manner of service providers, working times of doctor and number of required doctor especially from Plastic Surgery and Traumato-Orthopedic care services.

6.2 Recommendations

Recommendation for action

This study brings the number of recommendations for contributing to the improvement of the health care services at Surgery Department of National Pediatric Hospital as follows:

1. Waiting time for receiving services and number of specialist doctor has been among the concern of caregivers. In this regards, the hospital should consider

more about working day times and recruitment of more doctor especially in specialized area in order to reduce waiting time seeing doctor. The hospital should also pay more attention to the regulation on commencement of working hours and put more effort to reinforce the implementation of this regulation.

2. Interpersonal manner of health providers also should be considered to improve as much as possible. Two ways communication with politeness and friendliness should be applied during the provision of health care. Good communication model should be established so that it will help to increase caregiver's satisfaction level.

3. This study also pointed out that caregivers concerned more with medical expense. The number of patient paid out of pocket money was more than those without paying anything. Medical expense is not affordable for most of caregivers. For this reason, their satisfactions need to be considered and improved by carefully discuss with them on their ability to pay matching with their need rather than their demand in the case their ability to pay is limited. In addition, the price of medical expense should be post in the front in order to keep caregivers informed for the sake of transparency, and this of course will help the hospital to satisfy his customers.

Recommendation for future research

1. Qualitative should be conducted together with quantitative for future study on satisfaction with health care services. Open questions are very essential to cross check the satisfaction level of caregivers. Thus, interviewers should encourage caregivers to answer the questions as much as possible.

2. Further study on caregivers' satisfaction should be performed in parallel with job satisfaction of health providers which will be useful to cross check with caregivers' dissatisfaction and help solving problems accordingly.

3. A study on larger number of Inpatient respondents and additional component of satisfaction part from Aday and Anderson such as co-ordination, medical information, out-of pocket cost, interpersonal manner, and physical

environment are recommended. It will mainly useful to understand the need and concern of caregivers and fulfilling it appropriately.

6.3 Study Limitation

The result of the study may present limitation for its generalization for the results of the questionnaire relied on interview data, especially the respondent's answer that may recall bias. This demonstrates the significant limitation, as there is no biological and scientific method conducted on validation of his or her response. Plus, there were only 212 of Outpatient respondents included to determine the association with satisfaction level which is less than the sample size calculated (245). The limited number of Inpatient respondents and time limitation in conducting this research may also affect the result of this study.

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APPENDIX

APPENDIX A

QUESTIONAIRE

Satisfaction from Caregivers of Children under age of Five for Surgery Department Health Services at National Pediatric Hospital, Cambodia.

This questionnaire is prepared for Master of Public health (MPH) program thesis writing purpose. The questionnaire is constructed for determine your satisfaction towards services provided by the hospital. Your responses will be kept secret and will not be exposed for any other purposes. Therefore, we need your full cooperation and honest answers.

Date for data collection:_____/_____/_____ (D/M/Y)

Times of data collection:_____to_____

Part I: Predisposing factors of individual caregiver:

1. Age----------Years
2. Gender
    1. ☐ Male
    2. ☐ Female
3. What is your relationship with this child?
    1. Mother
    2. Father
    3. Others (please specify) ----------
4. How old is this child? ----------years
5. What kind of work are you doing?
    1. Daily labor
    2. Business
    3. Housewife
    4. Employee
    5. Service
    6. Others (please specify) ----------

6. How much is your monthly income? ---------- Reil.
7. How much is your family monthly income? ----------Reil.
8. What is the highest class you have completed?
    1. Illiterate
    2. Primary
    3. Secondary
    4. Bachelor degree
    5. Others (please specify) ----------
9. How many sibling of this child? ----------

Part II: Enabling factors	Yes	No
1. Geographic accessibility		
1. You knew this hospital by yourself.		
2. You knew this hospital by other people suggestion.		
3. The traveling time spent for visiting this Surgery Department was acceptable.		
4. There was enough means of transportation for coming from home to this health care service.		
5. You could spend one day time for traveling from home to the health care service, getting consulted, and going back home.		
2. Availability		
6. There was adequate examining room and proper for patient.		
7. There was adequate seating in the examining room.		
8. There was adequate number of health workers.		
9. There was adequate medical equipment and proper to use.		
3. Financial accessibility		
10. You could afford for the transportation cost.		
11. You have to pay for the cost of medical care more than you can afford.		

4. Acceptability	Yes	Not sure	No
12. You believed in the suggestion the doctor advised.			
14. The doctor seemed very knowledgeable.			
15. You had confidant the nurse to take care.			
16. You accepted the doctor's suggestion.			
17. You accepted the nurse's suggestion.			

Part III: Need factors:

1. Health problem

1. Have you ever been visited this Surgery Department before?

1. ☐ Yes 2. ☐ No

If yes, how many times have you visited in this Surgery Department ----------

2. What is the current health problem of your child that brings him/her to this hospital today?

---

3. Before arriving at this health care service, what did you think about the condition of your child's illness?

1. ☐ Serious 2. ☐ Not Serious

If you mention (1), please state your reasons,

---

2. Health expectation

Before utilizing the hospital services, what was your expectation toward the following issues?

4. Cost of the service-

1. No expectation
2. Free of charge
3. Acceptable (reasonable)
4. High

5. Support of the Service providers (Doctors, Nurses, Kenesitherapist, Lab technicians, Pharmacists, Supportive staff etc.)

1. No expectation
2. Fair
3. Acceptable (reasonable)
4. Excellent

6. Technical equipment of the hospital

1. No expectation
2. Fair
3. Acceptable (reasonable)
4. Excellent

7. Supply of medicine-

1. No expectation
2. Fair
3. Acceptable (reasonable)
4. Excellent

3. Health personnel service

8. During your time of service delivery, who did you meet?

1. ☐ Office registrar
2. ☐ Nurse
3. ☐ Doctor
4. ☐ Kinesitherapist
5. ☐ Lab technician
6. ☐ Pharmacist
7. ☐ Supportive staff

9. What do you think toward service providers during their time spent with you?

Office Registrar Respect-

How did office registrar greet you at registration office?

1. Not nicely
2. Nicely
3. Very nicely

10. Attention

a. Do you feel the office registrar listened to you attentively?

1. Not attentively
2. Attentively
3. Very attentively

b. Do you receive the cost information before your get services?

1. Not at all
2. Partially
3. Fully

11. Doctors Respect-

How did doctor greet you when you entered into doctor's room?

4. Not nicely
5. Nicely
6. Very nicely

12. Attention

a. Do you feel the doctor listened to your child problems attentively?

4. Not attentively
5. Attentively
6. Very attentively

b. Do you feel that doctor has given you opportunity to speak freely about child problem?

1. Not at all
2. Partially
3. Fully

c. Did you get enough explanation about the necessity of laboratory tests?

1. No
2. Partially
3. Yes

13. Privacy –

At the time of service delivery, do you think that the doctor has maintained your privacy?

a. History talking

1. No
2. Partially
3. Yes

b. Physical examination

1. No
2. Partially
3. Yes

14. Nurses Respect-

How did they greet you when you entered into the room?

1. Not nicely
2. Nicely
3. Very nicely

15. Attention

a. Do you feel they listened to your questions attentively?

1. Not attentively
2. Attentively
3. Very attentively

b. Do you feel they have given you opportunity to speak freely about your child problem?

1. Not at all
2. Partially
3. Fully

16. Kinesitherapist Respect-

How did they greet you when you entered into their room?

1. Not nicely
2. Nicely
3. Very nicely

17. Attention-

a. Do you feel they have given you opportunity to speak freely about your child problem?

1. Not at all
2. Partially
3. Fully

b. Did you receive the explanation about the purpose of kinetherapy?

1. Not at all
2. Partially
3. Fully

18. Lab technicians Respect-

How did they greet you when you entered into their room?

4. Not nicely
5. Nicely
6. Very nicely

19. Attention

a. Did you receive the explanation about the purpose of the test?

1. Not at all
2. Partially
3. Fully

20. Pharmacists Respect-

How did they greet you when you have reached the pharmacy counter?

1. Not nicely
2. Nicely
3. Very nicely

21. Attention

Did you feel that they have given clarification about your child dosage of medicine?

1. Not at all
2. Partially
3. Fully

22. Supportive staff Respect-

(Gate keeper etc.)

How did they treat you?

1. Not nicely
2. Nicely
3. Very nicely

23. Attention

Did you feel they have listened to you and helped you?

1. Not at all
2. Partially
3. Fully

24. After medical evaluation, have the doctor told you the diagnosis of your child?

1. ☐ Yes 2. ☐ No

If you answer (1) what is the diagnosis of the child? ----------

Part IV: Satisfaction of services

Based on the reaction of patient to each statement below, please tick (√) in the appropriate box to mark correctly the satisfaction level of caregiver with the following statements:

Scale: 5= Very satisfied, 4= Satisfied, 3= Neutral, 2= Dissatisfied, 1= Very dissatisfied

Statements	Satisfaction level				
	1	2	3	4	5
1. Convenience					
1. The ease of finding the Surgery Department for you.					
2. The appropriateness of arrangement for waiting area for you.					
3. The availability of required doctor during the working hours.					
4. The availability of required nurse during the working hours.					
5. The a mount of availability of medicine prescribed by doctor from the pharmacy section.					
6. The time waiting for the required services for you.					
7. The cleanliness of the toilet for you.					

8. There is a clear drawing picture demonstrating you to other health care services.					
2. Courtesy					
9. Introduction from doctors and nurses to you about themselves before taking history or examination.					
10. The permission of doctors from you before examining your child.					
11. Attentiveness from doctors and nurse while answering your questions.					
12. The staff regards you without considered your socio-economic status.					
3. Quality					
13. You understand about your child illness and treatment after seeing the doctor.					
14. You understand the explanation of how to use medicine prescribed by doctor.					
15. The willingness of doctors and nurses to treat your child.					
16. The doctor and nurse examined your child in detail.					
17. The skill and experience of doctors in Surgery Department who treat your children.					
18. The skill of nurses in nursing care for you.					
19. The doctor provides you choices of treatment for your child.					

Part V: Suggestions or comments for improvement of the services

1. Are you satisfied with this Surgery Department existing services?

1. Satisfied

2. Neutral

3. Dissatisfied

If you mention (3), you can give your dissatisfied point-

---

2. For the improvement of Surgery Department service do you have any advice or suggestions?

---

3. In case need of health care for your child, will you use this health services again?

Yes, because ----------

No, because ----------

Thanks you for your cooperation.

Name of the interviewer: ----------

Signature of the interviewer: ----------

APPENDIX B

ACTION PLAN

Number	Activities	2013					2014							
		June- Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	August
1	Topic selection													
2	Literature review													
3	Proposal writing													
4	Proposal presentation													
5	Development of tool and fertilization of proposal													
6	Research tool try out (Pilot) -test validity and reliability													
7	Revise the tool													
8	Ethical consideration													
9	Data collection													
10	Data analysis and interpretation													
11	Report writing													
12	Presentation and publication													

APPENDIX C

Association between Dependent and Independent variables of IPD

Independent variables	Satisfaction level			p-value
	Low N(%)	Medium N(%)	High N(%)	Total
1. Age				**.014**
15-34	3(16.7)	14(77.8)	1(5.5)	18(100.0)
35 and above	3(20.0)	5(33.3)	7(46.7)	15(100.0)
2. Gender				**.184**
Male	0(0)	1(33.3)	2(66.7)	3(100.0)
Female	6(20.0)	18(60.0)	6(20.0)	30(100.0)
3. Educational level				**.414**
Illiterate- Primary school	2(10.5)	12(63.2)	5(26.3)	19(100.0)
Secondary school and higher	4(28.6)	7(50.0)	3(21.4)	14(100.0)
4. Occupation				**.579**
Worker and farmer	3(14.3)	13(61.9)	5(23.8)	21(100.0)
Housewife	2(25.0)	3(37.5)	3(37.5)	8(100.0)
Business, service agent and civil agent	1(25.0)	3(75.0)	0(0)	4(100.0)
5. Family income				**.014**
0-450.000	3(20.0)	5(33.3)	7(46.7)	15(100.0)
45.001-and above	3(16.7)	14(77.8)	1(5.5)	18(100.0)
6. **Geographical accessibility**				**.382**
High	4(14.8)	17(63.0)	6(22.2)	27(100.0)
Moderate and poor	2(33.3)	2(33.3)	2(33.3)	6(100.0)
7. Availability				**Constant**
High	6(18.2)	19(57.6)	8(24.2)	33(100.0)
Moderate and poor	0(0)	0(0)	0(0)	0(0)
8. Financial accessibility				**.049**
High	3(25.0)	9(75.0)	0(0)	12(100.0)
Moderate and poor	3(14.3)	10(47.6)	8(38.1)	21(100.0)
9. Acceptability				**Constant**
High	6(18.2)	19(57.6)	8(24.2)	33(100.0)
Moderate and poor	0(0)	0(0)	0(0)	0(0)
10. Health problem				**.680**
Serious	5(20.8)	14(58.4)	5(20.8)	24(100.0)
Not serious	1(11.1)	5(55.6)	3(33.3)	9(100.0)

VITA

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