UNIVERSITI SAINS MALAYSIA

PARENTS' SATISFACTION OF CARE IN MEDICAL PEDIATRIC WARD AT HOSPITAL UNIVERSITI SAINS MALAYSIA (HUSM)

by

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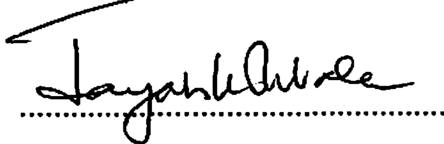
Dissertation submitted in partial fulfillment of the requirements for the degree of Bachelor of Health Sciences (Nursing)

April 2009

CERTIFICATE

This is to certify that the dissertation entitled 'Parents' Satisfaction of Care in Medical Pediatric Ward at Hospital Universiti Sains Malaysia (HUSM) is the bonafide record of research work done by Norelessa Binti Abdul Aziz, 87445 during the period of July 2008 to April 2009 under my supervision. This dissertation submitted in partial fulfillment for the degree of Bachelor of Health Sciences (Nursing). Research work and collection of data belongs to Universiti Sains Malaysia.

Supervisor



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PARENTS' SATISFACTION OF CARE IN MEDICAL PEDIATRIC WARD AT HOSPITAL UNIVERSITI SAINS MALAYSIA (HUSM)

ABSTRACT

Patient satisfaction is a component of health care quality and is increasingly being used in many countries in the world. It is because of its role in quality assurance and continuous quality improvement systems. Views of parents take on increased importance because children are too young to express their own judgment to evaluate the health care services. This quantitative study was conducted to explore the level of parents' satisfaction of care in medical pediatric ward at Hospital Universiti Sains Malaysia (HUSM). This research is a cross-sectional, descriptive study using self-administer questionnaire. A total of 45 parents were recruited using purposive sampling from medical pediatric ward, HUSM. The questionnaire consists of two parts: parts A consists of parents' demographic and child health-related data, parts B consists of 47 items of quality of care. Data was analyzed using Statistical Package for Social Science (SPSS) version 12 software. Findings show that four relative higher satisfaction score noted in staff work environment, followed by staff attitudes, caring process, and medical treatment. Whereas accessibility, information illness, information routines, and participation were in lower score relatively. Findings also shows that, there was no significant mean different between parents' satisfaction score with education level ($p = 0.058$) and frequency of child hospitalization category ($p = 0.745$). Based on the result, can be conclude that the less satisfied services need to be emphasized and suitable actions should be implemented. This will help to increase the quality of patient care in medical pediatric ward, HUSM.

KEPUASAN HATI IBU BAPA TERHADAP PENJAGAAN ANAK DALAM WAD PERUBATAN PEDIATRIK DI HOSPITAL UNIVERSITI SAINS MALAYSIA (HUSM)

ABSTRAK

Kepuasan hati pesakit merupakan satu komponen kualiti penjagaan kesihatan dan telah meningkat penggunaanya di kebanyakan negara di dunia. Hal ini kerana peranannya dalam jaminan kualiti dan sistem pembaikian kualiti berterusan. Pandangan ibu bapa dianggap penting kerana kanak-kanak sangat muda untuk menyatakan pendapat sendiri untuk menilai perkhidmatan penjagaan kesihatan. Kajian kuantitatif ini dijalankan untuk meninjau tahap kepuasan hati ibu bapa terhadap penjagaan anak dalam wad perubatan kanak-kanak di Hospital Universiti Sains Malaysia (HUSM). Kajian jenis keratan-rentang, deskriptif ini menggunakan borang soal selidik yang dijawab sendiri. Seramai 45 ibu bapa direkrut menggunakan persampelan bertujuan daripada wad perubatan kanak-kanak, HUSM. Borang soal-selidik mengandungi dua bahagian: bahagian A mengandungi data demografi ibu bapa dan data berkaitan kesihatan kanak-kanak, bahagian B mengandungi 47 item kuaiti penjagaan ibu bapa. Data-data telah dianalisis menggunakan perisian *Statistical Package for Social Science (SPSS)* versi 12. Hasil kajian menunjukkan bahawa empat skor puas hati lebih tinggi relatif ialah persekitaran kerja staf, diikuti dengan sikap staf, proses prihatin, dan rawatan perubatan. Sementara itu, ketercapaian, pengetahuan berkaitan penyakit, pengetahuan berkaitan rutin dan penyertaan adalah dalam skor lebih rendah secara relatif. Hasil kajian juga menunjukkan bahawa tidak terdapat perbezaan yang signifikan antara skor kepuasan ibu bapa dengan tahap pendidikan (p = 0.058) dan kategori kekerapan hospitalisasi kanak-kanak (p = 0.745). Berdasarkan keputusan, dapat disimpulkan bahawa perkhidmatan yang kurang puas hati perlu dititikberatkan dan tindakan yang sesuai patut dilaksanakan. Ini akan membantu meningkatkan kualiti penjagaan pesakit di wad perubatan kanak-kanak, HUSM.

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Quality is a concept not easily defined. Webster's Ninth New Collegiate Dictionary (1990) as cited in Ygge (2004) describes quality as "degree or grade of excellence". During the last few decades there has been a growing interest in defining and measuring quality of care. Avedis Donabedian, one of the forerunners of research in this area, described a three-part approach to assessing quality of care, based on an analysis of structure, process and outcomes. (Donabedian (1988) as cited in Ygge, 2004).

Structure refers to the settings in which care is offered, including manpower, material resources, and organizational structure. The process describes what is involved in the patient's seeking care and what occurs during the care exchange. Outcomes refer to the effects of the care on the receivers. Donabedian (1988) as cited in Ygge (2004) also describes two elements in the performance of practitioners, the technical and the interpersonal; "the interpersonal process is the vehicle by which technical care is implemented and on which its success depends".

The patient's judgement of the quality of care in all its aspects, but particularly concerning the interpersonal process, is defined by Donabedian (1980) as cited in Ygge (2004) as an outcome of care. According to Kitson (1989) as cited in Ygge (2004), quality of care in the nursing profession begins and ends with the patient's experience with health care services.

When measuring patients' judgements of care, the concept of patient satisfaction is often used. Patient satisfaction is a component of health care quality and is increasingly has being used in many countries in the world. This is because of its role in quality assurance and continuous quality improvement systems. Ygge and Arnetz (2004) also had similar opinions and accepted patient satisfaction as an indicator of quality of care. Corner and Nelson (1999) defined patient satisfaction as the perceptions of patient needs and expectations being met. Needs and satisfaction cannot be separated but are interrelated to each other. When patients received and meet enough needs during hospitalization, they will express satisfaction.

For adult patient, they can express their satisfaction and dissatisfaction about the received services and request for their needs on their own but not for children. A child has no position to fully comprehend the necessity and usefulness of its admission to a hospital. They are too young to express their own judgment on the health care services provided to them. In this situation, the views or perspectives of parents take on increased importance to evaluate the health care services in order to fulfill their needs. Ygge and Arnetz (2004) also agree that parents' perspectives are important to evaluate pediatric health care services.

Several researchers (Mitchell-Dicenso, Guyatt, Paes, Blatz, Kirpalani, Fryers, Hunsberger, Pinelli, Van Dover & Southwell (1996); Conner & Nelson (1999); Ygge & Arnetz, 2001) have studied parental participation and agreed that parents' presence in the hospital and their participation in the care given have been recognized to be important and necessary for the child and for the parents themselves. The child feels more secure and emotional stress was reduced.

Previous studies have identified essential problems regarding quality of care that are important enough to impact satisfaction reports such as communication and information (Baine, Rosenbaum & King, 1995), pain management (Blesch & Fisher,

1996), caring process, participation in the child's treatment, staff attitudes, staff work environment (Ygge & Arnetz, 2001).

Communication is the most reported domain of satisfaction with pediatric health care services (Conner & Nelson, 1999). Several dimensions of communication have been identified such as open and honest dialogue, sharing of factual information, providing complete information and preparing parents for uncertainty. Based on study done by Homer, Marino, Cleary, Alpert, Smith, Ganser, Brustowicz, and Goldmann (1999) found that communication is one of the components of pediatric health care that correlated most strongly with overall parent ratings.

1.2 Problem Statement

Hospital management is responsible for quality improvement. It has begun to recognize that patients' and parents' perceptions of quality of care should be a part of the process of delivering a high quality of care. To be a hospital that can attract patients and hospital staff, the views of patients, parents and relatives is one key for success (Scott, Sochalski & Aiken, 1999, Aiken, Havens & Sloane (2000) as cited in Ygge, 2004). Without satisfied patients, parents and relatives, health care has not achieved its goal (Vouri (1991) as cited in Ygge, 2004).

For adult patient, they can express their satisfaction and dissatisfaction about the received services and request for their needs on their own but not for children. A child has no position to fully comprehend the necessity and usefulness of its admission to a hospital. They are too young to express their own judgment on the health care services provided to them. In this situation, the views or perspectives of parents take on increased importance to evaluate pediatric health care services in the process of delivering a high quality of care the health care services in order to fulfill their needs. Ygge and Arnetz (2004) also agree that parents' perspectives are important to evaluate pediatric health care services.

Besides, limited knowledge available about parents' perceptions of and experience with pediatric care provide reason enough to do this research process.

Donabedian's Model was used as conceptual framework in this study. This model has been used in many studies in several countries as conceptual framework to evaluate parent satisfaction with quality of care at the hospital includes Ygge and Arnetz (2001). They used in their study entitled 'Quality of Paediatric Care: Application and Validation of an Instrument for Measuring Parent Satisfaction with Hospital Care'. This model has been developed by Avedis Donabedian (1966) and included the elements of structure, process and outcomes (Ruane & Ruane, 1997). This model will be explained further in Chapter 2.

1.3 Objectives of the study

1.3.1 General Objective

The objective of this study was to explore the level of parents' satisfaction of care in medical pediatric ward at HUSM.

1.3.2 Specific Objectives

1. To identify the parents' satisfaction level of quality of care in medical pediatric ward at HUSM
2. To determine overall parents' satisfaction grade by using Visual Analog Scale (VAS) in medical pediatric ward at HUSM
3. To determine the relationship between parents' satisfaction score and parents' education level in medical pediatric ward at HUSM
4. To determine the relationship between parents' satisfaction score and frequency of child hospitalization category in medical pediatric ward at HUSM

1.4 Research Questions

1. What is the parents' satisfaction level of care in medical pediatric ward at HUSM?
2. What is the overall parents' satisfaction grade by using Visual Analog Scale (VAS) in medical pediatric ward at HUSM?
3. What is the relationship between parents' satisfaction score and parents' education level in medical pediatric ward at HUSM?
4. What is the relationship between parents' satisfaction score and frequency of child hospitalization category in medical pediatric ward at HUSM?

1.5 Hypothesis

1.5.1 Parents' education level

H_O: There is no mean difference between parents' satisfaction score and education level

H_A: There is mean difference between parents' satisfaction score and education level

1.5.2 Frequency of child hospitalization category

H_O: There is no mean difference between parents' satisfaction score and frequency of child hospitalization category

H_A: There is mean difference between parents' satisfaction score and frequency of child hospitalization category

1.6 Definition of Terms (Conceptual)

1.6.1 Parent

Parent was defined as father or mother of a person. (Cambridge Dictionaries Online, 2008). Parent in this study means father or mother of the child and stay with the child during hospitalization for at least 2 days or more.

1.6.2 Satisfaction

According to Cambridge Dictionaries Online (2008), satisfaction means fulfillment of needs or desire. In this study, satisfaction means fulfillment of needs or desire of parents towards the care for their child during his or her hospitalization. Satisfaction of care was rated on four-point Likert-type scale by parents of the child except for two questions in medical treatment domain. The final question was asked parents to give their overall rating of the quality of care at the ward for present hospitalization on Visual Analog Scale (VAS) from 1 (very satisfied) to 10 (very not satisfied).

1.6.3 Care

Care was defined as the process of protecting and looking after someone or something (Cambridge Dictionaries Online 2008). There were eight domains characterizing care in this study, which were information-illness, information-routines, accessibility, medical treatment, caring process, staff attitudes, participation and staff work environment.

1.6.4 Medical pediatric ward

A ward for pediatric patients, especially with medical problems will be admitted in this ward. Their ages were actually from 31 days to 12 years old, but the ward also accept old cases patient, easy for doctor to know the progression of their patient's health. In HUSM, medical pediatric ward was refers to 6 Selatan ward.

1.7 Significance of the Study

The measurement of patient experiences and satisfaction with health care is now recognized as an important component in the evaluation of health care interventions and for assessing service quality. Patients have a wealth of information regarding the functioning of social service programs and gathering their views provides valuable insights about how they experience services that has been provided to them. With this information,

service providers can continue practices to which patients are responding favorably and change those aspects of services that patients feel are not helpful. In pediatric care, the views of parents are increasingly sought for evaluations of pediatric care quality since children are too young to express their own judgment.

This study is very important to be conduct because if not, we may not be able to explore the level of parents' satisfaction of pediatric care or services that are provided to the child and parents. In addition, we will not know the problem areas in the ward and changes cannot be implemented. The lack of focus on developing measures of parental experience with pediatric inpatient care also may reflect the relative infrequency of hospitalization for the pediatric population over year.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter explored the concept of quality of care, concept of satisfaction in health care, and patient and parents' satisfaction of care. It also explored the instruments used in this study and its domains. Furthermore, this chapter explored the parents' need during child hospitalization. Relationship of parents' satisfaction score between parent's education level and frequency of child hospitalization category in previous studies also explored. Finally, it described details about conceptual framework used in this study.

2.2 Quality of care

Quality is a concept not easily defined. Webster's Ninth New Collegiate Dictionary (1990) as cited in Ygge (2004) describes quality as "degree or grade of excellence". During the last few decades there has been a growing interest in defining and measuring quality of care.

Avedis Donabedian, one of the forerunners of research in this area, described a three-part approach to assessing quality of care, based on an analysis of structure, process and outcomes. (Donabedian (1988) as cited in Ygge, 2004). Structure refers to the settings in which care is offered, including manpower, material resources, and organizational structure. The process describes what is involved in the patient's seeking care and what occurs during the care exchange. Outcomes refer to the effects of the care on the receivers. Donabedian (1988) as cited in Ygge (2004) also describes two elements

in the performance of practitioners, the technical and the interpersonal; "the interpersonal process is the vehicle by which technical care is implemented and on which its success depends".

The patient's judgement of the quality of care in all its aspects, but particularly concerning the interpersonal process, is defined by Donabedian (1980) as cited in Ygge (2004) as an outcome of care. According to Kitson (1989) as cited in Ygge (2004), quality of care in the nursing profession begins and ends with the patient's experience with health care services.

2.3 The concept of satisfaction with health care

When measuring patients' judgements of care, the concept of patient satisfaction is often used. Korsch, Gozzi & Francis (1968) as cited in Ygge (2004) launched the hypothesis that a relationship existed between the nature of the verbal communication between the doctor and the patient and the outcome in terms of patient satisfaction. Larsen and Rootman (1976) as cited in Ygge (2004) found that patients who are more involved in their care feel more satisfied with the care and are more likely to comply with treatment, and as a consequences have better outcomes.

Donabedian (1980) as cited in Ygge (2004) stated that client satisfaction is of fundamental importance as a measure of quality of care since it gives information about the provider's success at meeting those client's values and expectations on which the client is the ultimate authority. The measurement of satisfaction is, therefore, an important tool for research, administration and planning.

Today, patient satisfaction is considered an important indicator of care quality. Patients can play an important role in defining what constitutes quality by determining what values should be associated with different outcomes. Vuori (1991) as cited in Ygge (2004) states that patient satisfaction is more than an indicator or a measure of the quality of care.

If health is a desired outcome of care, patient satisfaction is an essential part of the quality of care. It does not matter whether satisfaction reflects the competence of the physician or the nursing care. If patients are dissatisfied, health care has not achieved its goal (Vuori (1991) as cited in Ygge, 2004).

2.4 Patient and parents' satisfaction of care

When measuring patient's judgments of care, the concept of patient satisfaction is often used. Corner and Nelson (1999) defined patient satisfaction as the perceptions of patient needs and expectations being met. According to Westawey, Rheeder, Van Zyl and Seager (2003), measurement of patient satisfaction fulfils three distinct functions which are understanding patients' experiences of health care, identify problems in health care and evaluation of health care. Sitzia and Wood (1997) has emphasized that evaluation is regarded as the most important dimension.

For adult patient, they can evaluate services that are provided to them but for the child, they need someone to evaluate the services of care that are received. It is because they are too young to express their own judgment on the health care services that are provided to them. Since most parents are person who are very close and always with them, parents' perspectives are take on increase importance to evaluate health care services in pediatric care (Ygge & Arnetz (2001); Conner & Nelson (1999), Mitchell-Dicenso et al., 1996).

2.5 Instrument

The instrument that was used in this study is Quality of Care Parent Questionnaire (QCPQ) 2002, also known as the Pyramid Parent Questionnaire. This questionnaire has been used on two occasions in Sweden, first in 1999 and again 2001, to evaluate parent satisfaction with quality of care at the hospital. The measurement instrument has

demonstrated good validity and reliability (Ygge & Arnetz, 2001). All questions are directed to the parents of patients rather than to the patient themselves. The questionnaire has been classified into eight domains as followed:

2.5.1 Information related illness and routines

Previous research has identified essential problems regarding quality of care, mainly related to information and communication with the parents (Ammentorp, Rormann, Mainz & Larsen, 2001; Homer et al., 1999). Parents seem more dissatisfied if the information and communication do not meet their expectations (Homer et al., 1999).

Schaffer, Vaughn, Kenner, Donohue and Longo (2000) have found that parents wanted caregivers who listened and answered their questions, thus demonstrating the importance of talking to them and of maintaining an open line of communication.

According to study done by Pagnamenta and Benger (2007) found that one of the most important factors in determining overall satisfaction with care in a children's emergency department were a clear explanation of the child's diagnosis and treatment plan. It means that parent want to get enough information about their child's illness and prescribed treatment to their child.

2.5.2 Accessibility

Parents seems more satisfied if they do not have difficulties to access or contact hospital, doctor or nurses to ask about their children (Ygge & Arnetz, 2001). Ygge and Arnetz (2001) have conducted a study at one university hospital and found accessibility as the lowest rating, indicated that services in accessibility should be improved.

2.5.3 Medical treatment

Ygge and Arnetz (2001) have constructed 4 questions of medical treatment about pain treatment, staff competence and staff skill. Study done by Simons (2002) aim to explore both nurses and parents' perceptions of parental involvement in their child's postoperative pain management by using both qualitative and quantitative methods. The

findings demonstrated that nurses perceived that parents were receiving more support from them than that which parents felt they were receiving. Parents were more satisfied with their child's pain management and children received more analgesia when they were cared for by a lower grade nurse.

2.5.4 Staff attitudes

Ygge and Arnetz (2001) have constructed eight items for staff attitudes domain. The items asking about whether staff is treated kindly, taken care of, take seriously, and treated with respect of child and parent. Schaffer et al. (2000) found that parents wanted nurses to treat them with respect and to demonstrate support and sensitivity.

2.5.5 Caring process

Mitchell-Dicenso et al. (1996) had identified a caring personality as an important domain in parent satisfaction. Schaffer et al. (2000) also have similar findings. Caring, such as a sympathetic approach, an opportunity to talk and be heard and an effort to make parents feel better, has been reported by parents to be favorable approaches to care delivery that impact perceived satisfaction of care (Strauss, Sharp, Lorch and Kachalia, 1995).

2.5.6 Participation

Parental participation in the pediatric care has been recognized to be important and necessary for the child and for the parents themselves. The child feels more secure and parent's emotional stress is reduced. But sometimes, involvement in care can also be stressful for parents, particularly when children are required to undergo examinations and treatments that can be unpleasant (Callery, 1997). The parents were empowered when they were full participate in their child's care. Satisfaction was found to be significantly higher in parents who were involved in the decision making process in the management of their children (Conner & Nelson, 1999).

2.5.7 Staff work environment

Ygge and Arnetz (2004) have conducted semi structured interviews with 14 parents of chronically ill children. They have found that lack of support from the hospital staff, not dared and hesitate to bother them. All parents emphasized that most of the staff was fantastic, admired for the work, caring for sick child. They also found that hospital staffs seem to be busier than previously. Parents felt that lack of time from staffs was not only because of stress, but rather was a result of poor work organization.

2.6 Parents' need during child hospitalization

Care or services given to the patient is supposed to be based on their needs. The concept of need is difficult to define. Patients and caregivers may have different opinions about patients needs. Patients will express satisfaction when their perceptions of needs and expectation being met. Kyritsi, Matziou, and Evaglou (2005) have done a study to examine the specific needs that are important for the parents during their child's stay at the hospital and how important these needs are. They have found that parents' need mostly emphasize on information, trust, support and guidance from the nurses and doctors during their child's stay at the hospital.

Another study concerned about parents' need during their child's hospitalization was investigated by Hallstrom, Runneson and Elander (2002). Nine themes characterizing parental needs were identified in the analysis. The themes consisted of the need for security, mediating security to the child, communication, control, pleasing staff, being a competent parent, the family, relief, and satisfying personal needs. The most prominent needs were the need for security and mediating security to the child.

2.7 The relationship of parents' satisfaction level between parent's education level and frequency of child hospitalization category

In this study, the relationship of parents' satisfaction level between level of parents' education and frequency of child hospitalization were examined. Ygge and Arnetz (2001) have found that parents with regular or frequent contacts with pediatric care were more satisfied with their own involvement than parents with infrequent contacts. This opinion was not consistent with the finding of the study done by Huang, Lai, Tsai, Weng, Hu and Yang (2004) at emergency department (ED). They have found that infrequent ED users tended to give a higher satisfaction rating than frequent ED users to emergency care.

Some studies have elicited a correlation and association between parents' education and satisfaction. Ammentorp, Sabroe and Mainz (2006) have found no correlation but Hall and Dornan (1990) found that high educated patients are less satisfied because they have higher expectations.

2.8 Conceptual Framework

Donabedian's Model was used as conceptual framework in this study. This study was based on the theory that work environment is one part of structure and process that is essential for delivering high quality of care from the parents' perspectives and the factors that influence the outcome. It has been developed by Avedis Donabedian (1966) and included the elements of structure, process and outcomes (Ruane & Ruane, 1997). Structure is defined as physical and organizational properties of the settings in which care is provided. It deals with the administrative organization, the facilities and equipment, scope of services, the qualifications and profiles of the professional personnel, the characteristics of the patient population, and the policies and procedures governing patient care. Process refers to how care is delivered or what is done for patients. It involves the activities that are planned for the patient to occur in the course of treatment. Outcome

measures are the desired states resulting from care processes or what is accomplished for patients (Ruane & Ruane, 1997).

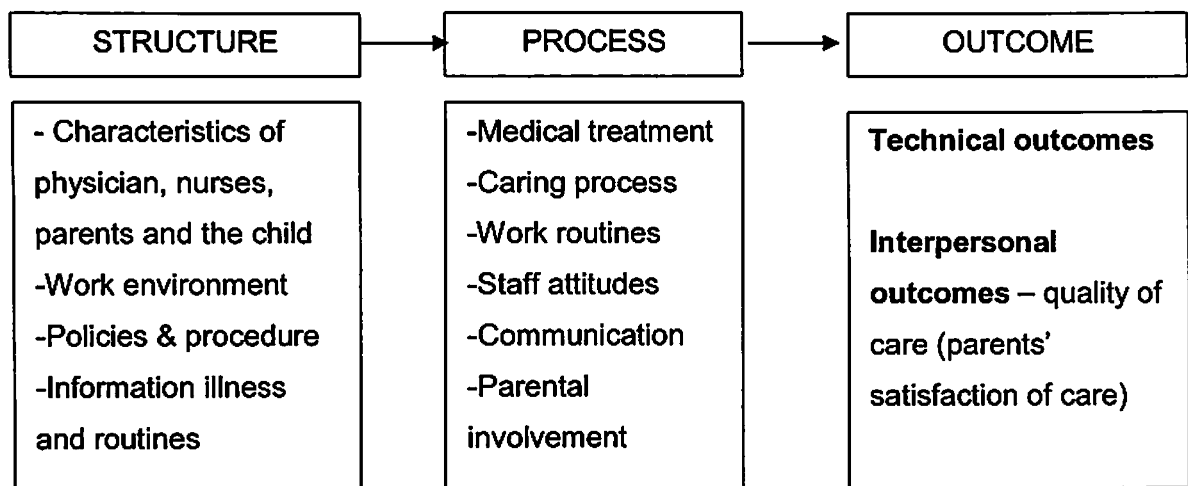
Donabedian noted a distinction between two types of outcomes (Ruane & Ruane, 1997). Technical outcomes encompass the physical and functional aspects of care. Examples of technical outcomes include the absence of postsurgical complications and the successful management of hypertension and other chronic conditions. Interpersonal outcomes encompass dimensions of the "art" of medicine. These include patient satisfaction with care and the influence of care on the patient's quality of life as perceived by the patient.

This study only focus on interpersonal outcomes which are patient satisfaction with care provided. It is not perceived by patient themselves but their parents because children are very young to express their own judgement. Within Donabedian's framework, these two types of outcomes are interdependent, so that one cannot be considered in isolation from the other in evaluating the quality of care. Further, Donabedian (1966) asserted that these three categories of quality measures also are not independent but are linked in an underlying framework (Ruane & Ruane, 1997). Good structure should promote good process and good process in turn should promote good outcome.

In this study, this model is used to describe the care-delivery process of the child and parents with only focus on quality of care as an outcome. Here parental involvement is part of the process, but it is also connected with all necessary organizational attributes like a structure for information about routines and examinations and treatment, as well as staff guidelines for parental involvement. Parental involvement is not isolated from the rest of the caring process, where medical treatment, care process, staff attitudes, and communication all aim at the child's well-being (see Figure 2.1).

The elements of structure include characteristics of physician, nurses, parents and the child (patient), information related to illness and routines, work environment, policies

and procedure governing patient care. For the process, it involves medical treatment, caring process, staff attitudes and parental involvement. Parents will evaluate all the elements of structure and process involve by using questionnaire that will be measured on four-point Likert type scale whether they are satisfied or not with the care-delivery process of their children during hospitalization as the outcome (see Figure 2.1).



(Adapted from Donabedian's Model (1966) cited in Ruane & Ruane, 1997)

Figure 2.1: Donabedian's Model of the care delivery process of child and parents

CHAPTER 3

METHODOLOGY

3.1 Research Design

A descriptive and quantitative study was conducted through cross-sectional design.

3.2 Population and Setting

The target populations were parents of the hospitalized children at the medical pediatric ward, also known as 6 Selatan ward at Hospital Universiti Sains Malaysia (HUSM). It was located at Kubang Kerian, Kelantan.

3.3 Sample

3.3.1 Sample Size

Initial predicted sample size was calculated by using single mean formula. The formula is $n = \left[\frac{Z\,\sigma}{\Delta} \right]^2$ (Naing, 2008)

σ = population standard deviation, the quantity $z\,\sigma/\sqrt{n}$ representing the width of the confidence interval (precision) were given by Δ.

For a 95% confidence interval, $Z = 1.96$,

$\sigma = 16.8$ is standard deviation of overall quality grade, (Ygge & Arnetz, 2004) and $\Delta = 4$.

$$n = \left[\frac{1.96\,[16.8]}{4} \right]^2$$

$n = 68 + 10\%$ drop-out

n = 75

From the calculation of sample size using single mean formula, the predicted sample size in this study was 75. Only 45 respondents were recruited during data collection period. It is because of time limitation during data collection.

3.3.2 Sampling Design

Purposive sampling was used to recruit respondents. Purposive sampling is a non-probability sampling where samples are readily available and those who meet the inclusion criteria only chose as respondents.

3.3.3 Inclusion and Exclusion Criteria

The inclusion criteria were as follows:

a. Mother or father of the child
b. Parents of the child who are admitted to the 6 Selatan and stay with the child at least for 2 days or more
c. Parents who agreed to participate in this study
d. Able to communicate, read and write Malay language

The exclusion criteria were as follows:

a. Parents of the child who are admitted to the 6 Selatan for one days
b. Parents who unable to communicate, read and write in Malay language

3.4 Instrumentation

3.4.1 Instrument

The instrument was used in this study is Quality of Care Parent Questionnaire (QCPQ) 2002, also known as the Pyramid Parent Questionnaire (Appendix B). It was adapted by Ygge and Arnetz (2001) in their study entitled 'Quality of Paediatric Care: Application and Validation of an Instrument for Measuring Parent Satisfaction with Hospital Care'. The questionnaire has been used on two occasions, first in 1999 and again 2001, to

evaluate parent satisfaction with quality of care at the hospital. The measurement instrument has demonstrated good validity and reliability by Ygge and Arnetz (2001). All questions were directed to the parents of patients rather than to the patient themselves.

The questionnaire was a self-administered questionnaire had 48 items structured and divided into two parts: Part 1 consisted of three items regarding parents' demographic and child health related data. The questions were 'What is your relationship with the child?', 'What is your highest education level?', and 'How many times have your child been hospitalized?'. Part 2 consisted of forty-four items which were classified into eight indices or domains of quality of care. The domains are information-illness (3 questions), information-routines (4 questions), accessibility (3 questions), medical treatment (4 questions), caring process (8 questions), staff attitudes (8 questions), participation (4 questions), and staff work environment (9 questions).

All questions in eight domains was rated using a four-point Likert-type scale ranging from "4" (yes, to a great degree), "3" (yes, to a certain degree), "2" (no, not especially), and "1" (no, not at all), except two questions in medical treatment indices was rated using five-point Likert-type scale. These questions concern the adequacy of the child's pain treatment, and include a fifth response alternative, 'not applicable'.

Questions under the headings 'staff attitudes' and 'caring process' were posed in two ways: focusing on the parent's own perception first, and then asking the parent to describe the situation for his or her child. These questions deal specifically with patient-staff contact. It was for this reason that these two domains encompassed both the parent's perception of their own contact with staff and their perception of their child's contact with staff. Together all of these categories aimed to achieve a total picture of the quality of care. The work environment questions ask parents to give their perceptions of the staff work environment.

The final question was asked parents to give their overall rating of the quality of care in the ward for present hospitalization on VAS from 1 (very not satisfied) to 10 (very satisfied). All of these categories aim to achieve a total picture of the quality of care.

4.4.2 Variables measurement

There are two independent variables in this study, which are parents' education level and frequency of child hospitalization. Parents' education level was classified into five levels as follows:

Primary school was scale as 1

Secondary school was scale as 2

STPM/Diploma was scale as 3

Degree was scale as 4

Master and PHD was scale as 5

Then, parents education level was classified into two groups either SPM and below and STPM and above. SPM and below group consists of respondents from primary school and secondary school. Meanwhile, STPM and above group consists of respondents with level of education from Sijil Tinggi Pelajaran Malaysia (STPM), diploma, degree, master and PHD.

Another independent variable was frequency of child hospitalization category. They were classified into two categories which are:

First time was scale as 1

Second or more times was scale as 2

The dependent variable was parents' satisfaction score. Total score of parents' satisfaction was computed as summation scores of all domains of quality of care.

All questions in eight domains was rated using a four-point Likert-type scale ranging from "4" (yes, to a great degree), "3" (yes, to a certain degree), "2" (no, not especially), and "1" (no, not at all), except two questions in medical treatment indices was

rated using five-point Likert-type scale. These questions concern the adequacy of the child's pain treatment, and include a fifth response alternative, 'not applicable'. The final question was asked parents to give overall rating of the quality of care at the ward on VAS from 1 (very not satisfied) to 10 (very satisfied).

3.4.3 Validity of Instruments

The content of the instruments had been reviewed and discussed among pediatric hospital staff prior to use in 1998 and 1999. Staff at all three hospital considered the questionnaire to be relevant and comprehensive, a measure of the instrument's content validity (Ygge & Arnetz, 2001).

3.4.4 Translation of Instrument

The original instruments were in English language. The English version of the instrument had been translated into Malay language by Unit Bahasa dan Terjemahan, Universiti Sains Malaysia, Health Campus, Kelantan. The questionnaires were checked by the researcher and supervisor for correct translation of medical terminology commonly used in nursing. Back translation had been done to make sure the translated questionnaire still have the same meaning with the original questionnaire.

3.4.5 Reliability

Prior data collection, a pilot study was conducted to test the reliability of the translated questionnaires. Among 10 respondents whom meet the inclusion criteria was tested to determine the internal consistency reliability using Cronbach's Alpha.

The alpha coefficient of the total scale of the questionnaires was 0.81. The alpha coefficients of the questionnaires eight domains were 0.81, 0.79, 0.82, 0.79, 0.74, 0.75, 0.78 and 0.73 for information-illness, information-routines, accessibility, medical treatment, caring process, staff attitudes, participation and staff work environment respectively. Alpha coefficients indicated that the instruments demonstrated good internal consistency.

3.5 Ethical considerations

Data were collected after permission was obtained from the Research Ethical Committee (Human) USM, Hospital Director of HUSM, Head of Pediatric Department and Sister of 6 Selatan before the survey taken place.

Throughout the study, ethical consideration took into account such as autonomy, confidentiality, and anonymity. Only patients who volunteer and willing to participate in this study gave verbal or written consent involved. Participants were assured of anonymity, confidentiality of all information given, and that the use of such information was only for the purpose of this study.

3.6 Data collection methods

Self-administered questionnaires were used to collect data in this study. Parents of the child who admitted to the medical pediatric ward within the period of data collection were approached individually by the researcher. The data collection starts from February 2008 until March 2009.

All respondents were given explanation about the study for its purpose, the procedure of data collection and how the questionnaire should be completed. The respondents were asked to complete the questionnaire approximately within 10 to 15 minutes. Data were collected by the researcher when respondents have completed it. The questionnaires were checked first before the researcher leaves the ward.

3.6.1 Flow Chart of Data Collection

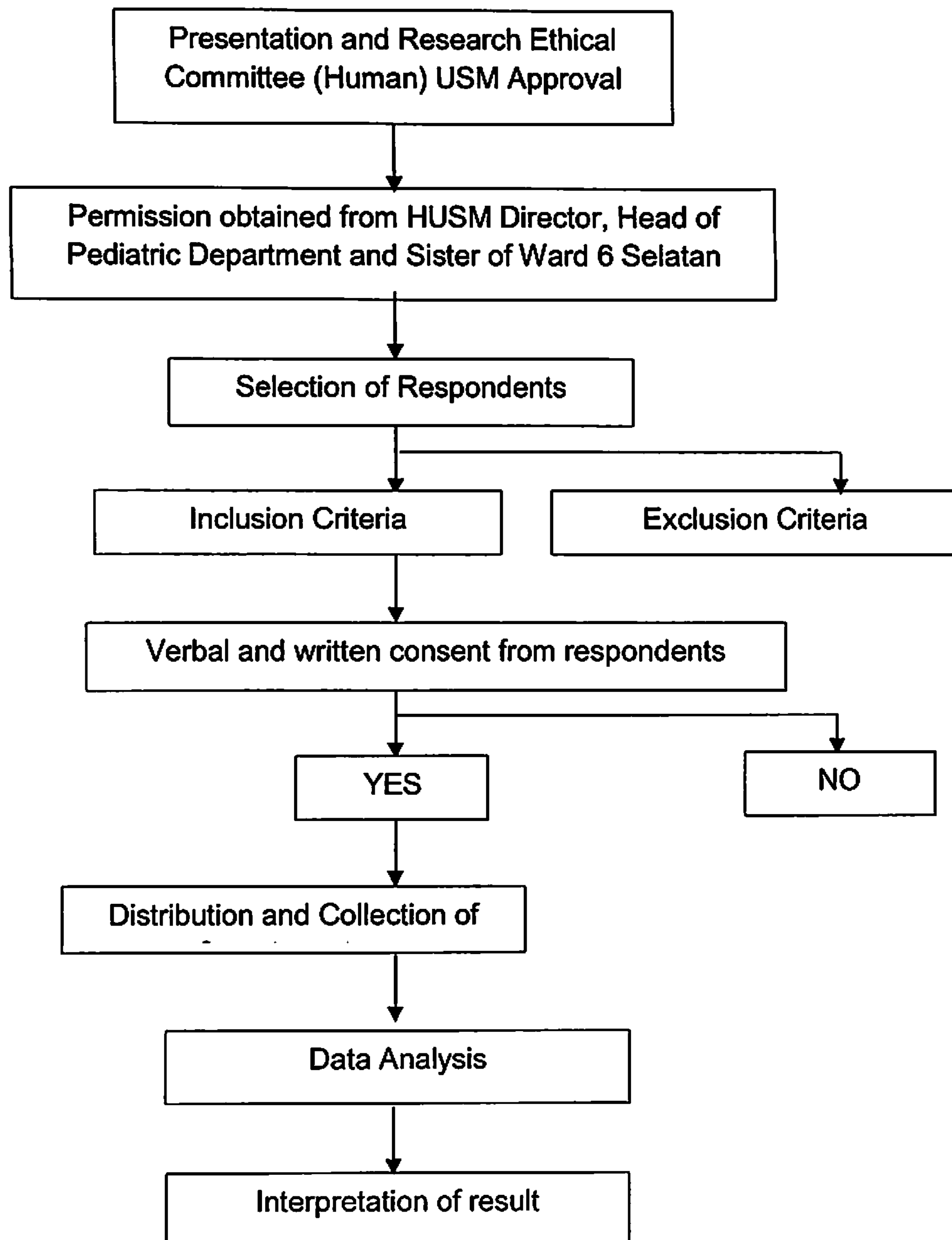


Figure 3.1: Flow Chart of Data Collection

3.7 Data Analysis

The data were processed with SPSS (Statistical Package for Social Science) for Windows, version 12.0. The data were then analyzed using descriptive and inferential statistics for answering the four research questions. Descriptive statistics were used to present parents' demographic and child health related data. These were described in terms of frequency and percentage. Parents' satisfaction towards the quality of care was presented in simple error bar of mean of 95% confidence interval. The overall parents satisfaction grade by using VAS from 1 (very not satisfied) to 10 (very satisfied) were described in term of frequency and percentage.

The relationship between parents' satisfaction score with education level and frequency of child hospitalization category were tested using independent t-test. Total score of parents' satisfaction was computed as summation scores of all domains of quality of care. Levene's test was used to check for assumptions of equality of variances. Non significant Levene's test ($p > 0.05$) was used to meet the assumptions of equality of variances. If the Levene's test is significant ($p < 0.05$), p value for independent t-test for the equality of variances not met was used.