

RELATIVE CAREGIVERS' SATISFACTION TOWARDS  
NURSING CARE OF NEURO PATIENTS IN HOSPITAL

UNIVERSITI SAINS MALAYSIA (USM)

NURUL NADZIRAH BINTI KHAIRUDDIN

DEGREE BACHELOR OF NURSING (HONOURS)

SCHOOL OF HEALTH SCIENCES

UNIVERSITI SAINS MALAYSIA

2022

RELATIVE CAREGIVERS' SATISFACTION TOWARDS  
NURSING CARE OF NEURO PATIENTS IN HOSPITAL  
UNIVERSITI SAINS MALAYSIA (USM)

By

NURUL NADZIRAH BINTI KHAIRUDDIN

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

July 2022

## **ACKNOWLEDGEMENT**

Assalamualaikum. First and foremost, I would like to express my gratitude to Allah S.W.T for giving me strength, patience, and guidance in completing this dissertation within the timeframe.

Secondly, I wish to deliver sincere gratitude to my supervisor, Dr. Salmi binti Ab Aziz who patiently taught and give guidance to me upon completing the dissertation. My deepest thanks to my supervisor for helping me deal with the stressor and giving a lot of suggestions for my dissertation. She supported me endlessly and always asks about the progression of the dissertation.

It is always my pleasure to remind all the encouragement given by my family from the start of preparing the proposal until the dissertation has been completed. Special thanks to my family members for all the endless prayers, support, and advice.

Besides, I could not thank and appreciate enough my fellows for their caring and understanding in giving me the strength and support to complete this dissertation. It was a great comfort and memorable moment whilst completing the work together with them. Even though each of us had our struggles and hardships regarding the dissertation, we always asked each other about the best solution to improve and complete the dissertation successfully.

Lastly, my completion of the dissertation could not have been completed without the help and guidance of my fellow seniors. They had taught and given me a lot of opinions and options on how to complete the dissertation. They had also shared the example of their dissertation for my reference.

## TABLE OF CONTENTS

<b>CERTIFICATE .....</b>	<b>i</b>
<b>DECLARATION .....</b>	<b>ii</b>
<b>ACKNOWLEDGEMENT .....</b>	<b>iii</b>
<b>TABLE OF CONTENTS .....</b>	<b>iv</b>
<b>LIST OF TABLES .....</b>	<b>vii</b>
<b>LIST OF FIGURES .....</b>	<b>viii</b>
<b>LIST OF ABBREVIATIONS.....</b>	<b>ix</b>
<b>ABSTRAK.....</b>	<b>x</b>
<b>ABSTRACT .....</b>	<b>xi</b>
<b>CHAPTER 1 - INTRODUCTION .....</b>	<b>1</b>
1.1 Background of study.....	1
1.2 Problem statement.....	2
1.3 Research question .....	4
1.4 Research objective .....	4
1.4.1 General objective .....	4
1.4.2 Specific objectives.....	5
1.5. Hypothesis .....	5
1.6. Conceptual and operational definitions.....	6
1.7. Significance of the study .....	7
<b>CHAPTER 2 - LITERATURE REVIEW .....</b>	<b>9</b>
2.1 Introduction.....	9
2.2 Neurological disorder .....	9
2.3 Neuro Intensive Care Unit.....	10
2.3 Factors influencing relative caregivers' satisfaction with nursing care .....	11
2.4 Nursing care in Neuro-ICU.....	13
2.5 Quality of nursing care.....	14
2.6 Conceptual framework of the study .....	15
<b>CHAPTER 3 - METHODOLOGY .....</b>	<b>18</b>
3.1 Introduction.....	18
3.2 Research design .....	18
3.3 Study setting and population.....	19

3.4 Sampling plan.....	19
3.4.1 Inclusion criteria .....	19
3.4.2 Sample size estimation.....	20
3.4.3 Sampling method .....	21
3.5 Instrumentation.....	21
3.5.1 Instrument .....	21
3.5.2 Validity and reliability .....	22
3.6 Variables.....	22
3.6.1 Variables measurement .....	23
3.6.2 Variables scoring .....	23
3.7 Data collection method .....	24
3.7.1 Procedure of data collection.....	24
3.7.2 Study Flow Chart .....	25
3.8 Ethical consideration .....	26
3.9 Data analysis .....	28
<b>CHAPTER 4 - RESULTS.....</b>	<b>29</b>
4.1 Introduction.....	29
4.2 Results of the study .....	29
4.2.1 Sociodemographic data .....	29
4.2.2 Level of satisfaction among relative caregivers towards nursing care .....	32
4.2.3 Relationship between relative caregivers towards nursing care and decision-making related to patient care.....	35
<b>CHAPTER 5 – DISCUSSION.....</b>	<b>37</b>
5.1 Introduction.....	37
5.2 Level of satisfaction among relative caregivers towards nursing care .....	37
5.3 Correlation between the satisfactions level among relative caregivers towards nursing care and decision-making related to patient care .....	39
5.4 Strength and limitations of the study.....	40
<b>CHAPTER 6 – CONCLUSIONS .....</b>	<b>41</b>
6.1 Introduction.....	41
6.2 Summary of the study findings.....	41
6.3 Implication and recommendation .....	42
6.4 Conclusion .....	43

<b>REFERENCES .....</b>	<b>44</b>
<b>APPENDIXES .....</b>	<b>51</b>
Appendix A: Instrument .....	51
Appendix B: Permission from the Author .....	56
Appendix C: Research Information and Consent Form .....	57
Appendix D: Institutional Approval .....	73
Appendix E: Ethical Approval.....	76

## **LIST OF TABLES**

Table 3.1 Data Analysis

Table 4.1 Socio-demographic characteristic

Table 4.2 Level of satisfaction among relative caregivers towards nursing care of neuro patients in Hospital USM

Table 4.3 Correlation between satisfaction level among relative caregivers towards nursing care and decision making related to patient care in neuro ICU, Hospital USM.

## **LIST OF FIGURES**

Figure 2.1 Conceptual framework of family satisfaction

Figure 3.1 Study flow chart

Figure 4.1 Bar chart mean scores of the single items on the FS-ICU to determine the level of satisfaction towards nursing care of neuro patients

Figure 4.2 Scatter plot of the correlation between satisfaction level among relative caregivers towards nursing care and decision making related to patient care in neuro ICU, Hospital USM



## **LIST OF ABBREVIATIONS**

USM	: Universiti Sains Malaysia
Neuro ICU	: Neuro Intensive Care Unit
SPSS	: Statistical Package for Social Science
FS–ICU	: Family Satisfaction in Intensive Care Unit

**KEPUASAN PENJAGAAN KEJURURAWATAN DALAM  
KALANGAN AHLI KELUARGA TERHADAP PESAKIT NEURO  
DI HOSPITAL UNIVERSITI SAINS MALAYSIA (USM)**

**ABSTRAK**

Kepuasan penjaga dalam kalangan keluarga telah menjadi ukuran penting untuk meningkatkan kualiti penjagaan terhadap pesakit di wad ICU neuro. Matlamat kajian adalah untuk menilai tahap kepuasan di kalangan penjaga pesakit terhadap penjagaan kejururawatan pesakit neuro; untuk menentukan hubungan antara tahap kepuasan dalam kalangan penjaga pesakit terhadap penjagaan kejururawatan dan membuat keputusan berkaitan penjagaan pesakit neuro di neuro ICU, Hospital USM. Kajian dijalankan di wad ICU neuro, Hospital USM. Data dikumpul dari Januari 2022 hingga Julai 2022. Kajian *cross-sectional* telah dijalankan dalam kalangan 80 responden menggunakan soal selidik *Famiy Satisfaction Intensive Care Unit* (FS-ICU) versi Bahasa Melayu. Analisis statistik dijalankan menggunakan statistik deskriptif dan ujian korelasi Pearson. Keputusan menunjukkan majoriti peserta dengan skor min tertinggi 9.04 (SD=0.55). Terdapat korelasi yang signifikan antara tahap kepuasan dalam kalangan penjaga relatif terhadap penjagaan kejururawatan dan membuat keputusan berkaitan penjagaan pesakit di neuro ICU, Hospital USM ( $r = 0.805$ ,  $p < 0.001$ ). Justeru, jururawat memainkan peranan utama dalam memahami kebimbangan dan keperluan saudara mara dalam menentukan keputusan terbaik untuk pesakit. Ini kerana saudara mara juga adalah tonggak pemberi sokongan dan harapan yang besar kepada pesakit.

**RELATIVE CAREGIVERS' SATISFACTION TOWARDS  
NURSING CARE OF NEURO PATIENTS IN HOSPITAL  
UNIVERSITI SAINS MALAYSIA (USM)**

**ABSTRACT**

Relative caregivers' satisfaction has become an important measurement for improving the quality of care for patients in the neuro ICU ward. The current study aimed to assess the level of satisfaction among relative caregivers towards nursing care of neuro patients; to determine the relationship between the satisfactions level among relative caregivers towards nursing care and decision-making related to patient care in neuro ICU, Hospital USM. The study was conducted in the neuro ICU ward, Hospital USM. The data was collected from January 2022 to July 2022. A cross-sectional study was conducted among 80 respondents using the Malay version of Family Satisfaction Intensive Care Unit (FS-ICU) questionnaire. Statistical analysis was conducted using descriptive statistics and the Pearson correlation test. As a result, the participants showed the highest mean score of 9.04 (SD=0.55) as a majority of data. There was a significant correlation between the satisfactions level among relative caregivers towards nursing care and decision-making related to patient care in the neuro ICU, Hospital USM ( $r = 0.805$ ,  $p < 0.001$ ). Hence, nurses play a major role in understanding the relatives' concerns and needs in determining the best decision-making for the patient. This is because the relatives are the pillar in giving support and hope to the patient.

# CHAPTER 1 - INTRODUCTION

## 1.1 Background of study

The healthcare personnel are well educated in offering high-quality care and positive relationships with patients. This is a necessary step in providing effective and efficient care. A variety of measurements have been developed to improve the quality of care for severely ill patients such as evidence-based medicine, recommendations and procedures, quality improvement cycles, changes in safety culture, and risk management (Rothen *et al.*, 2010). The quality improvement efforts are generally based on clinical performance measures such as the incidence of deep vein thrombosis or ventilator-associated pneumonia, duration of stay in the intensive care unit or resource utilization, and death (Rothen *et al.*, 2010).

In the neuro intensive care unit (neuro ICU), patients often have no control over their conditions. Thus, a strong relationship between patients' families and other relatives with healthcare personnel must be put under fair consideration (Lam *et al.*, 2015). Other than that, the combination of unclear long-term prognoses and the inability of patients to communicate improve the importance of family involvement in patients' well-being (Davidson *et al.*, 2014). Assessing relative satisfaction level toward nursing care of neuro patients provides a way to determine whether the nursing care goals were attained. Directly measuring this in patients in the neuro ICU is difficult because of their clinical status. Thus, relative (surrogate) satisfaction is used as a proxy measure.

‘Family satisfaction’ is an abstract concept. Indeed, both ‘family’ and ‘satisfaction’ are not clearly defined or used uniformly. Here, we are referring to ‘family’ as a group of persons with close familial, social, or emotional relationships with the patient (Rothen *et al.*, 2010). This includes next of kin, but also other persons with a close relation to the patient. There are probably relevant social, cultural, or religious differences in the view regarding what such a family may include (Rothen *et al.*, 2010). The satisfaction was achieved when the needs of the relatives and patients were achieved. In practice, moments of communication between nurses and relative caregivers were rarely observed (Bélanger *et al.*, 2016). This can be a source of conflict when they were highly present and asked questions or when planning the patient’s discharge towards the end of the hospital stay (Bélanger *et al.*, 2016).

## **1.2 Problem statement**

The provision of medical care is a patient and family-centered had received increased attention in the general critical care community, especially over the past decade (Davidson *et al.*, 2007). It was associated with better clinical outcomes and may reduce potential complaints due to miscommunication. In the intensive care unit (ICU), it is important to build a good rapport with their family member as the patient unable to make a decision for themselves as the patient is unable to decide, building a good rapport with their family members is very important (Rothen *et al.*, 2010).

Besides, it had been recognized that families of patients admitted to the ICU were at higher risk of developing anxiety, depression, and post-traumatic stress disorder (Kentish-Barnes *et al.*, 2009). They were suddenly subjected to an uncertain outcome

for their loved ones, with associated emotional, social, and financial consequences, and in a strange environment packed with complex technological advancements (Rothen *et al.*, 2010). The long-term psychological impact on the family after an ICU encounter was now termed post-intensive care syndrome–family (PICS-F) (Rawal *et al.*, 2017). This adds to society’s health care burden and reduces the family’s ability to provide ideal care. A previous study reported that the risk of developing PICS-F was affected by the way of interaction between health care workers and patients’ families (Schulz & Sherwood, 2008). For these reasons, ICU quality measurement should include the families’ perspective and satisfaction with the care process (Rothen *et al.*, 2010).

Furthermore, in 2001, the Institute of Medicine strongly recommended that healthcare delivery systems become patient-centered rather than clinician- or disease-centered, with treatment recommendations and decision-making tailored to patients’ preferences and beliefs (Davidson *et al.*, 2007). In the Institute of Medicine’s patient-centered model, patients and families were kept informed and actively involved in medical decision-making and self-management; patient care was coordinated and integrated across groups of healthcare providers; healthcare delivery systems provided the physical comfort and emotional support to patients and families members; healthcare providers have a clear understanding to patients’ concepts of illness and their cultural beliefs; and healthcare providers understand and apply principles of disease prevention and behavioral change appropriate for diverse populations (Davidson *et al.*, 2007).

The previous study in the neuro ICU also reported the adverse impacts on nursing care and communication between relative caregivers and health care personnel (Davidson *et al.*, 2007). Therefore, the level of satisfaction among relative caregivers

towards nursing care of neuro patients in neuro ICU, Hospital USM was important in patients' well-being as there was little research found on the relative caregivers' satisfaction towards nursing care of neuro patients. Taken together, the assessment of the level of satisfaction among relative caregivers towards nursing care will enhance the decision-making for the patients.

### **1.3 Research question**

The research questions for this study are as below:

1. What is the level of satisfaction among relative caregivers towards nursing care of neuro patients in Hospital USM?
2. What is the correlation between the satisfaction level among relative caregivers towards nursing care and decision-making related to patient care in neuro ICU, Hospital USM?

### **1.4 Research objective**

#### **1.4.1 General objective**

The general objective is to assess the level of satisfaction among relative caregivers towards nursing care of neuro patients in neuro ICU, Hospital USM.

### **1.4.2 Specific objectives**

1. To assess the level of satisfaction among relative caregivers towards nursing care of neuro patients in Hospital USM.
2. To determine the correlation between the satisfactions level among relative caregivers towards nursing care and decision-making related to patient care in neuro ICU, Hospital USM.

### **1.5. Hypothesis**

Null Hypothesis (Ho) : There is no significant correlation between the satisfaction level among relative caregivers towards nursing care and decision-making related to patient care in neuro ICU, Hospital USM.

Alternative Hypothesis (H1) : There is a significant correlation between the satisfaction level among relative caregivers towards nursing care and decision-making related to patient care in neuro ICU, Hospital USM.



## 1.6. Conceptual and operational definitions

- Relative caregivers : An adult person, who by blood, marriage or adoption, is the great grandparent, grandparent, step grandparent, great aunt, aunt, great uncle, uncle, stepparent, brother, sister, step brother, step sister, half brother, half sister, niece, nephew, first cousin or first cousin once removed of a minor and with whom the minor resides, but who is not the legal custodian or guardian of the minor; or parties authorized to give consent (Law Insider, 2022). In this study, relative caregivers refer to individuals who care for the patient during the hospitalization.
- Satisfaction : The amount of fulfillment of perceived or real, implicit, or explicit needs and expectations of an individual or a group of persons (Rothen *et al.*, 2010). In this study, satisfaction is referred to the assessment of the relative caregivers towards nursing care of neuro patients in neuro ICU, Hospital USM.
- Nursing care : Defined as to promote health and to help, support, educate and develop the patient by liberating his or her resources. Nursing care is based on interaction and participation to satisfy universal and personal needs in daily life, needs that have become disrupted

because of ill health (Johansson *et al.*, 2002). In this study, nursing care refers to the care nurses give to neuro patients through hospitalization.

### **1.7. Significance of the study**

In Oregon, a study by Tilden and colleagues (1995) interviewed 32 family members of 12 patients who died in the ICU while undergoing withdrawal of life support. Families regarded the physician and nursing actions as favorable by giving support of prior planning, prompt communication, and explanation of family responsibilities, fostering family consensus, and accommodating family mourning (Tilden *et al.*, 1995). However, some behavior such as postponing talks regarding treatment withdrawal, delaying withdrawal once scheduled, putting the complete responsibility of decision making on one person, withdrawing from the family, and portraying death as a failure made families feel excluded or increased their burden (Tilden *et al.*, 1995).

In a survey conducted in North Carolina, bereaved family members of elderly patients who died at home, at the hospital, and nursing home were interviewed (461 family members with a total of 80% contacted) (Hanson *et al.*, 1997). Generally, the family members were satisfied with the life-sustaining treatment decision. However, they were concerned about the failures in communication and pain control (Hanson *et al.*, 1997). Those who expressed criticisms primarily complained about the information received and the way it was communicated (Hanson *et al.*, 1997). However, in Switzerland, a study by Malacrida *et al.* (1998) surveyed the relatives of patients who died in the ICU and found that a high percentage of respondents (83%) were satisfied

with the care received by their family members. In another study, family members emphasized the need for better communication, greater access to physicians, and better pain management to improve the quality of care at the end of life (Wells *et al.*, 2008).

Previously, Guyatt and colleagues (1995) have generated a list of items relevant to family satisfactions with medical decision-making in the chronic-care setting, based on a literature review and interviews with patients, relatives, and healthcare providers. The satisfaction survey, Family Satisfaction-ICU (FS-ICU), has been thoroughly validated in the general critical care population (Hwang *et al.*, 2014). The survey has been used in many countries which helped in improving the satisfaction of care of the relative caregivers regarding the nursing care (Wan Abdul Rahman *et al.*, 2020). Themes that emerged and seemed to correlate with the care satisfaction; feeling included in the decision-making process, avoiding prolongation of death, explication of families' roles, facilitating family consensus and quality, quantity, and timeliness of information provided (Hwang *et al.*, 2014).

The relative caregivers can make their decision and give the best to the patients with effective communication and adequate information. However, the assessment of family satisfaction levels with decision-making in the critical care setting has been poorly studied. Thus, the current study aims to assess the level of satisfaction among relative caregivers towards nursing care of neuro patients in Hospital USM using the Malay version of FS-ICU. The improvement of satisfaction among relative caregivers will lead to a better decision-making for the patients as well as the treatment that will be received in the neuro ICU.

## **CHAPTER 2 - LITERATURE REVIEW**

### **2.1 Introduction**

This chapter generally discusses neurological disorders, the pathophysiology of selected neurological disorders, the factors influencing relative caregivers' satisfaction with nursing care, and the quality of nursing care. Other than that, this chapter also describes the conceptual framework used in this study.

### **2.2 Neurological disorder**

Neurological disorders are prevalent in critically sick patients; they frequently indicate that other organs are failing, but they are also significant sources of morbidity and mortality (Bleck & Thomas, 2006). Septic encephalopathy, the pathogenesis of which is unknown, can impair cognitive performance; nonetheless, afflicted patients generally recover to their baseline after sepsis resolves. In the intensive care unit, seizures and cerebrovascular problems are very frequent. Neuromuscular problems are significant reasons for failure to wean from artificial breathing and result in significant long-term morbidity (Bleck & Thomas, 2006).

Intensive care intensivists should be perspicacious about changes in the level of consciousness or movement when investigating a fall in oxygen saturation or a rising white blood cell count (Wijdicks, 1996). At times the neurological problem has been visible, but its manifestations may be inappropriately attributed to the presenting illness. Other neural problems, such as critical illness polyneuropathy, may develop

insidiously and become apparent only as the patient improves (Bleck & Thomas, 2006).

### **2.3 Neuro Intensive Care Unit**

The neurologists are mostly employed at the district general or teaching hospitals with substantial general intensive care units (ICUs) (Howard, 2021). The ICUs in this context require neurologists' participation, particularly in the evaluation of hypoxic brain injury and the neurological consequences of organ failure, severe illness, and sepsis (Howard, 2021). In contrast, specialist neuro ICUs tend to serve a distinct patient group. These facilities are primarily focused on the care of patients suffering from primary encephalopathy, the control of elevated intracranial pressure (ICP), the administration of ventilator, autonomic, and bulbar insufficiency, and the implications of significant neuromuscular weakness (Howard, 2021). This job entails the treatment of mechanical ventilation failure, particular therapies (both medicinal and surgical), and general medical consequences associated with these illnesses (Howard, 2021).

Generally, neuro ICU patients diagnosed with neurological disorders such as myasthenia gravis, Guillain-Barre syndrome, central nervous system infections, status epilepticus, and stroke do better than typical ICU patients with secondary neurological disease (Howard, 2021). Such patients, on the other hand, require ICU care for substantially longer periods. This places tremendous psychological strain on patients, caregivers, nurses, physicians, and other health care personnel.

Furthermore, each patient-care area should include enough room for the patient and the equipment needed to care for the patient, as well as outlets for power, oxygen,

compressed air, and vacuum suction. The unit should also feature a medicine station and quick access to a pharmacy or satellite pharmacy. Within the unit, there should be clean and dirty utility rooms for quick access to and disposal of items needed for patient care (Moheet *et al.*, 2018). Other than that, there should design an isolation unit to place patient that has a communicable disease (Moheet *et al.*, 2018). Furthermore, all units should meet the relevant requirements for fire safety, wireless communication, plumbing, electricity, and ventilation.

### **2.3 Factors influencing relative caregivers' satisfaction with nursing care**

According to research from Europe, Canada, and the United States, this is a global issue. A French randomized experiment found that strengthening communication with and support for families who have a loved one dying in the ICU can considerably lower family member symptoms of despair, anxiety, and posttraumatic stress disorder. Previous research has indicated that these symptoms are a considerable burden for the relatives of ICU survivors (Wall *et. al.*, 2007). The relative caregivers were more satisfied with family-centered aspects of care such as inclusion in decision making, communication, and emotional support for the family.

According to Haave et al. (2021), many families view their time in the critical care unit as difficult and fraught with the ambiguity of their intensive care patient's condition, treatment, and prognosis. Family members describe the experience and sight of the critical care patient, as well as the hospital surroundings, as terrifying and surreal (Haave *et al.*, 2021). They want to be involved in patient care and decision-making processes. Furthermore, there is room for growth in terms of the family's perceptions of

receiving help in decision-making processes. When the ICU nurses are not there, information exchanges between them and family members are even more challenging. In recent years, patient perceptions of quality of care or satisfaction, as well as family perspectives, have been recognized and used as one of several internationally accepted quality indicators for intensive care medicine (Haave *et al.*, 2021). Medical services from nurses play a significant role as they measure the quality of nursing care for the patient. In recent years, increased research on family satisfaction has resulted from knowledge about the experiences of the patient and their family during their ICU stay (Haave *et al.*, 2021).

Guyatt *et al.* (1995) generated a list of items relevant to family satisfaction with medical decision-making in the chronic-care setting. Tilden *et al.* (1995) interviewed family members of 12 patients who died in an ICU while undergoing withdrawal of life support. Themes that emerged and seemed to correlate with satisfaction with care included: feeling included in the decision-making process and avoiding prolongation of death (Daren *et al.*, 2002; Tilden *et al.*, 1995).

Independent factors that affect satisfaction with overall care and identified by this study can be grouped into three areas which are care of patient and family, professional care (frequency of communication by nurses), and physician skill and competence (Lam *et al.*, 2015). The importance of communication has been emphasized by numerous studies. Removing barriers in the healthcare system that discourage communication between healthcare providers and families would be beneficial (Lam *et al.*, 2015).

Many issues in end-of-life care were identified previously by Kirchhoff *et al.* (2004). This study reported that 16% of respondents were dissatisfied with patient

comfort, while 30% were dissatisfied with communication and decision-making (Kirchhoff *et al.*, 2004). Hospital setting (perhaps organization of care or practice patterns) and whether death happened during the initial hospitalization rather than after discharge were two characteristics related to higher satisfaction with communication and decision making (Kirchhoff *et al.*, 2004). Heyland and Tranmer (2001) introduced a method to assess family satisfaction in the ICU by identifying significant areas using current conceptual frameworks of patient satisfaction, decision making, and quality of end-of-life care. They discovered a strong link between overall care satisfaction and decision-making satisfaction (Heyland & Tranmer, 2001).

## **2.4 Nursing care in Neuro-ICU**

As mentioned above, ICU is a complex technological environment associated with a high level of emotional distress and workload. Hence, the use of efficient management strategies is important to secure the best use of resources and patient safety (Aiken *et al.*, 2012). Nursing workload is a topic that has been widely discussed because of its impact on the quality of life of health professionals, on hospital costs associated with nurse staffing and on patient safety (Carayon and Gürses, 2005). The qualitative and quantitative assessment of nursing personnel may provide important information for the management of health care resources, helping humanize health care, increase efficiency, and reduce healthcare costs (Cucolo and Perroca, 2010).

Other than that, they were expecting frequent patient assessments and monitoring (Kamana, 2021). These frequent neuro assessments are necessary as it shows the first sign of a neuro change often is seen in level of consciousness/orientation



(Kamana, 2021). Neurological assessments can often be very subjective. In total, Neuro-ICU nurses' monitored patient's condition, administers medication, and also helps educate patients and their families who are dealing with a potential life-altering event. To deal with it a Neuro ICU nurse must be calm under high-pressure situations.

## **2.5 Quality of nursing care**

According to the Institute of Medicine, "quality care" is defined as "safe, timely, effective, efficient, equitable, and patient-centered" (Wall *et. al*, 2007). It has been stated that critically ill patients frequently lack the capacity to make their own decisions owing to sickness or delirium, family members play an important part in the everyday decision-making, and patient-centeredness in the ICU incorporates family-centeredness (Wall *et. al*, 2007). Furthermore, most critically ill patients prefer that their families make decisions for them, even when the family's wishes and the patient's advance directives conflict (Wall *et. al*, 2007). For these reasons, ICU families' perspectives are especially notable, and measuring family satisfaction with care is a useful technique for assessing one component of ICU quality (Wall *et. al*, 2007).

It is critical to measure family members' satisfaction with the treatment and support they get to enhance the quality of care offered to patients' relatives in the ICU (Kryworuchko & Heyland, 2009). Increasingly, patient and family-centered outcomes are being recognized as important outcome measures (Lynn, McMillen, & Sidani, 2007). Although there is a nascent understanding of the important determinants of patient satisfaction, we do not know if these aspects of care are relevant to families. Relative caregivers' satisfaction may be a worthwhile target for quality improvement

initiatives. Furthermore, it is important to understand patients' opinions and satisfaction with proper nursing care in the ward (Lynn, McMillen, & Sidani, 2007).

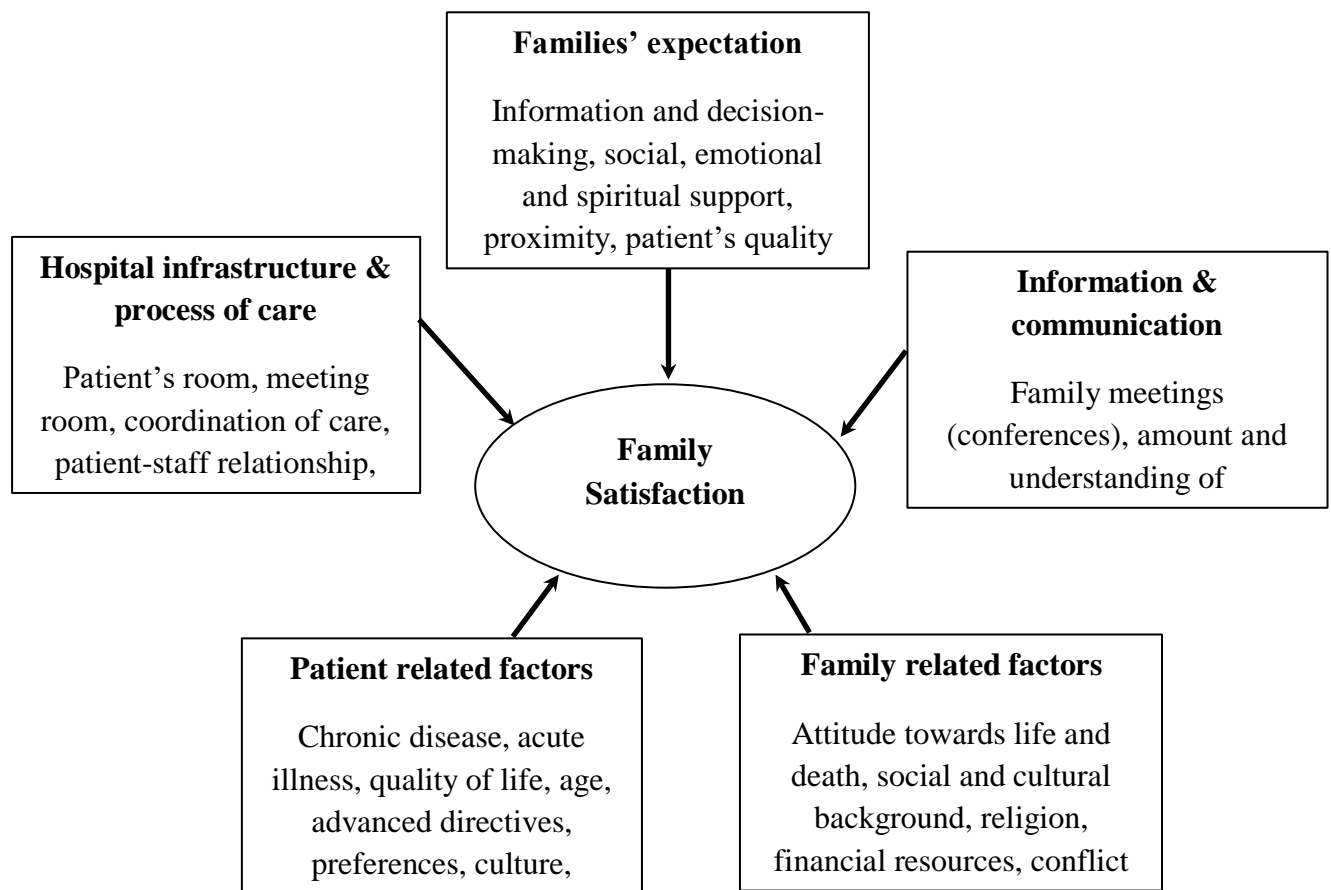
## **2.6 Conceptual framework of the study**

The amount of fulfillment of an individual's or a group's perceived or real, implicit or explicit requirements and expectations was referred to as satisfaction (Rothen *et al.*, 2010). There was a considerable difference in levels of satisfaction among individuals if all needs and expectations were met (Rothen *et al.*, 2010). The performance of a certain ICU may be termed remarkable if the amount of fulfillment considerably exceeds the needs of patients and their families (Rothen *et al.*, 2010).

Figure 2.1 shows a conceptual framework for family satisfaction in critically sick adults. Even though the patient is the primary focus of care in the ICU, there are various reasons why the satisfaction of critically ill patients' families should be a priority. The ICU patients are unable to appraise the appropriateness of care thus family members may act as surrogates. Family members may also play a vital role in decision-making, depending on the recognized standards and ethical values in a particular country (Rothen *et al.*, 2010). Furthermore, they were frequently personally invested, either because of their emotional link with the patient, their emotions of helplessness, or their fear of losing a loved one, with all the emotional, social, and economic ramifications involved (Rothen *et al.*, 2010).

As previously stated, family satisfaction represents the degree to which needs and expectations are met (Rothen *et al.*, 2010). Healthcare practitioners are not always aware of the needs expecting by patients and their families. (Rothen *et al.*, 2010).

Surprisingly, relatives desired more information expected by ICU doctors than recommended in guidelines or contained in information packets. There may also be disparities between family members' needs and those assumed by critical care nurses (Rothen *et al.*, 2010).



*Figure 2.1 Conceptual framework of family satisfaction*

## **CHAPTER 3 - METHODOLOGY**

### **3.1 Introduction**

This chapter explained and justified the approach and rationale used in supporting the chosen research methodology. Achieving the purpose of the study requires understanding and correct determination of a suitable research design. This chapter starts with an explanation and justification of the study design applied in this study. Then, the chapter continued with the description of the study setting and population. This sampling plan included participant selection criteria, sampling method and sample size determination, instrumentation, and ethical consideration in this study through the suitable data collection. The final section in this chapter explained the proposed statistical analyses used with the quantitative data.

### **3.2 Research design**

A descriptive cross-sectional study design was used in the current study. A cross-sectional study design is a type of observational study design. In a cross-sectional study, the investigator measures the outcome and the exposures of the study participants at the same time (Setia, 2016). The rationale and justification for using a cross-sectional study were that this study design was able to collect data from the whole population at a single point of time to study the variables of interest (Polit & Beck, 2016). Besides, the cross-sectional study design enabled researchers to measure multiple exposures and outcomes at the same time. The current study aimed to assess the level of satisfaction among relative caregivers towards nursing care of neuro patients. The current study also aimed to assess the correlation between the satisfaction

level among relative caregivers towards nursing care and decision-making related to patient care in neuro ICU, Hospital USM.

### **3.3 Study setting and population**

The study was conducted among relatives caregivers who take care of the patients in the neuro ICU, Hospital USM. The study was conducted between January 2022 to July 2022. The sampling method chosen in this study to select samples from the population of interest was purposive sampling as the researcher only selected participants that meet the inclusion criteria. The total number of respondents in this study was 80. The data was obtained from the researcher by giving out the questionnaire and administering participants filled up the questions.

### **3.4 Sampling plan**

#### **3.4.1 Inclusion criteria**

Participants selected are:

- 18 years and above.
- Able to understand Malay.
- Families of admitted patients with a minimum ICU length of stay of 24 hours.

Participants excluded are:

- Relatives of patients with cognitive impairment.

### 3.4.2 Sample size estimation

The sample size was estimated using a 95% confidence interval, a power of 80% proportion, and a proportion of the relative caregivers' satisfaction with nursing care ( $p=0.05$ ) from the previous study by Haave et al. (2021). The sample sizes calculation used for this study as stated below;

$$n = \left[ \frac{Z}{\Delta} \right]^2 p(1 - p)$$

$$n = \left[ \frac{1.96}{0.05} \right]^2 0.05(1 - 0.05)$$

$$n = 72.99$$

$$n = 73$$

The sample size was calculated and 10% of the drop-out rate was added to ensure the validity and reliability of the study. Hence, the total sample size needed;

$$n = 73 + (73 \times 10\%)$$

$$n = 73 + 7.3$$

$$n = 80.3$$

$$n = 80$$

$$n = \text{sample size}$$

$$Z = Z \text{ score of confidence interval}$$

$$p = \text{anticipated population}$$

$$\Delta = \text{precision}$$

### **3.4.3 Sampling method**

The purposive sampling method was chosen in this study to select samples from the population of interest. Purposive sampling was used because the researcher had set the specific criteria of respondents that the families of admitted patients in the neuro-ICU with a minimum ICU length of stay (LOS) of 24 hours (Weber et al., 2021).

## **3.5 Instrumentation**

### **3.5.1 Instrument**

The instrument used in this study was Malay version of Family Satisfaction Intensive Care Unit (FS-ICU) questionnaire adopted from Wan Abdul Rahman et al. (2020) study with the permission of the author. The purpose of using this instrument was to aid researchers to study the correlation between the satisfaction level among relative caregivers towards nursing care and decision-making related to patient care in neuro ICU, Hospital USM. The questionnaire consists of three sections. In total, there were 40 items in the questionnaire.

Section A was the subjects' background consisted of seven questions: age, gender, marital status, race, education, occupation, and the relationship with the patient. Each respondent was required to tick in the box that suits them the best. In section B, the respondents were given their opinions on patients' care. There were a total of 18 questions in this part and the respondents were obliged to answer each question.

In section C (two parts), the level of satisfaction regarding the involvement of family members in making decisions related to patients' care was examined. In the first part, they were giving their opinion on patients' care in the intensive care unit (ICU)



and there were a total of eight questions that needed to answer. The second part was about the involvement of family members in the process of decision-making regarding patients' treatment. There were 15 questions in this part.

### **3.5.2 Validity and reliability**

The validity and reliability of the instrument were crucial in ensuring the accuracy of data collection. A pilot study was carried out on 10% of the study sample who met the inclusion criteria of the study. It was conducted in Surgical ICU (SICU) by distributing the questionnaire through face to face. The purpose of the pilot study was to assess the reliability of the study and to test the applicability, simplicity, and clarity of the research tool. Reliability was crucial to measure the consistency of a series of measurement tools. The Cronbach's alpha method was used to assess the measurement reliability in the current study. The Cronbach's alpha was useful to measure the internal consistency of items with multiple choices such as the Likert scale that was used in this study's questionnaire (Taber, 2018). Cronbach's alpha coefficient was computed using Statistical Package for Social Sciences (SPSS) software. A Cronbach's alpha coefficient above 0.70 was acceptable (Wan Abdul Rahman et al., 2020).

### **3.6 Variables**

There were two types of variables in this study which were independent variables and dependent variables.

### **3.6.1 Variables measurement**

The dependent variable in this study which was the relative caregivers' satisfaction towards nursing care of neuro patients was obtained.

Independent variables were obtained from the questionnaire. Sociodemographic data were reflected by questions such as age, gender, education background, occupation, and the relationship with the patient. The satisfactions were assessed through respondents' opinions towards the care for their family members (patients) and patient care at neuro ICU.

### **3.6.2 Variables scoring**

The family satisfaction with care subscale included questions about the care of the patient and family members as well as the nurse's communication skills. This construct was measured using the interval scale ranging from 1 (strongly dissatisfied) to 10 (strongly satisfied) with the given item statement.

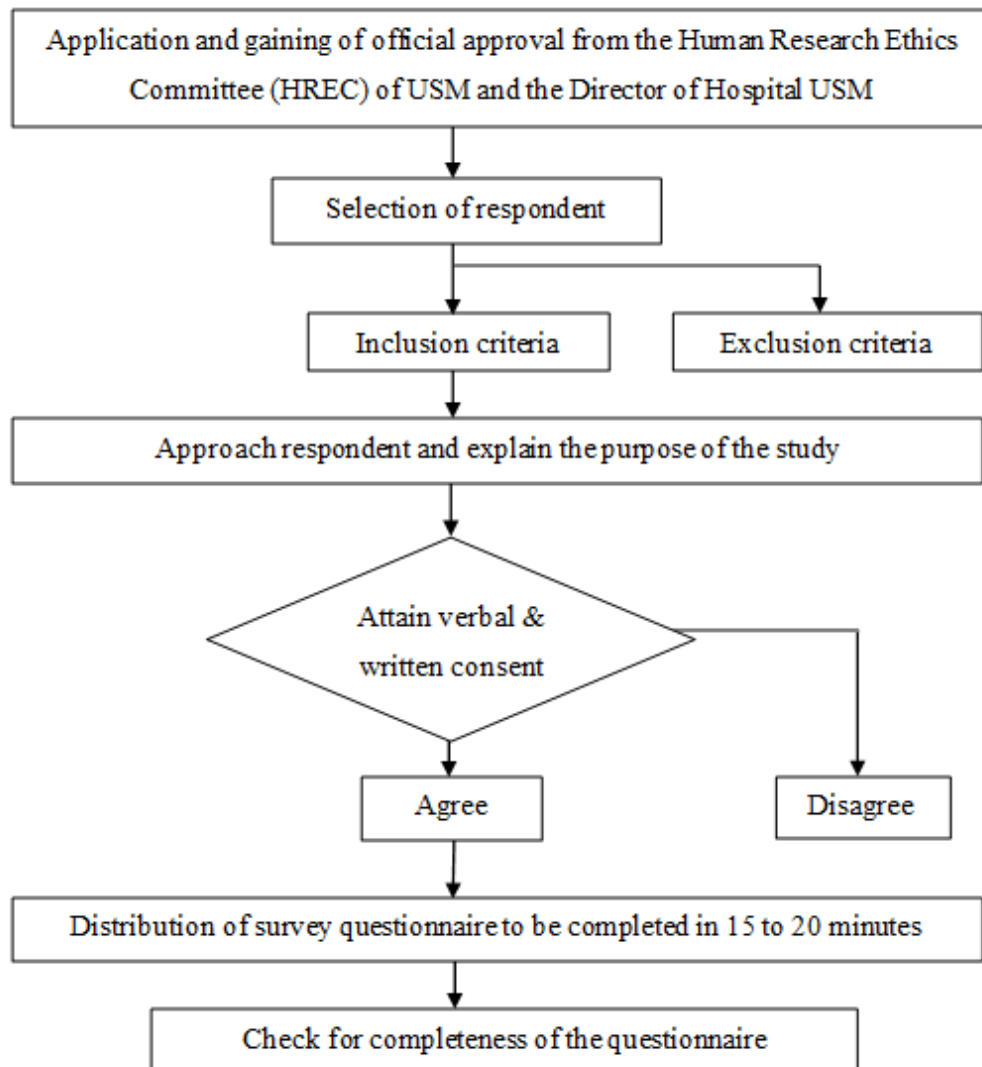
The level of satisfaction among relative caregivers towards nursing care of neuro patients was presented in a mean score (*M*) and standard deviation (*SD*) form. The higher the mean score, the higher the level of satisfaction among relative caregivers towards nursing care of neuro patients. Respondents with mean score of six and above through the questionnaire is considered having a high level of satisfaction towards nursing care of neuro patients in Hospital USM.

### **3.7 Data collection method**

#### **3.7.1 Procedure of data collection**

Data collection was conducted after gaining approval from the Human Research Ethical Committee (HREC) and permission to conduct the study from the Director of Hospital USM. Data collection commenced between January 2022 to July 2022. Figure 3.1 showed the illustration of the flow chart of the process of data collection. The first step of the data collection process was to identify and select eligible respondents who fulfilled the inclusion criteria of the study through the registration record of neuro ICU, Hospital USM. Then, the researcher invited and recruited eligible respondents to participate in the study. The researcher explained the purpose of the study to the respondents and obtained their informed consent. The respondents acknowledged that their participation was voluntary, and their privacy and confidentiality were ensured. Then, they completed FS-ICU questionnaire that took approximately 15 to 20 minutes to complete the questionnaire. The questionnaire was collected by researchers upon completion of the questionnaire. All data and information obtained from respondents were only accessed by researchers.

### 3.7.2 Study Flow Chart



*Figure 3.1 Study flow chart*

### **3.8 Ethical consideration**

This study was conducted under the permission of the Human Research Ethics Committee (HREC), Universiti Sains Malaysia. The approval was needed to protect the rights of participants, researcher, and institution. Participants were advised regarding any risks following the study, the right to participate, and their right to decide to discontinue the study at any time without having punishment (APPENDIX C). Participants also were explained about the confidentiality of the information collected in this study, only for research and academic purposes. The informed consent from each participant was obtained before joining the study (APPENDIX C).

The permission to use the instrument tool in this study had been acknowledged by the original author. The author had given her permission on using the tools (APPENDIX B)

Vulnerable issues in this study may be arising when the data of participants is being used for the study. But since the participant's questionnaire was not named and the data were presented in a group data thus researcher believes that the result was anonymous and not presented any participants. Not only that, participants also had voluntarily joined the study and signed the informed consent. The right to decline or join the study had been asked before data collection. The researcher had declared that there was no conflict of interest involved in the study. Consent forms and data from the participants in the questionnaire will be kept in private and confidential manners. It was used for academic and research purposes only. The data can only be viewed by the researcher, team members, and supervisor. As the data is presented in a group form, the identity of participants will not be revealed.

The current study focuses on relative caregivers' satisfaction levels towards nursing care of neuro patients. Thus, the researcher hopes that the result will be taken into action by higher-up associations such as the Ministry of Health or NGOs in Malaysia. As the location of this study is Hospital USM, the Director of the hospital may be included. This may initiate proper management in providing a better quality of care among nurses in the country.

The participants had been alerted that this is a self-supported study thus no honorarium or incentives were given after completing the questionnaire.

### 3.9 Data analysis

Data collection was analyzed using Statistical Package for Social Sciences (SPSS) software of version 26.0 for Windows 10. The collected data were screened and checked to ensure their accuracy and identified any data errors, outliers, or inconsistencies of data.

Descriptive analysis was performed to summarize the background of the studied participants and the correlation between the two variables. Pearson's correlation was used to assess the correlation between the satisfaction level among relative caregivers towards nursing care and decision-making related to patients' care in neuro ICU, Hospital USM. A level of 5% and 95% of confidence intervals were implemented in this study.

*Table 3.1 Data Analysis*

Research Objectives	Test
Objective 1:  To assess the level of satisfaction among relative caregivers towards nursing care of neuro patients in Hospital USM.	Descriptive
Objective 2:  To determine the correlation between the satisfactions level among relative caregivers towards nursing care and decision-making related to patient care in neuro ICU, Hospital USM.	Pearson's Correlation

## **CHAPTER 4 - RESULTS**

### **4.1 Introduction**

The data was analyzed to test the hypothesis and answer the research questions. As already indicated in the preceding chapter, data was interpreted in a descriptive form. This chapter comprises the analysis, presentation, and interpretation of the findings resulting from this study.

### **4.2 Results of the study**

#### **4.2.1 Sociodemographic data**

In this study, a total of 80 patients' relatives were included. The sociodemographic characteristics and the frequency of distribution among participants and their percentage were shown in Table 4.1.

The age of the participants involved in this study was 18 years old and above. The highest respondent in this study aged between 30 to 39 years old (32.5%) and the least participants involved were between the ages of 50 to 59 years old (16.3%). In terms of gender, most of the participants were female with 63.7%. While the male participants accounted for 36.3% of all respondents.

In the current study, 77.5% of the respondents were married and 22.5% were single, divorced and others were 0%. The educational level showed that 36.3% of the respondents with a degree level of education, 31.3% had completed their secondary school, 28.7% had their education at college and 3.8% completed their primary school.



In this study, 28.7% of respondents were housewives, 25% worked in the government sector, 17.5% worked in the private sector, and the least respondents in this study were retirees, 5%. For the relationship of the participant with the patient, most of them are patients' children (41.3%), spouses, (33.8%), and the least are patients' siblings (11.3%).

**Table 4.1 Socio-demographic Characteristic (n=80)**

<b>Variables</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>Age (years)</b>		
Below 30 years old	24	30.0
30 - 39 years old	26	32.5
40 - 49 years old	17	21.3
50 - 59 years old	13	16.3
<b>Sex</b>		
Male	29	36.3
Female	51	63.7
<b>Marital status</b>		
Married	62	77.5
Single	18	22.5
<b>Races</b>		
Malay	62	77.5
Chinese	10	12.5
Indian	5	6.3
Others	3	3.8
<b>Education level</b>		
Primary school	3	3.8
Secondary school	25	31.3
College	23	28.7
University	29	36.3
<b>Profession</b>		
Government	20	25.0
Private	14	17.5
Self-employed	12	10.8
Retiree	4	5.0
Housewife	23	28.7
Not working	7	8.8
<b>I am:</b>		
Patient's spouse	27	33.8
Patient's children	33	41.3
Patient's parents	11	13.8
Patient's siblings	9	11.3

#### **4.2.2 Level of satisfaction among relative caregivers towards nursing care**

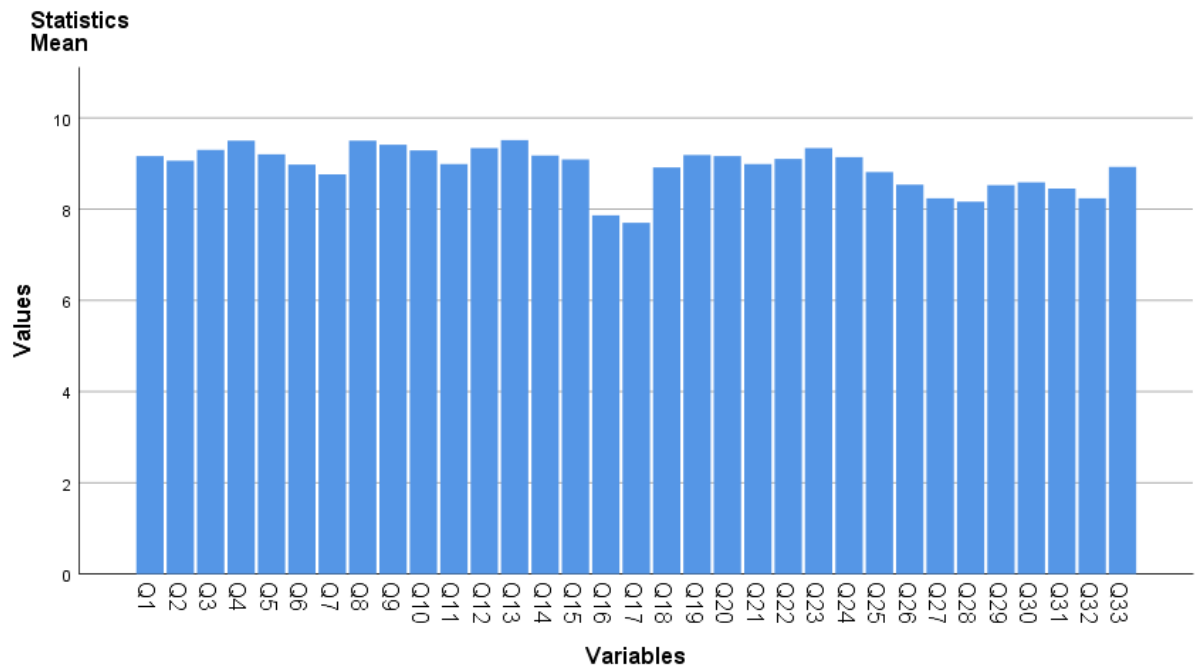
There are three items to measure the satisfaction level among relative caregivers towards nursing care which are concern and quality of care toward patient; the service and efforts in meeting their needs; and skills, care and, the atmosphere in the ICU. These items were given the score of 1-5 (very dissatisfied) and 6-10 (very satisfied).

The items for service and effort in meeting their needs (Question 1-6) showed the highest mean score, 9.21 (SD=0.58). Next, the concern and quality of care towards patients (Question 7-12) stated a mean score of 9.20 (SD=0.56) and the items for skills, care and, the atmosphere in the ICU (Question 13-18) stated a mean score of 8.71 (SD=0.71).

Taken together, the relative caregivers were satisfied with the treatment and care for the patient. The scores of single item of the FS-ICU were presented in Table 4.2.

**Table 4.2 Level of satisfaction among relative caregivers towards nursing care of neuro patients in Hospital USM.**

No.	Item Statement	Mean Score	Standard Deviation
1	The patient has been well cared for by the ICU staff.	9.16	1.061
2	The courtesy, respect, and compassion for the patient.	9.06	0.959
3	The ICU staff service was satisfactory.	9.30	0.999
4	The pain treatment has been well given.	9.50	0.636
5	Management of breathlessness.	9.20	0.920
6	Management of agitation	8.98	0.888
7	Consideration for family needs.	8.76	0.945
8	Emotional support towards family.	9.50	0.675
9	The teamwork of all the ICU staff.	9.41	0.758
10	Concern and caring by ICU staff.	9.29	0.715
11	Service by ICU staff.	8.99	0.921
12	Skill and competence of ICU nurses.	9.34	0.745
13	Communication with ICU nurses.	9.51	0.503
14	Skill and competence of ICU doctors.	9.18	0.776
15	Atmosphere of ICU.	9.09	0.830
16	The atmosphere in the ICU waiting room.	7.86	1.473
17	Cleanliness in the ICU waiting room	7.70	1.436
18	Treatment by the doctor was satisfactory.	8.91	0.970
19	The doctor informs each development of the patient satisfactorily.	9.19	0.969
20	The ICU doctor's response to our inquiries was satisfactory.	9.16	0.818
21	The information provided by the ICU doctor is clear and easy to understand.	8.99	1.131
22	The information provided by the ICU doctor is adequate and satisfactory.	9.10	1.086
23	The ICU doctor's explanation of the patient's condition is satisfactory.	9.34	1.158
24	The ICU doctor's explanation of the treatment provided was satisfactory.	9.14	0.978
25	Explanations from doctors, nurses, and ICU staff about the treatments are consistent.	8.81	0.813
26	I am involved in making decisions related to patient treatment.	8.54	1.136
27	I was supported by the doctor in ICU when making decisions about this patient.	8.24	1.503
28	I have control over the care and treatment of this patient.	8.16	1.216
29	I was given enough time to make any decision.	8.53	1.340
30	I was given a clear explanation of the possible risks when making a decision.	8.59	1.144
31	I was given a clear explanation of the cost of treatment when making a decision.	8.45	0.899
32	I have been given a clear explanation of any alternative available for decision-making.	8.24	1.161
33	I am satisfied with the decision I made for this patient.	8.93	0.808



*Figure 4.1 Bar chart mean scores of the single items on the FS-ICU to determine the level of satisfaction towards nursing care of neuro patients. The item statements 1 to 33 of the questionnaire were presented in Q symbol.*

#### 4.2.3 Relationship between relative caregivers towards nursing care and decision-making related to patient care.

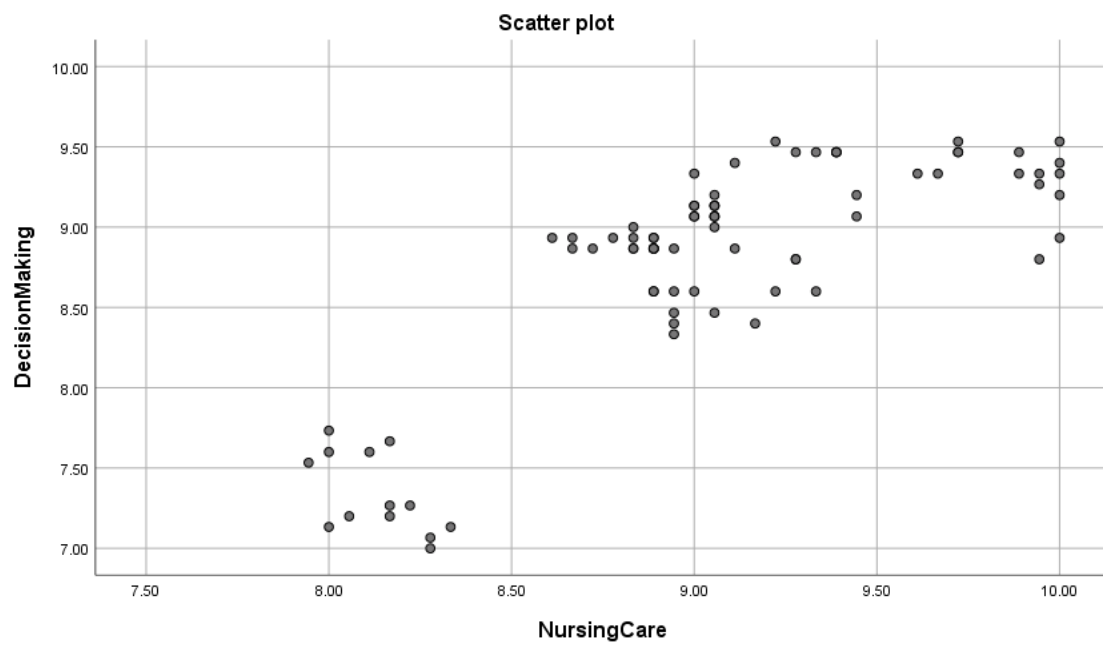
The correlation between satisfaction level among relative caregivers towards nursing care and decision making related to patient care in neuro ICU, Hospital USM was tested using the Pearson Correlation test as shown in Table 4.3. The null hypotheses were rejected ( $r=0.805$ ,  $p < 0.001$ ). There were significant, moderate, and positive correlations between satisfaction levels among relative caregivers towards nursing care and decision-making related to patient care in neuro ICU, Hospital USM.

The data in Figure 4.2 showed an uphill pattern as it moved from left to right, indicated a positive correlation between nursing care and decision-making. As the satisfaction level towards nursing care increased, the decision-making related to patient care in neuro ICU tend to increase.

**Table 4.3** *Correlation between satisfaction level among relative caregivers towards nursing care and decision-making related to patient care in neuro ICU, Hospital USM.*

	Satisfaction	
	r	p-value*
<b>Decision Making</b>	0.805**	0.000

**\*\*.** Correlation is significant at the 0.01 level



***Figure 4.2 Scatter plot of the correlation between satisfaction level among relative caregivers towards nursing care and decision making related to patient care in neuro ICU, Hospital USM.***

## **CHAPTER 5 – DISCUSSION**

### **5.1 Introduction**

This chapter discusses the study findings based on the study objectives. The study aimed to assess the level of satisfaction among relative caregivers towards nursing care of neuro patients in neuro ICU, Hospital USM. The discussion includes level of satisfaction among relative caregivers towards nursing care and its correlation between the satisfactions level among relative caregivers towards nursing care and decision-making related to patient care.

### **5.2 Level of satisfaction among relative caregivers towards nursing care**

Level of satisfaction among relative caregivers towards nursing care was scored based on the questionnaires. In this study, majority of the relatives were satisfied with the nursing care given to the patient in neuro ICU ward ( $M=9.04$ ,  $SD=0.55$ ).

Level of satisfaction was divided into three items. There were concern and quality of care towards patients; the service and efforts in meeting their needs; and skills, care and, the atmosphere in the neuro ICU.

The data showed high satisfaction level among relatives with the services and efforts in meeting their needs with a mean score of 9.21 ( $SD=0.58$ ). The questionnaires showed the statements for the needs of emotional support, good staffs' manners and communication skills are fulfilled; the relatives satisfied with the nursing care. The important part of the responsibilities of neuro ICU physicians and nurses is to attend the needs of patients' family members, who are committed to easing the pain and suffering



of those who have a critically ill relative or close friend (Azoulay *et al.*, 2001). The study suggested that family members desired honest, intelligible, and timely information; liberal visiting policies; and the assurance that their loved one is being cared for by competent and compassionate people (Azoulay *et al.*, 2001). Better information was linked to better outcomes in terms of satisfying family members' needs and raising their level of satisfaction (Azoulay *et al.*, 2001).

Furthermore, the concern and quality of care towards patients stated a mean score of 9.20 (SD=0.56). The relatives observed the way of ICU staffs took care of the patients to ensure the treatment received by the patients at neuro ICU. Previous study by Syakilah *et al.* (2015) reported that proper education of staff and the development of good strategies in addressing concerns of family members significantly improved the client's satisfaction scores. Apart from that, that study reported that the delivery of nursing care was improved by identifying the right communication technique about patients' care with their relatives (Syakilah *et al.*, 2015). The nurses also created an awareness of good communication with patients' family members in order to reduce their anxiety regarding patients' current progress of treatment (Syakilah *et al.*, 2015).

Lastly, the questionnaires regarding item skills, care, and the atmosphere in the ICU stated a mean score of 8.71 (SD=0.71). Mostly, the relatives are concern about the atmosphere in the ICU and their waiting room. There are many sounds of machine in the neuro ICU that might be disturbing for the patients, and these slightly worry them. Engström and Söderberg (2004) reported that family members greatly appreciated the waiting room as it gave them the opportunity to stay close to the ICU patients. In contrast, another study reported that the time spent in the waiting room was perceived as stressful as family members would rather be with the patient (Haave *et al.*, 2021).

### **5.3 Correlation between the satisfactions level among relative caregivers towards nursing care and decision-making related to patient care**

The current study aimed to measure the family satisfactions level towards nursing care. The findings in this study might be important to improve the quality of care among nurses towards patients. The data showed a significant positive correlation between the satisfactions level among relative caregivers towards nursing care and decision-making related to patient care with  $p\text{-value} < 0.001$  for both variables.

In general, collaboration in deciding has been promoted to incorporate patient and family preferences into the customized treatment plan for an individual (Sahgal *et al.*, 2020). Previous study reported that the measurement of satisfaction level among family members included feeling in the decision-making process, avoiding prolongation of death, explication of families' roles, facilitating family consensus, and quality, quantity, and timeliness of information provided (Daren *et al.*, 2001). Taken together, high satisfaction level with the collaboration in decision-making showed in this study might use to enhance the opportunity to improve the satisfaction level among relative caregivers in the ICU.

#### **5.4 Strength and limitations of the study**

The strength of the study is to improve the quality of nursing care towards patients in neuro ICU. The questionnaire used to conduct this study was fully validated and reliable with Cronbach alpha was 0.70. Furthermore, the questionnaire was translated in Malay language, helped the participants to understand and answer all questions without clearly.

However, there are also limitations of the study. First, this study was conducted during pandemic so the time frame for data collection was limited. Most of the respondents answered the questions through online survey. Thus, the researcher was unable to observe the respondents' personally to get the most honest answer from them. The assessment of satisfaction with care also influenced by other aspects of life, such as complicated grief or heavy care burdens, which might disturb their personal impression (Agard *et al.*, 2015; Steenbergen *et al.*, 2015). Previous study showed that the emotional imparments was frequently among patients' family members after the ICU experiences (Fumis *et al.*, 2015).

## **CHAPTER 6 – CONCLUSIONS**

### **6.1 Introduction**

This chapter reviews the conclusion reached from the overall data. It summarizes the recommendation for nursing practice, nursing education and nursing research as well as a conclusion reached for this study.

### **6.2 Summary of the study findings**

Summarizing the study, it was designated to assess relative caregivers' satisfaction towards nursing care of neuro patients in Hospital USM. A total of 80 participants was recruited among patients' relative. Data were collected by using FS-ICU questionnaire adopted from a previous study by Wan Abdul Rahman et al. (2020).

Majority of the participants were satisfied with the nursing care given to the patient in neuro ICU ward ( $M=9.04$ ,  $SD=0.55$ ). Furthermore, the current study reported a significant correlation between the satisfactions level among relative caregivers towards nursing care and decision-making related to patient care in neuro ICU, Hospital USM ( $r=0.805$ ,  $p\text{-value} < 0.001$ ).

### **6.3 Implication and recommendation**

According to the result of this study showed a high satisfaction level among relatives' caregivers towards nursing care of neuro patients in Hospital USM. However there are still implications and recommendation offered to improve the care given to the patient to enhance better quality of care in the future.

Despite the high satisfaction level of care, there should have a strategy to improve the communication between relative caregivers and other healthcare personnel. Try to ask for their opinion and feeling regarding the care given to the patients so the relative caregivers will become more understanding in the treatment given by the healthcare personnel. Apart from that, result of this study might be used for future learning purposes. The healthcare staff and students will be able to realize the importance of gaining satisfaction feedback from patients and their relatives in improving the quality of nursing care.

For further study, it is recommended to use a larger study population (outside of Hospital USM) for better variations of data. The varieties of data might be used to run a study involving NGOs such as nursing home and private hospital. Furthermore, it is important to have a deep talk with relative caregivers while collecting the information to have a better understanding in their emotion and physical support. This may help in the accuracy of information gain through the study.

## **6.4 Conclusion**

In conclusion, relative caregivers' satisfaction has become an important measurement in improving the quality of care towards patients in neuro ICU ward. They are expecting the nurses to give the best quality of care to their family members' despite unable to express their own wishes, lack of knowledge, and fear. Hence, nurses play a major role in understanding the relatives' concerns and needs in determining the best decision-making for the patients. This is because the relatives are the pillar in giving support and hope to the patients.

## REFERENCES

- Agard, A. S. , Egerod, I. , Tønnesen, E. , & Lomborg, K. (2015). From spouse to caregiver and back: A grounded theory study of post-intensive care unit spousal caregiving. *Journal of Advanced Nursing*, 71(8), 1892–1903.
- Aiken L, Sermeus W, Heede KV, Sloane DM, Busse R, McKee M, et al. Patient safety satisfaction and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *BMJ* 2012;344:e1717.
- Aiken L.H. & Patrician P.A. (2000) Measuring organizational traits of hospitals: the revised nursing work index. *Nursing Research* 49(3), 146–153
- Azoulay, Elie; Pochard, Frédéric; Chevret, Sylvie; Lemaire, François; Mokhtari, Mustafa; Le Gall, Jean-Roger; Dhainaut, Jean François; Schlemmer, Benoît (2001). *Meeting the Needs of Intensive Care Unit Patient Families*. *American Journal of Respiratory and Critical Care Medicine*, 163(1), 135–139. doi:10.1164/ajrccm.163.1.2005117
- Bélangier, Louise; Bourbonnais, Anne; Bernier, Roxanne; Benoit, Monique (2016). Communication between nurses and family caregivers of hospitalized older persons: a literature review. *Journal of Clinical Nursing*, (3), –. doi:10.1111/jocn.13516
- Bleck, Thomas (2006). Neurological Disorders in the Intensive Care Unit. *Seminars in Respiratory and Critical Care Medicine*, 27(3), 201–209. Doi: 10.1055/s-2006-945531

- Burhans, L., & Alligood, M. (2010). Quality nursing care in the words of nurses. *Journal of Advanced Nursing*, 66(8), 1689-1697. <https://doi.org/10.1111/j.1365-2648.2010.05344.x>
- Carayon P, Gürses AP. A human factors engineering conceptual framework of nursing workload and patient safety in intensive care units. *Intensive Crit Care Nurs* 2005;21:284—301.
- Cucolo DF, Perroca MG. Restructuring the nursing staff and its influence on care hours. *Rev Latino-Am Enfermagem* 2010;18:175—81.
- Daren K. Heyland; Joan E. Tranmer (2001). *Measuring family satisfaction with care in the intensive care unit: The development of a questionnaire and preliminary results.* , 16(4), 142–149. doi:10.1053/jcrc.2001.30163
- Davidson, J. E., Powers, K., Hedayat, K. M., Tieszen, M., Kon, A. A., Shepard, E., Spuhler, V., Todres, I. D., Levy, M., Barr, J., Ghandi, R., Hirsch, G., Armstrong, D., & American College of Critical Care Medicine Task Force 2004-2005, Society of Critical Care Medicine (2007). Clinical practice guidelines for support of the family in the patient-centered intensive care unit: American College of Critical Care Medicine Task Force 2004-2005. *Critical care medicine*, 35(2), 605–622. <https://doi.org/10.1097/01.CCM.0000254067.14607.EB>
- Engstrom A, Soderberg S. The experiences of partners of critically ill persons in an intensive care unit. *Intens Crit Care Nurs*. 2004;20(5):299–308; quiz 9-10. doi:<https://doi.org/10.1016/j.iccn.2004.05.009>



- Fumis, R. R. , Ranzani, O. T. , Martins, P. S. , & Schettino, G. (2015). Emotional disorders in pairs of patients and their family members during and after ICU stay. *PLoS ONE*, *10*(1), e0115332 <https://doi.org/10.1371/journal.pone.0115332>
- Guyatt, G. H., Mitchell, A., Molloy, D. W., Capretta, R., Horsman, J., & Griffith, L. (1995). Measuring patient and relative satisfaction with level or aggressiveness of care and involvement in care decisions in the context of life-threatening illness. *Journal of clinical epidemiology*, *48*(10), 1215–1224. [https://doi.org/10.1016/0895-4356\(95\)00024-x](https://doi.org/10.1016/0895-4356(95)00024-x)
- Haave, R., Bakke, H., & Schröder, A. (2021). Family satisfaction in the intensive care unit, a cross-sectional study from Norway. *BMC Emergency Medicine*, *21*(1). <https://doi.org/10.1186/s12873-021-00412-8>
- Hanson, L. C., Danis, M., & Garrett, J. (1997). What is wrong with end-of-life care? Opinions of bereaved family members. *Journal of the American Geriatrics Society*, *45*(11), 1339–1344. <https://doi.org/10.1111/j.1532-5415.1997.tb02933.x>
- Heyland, D. K., Tranmer, J. E., & Kingston General Hospital ICU Research Working Group (2001). Measuring family satisfaction with care in the intensive care unit: the development of a questionnaire and preliminary results. *Journal of critical care*, *16*(4), 142–149. <https://doi.org/10.1053/jcrc.2001.30163>
- Howard RS, Kullmann DM, Hirsch NP Admission to neurological intensive care: who, when, and why? *Journal of Neurology, Neurosurgery & Psychiatry* 2003; **74**:iii2-iii9.
- Hwang, D. Y., Yagoda, D., Perrey, H. M., Tehan, T. M., Guanci, M., Ananian, L., Currier, P. F., Cobb, J. P., & Rosand, J. (2014). Assessment of satisfaction with care among family members of survivors in a neuroscience intensive care unit.

*The Journal of neuroscience nursing : Journal of the American Association of Neuroscience Nurses*, 46(2), 106–116.  
<https://doi.org/10.1097/JNN.0000000000000038>

*I am a Neuro ICU Nurse*. Kamana. (2021). Retrieved 14 August 2022, from <https://www.kamanahealth.com/neuro-icu-nurse/>.

Johansson, P., Oléni, M., & Fridlund, B. (2002). Patient satisfaction with nursing care in the context of health care: a literature study. *Scandinavian Journal of Caring Sciences*, 16(4), 337-344. <https://doi.org/10.1046/j.1471-6712.2002.00094.x>

Kentish-Barnes, N., Lemiale, V., Chaize, M., Pochard, F., & Azoulay, E. (2009). Assessing burden in families of critical care patients. *Critical care medicine*, 37(10 Suppl), S448–S456.  
<https://doi.org/10.1097/CCM.0b013e3181b6e145>

Kirchhoff, Karin T; Song, Mi-Kyung; Kehl, Karen (2004). *Caring for the family of the critically ill patient*. *Critical Care Clinics*, 20(3), 453–466.  
[doi:10.1016/j.ccc.2004.03.009](https://doi.org/10.1016/j.ccc.2004.03.009)

Kryworuchko, J., & Heyland, D. K. (2009). Using family satisfaction data to improve the processes of care in ICU. *Intensive Care Medicine*, 35(12), 2015–2017.

Lam, S. M., So, H. M., Fok, S. K., Li, S. C., Ng, C. P., Lui, W. K., Heyland, D. K., & Yan, W. W. (2015). Intensive care unit family satisfaction survey. *Hong Kong medical journal = Xianggang yi xue za zhi*, 21(5), 435–443.  
<https://doi.org/10.12809/hkmj144385>

Lynn M.R., McMillen B.J. & Sidani S. (2007) Including the provider in the assessment of quality care: development and testing of the nurses' assessment of quality scale – acute care version. *Journal of Nursing Care Quality* 22(4), 328–336.

- Lynn, M.R., McMillen, B.J., & Sidani, S. (2007). Understanding and measuring patients' assessment of the quality of nursing care. *Nursing Research*, 56, 159–166.
- Neurological Disorders. Dphhs.mt.gov. (2021). Retrieved 14 November 2021, from <https://dphhs.mt.gov/schoolhealth/chronichealth/neurologicaldisorders>.
- Polit, D. F., & Beck, C. T. (2016). *Nursing Research: Generating and Assessing Evidence for Nursing Practice*. Wolters Kluwer.
- Rawal, G., Yadav, S., & Kumar, R. (2017). Post-intensive care syndrome: An overview. *Journal Of Translational Internal Medicine*, 5(2), 90-92. <https://doi.org/10.1515/jtim-2016-0016>
- Relative caregiver Definition: 116 Samples | Law Insider*. Law Insider. (2022). Retrieved 14 May 2022, from <https://www.lawinsider.com/dictionary/relative-caregiver#:~:text=Relative%20caregiver%20means%20an%20individual,the%20home%20by%20the%20Department>.
- Rothen, Hans U; Stricker, Kay H; Heyland, Daren K (2010). Family satisfaction with critical care: measurements and messages. *Current Opinion in Critical Care*, 16(6), 623–631. doi:10.1097/mcc.0b013e32833e9718
- Sahgal, Savina; Yande, Aneesha; Thompson, Bradford B.; Chen, Emily P.; Fagerlin, Angela; Morgenstern, Lewis B.; Zahuranec, Darin B. (2020). *Surrogate Satisfaction with Decision Making After Intracerebral Hemorrhage. Neurocritical Care*, (), –. doi:10.1007/s12028-020-01018-x
- Schulz, R., & Sherwood, P. R. (2008). Physical and mental health effects of family caregiving. *The American journal of nursing*, 108(9 Suppl), 23–27. <https://doi.org/10.1097/01.NAJ.0000336406.45248.4c>

- Setia M. S. (2016). Methodology Series Module 3: Cross-sectional Studies. *Indian journal of dermatology*, 61(3), 261–264. <https://doi.org/10.4103/0019-5154.182410>
- Shorten, Allison; Smith, Joanna (2017). Mixed methods research: expanding the evidence base. *Evidence Based Nursing*, 20(3), 74–75. doi:10.1136/eb-2017-102699
- Steenbergen, S. , Rijkenberg, S. , Adonis, T. , Kroeze, G. , van Stijn, I. , & Endeman, H. (2015). Long-term treated intensive care patients outcomes: The one- year mortality rate, quality of life, health care use and long-term complications as reported by general practitioners. *BMC Anesthesiology*, 15, 142.
- Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48(6), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>
- van Manen M. (1990) Researching Lived Experience: Human Science for an Action Sensitive Pedagogy. State University of New York Press, Albany, NY.
- Wall, R. J., Curtis, J. R., Cooke, C. R., & Engelberg, R. A. (2007). Family satisfaction in the ICU: differences between families of survivors and nonsurvivors. *Chest*, 132(5), 1425–1433. <https://doi.org/10.1378/chest.07-0419>
- Wan Abdul Rahman, W., Othman, A., Jusoh, A., Zani, H., Awang, Z., & Ghazali, S. (2020). Validation Instrument Measuring FS-ICU on Satisfaction Care Malay Language Version Among Relatives at the Intensive Care Unit in Public Hospitals. *Asian Journal Of Medicine And Biomedicine*, 4(2), 22-29. <https://doi.org/10.37231/ajmb.2020.4.2.358>

- Weber, U., Zhang, Q., Ou, D., Garritano, J., Johnson, J., Anderson, N., Knies, A. K., Nhundu, B., Bautista, C., Huang, K. B., Vranceanu, A. M., Rosand, J., & Hwang, D. Y. (2021). Predictors of Family Dissatisfaction with Support During Neurocritical Care Shared Decision-Making. *Neurocritical care*, 1–9. Advance online publication. <https://doi.org/10.1007/s12028-021-01211-6>
- Wells N, Pasero C, McCaffery M. Improving the Quality of Care Through Pain Assessment and Management. In: Hughes RG, editor. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. *Rockville (MD): Agency for Healthcare Research and Quality (US)*; 2008 Apr. Chapter 17. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK2658/>
- Wijdicks, E. (1996). Neurologic Complications in Critically Ill Patients. *Anesthesia & Analgesia*, 83(2), 411-419. <https://doi.org/10.1097/00000539-199608000-00036>
- Williams A.M. (1998) The delivery of quality nursing care: a grounded theory study of the nurse's perspective. *Journal of Advanced Nursing* 27, 808–816.

## APPENDIXES

### Appendix A: Instrument

#### BORANG KAJI SELIDIK TAHAP KEPUASAN PENJAGAAN DAN PENGLIBATAN DALAM MEMBUAT KEPUTUSAN KALANGAN AHLI KELUARGA PESAKIT DI UNIT RAWATAN RAPI

Nama ahli keluarga :

Penjaga pesakit katil :

Kod :

#### **BAHAGIAN A: LATAR BELAKANG**

Umur : ☐ Di bawah 30 ☐ 30 – 39 ☐ 40 – 49 ☐ 50 – 59 ☐ 60 dan ke atas

Jantina: ☐ Lelaki ☐ Perempuan

Status Perkahwinan:

☐ Kahwin

☐ Janda

☐ Bujang

☐ Lain-lain (Nyatakan) .....

Bangsa:

☐ Melayu

☐ India

☐ Cina

☐ Lain-lain (Nyatakan) .....

Tahap Pendidikan:

☐ Tidak Bersekolah

☐ Kolej

☐ Sekolah Rendah

☐ Universiti

☐ Sekolah Menengah

Pekerjaan:

☐ Kerja Kerajaan

☐ Pesara

☐ Kerja Swasta

☐ Suri Rumah

☐ Kerja Sendiri

☐ Tidak Bekerja

Saya adalah:

☐ Pasangan kepada Pesakit

☐ Ibubapa Pesakit

☐ Anak kepada Pesakit

☐ Adik Beradik Pesakit

## **BAHAGIAN B: KEPUASAN PENJAGAAN PANDANGAN ANDA TERHADAP TAHAP**

### **PENJAGAAN KEPADA AHLI KELUARGA ANDA (PESAKIT)**

**\*\*Sila tandakan satu skala nombor yang terbaik menggambarkan perasaan dan pandangan anda**

<b>KENYATAAN</b>		<b>Sangat tidak berpuashati</b>					<b>Sangat berpuashati</b>				
<b>Keprihatinan dan kualiti penjagaan terhadap pesakit</b>		<b>←</b>					<b>→</b>				
<b>1.</b>	Pesakit telah dijaga dengan baik oleh staf ICU.	1	2	3	4	5	6	7	8	9	10
<b>2.</b>	Budi bahasa staf ICU adalah memuaskan.	1	2	3	4	5	6	7	8	9	10
<b>3.</b>	Layanan staf ICU adalah memuaskan.	1	2	3	4	5	6	7	8	9	10
<b>4.</b>	Rawatan kesakitan telah diberikan dengan baik.	1	2	3	4	5	6	7	8	9	10
<b>5.</b>	Rawatan kesukaran bernafas adalah memuaskan.	1	2	3	4	5	6	7	8	9	10
<b>6.</b>	Rawatan keresahan dan kegelisahan adalah memuaskan.	1	2	3	4	5	6	7	8	9	10
<b>Layanan dan usaha didalam memenuhi keperluan anda</b>		<b>←</b>					<b>→</b>				
<b>7.</b>	Staf ICU memenuhi keperluan kami dengan memuaskan.	1	2	3	4	5	6	7	8	9	10

8.	Staf ICU memberi sokongan emosi dengan memuaskan.	1	2	3	4	5	6	7	8	9	10
9.	Semangat kerja berpasukan kakitangan ICU adalah memuaskan.	1	2	3	4	5	6	7	8	9	10
10.	Budi bahasa kakitangan ICU memuaskan.	1	2	3	4	5	6	7	8	9	10
11.	Layanan kakitangan ICU memuaskan.	1	2	3	4	5	6	7	8	9	10
12.	Komunikasi jururawat adalah memuaskan.	1	2	3	4	5	6	7	8	9	10
<b>Kemahiran, perawatan dan suasana persekitaran di ICU</b>		Sangat tidak berpuashati ←					Sangat berpuashati →				
13.	Kemahiran jururawat bertugas memuaskan.	1	2	3	4	5	6	7	8	9	10
14.	Kami berpuashati dengan kemahiran doktor di sini.	1	2	3	4	5	6	7	8	9	10
15.	Suasana di dalam bilik ICU adalah memuaskan.	1	2	3	4	5	6	7	8	9	10
16.	Suasana di bilik menunggu adalah memuaskan.	1	2	3	4	5	6	7	8	9	10
17.	Kebersihan bilik menunggu ICU adalah memuaskan.	1	2	3	4	5	6	7	8	9	10
		Sangat berpuashati ←					Sangat tidak berpuashati →				
18.	Kami berpuashati dengan rawatan yang diberikan oleh doktor di ICU.	1	2	3	4	5	6	7	8	9	10



**BAHAGIAN C: TAHAP KEPUASAN TERHADAP PENGLIBATAN AHLI KELUARGA DALAM MEMBUAT KEPUTUSAN BERKAITAN PERAWATAN PESAKIT**

**❑ PANDANGAN ANDA TERHADAP PENJAGAAN PESAKIT DI UNIT RAWATAN RAPI**

\*\*Soalan dibahagian ini menilai perasaan dan pandangan anda dalam penglibatan ahli keluarga semasa proses membuat keputusan terhadap perawatan kepada pesakit. Di ICU, ahli keluarga anda (pesakit) akan menerima rawatan yang berbeza dengan pesakit yang lain. Tandakan jawapan yang terbaik bagi menggambarkan perasaan dan pandangan anda pada skala nombor yang berkenaan.

<b>Keperluan memperoleh maklumat berkaitan pesakit</b>		Sangat tidak berpuashati ←					→ Sangat berpuashati				
1.	Doktor memaklumkan setiap perkembangan dengan memuaskan.	1	2	3	4	5	6	7	8	9	10
2.	Maklumbalas kakitangan ICU terhadap pertanyaan kami adalah memuaskan.	1	2	3	4	5	6	7	8	9	10
3.	Maklumat yang diberikan oleh doktor ICU adalah jelas dan mudah difahami.	1	2	3	4	5	6	7	8	9	10
4.	Maklumat yang diberikan oleh doktor ICU adalah mencukupi dan memuaskan.	1	2	3	4	5	6	7	8	9	10
5.	Penerangan doktor ICU terhadap keadaan pesakit adalah memuaskan.	1	2	3	4	5	6	7	8	9	10
<b>Penerangan dan kefahaman ahli keluarga</b>		Sangat tidak berpuashati ←					→ Sangat berpuashati				
6.	Penerangan doktor ICU terhadap perawatan yang diberikan adalah memuaskan.	1	2	3	4	5	6	7	8	9	10
7.	Penerangan daripada doktor, jururawat, dan staf ICU tentang perawatan adalah konsisten.	1	2	3	4	5	6	7	8	9	10
		Sangat tidak setuju ←					→ Sangat setuju				
8.	Saya terlibat dalam membuat keputusan berkaitan perawatan pesakit.	1	2	3	4	5	6	7	8	9	10


❑ PENGLIBATAN AHLI KELUARGA DI DALAM PROSES MEMBUAT

**KEPUTUSAN BERKAITAN PERAWATAN PESAKIT:**

<b>Sokongan dari staf ICU dan penglibatan ahli keluarga dalam proses membuat keputusan berkaitan perawatan pesakit</b>		Sangat tidak disokong ←					Sangat disokong →				
9.	Saya disokong oleh doktor ICU semasa membuat keputusan tentang pesakit ini.	1	2	3	4	5	6	7	8	9	10
		Sangat diluar kawalan ←					Memunyai kawalan →				
10.	Saya mempunyai kawalan ke atas penjagaan dan perawatan pesakit ini.	1	2	3	4	5	6	7	8	9	10
		Cukup masa ←					Perlu lebih masa →				
11.	Saya diberikan masa yang mencukupi untuk untuk membuat sebarang keputusan.	1	2	3	4	5	6	7	8	9	10
<b>Penerangan berkaitan perawatan pesakit semasa proses membuat keputusan.</b>		Cukup masa ←					Perlu lebih masa →				
12.	Saya diberikan penerangan yang berkaitan kemungkinan risiko semasa membuat keputusan.	1	2	3	4	5	6	7	8	9	10
13.	Saya telah diberikan penerangan yang jelas tentang sebarang alternatif yang ada untuk membuat keputusan.	1	2	3	4	5	6	7	8	9	10
14.	Saya terlibat dalam membuat keputusan berkaitan perawatan pesakit.	1	2	3	4	5	6	7	8	9	10
15.	Saya berpuashati dengan keputusan yang saya buat terhadap pesakit ini.	1	2	3	4	5	6	7	8	9	10

## Appendix B: Permission from the Author

**PERMISSION TO USE QUESTIONNAIRE**



Nurul Nadzirah Binti Khairuddin  
Tue 02/11/2021 12:16  
To: wnaliza@unisza.edu.my


Date: 2/11/2021  
To: The Author(s)  
From: Nurul Nadziah Binti Khairuddin, Student of Nursing  
USM, nadzirahkhairuddin99@student.usm.my

Dear author(s),  
I am writing to request permission for using the questionnaire for the purpose of my study research. The material that I would like to propose is:  
Validation Instrument Measuring FS-ICU on Satisfaction Care Malay Language Version Among Relatives at the Intensive Care Unit in Public Hospitals  
(<https://journal.unisza.edu.my/qjmb/index.php/qjmb/article/view/358/222>)


If for some reason you do not own the copyright for these materials, I would appreciate any information you can provide concerning the proper person or company with whom I should inquire.

Please respond in writing to indicate whether permission is granted and inform me of any fees or conditions that may be required. In addition to the terms of the agreement, please also indicate how you wish to be credited.


**FS-ICU tool Malay version.**



Nurul Nadzirah Binti Khairuddin  
Thank you puan.  
Tue 02/11/2021 20:52



WAN NOR ALIZA WAN ABDUL RAHMAN <wnaliza@unisza.edu.my>  
Tue 02/11/2021 19:05  
To: Nurul Nadzirah Binti Khairuddin

 FSICU Malay version cop...  
380 KB

Assalamualaikum...Thanks for you interest in the FS-ICU tool Malay version. You are welcome to use it. Please acknowledge copyright UniSZA in your study and in your article after completing in your study.

## **Appendix C: Research Information and Consent Form**

### **LAMPIRAN A**

#### **MAKLUMAT KAJIAN**

##### **Tajuk Kajian:**

**Kepuasan Penjaga Terhadap Penjagaan Kejururawatan Pesakit Neuro di Hospital USM**

**Nama Penyelidik : Nurul Nadzirah Binti Khairuddin**

**Penyelidik bersama : Dr Salmi Binti Ab Aziz**

#### **PENGENALAN**

Anda dipelawa untuk menyertai secara sukarela dalam penyelidikan yang mengkaji mengenai Kepuasan Penjaga Terhadap Penjagaan Kejururawatan Pesakit Neuro di Hospital USM. Menilai tahap kepuasan penjaga dapat menyumbang dalam meningkatkan tahap penjagaan kejururawatan terhadap pesakit terutamanya di unit rawatan rapi. Selain itu, ianya juga berkaitan dengan keputusan yang akan dilakukan oleh penjaga pesakit terhadap perawatan yang akan diberikan kepada pesakit. Adalah penting bagi anda membaca dan memahami maklumat kajian sebelum anda bersetuju untuk menyertai kajian penyelidikan ini. Sekiranya anda menyertai kajian ini, anda akan menerima satu salinan borang ini untuk simpanan anda. Penyertaan anda di dalam kajian ini dijangka mengambil masa 15 hingga 20 minit. Seramai 80 orang dijangka akan menyertai kajian ini.

#### **TUJUAN KAJIAN**

Kajian ini bertujuan adalah untuk menilai tahap kepuasan di kalangan penjaga relatif terhadap penjagaan kejururawatan pesakit neuro di Hospital USM.

#### **KELAYAKAN PENYERTAAN**

Penyelidik yang bertanggungjawab untuk kajian ini akan membincangkan mengenai syarat penyertaan dalam kajian ini. Adalah penting bahawa anda benar-benar juur dengan penyelidikan mengenai maklumat yang diminta. Anda tidak boleh mengambil bahagian dalam kajian ini jika anda tidak memenuhi semua kriteria.

Beberapa Syarat yang perlu dipenuhi untuk menyertai kajian ini adalah:

- 18 tahun dan ke atas
- Boleh memahami bahasa Melayu dan Inggeris
- Keluarga semua pesakit yang dimasukkan ke neuro-ICU dengan tempoh tinggal ICU minimum (LOS) 24 jam

Anda tidak layak menyertai sekiranya:

- Penjaga pesakit yang mempunyai masalah mental

## **PROSEDUR-PROSEDUR KAJIAN**

Sekiranya anda bersetuju untuk mengambil bahagian dalam kajian ini, anda perlu menjawab soal selidik tinjauan yang diedarkan oleh penyelidik. Masa yang diperlukan untuk menyelesaikan soal selidik adalah lebih kurang 15 hingga 20 minit. Soal selidik terdiri daripada 3 bahagian. Bahagian A adalah mengenai ciri sosio-demografi. Bahagian B adalah mengenai kepuasan penjagaan penjaga pesakit terhadap tahap penjagaan kepada ahli keluarga (pesakit) dan Bahagian C adalah berkenaan tahap kepuasan terhadap penglibatan ahli keluarga dalam membuat keputusan berkaitan perawatan pesakit.

## **RISIKO**

Ini adalah kajian soal selidik tinjauan. Prosedur invasif tidak akan dilakukan pada anda. Soal selidik dalam kajian ini diseragamkan, jadi tidak mengandungi diskriminasi terhadap responden. Namun, anda mungkin merasa emosional, keletihan atau kebosanan semasa menjawab soal selidik. Sila maklumkan kepada kakitangan kajian sekiranya anda menghadapi sebarang masalah atau mempunyai sebarang maklumat penting yang mungkin mengubah persetujuan anda untuk terus menyertai kajian ini.

## **PENYERTAAN DALAM KAJIAN**

Penyertaan anda dalam kajian ini adalah secara sukarela. Anda berhak menolak untuk menyertai kajian ini atau menamatkan penyertaan anda pada bila-bila masa, tanpa sebarang kehilangan manfaat yang sepatutnya anda perolehi.

Penyertaan anda juga mungkin boleh diberhentikan oleh kakitangan kajian ini tanpa persetujuan anda sekiranya anda didapati tidak sesuai untuk meneruskan kajian ini berdasarkan protokol kajian. Kakitangan kajian akan memaklumkan anda sekiranya anda perlu diberhentikan dari menyertai kajian ini.

## **MANFAAT YANG MUNGKIN**

Prosedur kajian ini akan diberikan kepada anda tanpa kos. Anda boleh menerima maklumat tentang informasi dan perawatan yang akan diberikan kepada ahli keluarga (pesakit) anda sepanjang berada di unit rawatan rapi. Anda tidak akan menerima sebarang pampasan kerana menyertai kajian ini. Namun sebarang keperluan perjalanan berkaitan dengan penyertaan ini akan diberikan. [SEKIRANYA BERKAITAN]

## **PERSOALAN**

Sekiranya anda mempunyai sebarang soalan mengenai prosedur kajian ini atau hak-hak anda, sila hubungi;

**Cik Nurul Nadzirah Binti Khairuddin**

Program Kejururawatan  
Pusat Pengajian Sains Kesihatan  
Kampus Kesihatan  
Universiti Sains Malaysia  
16150 Kubang Kerian, Kelantan  
No. Tel: 010-4122459  
E-mail: nadzirahkhairuddin99@student.usm.my

**Dr Salmi Binti Ab Aziz**

Pensyarah  
Pusat Pengajian Sains Kesihatan  
Kampus Kesihatan  
Universiti Sains Malaysia  
16150, Kubang Kerian, Kelantan  
No. Tel: 019-9894277  
E-mail: salmiabziz@usm.my

Sekiranya anda mempunyai sebarang soalan berkaitan kelulusan Etika atau sebarang pertanyaan dan masalah berkaitan kajian ini, sila hubungi;

**En. Mohd Bazlan Hafidz Mukrim**

Setiausaha Jawatankuasa Etika Penyelidikan (Manusia) USM  
Bahagian Penyelidikan dan Inovasi (P&I)  
USM Kampus Kesihatan.  
No. Tel: 09-767 2354 / 09-767 2362  
Email : bazlan@usm.my

ATAU

**Cik Nor Amira Khurshid Ahmed**

Sekretariat Jawatankuasa Etika Penyelidikan (Manusia) USM  
Pejabat Pengurusan dan Kreativiti Penyelidikan (RCMO)  
USM Kampus Induk, Pulau Pinang.  
No. Tel: 04-6536537  
Email: noramira@usm.my

## **KERAHSIAAN**

Maklumat yang anda berikan akan dirahsiakan oleh kakitangan kajian. Ianya tidak akan dedahkan secara umum melainkan jika ia dikehendaki oleh undang-undang. Data yang diperolehi dari kajian ini tidak akan mengenal pasti anda secara perseorangan. Hasil kajian mungkin akan diterbitkan untuk tujuan perkongsian ilmu. Semua borang kajian dan data yang anda berikan yang asal mungkin akan disemak oleh pihak penyelidik, Lembaga Etika kajian ini dan pihak berkuasa regulatori bagi tujuan mengesahkan prosedur atau data kajian klinikal. Maklumat anda akan disimpan dalam komputer dan hanya kakitangan kajian yang dibolehkan sahaja dibenarkan untuk mendapatkan dan memproses data tersebut. Dengan menandatangani borang persetujuan ini, anda membenarkan penelitian rekod, penyimpanan maklumat dan pemprosesan data seperti yang diuraikan di atas.

## **TANDATANGAN**

Untuk dimasukkan ke dalam kajian ini, anda atau wakil sah anda mesti menandatangani serta mencatatkan tarikh halaman tandatangan (Lihat contoh Borang Keizinan Peserta di LAMPIRAN S atau LAMPIRAN G (untuk sampel genetik) atau LAMPIRAN P).

---

**Borang Keizinan Peserta**

**(Halaman Tandatangan)**

---

**Tajuk Kajian:**

**Kepuasan Penjaga Terhadap Penjagaan Kejururawatan Pesakit Neuro di Hospital USM**

**Nama Penyelidik : Nurul Nadzirah Binti Khairuddin**

**Penyelidik bersama : Dr Salmi Binti Ab Aziz**

Untuk menyertai kajian ini, anda atau wakil sah anda mesti menandatangani mukasurat ini. Dengan menandatangani mukasurat ini, saya mengesahkan yang berikut:

- Saya telah membaca semua maklumat dalam Borang Maklumat dan Keizinan Pesakit ini termasuk apa-apa maklumat berkaitan risiko yang ada dalam kajian dan saya telah pun diberi masa yang mencukupi untuk mempertimbangkan maklumat tersebut.
- Semua soalan-soalan saya telah dijawab dengan memuaskan.
- Saya, secara sukarela, bersetuju menyertai kajian penyelidikan ini, mematuhi segala prosedur kajian dan memberi maklumat yang diperlukan kepada doktor, para jururawat dan juga kakitangan lain yang berkaitan apabila diminta.
- Saya boleh menamatkan penyertaan saya dalam kajian ini pada bila-bila masa.
- Saya telah pun menerima satu salinan Borang Maklumat dan Keizinan Peserta untuk simpanan peribadi saya.

---

Nama Peserta

---

No. Kad Pengenalan Peserta

---

Tandatangan Peserta atau Wakil Sah

(Masa jika perlu)

---

Tarikh (dd/MM/yy)



_____	_____
Nama & Tanda Tangan Individu yang Mengendalikan Perbincangan Keizinan	Tarikh (dd/MM/yy)

_____	_____
Nama Saksi dan Tandatangan	Tarikh (dd/MM/yy)

Nota: i) Semua peserta yang mengambil bahagian dalam projek penyelidikan ini tidak dilindungi insuran.

---

**Borang Keizinan bagi Penerbitan Bahan yang berkaitan dengan Peserta Kajian**

**(Halaman Tandatangan)**

---

**Tajuk Kajian:**

**Kepuasan Penjaga Terhadap Penjagaan Kejururawatan Pesakit Neuro di Hospital USM**

**Nama Penyelidik : Nurul Nadzirah Binti Khairuddin**

**Penyelidik bersama : Dr Salmi Binti Ab Aziz**

Untuk menyertai kajian ini, anda atau wakil sah anda mesti menandatangani mukasurat ini.

Dengan menandatangani mukasurat ini, saya memahami yang berikut:

- Bahan yang akan diterbitkan tanpa dilampirkan dengan nama saya dan setiap percubaan yang akan dibuat untuk memastikan ketanpanamaan saya. Saya memahami, walaubagaimanapun, ketanpanamaan yang sempurna tidak dapat dijamin. Kemungkinan sesiapa yang menjaga saya di hospital atau saudara dapat mengenali saya.
- Bahan yang akan diterbitkan dalam penerbitan mingguan/bulanan/dwibulanan/suku tahunan/dwi tahunan merupakan satu penyebaran yang luas dan tersebar ke seluruh dunia. Kebanyakan penerbitan ini akan tersebar kepada doktor-doktor dan juga bukan doktor termasuk ahli sains dan ahli jurnal.
- Bahan tersebut juga akan dilampirkan pada laman web jurnal di seluruh dunia. Seseengah laman web ini bebas dikunjungi oleh semua orang.
- Bahan tersebut juga akan digunakan sebagai penerbitan tempatan dan disampaikan oleh ramai doktor dan ahli sains di seluruh dunia.
- Bahan tersebut juga akan digunakan sebagai penerbitan buku oleh penerbit jurnal.
- Bahan tersebut tidak akan digunakan untuk pengiklanan ataupun bahan untuk membungkus.

Saya juga memberi keizinan bahawa bahan tersebut boleh digunakan sebagai penerbitan lain yang diminta oleh penerbit dengan kriteria berikut:

- Bahan tersebut tidak akan digunakan untuk pengiklanan atau bahan untuk membungkus.
- Bahan tersebut tidak akan digunakan di luar konteks – contohnya: Gambar tidak akan digunakan untuk menggambarkan sesuatu artikel yang tidak berkaitan dengan subjek dalam foto tersebut.

---

Nama Peserta

_____	_____	_____
No. Kad Pengenalan Peserta	T/tangan Peserta	Tarikh (dd/MM/yy)
_____		_____
Nama & Tanda Tangan Individu yang Mengendalikan		Tarikh (dd/MM/yy)
Perbincangan Keizinan		

Nota: i) Semua peserta yang mengambil bahagian dalam projek penyelidikan ini tidak dilindungi insuran.

**RESEARCH INFORMATION**

**Research Title :**

**Relative Caregivers' Satisfaction towards Nursing Care of Neuro Patient in HUSM**

**Name of main : Nurul Nadzirah Binti Khairuddin**

**Co-Researcher : Dr Salmi Binti Ab Aziz**

**INTRODUCTION**

You are invited to take part voluntarily in research studying relative caregivers' satisfaction towards nursing care of neuro patients. Assessing the level of caregiver satisfaction can contribute to improving the level of nursing care for patients especially in intensive care units. In addition, it is also related to the decision that will be made by the patient's caregiver on the treatment that will be given to the patient. It is important that you read and understand this research information before agreeing to participate in this study. You will receive a copy of this form to keep for your records if you agree to participate. Your participation in this study is expected to be 15 to 20 minutes. This study is estimated to include up to 80 participants.

**PURPOSE OF THE STUDY**

The purpose of this study is to assess the level of satisfaction among relative caregivers towards nursing care of neuro patients.

**PARTICIPANTS CRITERIA**

Researcher responsible for this study will discuss with you the requirements for participation in the study. It is important that you are completely truthful with the researcher about the information requested. You should not participate in this study if you do not meet all criteria.

Some of the requirements to be in this study are:

- 18 years and above
- Able to understand Malay and English language
- Families of all patients admitted to the neuro-ICU with a minimum ICU length of stay (LOS) of 24 hours

You are not qualified to participate if:

- Relative of patients with cognitive impairment

## **STUDY PROCEDURES**

If you agree to participate in the study, you will need to respond to a survey questionnaire distributed by the researcher. The time taken to complete the questionnaire will be approximately 15 to 20 minutes. The questionnaire consists of 3 sections. Section A is about socio-demographic characteristics. Section B is care satisfaction and Section C level of satisfaction on the involvement of family members in making decisions related to patient care.

## **RISKS**

This is a survey questionnaire study. Non-invasive procedures will be performed on you. The questionnaire in this study is standardized, so does not contain any discrimination to the respondents. However, you may feel emotional, fatigue or boredom during answering the questionnaire. You are welcome to ask the researcher responsible for this study if any doubts or inform the researcher if you wish to stop from answering the questionnaire.

## **PARTICIPATION IN THE STUDY**

Your taking part in this study is entirely voluntary. You may refuse to take part in the study or you may stop your participation in the study at any time, without any penalty or loss of benefits to which you are otherwise entitled. Your participation also may be stopped by the research team without your consent if in any form you have violated the study eligibility criteria. The research team member will discuss it with you if the matter arises.

## **POSSIBLE BENEFITS**

This study procedure will be provided to you at no cost. You can receive information about the information and care that will be given to your family members (patients) throughout your stay in the intensive care unit. You will not receive any compensation for participating in this study. However, any travel requirements related to this participation will be provided. [IF RELEVANT]

## QUESTIONS

If you have any question about this study or your rights, please contact;

**MS Nurul Nadzirah Binti Khairuddin**

Program of Nursing  
School of Health Science  
Health Campus  
Universiti Sains Malaysia  
16150 Kubang Kerian, Kelantan  
H/P No: 010-4122459  
E-mail: [nadzirahkhairuddin99@student.usm.my](mailto:nadzirahkhairuddin99@student.usm.my)

**Dr Salmi Binti Ab Aziz**

Lecturer  
School of Health Science  
Health Campus  
Universiti Sains Malaysia  
16150 Kubang Kerian, Kelantan  
H/P No: 019-9894277  
E-mail: [salmiabziz@usm.my](mailto:salmiabziz@usm.my)

If you have any questions regarding the Ethical Approval or any issue / problem related to this study, please contact;

**Mr. Mohd Bazlan Hafidz Mukrim**

Secretary of Human Research Ethics Committee USM  
Division of Research & Innovation (R&I)  
USM Health Campus  
Tel. No. : 09-767 2354 / 09-767 2362  
Email: [bazlan@usm.my](mailto:bazlan@usm.my)

OR

**Miss Nor Amira Khurshid Ahmed**

Secretariat of Human Research Ethics Committee USM  
Research Creativity & Management Office (RCMO)  
USM Main Campus, Penang  
Tel. No. : 04-6536537  
Email: [noramira@usm.my](mailto:noramira@usm.my)

## **CONFIDENTIALITY**

Your information will be kept confidential by the researchers and will not be made publicly available unless disclosure is required by law.

Data obtained from this study that does not identify you individually will be published for knowledge purposes.

Your original records may be reviewed by the researcher, the Ethical Review Board for this study, and regulatory authorities for the purpose of verifying the study procedures and/or data. Your information may be held and processed on a computer. Only research team members are authorized to access your information.

By signing this consent form, you authorize the record review, information storage and data process described above.

## **SIGNATURES**

To be entered into the study, you or a legal representative must sign and date the signature page [ATTACHMENT S or ATTACHMENT G (for genetic sample only) or ATTACHMENT P]

---

**Subject Information and Consent Form**

**(Signature Page)**

---

**Research Title:**

**Relative Caregiver's Satisfaction towards Nursing Care of Neuro Patient in Hospital  
USM.**

**Name of main : Nurul Nadzirah Binti Khairuddin**

**Co-Researcher : Dr Salmi Binti Ab Aziz**

To become a part of this study, you or your legal representative must sign this page. By signing this page, I am confirming the following:

- I have read all of the information in this Patient Information and Consent Form including any information regarding the risk in this study and I have had time to think about it.
- All of my questions have been answered to my satisfaction.
- I voluntarily agree to be part of this research study, to follow the study procedures, and to provide necessary information to the doctor, nurses, or other staff members, as requested.
- I may freely choose to stop being a part of this study at any time.
- I have received a copy of this Participant Information and Consent Form to keep for myself.

---

Participant Name

---

Participant I.C No

---

Signature of Participant or Legal Representative

---

Date (dd/MM/yy)



---

Name of Individual

Conducting Consent Discussion

---

Signature of Individual

---

Date (dd/MM/yy)

Conducting Consent Discussion

---

Name & Signature of Witness

---

Date (dd/MM/yy)

Note: i) All participants who are involved in this study will not be covered by insurance.

---

**Participant's Material Publication Consent Form**

**Signature Page**

---

**Research Title:**

**Relative Caregiver's Satisfaction towards Nursing Care of Neuro Patient in Hospital  
USM**

**Name of main : Nurul Nadzirah Binti Khairuddin**

**Co-Researcher : Dr Salmi Binti Ab Aziz**

To become a part of this study, you or your legal representative must sign this page.

By signing this page, I am confirming the following:

- I understand that my name will not appear on the materials published and there have been efforts to make sure that the privacy of my name is kept confidential although the confidentiality is not completely guaranteed due to unexpected circumstances.
- I have read the materials or general description of what the material contains and reviewed all photographs and figures in which I am included that could be published.
- I have been offered the opportunity to read the manuscript and to see all materials in which I am included, but have waived my right to do so.
- All the published materials will be shared among the medical practitioners, scientists and journalists worldwide.
- The materials will also be used in local publications, book publications and accessed by many local and international doctors worldwide.

I hereby agree and allow the materials to be used in other publications required by other publishers with these conditions:

- The materials will not be used as advertisement purposes or as packaging materials.
- The materials will not be used out of context – i.e.: Sample pictures will not be used in an article which is unrelated to the picture.

---



Participant Name

Participant I.C No.	Participant's Signature	Date (dd/MM/yy)
---------------------	-------------------------	-----------------

Name and Signature of Individual	Date (dd/MM/yy)
Conducting Consent Discussion	

Note: i) All participants who are involved in this study will not be covered by insurance.

## Appendix D: Institutional Approval

 	<b>HOSPITAL UNIVERSITI SAINS MALAYSIA KAMPUS KESIHATAN, USM 16150 KUBANG KERIAN, KELANTAN</b>
<b>BORANG PERMOHONAN PENGUNAAN DATA PESAKIT, PERKHIDMATAN MAKMAL DAN LAIN-LAIN DI HOSPITAL USM</b>	
<b>BAHAGIAN A : MAKLUMAT PEMOHON</b>	
NAMA	NURUL NADZIRAH BINTI KHAIRUDDIN
NO. KAD PENGENALAN	990424-01-5050
ALAMAT/JABATAN	PUSAT PENGAJIAN SAINS KESIHATAN KAMPUS KESIHATAN, UNIVERSITI SAINS MALAYSIA 16150 KUBANG KERIAN, KELANTAN
PROGRAM AKADEMIK	IJAZAH SARJANA MUDA SAINS KESIHATAN (KEJURURAWATAN)
PUSAT PENGAJIAN	SAINS KESIHATAN
NO. TELEFON	010-41224559
EMAIL	nadzirahkhairuddin99@student.usm.my
<b>TAJUK PENYELIDIKAN / AKTIVITI (jika berkaitan: beside teaching/peperiksaan professional)</b> RELATIVE CAREGIVERS' SATISFACTION TOWARDS NURSIN CARE OF NEURO PATIENT IN HOSPITAL UNIVERSITI SAINS MALAYSIA (USM).	
<b>JENIS &amp; NOMBOR AKAUN GERAN (jika berkaitan: FRGS, RU, Jangka pendek, insentif dll)</b>	
<b>TEMPOH PENYELIDIKAN / AKTIVITI</b>	
<b>SILA SENARAikan NAMA PAKAR/PENSYARAH/STAF/PELAJAR JIKA PERMOHONAN MELIBATKAN PENYELIDIKAN, PROJEK INOVASI, LATIHAN INDUSTRI &amp; PEMBELAJARAN.</b>	
<b>PENYELIDIK UTAMA/KETUA KUMPULAN/PENYELIA UTAMA:</b> NURUL NADZIRAH BINTI KHAIRUDDIN	
<b>PENYELIDIK BERSAMA/AHLI KUMPULAN (jika berkaitan):</b> 1. DR SALMI BINTI AB AZIZ 2. 3. 4.	
<b>PELAJAR SELIAAN/KUMPULAN PELAJAR (jika berkaitan):</b> 1. 2. 3.	
<b>(JIKA LATIHAN INDUSTRI, SILA NYATAKAN TEMPAT ASAL PENGAJIAN/KERJA PELAJAR)</b>	

**BAHAGIAN B : PERMOHONAN PENGGUNAAN DATA PESAKIT, PERKHIDMATAN MAKMAL  
DAN LAIN-LAIN**  
(sila tanda ( / ) diruang yang disediakan)

**MAKLUMAT DIPERLUKAN**

☒ **PENGGUNAAN DATA PESAKIT**

- Tujuan ☐ Pengajaran dan pembelajaran  
☒ Penyelidikan  
☐ Projek inovasi  
☐ Latihan industri

Tarikh Mula : 24/10/2021 .....

Tarikh Tamat : 31/07/2022 .....

Penerangan : .....

**PERKHIDMATAN MAKMAL**

- |  |   |
|--|---|
| <input type="checkbox"/> MAKMAL PATOLOGI KIMIA | <input type="checkbox"/> MAKMAL FARMAKOKINETIK            |
| <input type="checkbox"/> MAKMAL ENDOKRIN       | <input type="checkbox"/> MAKMAL FARMAKOLOGI (TOKSIKOLOGI) |
| <input type="checkbox"/> MAKMAL HEMATOLOGI     | <input type="checkbox"/> MAKMAL TRANSFUSI PERUBATAN       |
| <input type="checkbox"/> MAKMAL MIKROBIOLOGI   | <input type="checkbox"/> PUSAT GENOM                      |
| <input type="checkbox"/> MAKMAL HISTOPATOLOGI  | <input type="checkbox"/> NEURO SAINS                      |
| <input type="checkbox"/> MAKMAL IMUNOLOGI      | <input type="checkbox"/> PERKHIDMATAN RADIOLOGI           |

- Tujuan ☐ Pengajaran dan pembelajaran  
☐ Penyelidikan  
☐ Projek inovasi  
☐ Latihan industri

Tarikh Mula : .....

Tarikh Tamat : .....

Penerangan : .....

**LAIN-LAIN PERKHIDMATAN**

☐ **ASET MUDAH ALIH (ventilator, ultrasound, SPO2, x-ray dll)**

Sila senaraikan : .....

☐ **INFRASTRUKTUR (ruang/wad/bilik rawatan/klinik dll) :**

Sila senaraikan : .....

☐ **IVENTORI (peralatan pejabat/ict/perabot/alat gunahabis)**

Sila senaraikan : .....



☐ SUMBER MANUSIA (Jururawat, Pembantu Perawatan Kesihatan, Houseman dll)

Sila senaraikan :

.....  
.....

Tujuan ☐ Pengajaran dan pembelajaran

☐ Penyelidikan

☐ Projek inovasi

☐ Latihan industri

Tarikh Mula : .....

Tarikh Tamat : .....

Penerangan : .....

#### BAHAGIAN C : PENGESAHAN KETUA JABATAN/ PENYELIA

Dengan ini saya mengesahkan / ~~tidak mengesahkan~~ maklumat yang di pohon memenuhi keperluan Pengajaran & Pembelajaran, Penyelidikan dan Projek Inovasi

  
DR. SALAMI BINTI ALI AZIZ  
Pensyarah  
Pusat Pengajian Sains Kesihatan  
Universiti Sains Malaysia  
16150 Kubang Kerian, Kelantan.

(Tandatangan & Cop Rasmi)

9 DISEMBER 2021

(Tarikh)

#### BAHAGIAN D : KEGUNAAN PEJABAT

☒ Diperakukan ☐ Tidak Diperakukan

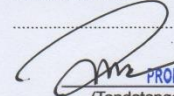
Ulasan / Komen : .....

  
MOHD SABERI BIN MOHD YUSOFF  
TIMBALAN PENDAFTAR KANAN  
Hospital Universiti Sains Malaysia  
16150 Kubang Kerian, Kelantan  
(Tandatangan & Cop Rasmi) (Tarikh) 5/1/22

#### BAHAGIAN E : KELULUSAN PENGARAH HOSPITAL USM

☒ Diluluskan ☐ Tidak Diluluskan

Ulasan / Komen : .....

  
PROF. DATO' DR. NIK HISAMUDDIN NIK AB. RAHMAN  
No. IDPM : 32959  
Pengarah  
Hospital Universiti Sains Malaysia  
16150 Kubang Kerian, Kelantan  
(Tandatangan & Cop Rasmi) (Tarikh) 5/1/22

#### Nota :

1. Maklumat ini hanya dibenarkan bagi tujuan Pengajaran & Pembelajaran, Penyelidikan dan Projek Inovasi secara dalaman sahaja tanpa melibatkan pembentangan dan penerbitan luar.
2. Sila lampirkan ringkasan projek pengajaran & pembelajaran, penyelidikan dan projek inovasi yang diperakukan oleh Penyelia.
3. Sila kemukakan satu salinan borang ini ke Jawatankuasa Etika Penyelidikan Manusia (JPeM)

Edisi Semakan : 01  
Tarikh : 31 Okt. 2018

## Appendix E: Ethical Approval



Jawatankuasa Etika  
Penyelidikan Manusia USM (JEPeM)  
Human Research Ethics Committee USM (HREC)

8<sup>th</sup> February 2022

Miss Nurul Nadzirah Khairuddin  
Undergraduate Student (Nursing)  
School of Health Sciences  
Universiti Sains Malaysia  
16150 Kubang Kerian, Kelantan.

Universiti Sains Malaysia  
Kampus Kesihatan  
16150 Kubang Kerian, Kelantan, Malaysia.  
Tel. : +609 - 767 3000/2354/2362  
Fax. : + 609 - 767 2351  
Email : jepem@usm.my  
Laman Web : www.jepem.kk.usm.my  
www.usm.my

**JEPeM Code : USM/JEPeM/21120815**

**Protocol Title: Relative Caregivers' Satisfaction Towards Nursing Care of Neuro Patients in Hospital Universiti Sains Malaysia (Hospital USM).**

Dear Miss.,

We wish to inform you that your study protocol has been reviewed and is hereby granted approval for implementation by the Jawatankuasa Etika Penyelidikan Manusia Universiti Sains Malaysia (JEPeM-USM). Your study has been assigned study protocol code **USM/JEPeM/21120815**, which should be used for all communications to JEPeM-USM in relation to this study. This ethical approval is valid from **8<sup>th</sup> February 2022** until **7<sup>th</sup> February 2023**.

Study Site: Hospital Universiti Sains Malaysia.

The following researchers are also involved in this study:

1. Dr. Salmi Ab Aziz

The following documents have been approved for use in the study.

1. Research Proposal

In addition to the above mentioned document, the following technical documents were included in the review on which this approval was based:

1. Patient Information Sheet and Consent Form (English version)
2. Patient Information Sheet and Consent Form (Malay version)
3. Questionnaire (Malay version)

While the study is in progress, we request you to submit to us the following documents:

1. Application for renewal of ethical approval 60 days before the expiration date of this approval through submission of **JEPeM-USM FORM 3(B) 2019: Continuing Review Application Form**.
2. Any changes in the protocol, especially those that may adversely affect the safety of the participants during the conduct of the trial including changes in personnel, must be submitted or reported using **JEPeM-USM FORM 3(A) 2019: Study Protocol Amendment Submission Form**.
3. Revisions in the informed consent form using the **JEPeM-USM FORM 3(A) 2019: Study Protocol Amendment Submission Form**.
4. Reports of adverse events including from other study sites (national, international) using the **JEPeM-USM FORM 3(G) 2019: Adverse Events Report**.
5. Notice of early termination of the study and reasons for such using **JEPeM-USM FORM 3(E) 2019**.
6. Any event which may have ethical significance.
7. Any information which is needed by the JEPeM-USM to do ongoing review.
8. Notice of time of completion of the study using **JEPeM-USM FORM 3(C) 2019: Final Report Form**.



